

### GENERAL CORRESPONDENCE

# YEAR(S):

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

1. S. S. S. S.

March 9, 1988

Mr. Roger C. Anderson Environmental Engineer Oil Conservation Division Energy, Minerals and Natural Resources Department P.O. Box 2088 Santa Fe, NM 87504

Re: Kutz Canyon Gas Plant -Waste Discharge Plan GW-45

Dear Mr. Anderson:

Enclosed are Sunterra's responses to your letter dated January 22, 1988. Please note that OCD's questions are italicized with Sunterra's response in regular type.

If further information is required, please advise.

Sincerely, ohn Renner

Fice President and General Manager

JR/scg Enclosure

### PROCESSING UNITS

1. The text of the plan states methanol, Ambitrol and ethyl mercapton are used in the process. Please submit the material safety data (MSD) sheets for these and any other chemicals used at the facility.

MSD sheets are included as Appendix 2 for all chemicals used at the Kutz Plant.

 Exhibit 5 shows the flare lines are routed directly into the lined pond without going through the oil/water separator. No flare lines from Kutz No. 1 go to the flare or the proposed flare pond. Is the exhibit drawn incorrectly?

Exhibit 5 in the waste discharge plan was drawn in error. A new Exhibit 5 is included showing the correct flare and wastewater routings.

### WASTEWATER CHARACTERIZATION

wi

 The text states open drains drain wash down water in the compressor buildings. Are there any soaps or degreasers used for cleaning? If so, please submit the MSD sheet for each chemical. Are the floors of the compressor buildings constructed of an impervious material? Are the curbed to prevent contaminant runoff to the surrounding soil? Are any other process facilities curbed?

Compressors are steamed cleaned and hand wiped. Sometimes N/L cleaner is used. Stoddard solvent (mineral spirits) is used for parts cleaning. MSD sheets are in Appendix 2.

The compressors have contained concrete sumps under floor level. These sumps will drain to the collection box where the oil will be separated out by the hydrocarbon/water separator. The compressor building floors are concrete painted with floor sealant. The compressor buildings are not bermed.

None of the process facilities are bermed. However, our plan states we will berm all pumps and oil storage areas. These bermed areas will be vacuumed out with our portable pump and tank and the collected contaminants will be deposited in collection box for separation by the hydrocarbon/water separator. The separated hydrocarbons will be put into storage for recycle.

2. Fire fighting training sessions use approximately 2,000 gallons per session. Where is the training held? Is a burn pit used? If so, what is its location? If a pit is not used, where is the water disposed of?

Most fire fighting is done with C3 (propane) as the fuel. Once a year we fill the fire fighting pit with river water and add 50 gallons of naphtha, allowing it to burn for training. When training is complete, we stand by as the naphtha burns off. The water in the pit evaporates. The pit is shown on Exhibit 5.

### PLANNED PROCESS CHANGES

1. There are several process chemicals identified in this section of the plan. Submit MSD sheets for all chemicals that are or will be used at the facility.

Appendix 2 contains all the MSD data sheets for all chemicals used at the plant.

### TRANSFER AND STORAGE OF PROCESS FLUIDS AND EFFLUENTS

1. The text states the collection boxes shown on Exhibit 5 are underground and of block-concrete design. Are there leak detection systems for these drains? If there is not a leak detection system in place or planned, submit an inspection method and schedule that is frequent enough to ensure integrity of the boxes. If leak detection systems are planned, submit the construction designs for review. A method and schedule for initial testing of the boxes must be submitted prior to plan approval.

The collection boxes will have a leak detection system installed. The design is shown in Exhibit 11.

Initially the boxes will be filled with river water and the sump observed for four hours to check for leaks. The sumps will be checked on a regular basis to insure integrity.

2. This section also states Sunterra plans to do integrity testing of the underground wastewater pipelines. Submit the proposed method and sched-ule.

After installation of drainage piping, each section will be plugged and filled with river water. We will monitor for four hours to check for leaks. We will test wastewater piping integrity every five years.

### EFFLUENT DISPOSAL

- 1. The text states the leak detection system of the proposed lined pond will be monitored daily. Submit a Contingency Plan that will be followed if fluids are observed in the sump. The procedures should include but are not limited to the following.
  - a. Notification of the OCD.
  - b. Analysis of the fluids to determine their origin, and supply the OCD with the analysis results.
  - c. If fluid is from the pond, notify OCD of proposed work (including liner repair) and provide follow-up information to the OCD of actions taken.

If, during daily monitoring, fluids are detected in the sump of the proposed double lined pond, Sunterra will notify the Aztec office of OCD. A sample of the fluid will be analyzed to determine if the pond liner is

leaking. If the fluid is coming from a leak in the liner, Sunterra will notify OCD of the leak and proposed remedy to repair the leak. OCD will be notified of Sunterra's progress in fixing the leak and other follow-up information requested by OCD.

### MISCELLANEOUS

1. Exhibit 5 has an area labeled proposed flare pond. Is this pond going to be lined with leak detection? If this pond is not going to be lined, a demonstration must be made that any fluids entering this pond will not pose a threat of groundwater contamination. If a lined pond is proposed, submit the construction plans for review.

Sunterra proposes a bentonite lined pond as a flare pond. The purpose of the pond is for use as a liquid seal to prevent flash back of the flare system. Liquid level will be controlled with the use of automatic liquid level control. River water will be used for makeup due to loss by natural evaporation and additional evaporation caused by the heat release of the flare. The construction plans are shown in Exhibit 12.

2. Exhibit 5 also shows what appears to be a pit south of the K-station. Identify this pit and its present function. What did this pit receive in the past? Will this pit be used in the future? If so, what for? If it is to be abandoned, submit a closure plan for review.

This pit was used in the past to collect inlet gas scrubber purges for the Y-station compressors. This scrubber purge has been rerouted into the existing flare pond. Sunterra proposes that this scrubber purge will pass through the hydrocarbon/water separator in our discharge plan. This pit will be closed and any tainted soils will be used as partial backfill of the existing flare pond as it is closed.

3. There is no mention of solid waste disposal in the plan. What is the final disposition of all solid wastes generated at the plant?

The solid wastes produced at the Kutz plant are disposed of in the following manner:

Oil, air, glycol, fuel and gas filters, oily rags, wastepaper, and pall rings are picked up by Waste Control of New Mexico. Pall rings include frac sand, formation fines, carbonate scale and ferrous oxide.

Iron sponge material (treated wood chips) are spread out on the ground away from the process area (after being steamed out in the vessel to remove sulfur and hydrocarbons). These chips are allowed to neutralize naturally, becoming an inert substance.

Activated charcoal is treated the same way, steamed out in the vessel and spread out on the ground away from the process area.

Dehydrator molecular sieve material (alumina-silicate) and ceramic balls are spread out around the plant area where excessive moisture collects. All used (waste) oil is collected in a used oil tank and sold to Mesa Petroleum to be recycled. The waste oil collection tank will be on a concrete and bermed slab.

Lean oil reclaimer, generators, reciprocating compressors, turbine compressors, air compressors, expander/compressors, and automotive oils are the only sources of waste oils.

All used barrels are to be stored on concrete slab, to be returned to vendors. These include muriatic acid, caustic soda, air compressor oil, expander oil, N/L cleaner, and cooling tower chemicals.

4. There is no mention of an SPCC plan in the application. If the facility has prepared and submitted an SPCC plan to the USEPA, please supply a copy to the UCD for inclusion in the discharge plan.

A review of the files indicates that an SPCC has not been prepared and submitted to the EPA.

5. Are there any laboratory facilities at the plant? If so, identify all chemicals used in the lab and their final disposition.

The lab at the Kutz Plan is primarily a chromatographic lab and not a wet chemistry lab. Approximately 5 gallons/year of a combination of K-F reagent, dilute HCl, DEA and glycol are collected and disposed of in the pond. Sunterra proposes that this small amount of liquid be placed in the hydrocarbon/water separator in our discharge plan.

6. There is no mention in the plan of waste oil. How is waste lube oil disposed of? The plan states that oil from the separator will be placed in storage for recycle. Where will it be stored? Is the storage area bermed to contain any leaks or spills? How and where will the oil be recycled? Is there any other source of waste oil?

**.** . .

Please see response to item 3 above.

-4-

### EXHIBIT II

### KUTZ PLANT GENERAL DESIGN FOR ALL WASTE WATER COLLECTION BOXES



FRONT VIEW





ſ

ı.

ļ

i

ŀ

**EXHIBIT 12** 

\$

I

; ;

ļ

I

ł

## KUTZ PLANT FLARE POND DESIGN

NOT TO SCALE

### APPENDIX 2

### MATERIAL SAFETY DATA SHEETS

### CHEMICALS CURRENTLY USED IN THE KUTZ PLANTS

Engi	ne 0il	Use	Vendor
1.2.	DTE 797 Pegasus 490 DTE 25	Turbines Clarks	Mobil Mobil
3.		Reirig. Compressors	MODIL
4.	Karus 427	Inst Air Compsrs	MODII
5.	Rarus 827	Start Air Compsrs	MODIL
Clea	ning Solvents		
6.	N L Concentrate	Soap, Grease Clnr	Lenn & Fink
7.	Solvent - Mineral Spirits	Parts Cleaner	Dial Oil
<u>- 8</u> .	Sepelec	Elec. Contact Clnr	Zep
<u> </u>	Zep Lemonex	Sanitary Cleaner	Zep
10.	Zep-D-Ice	De-icer	Zep
Trea	ting Chemicals		
11.	IWE 7044	Clg Twr Treating	Ind. Water Eng Inc
12.	Bromicide Tables	Clg Twr Treating	Great Lakes Chem.
13.	IWE 6030C	Clg Twr Treating	Ind. Water Eng Inc
14.	IWE 4015L	Clg Twr Treating	Ind. Water Eng Inc
15.	Methanol	Thaw Hydrates	Weskem
16.	Hydrochloric Acid	Deionizer System	Weskem
17.	Diethanolamine (DEA)	Process Chem. KII	Van Waters & Rogers
18.	Lean Oil (Naphtha)	Process Chem KI	Triangle Refineries
19.	Ambitrol FL	Engine coolant	Weskem
20.	Ureabor	Weed killer	Weskem
21.	Ethylene Glycol	Process chem KI	Weskem
22.	Corexit 7669 (anti-foam)	Process chem KII	Weskem
23.	Technihib 7020	Corrision Inhibtr	Unichem
24.	Scentinel A (Ethyl-mercaptan)	Propane Odorizer	Weskem
25.	Diethylene Glycol	Process chem KII	Dow Chemical
<u>^26.</u>	Karl Fisher Re-agent	Lab Analysis	J.T. Baker Chem Co
27.	Caustic Soda	Deionizer	Weskem
28.	IWE 100	Clg Twr Treating	Ind. Water Eng Inc
29.	IWE 7200	Clg Twr Treating	Ind. Water Eng Inc
30.	IWE 6135	Clg Twr Treating	Ind. Water Eng Inc





### UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE

Suite D, 3530 Pan American Highway NE Albuquerque, New Mexico 87107

OIL CONSERVATION DIVISION SANTA FE

1988

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

EB 1 2

Dear Mr. Lemay:

This responds to your public notice in which two proposed groundwater discharge plans were described. We have reviewed the plans and have not identified any resource issues of concern to our agency in the following:

GW-45, Sunterra Gas Processing Company, San Juan County Bloomfield, NM.
 GW-39, El Paso Natural Gas Company, San Juan Gas Processing Plant, San Juan County, Farmington, NM.

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

Sincerely yours, John C. Peterson

Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico Regional Administrator, Environmental Protection Agency, Dallas, Texas Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement, Albuquerque, New Mexico

NOTICE OF PUBLICATION STATE OF NEW MEXICO ENERGY, MINERALS AND NATU-RAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION JOIL CONSERVATION DIVISION Notice is hereby given that pur-guant to the 'New Mexico' Water Quality Control Commission Regula-tions, the following discharge planat have been aubmitted for approval to the Director of the Oil Conservation Division, Staté Land Office Building; P.O. Box 2088, Santa Fe, New Mexico 37504-2088; Telephone (505) 327-5500; 24 Santa Fe, New Conservation (500) ( 627-5800: 28: Surfarm Gas Process-ing Company, Kutz Canyori Gas Plant, John Renner, General Mana-ger, P.O. Box 1889, Bloomfield, New Mexico 87413, 'has 'submitted' for approval a ground water discharge plan application for its Kutz Canyon Gas Plant, located in the 'SW/4' of Section 12, NE/4 Section 13, SE/4 Section 14, 'Township' 28' North, Range (1: West, IMAPM, Sari Juan County, New Mexico, Approximately 4,200 gallone per day of 'process waste water will be disposed of in the OCD approval double find evapora-tion pond with, leak detection: The total dissolved solids of the wasterwas per flar (mg/1). 'Ground water insist likely to be affected by any discharge at the surface is spallow "perchater water with abla's asolids of the final solids of the surface is spallow "perchater water with abla's asolids of the final of a depth of about 200 the **E** (GW-45) Sunterra Gas Proces at a depth of about 200 led to FICIAL SEAL estimated TDS concentrations to the three "unlined ponds presently being used for disposal will be closed and reclaimed. The third unlined pond **y PURLY - NEW MERICO** 

will be retained to collect storm water runoff from the facility (GW39) EL Paso. Natural Gas Company, San Juan Gas Processing Plant, John Craig, Vice President, P.O. Box 4990, Farmington, New Mexico 87499, has submitted for Mexico 87499, has submitted for, approval a ground water discharge, plan for wastewater that does not come in contact with hydrocarbons ( non contact) for its facility locarbons ( section 1, Township 29 North, Range 15 West, IMIPM, San Juan County, New Mexico, Approximately 22,000 gallons per day of non-contact pro-cess wastewater, with a total dis-solved solids content of approximately solved solids content of apportimate-y 1400 mg/1 will be land applied on a 26-acre parcel on the east side of the facility. Discharge will be by sideroil irrigation except in the months of December and January when the effluent will be stored. Ground water most likely to be affected by the discharge is at a depth of 70 feet with an average total dissolved solids concentration of approximately 4500 mg/1. Interested, person may obtain further information from the Oil Conservation Division and may sub-mit written comments to the Director of the Oil Conservation Division at the solved solids content of appontimate of the Oil Conservation Division at the address given above. Prior to ruling address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be re-quested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is

should be held. A hearing will be held if the Director determines, there is significant public hearing is held, the Director will approve or disapprove the proposed plan based on informa-tion available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and in-formation submitted at the hearing. " GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe. New Mexico, on this and Marko Cri Cri Schwarz, Anno Cri Statu at Santa Fe, New Mexico, on this 3rd day of February. STATE OF NEW MEXICO

OIL CONSERVATION DIVISION awilliam J. Lemay, Director S E A L 1212 Journal, February 11, 1988

1 2 198

### STATE OF NEW MEXICO > ss

County of Bernalillo

....CRAIGE. MEYERS being duly sworn declares and

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

...... day 

publications on 

WITH SEC **ETARY OF STATE** 11-18

- CALANA

EDJ-15 (R-2/86)

Sworn and subscribed to before me, a Notary Public in and 

Statement to come at end of month.

ACCOUNT NUMBER ... C. 8.0.9.3.2.

Meyers.



No. 21317

STATE OF NEW MEXICO, County of San Juan:

Betty Shippbeing dul
sworn, says: That he is the National Ad Manager
THE FARMINGTON DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that th hereto attached
was published in a regular and entire issue of the said FARMINGTON DAILS
Times, a dairy newspaper dury quanted for the purpose within the
meaning of Chapter 107 of the 1937 Session Laws of the State of Nev
Mexico for $\_$ <u>Uffe</u> $fc q m fc q m f c q m $
First Publication
Second Publication
Third Publication
Fourth Publication
and that payment therefor in the amount of $-40.35$
has been made. Betty Dupp
Subscribed and sworn to before me this 12th day
ef February 88
). Shorta
NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO My Commission expires: 444 23, 199

i Publication COPY

Notice of Publication State of New Mexico ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION Notice is hereby given that pursuant to the New Mexico Water Quality Control Commission Regulations, the following discharge plans have been submitted for approval to the Director of the Oil Conserva-tion Division, State Land Office Building, PO Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800. (GW-45) Sunterra Gas Processing Company, Kutz Canyon Gas Plant, John Renner, General Manager, PO Box 1869, Bloom-field, New Mexico 87413, has submitted for approval a ground water discharge plan application for its Kutz Canyon Gas Plant, John Renner, General Manager, PO Box 1869, Bloom-field, New Mexico 87413, has submitted for approval a ground water discharge plan application for its Kutz Canyon Gas Plant, John Renner, General Manager, PO Box 1869, Bloom-field, New Mexico 87413, has submitted for approval a ground water discharge plan application for its Kutz Canyon Gas Plant, John Renner, General Manager, PO Box 1869, Bloom-field, New Mexico 87413, has submitted for approval a ground water discharge value application for its Kutz Canyon Gas Plant, John Renner, General Manager, PO Box 1869, Bloom-field, New Mexico Approximately 4,200 gallons per day of process waste water will be disposed of in an OCD approval double lined evaporation pond with leak detection. The bud discharge device of the waterwater lie and proving the approval double lined evaporation pond with leak detection. The total dissolved solids of the wastewater is approximately 1,500 milligrams per liter (mg/1). Ground water most likely to be affected by any discharge at the surface is shallow perched water with total dissolved solids (TDS) concentrations of 8000 to 18,000 mg/1. Deeper ground water is at a depth of about 200 feet with estimated TDS concentrations between 2000 and 5 4000 mg/1. Two of the three unlined ponds presently being used for disposal will be closed and reclaimed. The third unlined pond will be retained to collect storm water runoff from the facility. &

(GW-39) El Paso Natural Gas Company, San Juan Gas Process-ing Plant, John Craig, Vice President, PO Box 4990, Farm-ington, New Mexico 87499, has submitted for approval a ground water discharge plan for wastewater that does not come in contact with hydrocarbons (non contact) for its facility located in Section 1, Township 29 North, Range 15 West, NMPM, San Juan County, New Mexico. Approximately 22,000 gallons per day of non-contact process wastewater with a total dissolved solids content of approximately 1400 mg/1 will be land applied on a 26-acre parcel on the east side of the facility. Discharge will be by sideroll irrigation except in the months of December and January, when the effluent will be stored. Ground water most likely to be affected by the discharge is at a

depth of 70 feet with an average total dissolved solids concen-tration of approximately 4500 mg/l. Any interested persons may obtain further information from the Oil Conservation Division and may submit written com-ments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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

information submitted at the hearing. GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 3rd day of February. To be published on or before February 13, 1988: SEAL 😳

1 40 STATE OF NEW MEXICO OIL CONSERVATION DIVISION Ą.,-WILLIAM J. LE MAY Director Legal No. 21317 published in the Farmington Daily Times.

Farmington, New Mexico on Wednesday, February 10, 1988.

ŝ

STATE OF NEW MEXICO



OIL CONSERVATION DIVISION

ENERGE AND MINERALS DEPAR

GARREY CARRUTHERS

February 3, 1988

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 27501 (S05) 827-5800

Re: NOTICE OF PUBLICATION

MENT

Advertising Manager Albuquerque Journal 717 Silver SW Albuquerque, NM 87102

Dear Sir:

Please publish the attached notice one time immediately on receipt of this request. Please proofread carefully, as any error in a land description or in a key word or phrase can invalidate the entire notice.

Immediately upon completion of publication, please send the following to this office:

- 1. Publisher's affidavit in duplicate.
- 2. Statement of cost (also in duplicate).
- 3. CERTIFIED invoices for prompt payment.

We should have these immediately after publication in order that the legal notice will be available for the hearing which it advertises, and also so that there will be no delay in your receiving proper payment.

Please publish the notice not later than \_ February 13, 1988

Sincerely, WILLIAM J. LEMAY Director

WJL:dp

Attachment

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

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

(GW-45) Sunterra Gas Processing Company, Kutz Canyon Gas Plant, John Renner, General Manager, P.O. Box 1869, Bloomfield, New Mexico 87413, has submitted for approval a ground water discharge plan application for its Kutz Canyon Gas Plant located in the SW/4 of Section 12, NE/4 Section 13, SE/4 Section 14, Township 28 North, Range 11 West, NMPM, San Juan County, New Mexico. Approximately 4,200 gallons per day of process waste water will be disposed of in an OCD approval double lined evaporation pond with leak detection. The total dissolved solids of the wastewater is approximately 1,500 milligrams per liter (mg/l). Ground water most likely to be affected by any discharge at the surface is shallow perched water with total dissolved solids (TDS) concentrations of 8000 to 18,000 mg/l. Deeper ground water is at a depth of about 200 feet with estimated TDS concentrations between 2000 and 4000 Two of the three unlined ponds presently being mq/l. used for disposal will be closed and reclaimed. The third unlined pond will be retained to collect storm water runoff from the facility.

(GW-39) El Paso Natural Gas Company, San Juan Gas Processing Plant, John Craig, Vice President, P.O. Box 4990, Farmington, New Mexico 87499, has submitted for approval a ground water discharge plan for wastewater that does not come in contact with hydrocarbons (non contact) for its facility located in Section 1. Township 29 North, Range 15 West, NMPM, San Juan County, New Mexico. Approximately 22,000 gallons per day of non-contact process wastewater with a total dissolved solids content of approximately 1400 mg/1 will be land applied on a 26-acre parcel on the east side of the facility. Discharge will be by sideroll irrigation except in the months of December and January when the effluent will be stored. Ground water most likely to be affected by the discharge is at a depth of 70 feet with an average total dissolved solids concentration of approximately 4500 mg/l.

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

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

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 3rd day of February. To be published on or before February 13, 1988.

> STATE OF NEW MEXICO OIL CONSERVATION DIVISION

1 the WILLIAM J. LEMAY, Director

SEAL

STATE OF NEW MEXICO



ENERGY, MICRALS AND NATURAL RESOURCES DEPAR

OIL CONSERVATION DIVISION

GARREY CARRUTHERS

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

January 22, 1988

IENT

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. John Renner, General Manager Sunterra Gas Processing Company P.O. Box 1869 Bloomfield, NM 87413

> RE: Discharge Plan GW-45 Kutz Canyon Gas Plant San Juan County, New Mexico

Dear Mr. Renner:

The Oil Conservation Division has received and is in the process of reviewing the above-referenced discharge plan application. The plan submittal, dated December 21, 1987, was received by the OCD December 22, 1987. The following comments and requests for additional information are based on our review of the data provided in the plan and observations from site inspections on April 22, 1987 and June 22, 1987.

### PROCESSING UNITS

- 1) The text of the plan states methanol, Ambitrol and ethyl mercapton are used in the process. Please submit the material safety data (M.S.D.) sheets for these and any other chemicals used at the facility.
- 2) Exhibit 5 shows the flare lines are routed directly into the lined pond without going through the oil/water separator. No flare lines from Kutz No. 1 go to the flare or the proposed flare pond. Is the exhibit drawn incorrectly?

Page 2

### WASTEWATER CHARACTERIZATION

- 1) The text states open drains drain wash down water in the compressor buildings. Are there any soaps or degreasers used for cleaning? If so, please submit the MSD sheet for each chemical. Are the floors of the compressor buildings constructed of an impervious material? Are they curbed to prevent contaminant runoff to the surrounding soil? Are any other process facilities curbed?
- 2) Fire fighting training sessions use approximately 2000 gallons per session. Where is the training held? Is a burn pit used? If so, what is its location? If a pit is not used, where is the water disposed of?

### PLANNED PROCESS CHANGES

1) There are several process chemicals identified in this section of the plan. Submit MSD sheets for all chemicals that are or will be used at the facility.

### TRANSFER AND STORAGE OF PROCESS FLUIDS AND EFFLUENTS

- 1) The text states the collection boxes shown on Exhibit 5 are underground and of block-concrete design. Are there leak detection systems for these drains? If there is not a leak detection system in place or planned, submit an inspection method and schedule that is frequent enough to ensure integrity of the boxes. If leak detection systems are planned, submit the construction designs for review. A method and schedule for initial testing of the boxes must be submitted prior to plan approval.
- 2) This section also states Sunterra plans to do integrity testing of the underground wastewater pipelines. Submit the proposed method and schedule.

### EFFLUENT DISPOSAL

- 1) The text states the leak detection system of the proposed lined pond will be monitored daily. Submit a Contingency Plan that will be followed if fluids are observed in the sump. The procedures should include but are not limited to the following.
  - a. Notification of the OCD.

Page 3

- b. Analysis of the fluids to determine their origin, and supply the OCD with the analysis results.
- c. If fluid is from the pond, notify OCD of proposed work (including liner repair) and provide follow-up information to the OCD of actions taken.

### MISCELLANEOUS

- 1) Exhibit 5 has an area labeled proposed flare pond. Is this pond going to be lined with leak detection? If this pond is not going to be lined, a demonstration must be made that any fluids entering this pond will not pose a threat of ground water contamination. If a lined pond is proposed, submit the construction plans for review.
- 2) Exhibit 5 also shows what appears to be a pit south of the K-station. Identify this pit and its present function. What did this pit receive in the past? Will this pit be used in the future? If so, what for? If it is to be abandoned, submit a closure plan for review.
- 3) There is no mention of solid waste disposal in the plan. What is the final disposition of all solid wastes generated at the plant.
- 4) There is no mention of an SPCC plan in the application. If the facility has prepared and submitted an SPCC plan to the USEPA please supply a copy to the OCD for inclusion in the discharge plan.
- 5) Are there any laboratory facilities at the plant? If so, identify all chemicals used in the lab and their final disposition.
- 6) There is no mention in the plan of waste oil. How is waste lube oil disposed of? The plan states that oil from the separator will be placed in storage for recycle. Where will it be stored? is the storage area bermed to contain any leaks or spills? How and where will the oil be recycled? Is there any other source of waste oil?

Page 4

Submission of the information requested in this letter will allow our review of your application to continue. If you have any questions, please contact me at 827-5885.

Sincerely,

nd Koger lanser

Roger C. Anderson Environmental Engineer

cc: OCD - Aztec

### P 612 458 033

### Receipt for certified mail

### NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to John Renner	
Street and No. P.O. BOX 18(9	
P.O., State and ZIP Code	2412
Postage	\$
Certified Fee	+
Special Delivery Fee	1
Restricted Delivery Fee	+
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
	Sent to John Rener Street and No. P.O. Box 18(A R.O., State and ZIP, Code Drom Field Mm 87 Postage Certified Fee Special Delivery Fee Restricted Delivery Fee Restricted Delivery Fee Return Receipt Showing to whom, Date, and Address of Delivery TOTAL Postage and Fees Postmark or Date

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS GOVERNOR

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

December 2, 1987

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Gary Jordan Sunterra Gas Processing Company P. O. Box 1869 Bloomfield, New Mexico 87413

RE: Discharge Plan GW-45 Kutz Canyon Gas Plant San Juan County, New Mexico

Dear Mr. Jordan:

The Oil Conservation Division has received a copy of your correspondence to the Bureau of Land Management dated October 30, 1987. Any surface waste disposal relating to your processing plant will be a major part of the discharge plan you have been requested to submit to this office.

The following comments and requests for additional information are based on our review of the proposal.

- 1. A core hole is to be drilled near the center of the proposed pond. A hole such as this may provide a direct conduit for the pond waters to any permeable zones underlying the pond. It is advisable to leave the subsurface directly below the pond undisturbed.
- 2. A second core hole is proposed for "just outside the proposed pond." How far below the pond is the core hole to be? How will this hole be plugged? Can this hole be converted and used as a monitor well?
- 3. The location of the proposed pond is not given in the proposal. Please supply a diagram showing its relation to the plant.
- 4. Construction details of the proposed pond were not supplied. Provide with the discharge plan detailed construction plans to include at a minimum, dimensions, compaction calculations, wave calculations, freeboard calculations, berm strength calculations and piping schematics.

The proposed geologic and hydrologic investigation can provide an excellent demonstration that the use of an unlined pond will not impact ground water. The clarifications requested in this letter are required if an unlined pond is to be used as your disposal method.

Mr. Gary Jordan December 1, 1987 Page 2

During our phone conversation you informed me that you were evaluating alternate methods of disposal. Other methods, such as lined ponds with leak detection, have different criteria for site investigations, design and construction. A detailed proposal for the method you choose must be submitted as part of the discharge plan application.

If you have any questions, please do not hesitate to call me at (505) 827-5885.

Sincerely,

lesar Koger

Roger Anderson Environmental Engineer

RA:sl

cc: OCD - Aztec Mr. Hindell Greer - B.L.M.



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS

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

November 3, 1987

Bureau of Land Management Caller Service 4104 Farmington, New Mexico 87401

ATTENTION: Lindell Greer

Dear Mr. Greer:

Per your request today, I have enclosed copies of laboratory analyses of samples taken from Sunterra's Kutz Plant cooling tower and three ponds. Also enclosed are the New Mexico Water Quality Commission Standards for ground water.

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

Sincerely,

Jami Bailey Geologist

Enc.

JB:sl



Mr. Lindell Greer

Bureau of GanaEManagement Caller Service S4104

RE: SF 075309

 $\bigcirc$ 

Dear Mr. Greer:

During our phone conversation on October 28, 1987, we discussed the possibility of installing a single lined evaporative pond at our Kutz Plant. Exhibit 1 is an orthophoto of the Kutz Plant showing the present pond system. Exhibit 2 is results of sampling of the three ponds at the Kutz Plant that were duplicate samples taken by us and the New Mexico Oil Conservation Division (OCO). The sample results are a worst case scenario as we plan to install a hydrocarbon/water separator. This separator will remove essentially all of the hydrocarbons in the wastewater.

October 30, 1987

Exhibit 3 is a proposal for geologic and hydrologic investigations to provide information as to probable rates and paths for seepage from a single lined pond. The investigation will also provide depth to groundwater and its chemical nature.

As we discussed in our phone conversation, Sunterra must provide a Wastewater Discharge Plan to OCD by December 23, 1987. We would appreciate your prompt review of the enclosed information.

If further information is required, please call me at (505) 768-6700.

ary Jordan

cc: Mr. David Boyer - OCD Mr. John Renner - Sunterra

### KUTZ PLANT SAMPLING LOCATIONS Duplicate Sampling with OCD 4/22/87

Exhibit

Ν

### Sample I.D.

1. Water Sample of Kutz #1 Cooling Tower Sump

2. Water Sample of Flare Pond #1 Southwest Corner

3. Water Sample of Fond #2 Middle of North Side

4. Water Sample of Pond #3 Southwest Corner



.

TO: Sunterra Gas Processing DATE: 29 May 1987 ATTN: Gary Jordan 0661 PO Box 2106 Albuquerque, NM 87103

SAMPLE ID : #1

ANALYTE

ANALYTICAL RESULTS NOMINAL DETECTION LIMITS

<0.05 mg/l	0.05 mg/l
<1.0 mg/l	1.0 mg/l
<0.01 mg/l	0.01  mg/l
<0.05 mg/l	0.05  mc/l
<0.01 mg/l	0.01  mg/l
0.59  mg/l	0.01  mg/1
0.05  mc/l	0.01 mg/1
0.0023  mg/1	0.02  mg/1
< 0.01  mg/1	0.002  mg/r
0.019  mg/1	
(0.05  mg/1)	0.002  mg/1
<0.001 mg/1	0.001  mg/I
<0.001 mg/1	
<0.01 mc/1	
<0.001 mg/1 ·	
<0.001 mg/1	0.001  mg/I
	0.001  mg/1
(0.001  mg/)	
$\frac{1}{10001} \text{ mg/I}$	0.001  mg/I
(0.001 mg/1)	
(0.001 mg/1)	0.001  mg/I
44  mg/1	10  mg/I
	1.0  mg/l
= 0.03  mg/I	0.5  mg/r
913  mg/I	$\frac{10 \text{ mg/r}}{10 \text{ mg/r}}$
$0.072 m \sigma / 1$	$\frac{1.0 \text{ mg/r}}{0.003 \text{ mg/r}}$
1  mg/I	0.003  mg/r
$0.357 m \sigma / 1$	0.1  mg/1
	$0.03 \text{ mg/}^{-1}$
$\frac{1}{\sqrt{0}} = \frac{1}{\sqrt{0}}$	
0.150  mg/l	0.03  mg/l
erque, New Mexico 8710	9 • (505) 345-8964
	<pre>&lt;0.05 mg/l &lt;1.0 mg/l &lt;0.01 mg/l &lt;0.05 mg/l &lt;0.05 mg/l &lt;0.05 mg/l 0.05 mg/l 0.05 mg/l 0.002 mg/l &lt;0.01 mg/l &lt;0.01 mg/l &lt;0.001 mg/l &lt;0.</pre>

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely, .

Jennifer V. Smith, Ph.D. Lagoratory Director

	David Rover	/ 4 1
REPORT TO:	David Boyer	S.L.D. No. OR
	N.M. Oil Conservation Divisi	ON DATE REC. 4-27-37
•	P. 0. Box 2088	
	Santa Fe, N.M. 87504-2088	PRIORITY
PHONE(S):	327-5812	USER CODE: 13 2 2 3 5
SUBMITTER:	David Boyer	CODE: 12 16 10
SAMPLE COLLE	CTION CODE: (YYMMDDHHMMIII)	71014121211214101 1012
SAMPLE TYPE:	WATER A, SOIL , FOOD , OT	IER: CODE:
COUNTY: 50	~ Cuan : CITY: Be	cope: 1 1 1 1
LOCATION COD	E: (Townshin-Range-Section-Tracta)	$\frac{1}{8100 + 111100} + \frac{1}{213} + \frac{1}{1111} + \frac{1}{110006} = \frac{1}{110006} = \frac{1}{110006} = \frac{1}{110006} = \frac{1}{100006} = $
ANALYSES PRO	TESTED: Please sheek the appropriate bo	r(a) below to indicate the time of analytical economy
required. Wheney	er possible list specific compounds suspecte	d or required.
	PURGEABLE SCREENS	EXTRACTABLE SCREENS
_   (753) Alipha	tic Purgeables (1-3 Carbons)	(751) Aliphatic Hydrocarbons
(754) Aroma	tic & Halogenated Purgeables	(760) Organochlorine Pesticides
(765) Mass	Spectrometer Purgeables	(755) Base/Neutral Extractables
(766) Trihalo	omethanes	(758) Herbicides, Chlorophenoxy acid
Other	Specific Compounds or Classes	(759) Herbicides, Triazines
<u> </u>	· · · · · · · · · · · · · · · · · · ·	(760) Organochlorine Pesticides
□		(761) Organophosphate Pesticides
□ · · ·	· · · · · · · · · · · · · · · · · · ·	(767) Polychlorinated Biphenyls (PCB's)
□	·····	(764) Polynuclear Aromatic Hydrocarbons
		(762) SDWA Pesticides & Herbicides
	Tani tot O	2. 7.
Remarks: 32	mino - Aus lo	alur aneu
	· · · · · · · · · · · · · · · · ·	f 
PIETO DATA		· · · · · · · · · · · · · · · · · · ·
FIELD DAIA	if	والمراجع والمحافظ والمعادية فالمحاف والمراجع والمحافظ فالمحافظ والمحافظ والمحاف والمحاف والمحاف والمحافظ والمحافظ
pH = 7.5; Ca	mductivity= / 7 Pumbo/cm as 9 °	I; Calorine Residual= mg/l
Dissolved Oxygen	:=mg/l; Alkalmity=mg/l; F	low Eate
Depth to water	ft.; Depth of weilft.; Peri	ration Intervalft.; Casing:
Sampling Locatio	ra, Mechods and Zerratia (i.e. odors, etc.)	
DI ATTE	a Solom Sump Conte	The ver shuldawn maria
Tureh		
T carrie that it		
activities.(signatu	re collector):	Method of Shinment to the Lab
This form accom	manies - Septem Viais /Glass	Juge and/or
Samples were ar	reserved as foilows:	
[ ] NP:	No Preservation: Sample stored at mom	tampanatura
P-Ice	Sample stored in an ice hath (Not E	an)
A P-Na S O	Sample Preserved with Sedium This	ny.
CHAIN OF CU	STODY	S IS LEMOYE CHIOFINE [ESIGUE].
I certify that th	us sample was transferred from	and the second
at (location)	1000 - 100 -	
· · · · · · · · · · · · · · · · · · ·		and the
the statements !	n this block are some Buildust	
the statements is	n this block are correct. Evidentiary Seals	Not Sealed 🔲 Seals Intact: Yes 🔲 No 🗍

. •

ANALYSES PERFOR	ÉD	LAB. NO OR-	692	٢
	THIS PAGE FOR LABORA	TORY RESULTS ONLY	• 1	

This sample was tested using the analytical screen	ing method(s)	checked below:	
PTTPC FARI F SCOFFING		FALL SCREENS	
FURGEABLE SCREENS		EXTERCIABLE SCALENS	
(753) Aliphatic Purgeables (1-3 Carbons)		[ (751) Aliphatic Hydrocarbons	
🔀 (754) Aromatic & Halogenated Purgeables		(760) Organochlorine Pesticides	
(765) Mass Spectrometer Purgeables	••	(755) Base/Neutral Extractables	
(766) Trihalomethanes		(758) Herbicides, Chlorophenoxy acid	
Other Specific Compounds or Classes	•	(759) Herbicides, Triazines	
		(760) Organochlorine Pesticides	
		(761) Organophosphate Pesticides	
	<u></u>	(757) Bolychiorinated Binhanyle (PCB's)	
		(764) Polyculos America Explosion	
	<u> </u>	(764) Polyhuelear Aromatic Hydrocaroons	
		(162) SUWA Pesticides & Herbicides	
الم بيمم يعد بي م			
ANA	ALYTICA	L RESULTS	
· · · · · · · · · · · · · · · · · · ·		······································	- '
COMPOUND(S) DETECTED	CONC.	COMPOUND(S) DETECTED	CONC.
aromatic surreadles	N.D.		
halimenatest Jourson bles	N.D.		
and the second			
and the second	·		·
		· · · · · · · · · · · · · · · · · · ·	
• DETECTION LIMIT • 🔭	100 49/2	- DETECTION LIMIT -	
ABBREVIATIONS USED:	· · ·		
N D = NONE DETECTED AT OR ABOVE	THE STATE	D DETECTION LIMIT	
T P = DETECTED AT A SEVER BELOW	THE STATE	DEFECTION LIGHT (NOT CONTRACT)	
I R = DEILOIED RI R LEVED BELOW			1
I RESOLIS IN BRACKEIS J ARE UNCONF.	IRMED AND	OR WILH APPENAMALE QUANILIATION	
and the second			
		· · · · · · · · · · · · · · · · · · ·	
LABORATORY REMARKS:		· · · · · · · · · · · · · · · · · · ·	
	-		
میں بینے میں بینے پر بینے بینے اور			
the state of the second s			
a sa ang ang ang ang ang ang ang ang ang an		a maan oo ah	
			[
	شار با ۲۰۰ و دی. 		
CERTIFICAT	TE OF ANAL	YTICAL PERSONNEL	
Seal(s) Intact: Yes No FL. Seal(s) broken by	mit	Malin data:	· 1
I certify that I followed standard laboratory proceeding	res on handlin	g and analysis of this sample unless otherwise note	
that the statements on this name accurately proceeding	he analytical	o ma anaiyon or the sample uniced Utilerwise ROSE	
the the transmission of this page accurately reflect th		results for this sample.	
Date(s) of analysis: <u>574/87</u> Analyst's sig	mature:	ary C. Eler	
I certify that I have reviewed and concur with the	analytical resu	it's for this sample and with the statements in this	block.
Reviewers signature:			المتحقية، بالي التحد الا
	-		
مەسىپەتىيە بەيە بەيە بى			
		and and an	

	LAB NO.		o □ 59600 🕅	OTHER: 82	235	
4122187 Hocition TINE 1240	SITE INFORM- > ATION		SUNTERRA	<u>- Kui</u>	<u>- <u>P</u></u>	LAUT
Acced by - Person Agency	シル /OCD		· · · · · · · · · · · · · · · · · · ·	<i>Cce</i>	LING 10	DWER
ENVIRONM NO NM OIL CO AL State La PORT Santa Fe Attn:David_ Phone: 827-	NTAL BUREAU NSERVATION DIV 1d Office Bldg NM 87504-208 Nyer	/ISION , PO Box. 208 8	8 	Station/ weilcode		
MPLING CONDITIONS	3012			Owner		
Bailed C Pump Dipped C Tap	Water level		Discharge		Sample type	R
1(00400) 7.5 (STRU	Conductivity (Unco	nrected) ζζζζ) μmho	Water Temp. (00010)	.9 °C	Conductivity at	t 25°C (00094) μmhc
Id comments	L VOC FA	Jun Frank	emmonts	- \	L	-
MPLE FIELD TREATME to. of samples ubmitted / XNA: No acid added ( ALYTICAL RESULTS fr NA	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	er boxes XF: Filtered in 0.45 μme ΩA: Units Date analyze	field with $\Box$ A: mbrane filter $\Box$ A: $\Box$ 5 $\Box$ 1 conc. $HNO_3$ a	2 ml H <sub>2</sub> SO <sub>4</sub> /	Ladded	ning HNO3 addec
MPLE FIELD TREATME lo. of samples / ubmitted / XNA: No acid added [ ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095) Total non-filterable (esidue (suspended))	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	Er boxes XF: Filtered in 0.45 μme ΩA: Units Oate analyze μππο	field with mbrane filter $\Box A$ : 5ml conc. $HNO_3$ a a From $F_{,}$	$2 \text{ ml } H_2 SO_4 /$ $dded \qquad \Box 2$ $NA \text{ Sample}$ $2.25$	Ladded A: 4ml fur :: mg/1	ning HNO <sub>3</sub> added Data <u>Analyzed</u> <u>5/14</u>
MPLE FIELD TREATME lo. of samples ubmitted / $\Box$ $\leq$ NA: No acid added [ ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: $p \uparrow J$	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	r boxes XF: Filtered in 0.45 μme ΩA: Units Date analyze μmmo <u>siz</u>	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From <u>F</u> , Calcium Rotassium Magnesium	$2 \text{ ml } H_2 \text{SO}_4 / \\ \text{dded} \qquad \Box_4^2 \\ \text{NA Sample} \\ \frac{225}{4, \text{is}5} \\ \frac{47}{223} \\ \end{array}$	Ladded A: 4ml fur :: mg/1 mg/1 mg/1	Data Data <u>Analyzed</u> <u>5/14</u>
MPLE FIELD TREATME         a. of samples       /         ubmitted       /         XA: No acid added       I         ALYTICAL RESULTS fr         NA         Conductivity (Corrected)         25°C (00095)         Total non-filterable         residue (suspended)         (00530)         Cther:         Cther:	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: orn SAMPLES	er boxes XF: Filtered in 0.45 μme I A: Units Date analyze μmmo <u>siz</u>	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From , Calcium , Calcium , A gnesium , X Socium , X Socium , X Siczronat	$2 \text{ ml } H_2 SO_4/$ $dded \qquad \square 2$ $NA \text{ Sample}$ $2.25$ $4.65$ $4.7$ $2.23$ $2.35$	Ladded A: 4ml fur 	Data Data <u>Analyzed</u> <u>5/14</u> <u>5/14</u>
MPLE FIELD TREATME la. of samples ubmitted / XNA: No acid added [ ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (C0530) Cther: Cther: Cther: AH-SO. Nitrate-N <sup>+</sup> , Nitrate-N total (CO570)	NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	r boxes XF: Filtered in 0.45 μme I A: Units Oate analyze μmno <u>s/i</u>	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From, Calcium, Calcium, A Potassium, A Sodium, X Sulfata	$2 \text{ ml } H_2 SO_4/$ $dded \square 2$ $NA \text{ Sample}$ $225$ $4,55$ $47$ $223$ $2 356$ $44$ $87$	Ladded A: 4ml fur 	ning HNO <sub>3</sub> added Date Analyzed 5/14 5/14 5/14 5/5 5/5 5/5
MPLE FIELD TREATME lo. of samples ubmitted / XNA: No acid added ( ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: A-H-SO. Nitrate-N +, Nitrate-N total (00630) Ammonia-N total (00610) Total Kjekdani-N	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	ar boxes         XF:       Filtered in 0.45 μme         IA:         Units Oate analyze         μmno       -/-/-         mg/l          mg/l          mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From, Calcium,	$2 \text{ ml } H_2 SO_4/$ $dded \square 2$ $NA \text{ Sample}$ $2.25$ $4.65$ $4.7$ $2.23$ $2.33$ $2.33$ $4.44$ $8.7$ $3.7$ $4.7$ $3.7$ $3.33$ $4.44$ $8.7$ $3.7$ $4.54$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $4.7$ $5.7$ $5.7$ $4.7$ $5.7$	Ladded A: 4ml fur 	ning HNO <sub>3</sub> added Data <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u>
MPLE FIELD TREATME la. of samples ubmitted / XNA: No acid added [ ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095)	NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	Price       Crime       Crime    <	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From, Calcium	$2 \text{ ml } H_2 SO_4/$ $dded \qquad \square 2$ $NA \text{ Sample}$ $225$ $4,65$ $47$ $223$ $235$ $47$ $273$ $355$ $47$ $87$ $355$ $47$ $87$ $355$ $47$	Ladded A: 4ml fur 	ning $HNO_3$ added Date Analyzed 5/14 5/14 5/14 5/5 5/5 5/5
MPLE FIELD TREATMS lo. of samples ubmitted / $\square$ $\langle$ NA: No acid added [ ALYTICAL RESULTS fr NA Conductivity (Corrected) 25°C (00095) $\square$ Total non-filterable residue (suspended) (00530) $\square$ Cther: $\square$ Cther: $\square$ Cther: $\square$ Cther: $\square$ Nitrate-N $\neg$ , Nitrate-N total (00630) $\square$ Armonia-N total (00610) $\square$ Total Kjekdani-N ( ) $\square$ Chemical oxygen demand (00340) $\square$ Total organic carbon ( ) $\square$	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES iタリ・3	er boxes         XF:       Filtered in 0.45 μme         I A:         Units Date analyze         μmno       S/S         mg/l       g/l         mg/l       g/l         mg/l       g/l         mg/l       g/l	field with mbrane filter A: Sml conc. HNO <sub>3</sub> a From, Calcium /, Cation /, Cation /,	$2 \text{ ml } H_2 SO_4/$ $dded \qquad \square 2$ $NA \text{ Sample}$ $225$ $4,65$ $47$ $223$ $2 336$ $47$ $87$ $65 156$ Anion Ba	Ladded A: 4ml fur 	Data Data <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u>
MPLE FIELD TREATME         Io. of samples ubmitted       /         Io. of samples (NA: No acid added       Io.         ALYTICAL RESULTS fr NA       /         Conductivity (Corrected) 25°C (00095)       _         Total non-filterable residue (suspended) (00530)       _         Cther:       _         Arti-SO_       _         Nitrate-N +, Nitrate-N total (00630)       _         Arti-SO_       _         Nitrate-N +, Nitrate-N total (00630)       _         Chemical oxygen demand (00340)       _         Total organic carbon (       _         Other:       _         Other:       _	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: om SAMPLES	Price         Filtered in 0.45 μme           Δ F:         Filtered in 0.45 μme           Δ A:         Δ           Units Oate analyze         Δ           μmno         Δ/           mg/l         57/5           mg/l         57/5           mg/l         1           mg/l         1           mg/l         1           mg/l         1           mg/l         1           mg/l         1	field with mbrane filter A: Sml conc. HNO <sub>3</sub> a From, Calcium /, Calcium /,	2 ml H <sub>2</sub> SO <sub>4</sub> / dded $\square$ NA Sample 225 4,65 47 223 236 447 223 236 47 65 152 0 Anion Ba	Ladded A: 4ml fur 	ning HNO <sub>3</sub> added Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u>
MPLE FIELD TREATMS         Io. of samples ubmitted       /         IQ. NA: No acid added       II         X.NA: No acid added       II         ALYTICAL RESULTS fr       NA         Conductivity (Corrected)       25°C (00095)         Total non-filterable residue (suspended)       III         (00530)       III         Cther:       III         Other:       IIII         AH-SO.       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	NT — Check prope NF: Whole sample (Non-filtered) Other-specify: orn SAMPLES iヨリ3	er boxes         XF:       Filtered in 0.45 μme         I A:         Units Date analyze         μmno       S/S         mg/l	field with mbrane filter A: Sml conc. HNO <sub>3</sub> a From , Calcium , Calciu	$2 \text{ ml } H_2 SO_4/$ $dded \qquad \square 2$ $NA \text{ Sample}$ $225$ $4,65$ $47$ $223$ $2 336$ $47$ $273$ $2 336$ $47$ $273$ $2 36$ $47$ $273$ $2 36$ $47$ $273$ $2 36$ $47$ $273$ $2 36$ $47$ $273$ $2 36$ $47$ $7$ $273$ $47$ $7$ $273$ $47$ $7$ $7$ $7$ $7$ $7$ $7$ $7$ $7$ $7$	Ladded A: 4ml fur mg/1mg/1mg/1mg/1mg/1 mg/1mg/1 mg/1mg/1 2 mg/1 1ance eportedRe 2 c ZC	ning HNO <sub>3</sub> added Data <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/5</u>



•

•



	CATIONS					ANIONS	
ANALYT	E MEQ.	PPM	DET	r.LIMIT	ANALYT:	E MEQ.	PPM
Ca Mg Na K	11.23 3.86 9.70 0.12	225.00 47.00 223.00 4.68	< < < <	3.0 10.0 10.0 0.5	HCO3 S04 Cl	5.51 18.46 1.24	336.00 886.00 44.00
Mn Fe	0.00 0.00	0.00 0.00			NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	24.91	499.68				25.21	1266.00
TDS (me	asured) =	1562.00	וקק	n	····		
Ion Ba	lance =	98.82	%		Sampl Date	e No. out/By	=8701468 31467

.

•••

. ·

.\_\_\_\_\_

	SCIENTIFIC LAE 700 Camino de S Albuquerque, NM	ORAT alud NE 87106 (505) 841-	2555			VATER CHEMISTRY
DATE RECEIVED				00 🗆 59600 🕅	OTHER: 82	235
Collection DATE 04122187 Collection TIME	7	SITE INFORM- > ATION	Samole location	SUN TERRA	- Ku	TZ PLANT
Collected by - Personi CONER 1	HUDERED	N /0CD	Collection site description	n	<u>Coor</u>	WG TONER
SEND FINAL REPORT TO Attn	ENVIRONMENT NM OIL CONS State Land Santa Fe, I	TAL BUREAU SERVATION DI Office Bldg NM 87504-208	VISION , PO Box 208 88	8		
Pho SAMPLING CC	ne: 827-58 NDITIONS				weil code Cwner	<u> </u>
C Bailed	🗆 Pump 🗆 Tap	Water level		Discharge		
рH (00400) 7.	s'strip)	Conductivity (Unco	prected) 1325µmho	Water Temp. (00010)	<b>∽ •c</b>	Conductivity at 25 °C (00094)
NA	Corrected)		Units Date analyze	From,	NA Sample	e: Data Analyzed
□ Total non-filter residue (susp (00530) Cther: Cther: Cther:	able ended) by A.A	2.005		Calcium Potassium Magnesium Sodium		mg/1 mg/1 mg/1 mg/1
AHTSO.						wg/ +
<ul> <li>☐ Nitrate-N + . N total (C0630)</li> <li>☐ Ammonia-N tr</li> </ul>	litrata-N 		. mg/l	Sulfzta		 
<ul> <li>Total Kjeidani</li> <li>( )</li> <li>Chemical oxy demand (003)</li> </ul>	•N gen 40)		. mg/l		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
□ Total organic ( ()) □ Cther:	carbon		mg/l	- Cation/2	Anion Ba	lance
	×3		•	-	6	1 187 (- Cal-
						A



T0:	Suntarra Gas Processing ATTN: Gary Jordan	DATE 0661	: 29 May	1987		·
	PO BCX 2106					
	Arbuquerque, NM 8/105					
SAMP	LE ID : #2					
ANAL	YTE	ANALYTICAL	RESULTS	NOMINAL	DETECTION	LIMITS
As	· ·	0.28	mg/l		0.05 mg/1	L.
Ba		<1.0	mg/l		1.0 mg/1	L
Cđ		<0.01	mg/l		0.01 mg/1	L
Cr		<0.05	mg/l		0.05 mg/1	1
CN	•	0.03	mg/l		0.01 mg/1	L
F		0.70	mg/l		0.01 mg/1	1
Pb		0.09	mg/l		0.01 mg/	1
Tota	l Hg	<0.002	mg/l		0.002 mg/1	L
NO 3	as N	<0.01	mg/l		0.01 mg/	L
Se		0.020	mg/l		0.002 mg/	L
Ag		<0.05	mg/l		0.05 mg/	1
Benz	ene	0.14	mg/l		0.001 mg/	L
Tolu	lene	0.24	mg/l		0.001 mg/	1
CCL	4	<0.01	mg/l		0.01 mg/	L ·
1,2	Dichloroethane	<0.001	mg/l		0.001 mg/	1
1,1	Dichlorcethylene	<0.001	mg/l		0.001 mg/	1
1,1,	2,2 Tetrachlorcethylene	<0.001	mg/l		0.001 mg/	L
1,1,	2 Trichlorcethylene	<0.001	mg/l		0.001 mg/	1
Ethy	1 Benzene	0.011	mc/l		0.001 mg/	1
X71	nes .	0.12	mg/l		0.001 mg/	1
Meti	zlene Chloride	0.31	mc/l		0.001 mg/	1
CC.	3	<0.001	mc/l		0.001 mg/	<u>T</u>
1,1	Dichlorcethame	<0.001	ng/l		0.001 mg/	1
EDE		<0.001	mc/l		0.001 mg/	1
1,1,	1 Trichlorsethane	<0.001	mg/l		0.001 mg/	1
1,1,	2 Trichlorsethane	<0.001	mg/l		0.001 mg/	1
1,1,	2,2 Tetrachloroethane	<0.001	mg/l		0.001 mg/	I
Viny	l Chloride	<0.001	mg/l		.0.001 mg/	1
Cu	•	0.03	mg/l		0.01 mg/	1
C1		89	mg/l		1.0 mg/	1
Fe	•	2.63	mg/l		0.3 mg/	1
Mn		0.39	mg/l		0.01 mg/	1
SO 4	4 *	771	mg/l		1.0 mg/	l
Zn		0.034	mg/l	• • •	0.008 mg/	1
Al		<0.1	mg/l		0.1 mg/	1
В		0.376	mg/l		0.04 mg/	1
Co		<0.03	mg/l		0.03 mg/	l
Mo		<0.05	mg/l		0.05 mg/	1
Ni		0.182	mg/l		0.01 mg/	1

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director

÷

·		/i	
REPORT T	o: David Boyer	S.L.D. No. OR- <u>COVE</u>	- 37
	N.M. Oil Conservation Divisi	ON DATE REC.	1-27-;
	P. O. Box 2088		
	Santa Fe, N.M. 87504-2088	PRIORITY	
PHONE(S):	827-5812	USER CODE: 181212131	5
SUBMITTE	R: David Boyer	CODE: 12 16 10 1	
SAMPLE C	OLLECTION CODE: (YYMMDDHHMMIII)	17101412121/1215151 K	381
SAMPLE T	YPE: WATER 🖾, SOIL 📋, FOOD 📺, OT	HER: CODE: []	
COUNTY:	Son Aren ; CITY: Boo	mfieli) CODE:	
LOCATION	CODE: (Township-Range-Section-Tracts)	8 N + 1 1 W + 1 3 + 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LON06E243
ANALYSES	REQUESTED: Please check the appropriate bo	x(es) below to indicate the type of analytical scr	eens
required. W	Thenever possible list specific compounds suspected	ed or required.	
	PURGEABLE SCREENS	EXTRACTABLE SCREENS	
	Aliphatic Purgeables (1-3 Garbons)	(751) Aliphatic Hydrocarbons	
	Aromatic & naiogenated rurgeaoles Mass Spectrometer Purraables	(755) Base/Neutral Extractables	
	Tribalomethanes	(758) Herbicides Chlomphenory ac	id
	Other Specific Compounds or Classes	(759) Herbicides, Triazines	••• <b>•</b>
		(760) Organochlorine Pesticides	
	· · ·	(761) Organophosphate Pesticides	
		(767) Polychlorinated Biphenyls (P	CB's)
		(764) Polynuclear Aromatic Hydroc	arbons
17		(762) SDWA Pesticides & Herbicid	les
	Conductivity= <u>2610</u> umbo/cm at <u>21,5</u> °	C; Chlorine Residual=mg/l	
Dissolved (	Dxygen=mg/l; Alkalinity=mg/l; E	'low Rate/	
Depth to	waterft.; Depth of wellft.; Perf	oration Interval A.; Casing:	
Sampling I	ocation, Methods and Remarks (i.e. odors, etc.)	Oilywate H.C. odonana	يتصنصك
5	Taka ford = 1	(ucon) - Receiver all	's Rom
<u> </u>	restevente, 12xcent sch	Tiel Semplo West Side Hover	\$10-0
I certify th	tast the results in this block accurately reflect !	the results of my field analyses, observations and	1 1-
activities.(s	accompanies A Computer ( C'	Method of Shipment to the Lan	<u>هن بوست</u>
Samulae w	ETE Dreserved as follows:	andat and at	
אייייייייייייייייייייייייייייייייייייי	No Preservation: Cample stand at	temperature	1
L Pater	Samola stored in an ise bath /Mr.+ P		,
NI P.N.	SO Sample Preserved with Colline Milerile	ta ta vemare ellavina natival	•
CHAIN O	CUSTODY	ie io remove chlottis lesignar	
I certify t	hat this sample was transferred from	to	
at (locatio	n)	on / / - :	and the
the statem	ents in this block are correct. Evidentiary Seale	: Not Sealed T Seals Intact: Yes T No	 T :
Signatures			<b>بر بر الم</b>
ang nasures			

$\mathcal{C}$			
NALYSES PERFOR		LAB. NO OR- 689	
THIS PAGE	FOR LABOR	LATORY RESULTS ONLY	• 
his sample was tested using the analytical screeni	ng method(s)	checked below:	
PURGEABLE SCREENS   (753) Aliphatic Purgeables (1-3 Carbons)  (754) Aromatic & Halogenated Purgeables (765) Mass Spectrometer Purgeables (766) Trihalomethanes Other Specific Compounds or Classes		EXTRACTABLE SCREENS (751) Aliphatic Hydrocarbons (760) Organochlorine Pesticides (755) Base/Neutral Extractables (758) Herbicides, Chlorophenoxy acid (759) Herbicides, Triazines (760) Organochlorine Pesticides (761) Organophosphate Pesticides (767) Polychlorinated Biphenyls (PCB's) (764) Polynuclear Aromatic Hydrocarbons (762) SDWA Pesticides & Herbicides	
ANA	LYTICA	L RESULTS	
COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC.
hologeneted susceeder	U.D		
Asimptic purper after			
bernand il	1,00		
Tilliene	8:2		
2 thulling and	TIR	·····	
d a fall	TIP		·
	700		· · ·
xuise	- <u>x</u> .2 		
diffine	- Ki		
• DETECTION LIME • X	25-47/1	+ DETECTION LIMIT +	
BEREVIATIONS USED: N D = NONE DETECTED AT OR ABOVE T R = DETECTED AT A LEVEL BELOW [ RESULTS IN BRACKETS ] ARE UNCONFI CHATORY REMARKS: TANKS Sand	THE STATED THE STATED RMED AND/C	DETECTION LIMIT DETECTION LIMIT (NOT CONFIRMED) OR WITH APPROXIMATE QUANTITATION	CUT N

CERTIFICATE OF ANALYTICAL PERSONNEL

: :

*...* 

Sec. 12.

ż

- .

4 . . . . . . Seal(s) Intact: Yes 🔲 No 🕂 Seal(s) broken by: <u>mo</u> scal date: I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample. . . 53 Date(s) of analysis: 26 Marin -.- Analyst's signature: I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block. ...... ----...... Reviewers signature: mo. . . . . . . .
DATE RECEIVED	NOL		300 🗌 59600 🖄	X OTHER: 82	235	
<u>6412187</u>	SITE		INTGERA -	KUTE I	PLANT	
1255		Collection site descrip	tion	Pano	1	
CONSE / HUOFES	020 /0CD				·	
	MENTAL BUREAU		· · · · ·			· · · · · · · · · · · · · · · · · · ·
END NM OIL (	CONSERVATION DI	VISION	100			
REPORT State La Do Santa Fe	a. NM 87504-208	, PU DUX. 20				
Attn: David	Boyer					
Dhanas 027	5019			Station/	<del></del>	
	-3812 S			Owner	·······	
	Water level		Discharge	<u> </u>	Sample typ	96
<u>↓</u> Dipped □ Tap			Water Temp (00010)		Conductivit	48 N at 25°C (00004)
6.5 (SZ2	(b)	$\angle / \bigcirc \mu mhc$	0	24.5 00	Conductivi	(y at 25 °C (00034)
Field comments	100 1100	Shart (	- an Cam m	Dr Tal		······································
No. of samples submitted	Image: Image: NF: Whole sample (Non-filtered)         Image: Image: Other-specify: Image: NF: NF: NF: NF: NF: NF: NF: NF: NF: NF	F: Filtered 0.45 μπ □A:	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub>	$2 \text{ ml H}_2 \text{SO}_4$	Ladded	fuming HNO3 a
No. of samples submitted	INF: Whole sample (Non-filtered)	F: Filtered 0.45 μπ ΔΑ:	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub>	$2 \text{ ml H}_2 \text{SO}_4$	'Ladded A: 4m1	fuming HNO <sub>3</sub> a
No. of samples submitted	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES	♀ F: Filtered 0.45 μn □ A: Units Date analy	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub>	2 ml H <sub>2</sub> SO <sub>4</sub> / added	A: 4m1	fuming HNO <sub>3</sub> av Date
No. of samples submitted	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES	$\Im F: \begin{array}{c} Filtered \\ 0.45 \ \mu n \\ \Box A: \end{array}$	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub>	2 ml H <sub>2</sub> SO <sub>4</sub> / added	A: 4ml	fuming HNO <sub>3</sub> an Data <u>Analyzed</u>
No. of samples submitted SNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Tictal non-filterable residue (suspended)	Check prepare NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES 2566	SF: Filtered 0.45 μπ □ A: Units Date analy μmho	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> zed From	2 ml H <sub>2</sub> SO <sub>4</sub> / added	Ladded A: 4m1	Date Date <u>Analyzed</u> <u>5//c</u>
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Tictal non-filterable resicue (suspended) (00530)	Check preprint - Check	SF: Filtered 0.45 µm □A: Units Date analy µmho	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub> zed From Calcium X Petassium	2 ml H <sub>2</sub> SO <sub>4</sub> / added , MH-SAMF 292 7.41	/Ladded A: 4m1 	fuming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5//c</u> (sli3
No. of samples submitted  XNA: No acid added  ANALYTICAL RESULTS  NA  Conductivity (Corrected)  25°C (00095)  Total non-filterable residue (suspended) (00530)  Cother: Cothe	INF: Whole sample (Non-filtered) Other-specify: from SAMPLES	F:       Filtered         0.45 μm         □ A:         Units Date analy         μmho       ≤/:-√         mg/l	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> zed From Calcium X Petassium Magnesium	2 ml H <sub>2</sub> SO <sub>4</sub> / added , MA SAMP 292 7.41 36	/L added A: 4m1 	Data Data <u>Analyzed</u> <u>5//c</u> S/iz
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cother: Cother: Cother: Cother: Cother:	Check prop NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES 2566	SF: Filtered 0.45 µm □A: Units Date analy µmho mg/l	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub> zed From Calcium X Calcium X Potassium Magnesium Sodium	2 ml H <sub>2</sub> SO <sub>4</sub> / added NH-SAMF 292 7.41 36 305	/L added A: 4m1 	fuming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5//c</u> (sli3) <u>5//ic</u> s/i3
No. of samples submitted  XNA: No acid added  ANALYTICAL RESULTS  NA  Conductivity (Corrected)  25°C (00095)  Total non-filteracle resicue (suspended) (00530)  Cther: Cther: Cther: Cther:	Check prop NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES 2566	SF: Filtered 0.45 µm □ A: Units Date analy µmho . mg/l	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> Zed From Calcium X Calcium Potassium Magnesium X Sodium Sodium Sicartona	2 ml H <sub>2</sub> SO <sub>4</sub> / added , H Samp NA Samp 292 7.41 36 305 te 705	Ladded A: 4m1 	fuming HNO3 an Date <u>Analyzed</u> <u>5//c</u> /sli3 <u>5//c</u> s/i3 <u>5//c</u>
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cother: Co	Check prop NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES 2566	Image: Signal state in the second	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub> Zed From Calcium Calcium Calcium Magnesium Sodium Sodium Chioride	2 ml H <sub>2</sub> SO <sub>4</sub> / added NH-SAMF 292 7.41 36 36 305 te 705 88	/L added A: 4m1 	fuming $HNO_3$ and Date Analyzed 5//cc
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (C0530) Cother: Co	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	∑ F: Filtered 0.45 μn □ A: Units Date analy µmno	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> Zed From Calcium Detassium Magnesium Sodium Sodium Sodium Chioride Sulfate	2 ml H <sub>2</sub> SO <sub>4</sub> / added , , , , , , , , , , , , , , , , , ,	/L added A: 4m1 	fuming $HNO_3$ and Data <u>Analyzed</u> 5//12 5//12 5//12 5//12 5/12
No. of samples submitted  XNA: No acid added  ANALYTICAL RESULTS  NA  Conductivity (Corrected) 25°C (00095)  Total non-filterable residue (suspended) (C0530) Cother:	Check preprint - Check	SF: Filtered 0.45 µm □ A: Units Date analy µmho mg/l mg/l	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub> Zed From Calcium Calcium Potassium Magnesium Sodium Sodium Sicarbona Chloride MI Calcium	2 ml H <sub>2</sub> SO <sub>4</sub> / added <i>NH-SAMP</i> 292 7.41 36 303 te 703 88 629 ids 22	Ladded A: 4m1 	fuming $HNO_3$ and Date Analyzed 5//12 5//12 5//12 5//12 5//12 5/12 5/12 5/12 5/12
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Tictal non-filteracle residue (suspended) (C0530) Cother: C	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	SF: Filtered 0.45 µm □ A: Units Oate analy µmho mg/l mg/l mg/l	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> Zed From Calcium Calcium A Calcium A Calci	$2 \text{ ml H}_2 \text{SO}_4 \text{/}$ added 7 $1000 \text{ ml}^2$ $1000 \text$	Ladded A: 4m1 	fuming HNO <sub>3</sub> a Data Analyzed 5//12 5//12 5//12 5//12 5//12 5//12 5//12 5//12 5//12 5//12
No. of samples submitted XNA: No acid added ANALYTICAL RESULTS NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (CC530) Cther: Cth	Check preprint - Check	SF: Filtered 0.45 µm □ A: Units Date analy µmho mg/l mg/l mg/l	in field with nembrane filter A: 5m1 conc. HNO <sub>3</sub> Zed From Calcium Calcium A Calcium A Calci	2 ml H <sub>2</sub> SO <sub>4</sub> / added , MA-SAMF 292 7.41 36 305 22 88 629 ids 22	Ladded A: 4m1 	fuming $HNO_3$ and Date Analyzed 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25°C (00095)         Total non-filteracle resicue (suspended) (C0530)         Cther:         Cther:         Cther:         Cther:         Cther:         Nitrate-N +, Nitrate-N total (C0630)         Annonia-N total (C0610)         Total Kjeldani-N ()         Chemical oxygen demand (00340)         Total organic carpon	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	∑ F: Filtered 0.45 µm             □ A:             Units Date analy             µmho	in field with nembrane filter A: 5ml conc. HNO3 Zed From Calcium Calcium Potassium Magnesium Sodium Sodium Sodium Sulfate Magnesi	2 ml H <sub>2</sub> SO <sub>4</sub> / added , NA-SAMF 292 7.41 36 305 22 88 629 ids 22	Ladded A: 4m1 	fuming HNO <sub>3</sub> and Data Analyzad 5//cc
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25°C (00095)         Total non-filterable residue (suspended) (C0530)         Cther:         Cther:<	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	∑ F: Fiitered 0.45 µm □ A: Units Date analy µmho mg/l mg/l mg/l mg/l mg/l mg/l	in field with nembrane filter A: 5m1 conc. HNO3 Zed From Calcium Calcium A Calcium A Calcium A Calcium Calcium Calcium A Calcium A Calcium	2 ml H <sub>2</sub> SO <sub>4</sub> / added , MA-SAMF 292 7.41 36 305 te 702 88 629 ids 22 Anion Ba	Ladded A: 4m1 	fuming $HNO_3$ and Date Analyzed 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2 5/1/2
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25°C (00095)         Total non-filteracle resicue (suspended) (C0530)         Cther:         Cther:         Cther:         Cther:         Nitrate-N +, Nitrate-N total (C0630)         Annonia-N total (C0610)         Total Kjeldani-N ()         Chemical oxygen demand (00340)         Total organic carbon ()         Cther:         Other:         Other:	□ NF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	∑ F: Filtered 0.45 µm         □ A:             Units Date analy        A:	in field with nembrane filter A: 5ml conc. HNO3 Zed From Calcium Calcium Potassium Sodium Sodium Sodium Sodium Sodium Sulfate Nordal Sol Cation/ Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added , MA-SAMF 292 7.41 36 303 te 836 303 te 836 303 te 836 303 te 836 303 te 836 303 te Anion Ba	A: 4m1 A: 4m1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg	Euming HNO3 a Data <u>Analyzad</u> <u>5//cc</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u> <u>5//ic</u>
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25°C (00095)         Total non-filterable residue (suspended) (CC530)         Cther:         Cther:         Cther:         Cther:         AH-SO.         Nitrate-N +, Nitrate-N total (C0630)         Ammonia-N total (C0610)         Total Kjeldani-N (         Chemical oxygen demand (00340)         Total organic carbon (         Other:         Other:         Other:	INF: Whole sample (Non-filtered) □ Other-specify: from SAMPLES □ 566	∑ F: Filtered 0.45 µm             □ A:             Units Oate analy             µmho	in field with nembrane filter A: 5m1 conc. HNO3 Zed From Calcium Calcium Analyst Cation/ Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added 7 , M = 5 A MF 292 7.41 36 305 te 703 88 625 ids 22 Anion Ba Date F 5	Ladded A: 4m1 mg/1 mg/1 mg/1 mg/1 mg/1 2 mg/1 2 mg/1 1 mg/1 2 mg/	Euming HNO3 a Date Analvzed 5//12 5//12 5//12 5/13 5/12 5/12 5/12 5/12 Feviewed by
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25°C (00095)         Total non-filterable residue (suspended) (00530)         Cther:         Cther:         Cther:         Cther:         AH-SC.         Nitrate-N + , Nitrate-N total (00630)         Ammenia-N total (C0610)         Total Kjeldanl-N (         Chemical oxygen demand (00340)         Cther:         Other:         Other:         Laboratory remarks	$\square NF: Whole sample(Non-filtered)  \square Other-specify: from SAMPLES 2566$	∑ F: Filtered 0.45 µm         □ A:         □         □         □	in field with nembrane filter A: 5ml conc. HNO3 Zed From Calcium Potassium Magnesium Sodium Sodium Sodium Solioride Sulfate Magnasium Chioride Sulfate Chioride Sulfate Cation/ Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added 7 , MA-SAMP 292 7,41 36 303 te 703 88 629 ids 22 Anion Ba Date F 5	Ladded A: 4m1 mg/1 mg/1 mg/1 mg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 cmg/1 mg/1 cmg	fuming $HNO_3$ and Date Analyzed 5//12 5
No. of samples submitted         No. of samples submitted         XNA: No acid added         ANALYTICAL RESULTS         NA         Conductivity (Corrected)         25 °C (00095)         Total non-filteracle residue (suspended) (C0530)         Cther:         Cther:         Cther:         Cther:         Nitrate-N +, Nitrate-N total (C0630)         Annonia-N total (C0610)         Total Kjeldani-N ()         Chemical oxygen demand (00340)         Total organic carbon ()         Cther:         Other:         Dotter:         Other:	Provide the set of the	∑ F: Filtered 0.45 µm         □ A: □ A: Units Date analy µmho	in field with nembrane filter A: 5ml conc. HNO <sub>3</sub> Zed From Calcium Calcium Potassium Anagnesium Sodium Sodium Sodium Sodium Chioride Sulfate Chioride Conce Chioride Chio	2 ml H <sub>2</sub> SO <sub>4</sub> / added 7 , MA-SAMF 292 7.41 36 30 30 5 22 629 1ds 22 Anion Ba	Ladded A: 4m1 mg/1 mg/1 mg/1 mg/1 mg/1 C mg/1 SE mg/1 SE mg/1 C 1ance leported 26 E7	fuming HNO3 a Data <u>Analyzad</u> <u>5//c</u> <u>5//i</u> <u>5//i</u> <u>5//i</u> <u>5//i</u> <u>5//i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u> <u>5/i</u>

4	
•	

	CATIONS				ANIONS	-
ANALYT	E MEQ.	PPM	DET.LIMIT	ANALYTE	MEQ.	PPM
Ca Mg Na K	14.57 2.96 13.40 0.19	292.00 36.00 308.00 7.41	< 3.0 < 10.0 < 10.0 < 0.5	HCO3 S04 C1	11.50 13.10 2.48	702.00 629.00 88.00
Mn Fe	0.00 0.00	0.00		NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	31.11	643.41			27.09	1419.00
TDS (me	asured) =	2288.00	mqq	· . ·	م تحسیر م	
Ion Ba	lance =	114.85	2	Sample Date c	No. No.	=8701469 <u> () Shulu</u>

700 Camino de Albuquerque, I	ABORATO JION Salud NE NM 87108	(	and NITR	VATER CHEMISTR	Y
AECEIVED		<u>300 🗌 59600 🕅 🗸 O</u>	THER: 82	235	
24/22/87		SUNTERRA - 1	CUTE ;	PLANT	
1255	Callection site descrip	21100	$\mathcal{D}$		
BOYGR HNOERSO	<u>/0CD</u>		<i></i>		
ENVIRONME END NM OIL CO INAL State Lan EPORT Santa Fe, Attn: David B	NTAL BUREAU NSERVATION DIVISION d Office Bldg, PO Box 20 NM 87504-2088	)88			
	***************************************		Station/		
Phone: 827-9	5812		weil code		
AMPLING CONDITIONS			Owner		
C Bailed C Pump S Dipped C Tap	Water level	Cischarge		Sample type GRAAS	
PH (00400) 6.5 (Strip	) Conductivity (Uncorrected) $\exists \mathcal{L} / \mathcal{D} \mu mh$	0 Water Temp. (00010)	V.T. °C	Conductivity at 25 °C (00	094) µmha
Field comments	11OC Short FEI C	Stampan Tal		. <u>.</u>	
No. of samples					
submitted	NF: Whole sample (Non-filtered) F: Filtered 0.45 µl Other-specify:	tin field with A: 2 membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> /	Ladded	103 addeo
Submitted	NF: Whole sample (Non-filtered) Other-specify: A: bm SAMPLES	tin field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H₂SO₄/ ded	Ladded A: 4ml fuming HN	103 addec
Submitted	NF: Whole sample (Non-filtered) Other-specify: M SAMPLES Units Date analy	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H₂SO₄/ ded ⊠ NA Sample	Ladded A: 4ml fuming HN e: Data <u>Analyz</u>	i0 <sub>3</sub> addeo
Submitted	NF: Whole sample (Non-filtered) F: Filtered 0.45 µl Other-specify: M SAMPLES Units Date analy umho	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, the filter, the fil	ml H <sub>2</sub> SO <sub>4</sub> / ded X	Ladded A: 4ml fuming HN e: Data <u>Analyz</u> mg/l	103 addeo
submitted	NF: Whole sample (Non-filtered) F: Filtered 0.45 µl Other-specify: M SAMPLES Units Date analy umho	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, t Calcium	ml H₂SO₄/ ded ⊠ NA Sampie	Ladded A: 4ml fuming HN A: Data Analyz mg/1 mg/1	io <sub>3</sub> addee
submitted	NF: Whole sample (Non-filtered) ♀F: Filtered 0.45 µl Other-specify: □A: om SAMPLES Units Date analy µmho (µmho	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, t Calcium Potassium	ml H <sub>2</sub> SO <sub>4</sub> / ded X	Ladded A: 4ml fuming HN e: Data <u>Analyz</u> mg/1 mg/1	10 <sub>3</sub> addeo
submitted	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl Other-specify: SAMPLES Units Date analy umho mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, t Calcium Potassium Magnesium	ml H₂SO₄/ ded ⊠ NA Sampie	Ladded A: 4ml fuming HN e: Data <u>Analyz</u> mg/1 mg/1 mg/1	i0 <sub>3</sub> addee
submitted	NF: Whole sample (Non-filtered) ♀F: Filtered 0.45 µl 0 Other-specify: □A: om SAMPLES Units Date analy µmho mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, 1 Calcium Potassium Magnesium Sodium	ml H <sub>2</sub> SO <sub>4</sub> / ded	Ladded A: 4ml fuming HN e: Date <u>Analyz</u> mg/1 mg/1 mg/1 mg/1	10 <sub>3</sub> addeo
Submitted	NF: Whole sample SF: Filtered (Non-filtered) SF: Filtered 0.45 µl Other-specify: Dm SAMPLES Units Date analy units Date analy mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, t Calcium Potassium Magnesium Sodium Bicarbonate	ml H₂SO₄/ ded ⊠ NA Sampie	Ladded A: 4ml fuming HN a: Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1	i03 addeo
submitted     Image: Submitted       Image: NA: No acid added	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl Other-specify: SAMPLES Units Date analy umho mg/1	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad From, ' Calcium Calcium Magnesium Sodium Chloride	ml H <sub>2</sub> SO <sub>4</sub> / ded	Ladded A: 4ml fuming HN A: 0ata <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted     I       Submitted     I       NA: No acid added     I       NALYTICAL RESULTS from the second s	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl Other-specify: Dm SAMPLES Units Date analy units Date analy mg/l mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H₂SO₄/ ded ⊠ NA Sampie	Ladded A: 4ml fuming HN a: Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted     Image: Submitted       Image: NA: No acid added       Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF: Whole sample SF: Filtered (Non-filtered) SF: Filtered 0.45 µl om SAMPLES Units Date analy umho mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded X	Ladded A: 4ml fuming HN a: Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted     I       In NA: No acid added     I       In In No. I In No. In No. I In No. In No. I In No. I	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl om SAMPLES Units Date analy mg/l mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> /	Ladded A: 4ml fuming HN a: Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	i03 addeo
submitted       I         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl om SAMPLES Units Date analy umho mg/l mg/l mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded A	Ladded A: 4ml fuming HN A: 4ml fuming HN Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted       I         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF: Whole sample XF: Filterec (Non-filtered) XF: Filterec 0.45 µl Other-specify: Dm SAMPLES Units Date analy Units Date analy mg/l mg/l mg/l mg/l	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> /	Ladded A: 4ml fuming HN a: Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted       Image: Submitted         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF:       Whole sample (Non-filtered)       VF:       Filtered 0.45 µl         Other-specify:       II A:         om SAMPLES       Units Date analy	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded A NA Sample	Ladded A: 4ml fuming HN A: 4ml fuming HN Data <u>Analyz</u> mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1	103 addeo
submitted       Intervention         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF:       Whole sample (Non-filtered)       Image: F:       Filtered 0.45 µl 0.45 µl         Other-specify:       Image: A:         Image: A:       Image: A:         I	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded A NA Sample NA Sample S nion Ba Date R S	Ladded A: 4ml fuming HN A: 4ml fuming HN Data <u>Analyz</u> mg/1	And added
submitted       Image: Submitted         Image: NA: No acid added       Image: Submitted         Image: NA: No acid added       Image: Submitted         Image: NA: No acid added       Image: Submitted         Image: National Submitted       Image: Submitted         Image: Nat	NF: Whole sample SF: Filterec (Non-filtered) SF: Filterec 0.45 µl Other-specify: Units Date analy Units Date analy	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded A NA Sample NA Sample S nion Ba Date R S	Ladded A: 4ml fuming HN A: 4ml fuming HN B: Data <u>Analyz</u> mg/1	added
submitted       Intervention         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF:       Whole sample (Non-filtered)       VF:       Filtered 0.45 µll         Other-specify:       II A:         om SAMPLES       Units Date analy         Units Date analy       Impli         Implie       Implie         Implie       Imp	In field with membrane filter A: 2 Sml conc. HNO <sub>3</sub> ad	ml H <sub>2</sub> SO <sub>4</sub> / ded A NA Sample S nion Ba Date R S	Ladded A: 4ml fuming HN A: 4ml fuming HN a: Data <u>Analyz</u> mg/1	addee
submitted       Intervention         Image: NA: No acid added       Image: NA: No acid added         Image: NA: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: No acid added         Image: Na: No acid added       Image: Na: Na: Na: Na: Na: Na: Na: Na: Na: Na	NF:       Whole sample (Non-filtered)       Image: F:       Filtered 0.45 µr         I Other-specify:       Image: A:         I I A:       Image: A:         I I I I I A:       Image: A:         I I I I A:       Image: A:	A: 2 Sml conc. HNO <sub>3</sub> ad Sml conc. HNO <sub>3</sub> ad Calcium Calcium Potassium Magnesium Sodium Sodium Chloride Chloride Calcium Calcin/An Analyst	mI H <sub>2</sub> SO <sub>4</sub> / ded A NA Sample NA Sample S nion Ba Date R S	Ladded A: 4ml fuming HN A: 4ml fuming HN B: Data <u>Analyz</u> mg/1	adder

ICAP SCAN

SLD Lab No. TO 226 5/6/87 Analyst QB

्रम् सम्ब

Reviewed by: Date Reported: 05/18/87

ELEMENT	ICAP VALUE (mg/1)	AA VALUE(mg/l)
Aluminum	20.1	
Barium	0.4	
Beryllium	40.)	
Boron	0.3	
Cadmium	40.1	· · · · · · · · · · · · · · · · · · ·
Calcium	360.	
Chromium	40.1	
Cobalt	40.05	
Copper	40.)	
Iron	1.4	
Lead	40.1	
Magnesium	43.	
Manganese	0.52	
Molybdenum	<0.1	
Nickel	40.1	
Silicon	18.	
Silver	20.1	
Strontium	45	
	20.1	
Vanadia	20.1	
Zinc	20.1	
Arsenic		
Selenium		
Mercury		
,	· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·	

appendent S. In	127 1	BARAN	USER 5930	n □ 59600 ばX	лига. 82	235	
Collection CATE	<u>_1~, _10</u>	SITE	Sample location			4.1 T	
		INFORM- >		-BRRA - R	412 PL		
			Conlection site description	a	POND	/	
BOVER / ANDE	2500	/0CD			7		
SEND NM ( TINAL Stat AEPORT Sant Attn: Phone: SAMPLING CONDIT Bailed P Solipped T PH (00400) 7(52-2 Field comments	)IL CONS te Land ta Fe, I avid Boy 827-58 TIONS <sup>Jump</sup> ap	SERVATION DI Office Bldg VM 87504-208 Ver	VISION y, PO Box 208 38 (1ΑΥ 9.9 13) (1ΑΥ 9.9 13) CONSERVATION Somected) Δ C2) μmho	8 Discharge Water Temp. (00010)	Station/ well code Owner	Sample type GRAB Conductivity at 25°C (0005	94) <i>P</i>
SAMPLE FIELD TR No. of samples submitted /		T — Check prop : Whole sample (Non-filtered)	F: Filtered in 0.45 µm	n field with embrane filter A: 2	2 ml H <sub>2</sub> SO <sub>4</sub> /	/Ladded	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNE. NF. NA	EATMEN	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes ☆F: Filtered in 0.45 µm □A: Units Date analyz	in field with $\Box$ A: 2 embrane filter $\Box$ A: 2 Sml conc. $HNO_3$ and $HNO_3$ and $HNO_3$ and $HNO_3$	2 ml H₂SO₄/ dded 전	Ladded A: 4 <del>mi-fuming INO</del> Smr. 4-50-7 Units Date	) a ,3 : anali
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCE NF. NA Conductivity (Correct 25°C (00095)	EATMEN	T — Check prop : Whole sample (Non-filtered) Other-specify: 1 SAMPLES	Der boxes F: Filtered in 0.45 µm/ □ A: Units Date analyz	a field with embrane filter A: 2 Sml conc. ENO <sub>3</sub> action ad F. NA Calcium (00915) Magnesium (00925)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 22	/Ladded A: 4 <del>ml fuming IINO</del> <i>gmu Hy Sold</i> Units Date mg/l	) a ,3 : anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNE NF. NA Conductivity (Correct 25 °C (00095)	EATMEN . D NI ided D ( JLTS from med)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	Der boxes F: Filtered in 0.45 µm □ A: Units Date analyza	a field with embrane filter A: 2 Sml conc. HNO <sub>3</sub> ac ad F. NA Calcium (00915) Calcium (00925) Socium (00930)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded E	/Ladded A: 4 <del>ml fuming INO</del> mr. 4.50.1 / Units Date mg/l mg/l	) anai
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCE NF. NA Conductivity (Correct 25 °C (00095) Citati non-filterable residue (suspended (00570)	EATMEN . D NI ided D ( JLTS from med)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	Der boxes SF: Filtered in 0.45 µm □ A: Units Date analyz	a field with embrane filter A: 2 Sml conc. ENO <sub>3</sub> a ed F. NA Calcium (00915) Magnesium (00925) Socium (00930) Petassium (00935) Sicarponate (00440	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 22	/L added A: 4 <del>ml fuming IINO</del> Units Date mg/l mg/l mg/l	) anai
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCE NF. NA Conductivity (Correct 25 °C (00095) Conductivity (Corr	EATMEN . D Ni ided D ( JLTS from med) )	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	F: Filtered in 0.45 µm A: Units Date analyz	a field with embrane filter Sml conc. ENO <sub>3</sub> ac ad F. NA Calcium (00915) Calcium (00930) Socium (00930) Potassium (00935) Sicarbonate (00440) Chloride (00940)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded E	/L added A: 4 <del>mi fuming IINO</del> <u>Smr. 4, 50, 7</u> Units Date mg/l mg/l mg/l mg/l mg/l	; <u>3</u> ;3
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNE NF. NA Conductivity (Correct 25 °C (00095) Total non-filterable residue (suspended (00530) Cther: Cther:	EATMEN . C Ni ided C ( JLTS fron med)	T — Check prop : Whole sample (Non-filtered) Other-specify: 1 SAMPLES	er boxes SF: Filtered in 0.45 µm □ A: Units Date analyz 	a field with embrane filter Sml conc. ENO <sub>3</sub> au ed F. NA Calcium (00915) Calcium (00930) Socium (00930) Socium (00930) Sicarbonate (00444) Chloride (00940) Sulfate (00945) Total filteracia recidi	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 21	/L added A: 4 <del>mi fuming IINO</del> Units Date mg/l mg/l mg/l mg/l mg/l mg/l	anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCE NF. NA Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct Conductivity (Co	EATMEN . D Ni ided D ( JLTS from med) )	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	F: Filtered in 0.45 µm A: Units Date analyz	a field with embrane filter 5m1 conc. ENO <sub>3</sub> at ad F. NA Calcium (00915) Calcium (00930) Calcium (00930) Socium (00930) Potassium (00935) Sicarbonate (00440) Chioride (00940) Chioride (00945) Chioride (00945) Chioride (00945) Chioride (00945)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded E	/L added A: 4 <del>ml fuming IINO</del> <u>Smr. 49 Sorr</u> Units Date mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	; <u>3</u> anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION NF. NA Conductivity (Correct 25 °C (00095) Total non-filterable residue (suspended (00530) Cther: Cther: Cther: Cther: NF. Arit, SCA	EATMEN . C NI Ided C ( JLTS from	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes SF: Filtered in 0.45 µm □ A: Units Date analyz imho mg/l	a field with embrane filter Sml conc. ENO <sub>3</sub> au ed F. NA Calcium (00915) Magnesium (00925) Socium (00930) Potassium (00935) Sicarbonate (00440) Chloride (00940) Sulfate (00945) Total filteracle reside (dissoived) (70300) Cutter:	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 22	/L added A: 4 <u>mi fuming IINO</u> Units Date mg/l mg/l mg/l mg/l mg/l	; <u>3</u>
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNT NF. NA Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Correct Correct NF. Aritabal NF. Aritabal NF. Aritabal NF. Aritabal Correct NF. Aritabal Correct NF. Aritabal Correct NF. Aritabal Correct NF. Aritabal Correct Correct NF. Aritabal Correct Correct NF. Aritabal Correct Correct Correct NF. Aritabal Correct Co	EATMEN . D Ni Ided D ( JLTS from cred) .	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	F: Filtered in 0.45 µm □ A: Units Date analyze	a field with embrane filter Sml conc. HNO <sub>3</sub> ac ad F. NA Calcium (00915) Calcium (00930) Potassium (00930) Potassium (00930) Scitarbonate (00440) Chioride (00940) Chioride (00945) Chioride (00945) C	2 ml H <sub>2</sub> SO <sub>4</sub> / dded E	/L added A: 4 <del>ml fuming IINO</del> <u>Smr. 4; Sorr</u> <u>Units Date</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u>	), a , 3 anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Correct NF. A-1-5C4 Correct NF. A-1-5C4 Correct Correct Correct NF. A-1-5C4 Correct C	EATMEN .	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	mg/l	A field with ambrane filter Sml conc. HNO <sub>3</sub> au ad F. NA Calcium (00915) Calcium (00930) Socium (00930) Socium (00930) Sicarbonate (00444) Chloride (00940) Chloride (00944) Chloride (00945) Chloride	2 ml H₂SO₄/ dded 🔄	/L added A: 4 <u>mi fuming IINO</u> Units Date mg/l mg/l mg/l mg/l mg/l mg/l mg/l	; <u>3</u> a ; <u>3</u> a : anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION NF. NA Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Correct Correct NF. Arti-SCA Conductivity (Correct 25 °C (00095) Correct Correct Correct NF. Arti-SCA Correct	EATMEN . D Ni ided D ( JLTS from	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	mer boxes SF: Filtered in 0.45 µm/ □ A: Units Date analyz units Date analyz mg/l mg/l	A field with ambrane filter Sml conc. ENO <sub>3</sub> au ad F. NA Calcium (00915) Calcium (00930) Socium (00930) Potassium (00930) Sicarbonate (00440) Chioride (00940) Chioride (00940) Chioride (00945) Chioride (00945) Chioride (00945) Chioride (00945) Chioride (00945) Cther. F. A-rl <sub>2</sub> SO <sub>4</sub> Xitrate-N +, Nitrate V dissolved (00631)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 2	/L added A: 4 <u>ml fuming IINO</u> <u>Jmts Date</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>sf/</u>	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Correct Correct NF. Arri-SCA Nitrate N <sup>+</sup> , Nitrate total (00630) Ammonia-N total (00 Cortex () Notation () Nitrate N <sup>+</sup> , Nitrate total (00630) Ammonia-N total (00 Cortex () Cortex () Nitrate N <sup>+</sup> , Nitrate total (00630) Cortex () Cortex () Nitrate N <sup>+</sup> , Nitrate total (00630) Cortex () Nitrate N <sup>+</sup> , Nitrate total (00630) Cortex () Cortex	EATMEN . DNI ided D ( JLTS from cred)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	mg/l	n field with       A:         embrane filter       A:         Sml conc. ENO3 at         ed       F. NA         Calcium (00915)         Magnesium (00930)         Potassium (00930)         Science (00940)         Sicarbonate (00440)         Chioride (00945)         Total filterable residu         (cisscived) (70300)         Cther:         F. Artiz SO4         Xmmonia-N +, Nitrate         (00608)	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 21 5) 0) ue 	/L added A: 4 <del>mi fuming IINO</del> <u>Jan 4</u> <u>Units</u> Date <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>mg/l</u> <u>Jan 7</u> <u>Jan 7</u> <u></u>	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTIONAL RESUNCTION Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Correct NF. A-1, SCA Conductivity (Correct 25 °C (00095) Correct Correct NF. A-1, SCA Correct NF. A-1, SCA Correct C	EATMEN .	T — Check prop Whole sample (Non-filtered) Other-specify: 1 SAMPLES	mer boxes SF: Filtered in 0.45 µm/ □ A: Units Date analyze immo mg/l mg/l mg/l mg/l mg/l mg/l	a field with embrane filter Sm1 conc. ENO <sub>3</sub> au ed F. NA □ Calcium (00915) □ Magnesium (00925) □ Socium (00930) □ Petassium (00930) □ Petassium (00935) □ Sicarbonate (00440) □ Sulfate (00940) □ Sulfate (00945) □ Total filteracle residu (cissoived) (70300) □ Cther: F. A-rlz SO <sub>4</sub>	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 22 5) 5) 5) 0) ue N ved 1). 2/	/L added A: $4 mi - fuming - IINO$ Units Date mg/l	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Correct Correct NF. Arri-SCA Nitrate-N+, Nitrate- rotal (00630) Ammonia-N total (00 Correct (Correct) Chemical oxygen demand (00340) Correct Correct	EATMEN .	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	per boxes SF: Filtered in 0.45 µm □ A: Units Date analyze imho mg/l mg/l mg/l mg/l mg/l mg/l	a field with embrane filter Sml conc. HNO <sub>3</sub> ac ad F. NA Calcium (00915) Calcium (00930) Socium (00930) Potassium (00930) Socium (00930) Chioride (00940) Chioride (00940) Chioride (00940) Chioride (00945) Chioride (00631) Chioride (00608) Chioride (	2 ml H <sub>2</sub> SO <sub>4</sub> / dded 121 5)	/L added A: $4 mi - fuming - IINO$ Units Date $grav - H_{y} - SO H$ Units Date mg/l	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Correct NF. 2000 Correct NF. 2000 Correct NF. 2000 Correct NF. 2000 Correct Correct NF. 2000 Correct Correct NF. 2000 Correct Co	EATMEN .	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	Der boxes SF: Filtered in 0.45 µm □ A: Units Date analyz 	n field with       A:         embrane filter       A:         Sml conc. HNO3 au         ed       F. NA         Calcium (00915)         Magnesium (00925)         Socium (00930)         Potassium (00930)         Sicarbonate (00440)         Choride (00940)         Sulfate (00945)         Total filteracle residu         (cissoived) (70300)         Cther:         F. Artz SO4         X Nitrate-N +, Nitrate         dissoived (00631)         Ammonia-N dissoit         (00608)         Total Kjeldahl-N         (         Other:	2 ml H₂SO₄/ dded ⊠1 5) 5) 0) ue →N ved 1). 36	/L added A: $4 \frac{1}{mi} \frac{fuming IINO}{fum}$ Units Date mg/l	
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESINF. NA Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Conductivity (Correct 25°C (00095) Correct Correct Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Conductivity (Correct 25°C (00095) Correct Correct Correct Correct Correct NIF. Arrive SCa Nitrate-N +, Nitrate- rotal (00650) Ammonia-N total (00 Correct Corr	EATMEN . DNI ided C ( JLTS from cred)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	Der boxes SF: Filtered in 0.45 µmin □ A: Units Date analyz Immin mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	field with         mbrane filter         Sml conc. ENO <sub>3</sub> au         Sml conc. ENO <sub>3</sub> au         Calcium (00915)         Gagnesium (00925)         Socium (00930)         Potassium (00930)         Potassium (00935)         Sicarbonate (00444)         Chioride (00940)         Suifate (00945)         Chioride (00945)         Chioride (00945)         Chioride (00945)         Chiert         F. A-rl <sub>2</sub> SO <sub>4</sub> Xitrate-N +, Nitrate         dissoived (00631)         Ammonia-N dissoit         (00608)         Total Kjeldahl-N         ( )         Other:         Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / dded Ed 5) 0) 	/L added A: $4m1 - fum(mg - IINO)$ gm - Hy SO - f Units Date mg/I	2 anal
SAMPLE FIELD TR No. of samples submitted / NA: No acid ad ANALYTICAL RESUNCTION Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095) Correct Conductivity (Correct 25 °C (00095) Conductivity (Correct 25 °C (00095)	EATMEN . C Ni ided C ( JLTS from cred)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	Der boxes	n field with embrane filter Sml conc. ENO <sub>3</sub> au ed F. NA □ Calcium (00915) □ Magnesium (00925) □ Socium (00930) □ Porassium (00930) □ Socium (00930) □ Socium (00930) □ Socium (00930) □ Sistarbonate (00440) □ Sulfate (00940) □ Sulfate (00945) □ Total filteracle residu (cissorved) (70300) □ Cther: F. A-Hz SO4 ★ Nitrate-N +, Nitrate dissolved (00631) ★ Ammonia-N dissolv (00608) ★ Total Kjeldahl-N () ) □ Other: Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / dded S	/L added A: $4 mi = fum(mg = IINO)$ Units Date mg/l mg/	

· • ·

····- · ··· -·

----

· · · · · · · · · · · ·

.....

• • • • • •

. ...<del>.</del>

\_ · ··



TO: Sunterra Gas Processing DATE: 29 May 1987 ATTN: Gary Jordan 0661 PO Box 2106 Albuquerque, NM 87103

SAMPLE ID : #3

ANALYTE

ANALYTICAL RESULTS NOMINAL DETECTION LIMITS

As	<0.05	$m\sigma/1$	0.05	mic / T
Ba	<1.0	$m\sigma/1$	1 0	mg/1
Cd	<0.01	$m_{\rm C}/1$	0.01	$m_{\alpha}/1$
Cr	<0.05	$m_{\rm C}/1$	0.05	$m_{\alpha}/1$
CN	<0.01	$m_{cr}/1$	0.03	mg/1
F	0.65	$m\sigma/1$		mg/1
Pb	0 08	$m\sigma/1$	0.01	mg/1
Total Hg	<0 002	$m_{\sigma}/1$	0.02	$m_{G}/1$
NO 3 as N	<0 01	$m_{G}/1$	0.002	mg/1
Se	0 016	$m_{\sigma}/1$		mg/1
λα		$m_{\alpha}/1$	0.002	
Benzene		$m_{q}/1$	0.05	mg/1
Toluene		$m_{G}/1$	10.001	mg/1
CCL 4		mg/1	0.01	$m_{G}/1$
1.2 Dichloroethane				mg/l
1.1 Dichloroethylana		mg/1	0.001	mg/l
1 1 2 2 Tetrachloroethylano		mg/1	0.001	mg/l
1 1 2 Trichloroethriano			0.001	mg/1
TTTT Banzana		mg/1	10.0	mg/1
Yvlanac			0.001	mg/1
Methulana Chlorida	<0.001	mg/l	0.001	mg/1
	K0.001	mg/1	100.0	mg/1
			100.0	mg/1
TTR			0.001	
	<0.00±		0.001	$\mathbb{E} \subseteq / \bot$
1 1 2 Trichlorechene			0.001	mg/1
1 1 2 2 Totroployactions	KU.UUI	mg/1	0.001	mg/1
Vinvi Chlorido	KU.UUL	mg/l	0.001	mg/1
	KU.UUI	mg/1	0.001	mg/l -
		mg/l	0.01	mg/l
	101	mg/l	1.0	mg/l.
	0.84	mg/l	6.0	mg/1
50 4	0.44	mg/1	0.01	mg/1
	197	mg/1	1.0	mg/l
	0.066	mg/1	0.008	mg/1
AL . D	<u.1< td=""><td>mg/1</td><td>0.1</td><td>mg/1</td></u.1<>	mg/1	0.1	mg/1
	0.139	mg/l	0.04	mg/1
Mo	<0.03	mg/l	0.03	mg/l
	<0.05	mg/⊥	0.05	mg/l
TA T	U.186	$m\alpha/1$	0.01	mg/ L

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director

EEPORT TO:       David Boyer       SLD. No. OR.       C-7C         N.M. 017       Conservation Division       DATE REC.       42-737         P. O. Box 2088       Santa Fe, N.M. 87504-2083       PRIORITY         Santa Fe, N.M. 87504-2083       PRIORITY         BAYIG Source       CODE:       [3] 2] [2] 3] 5]         UNMATTER:       David Soyer       CODE:       [3] 2] [2] 3] 5]         SAMPLE:       TYPE.       WATER [2], SOIL [], FOOD [], OTHER:       CODE:       [4] 1]         COUNTY:       CODE:       [4] 1]       [4] 1] 1]       [4] 1] 1]         COOL:       TYPE WATER [2], SOIL [], FOOD [], OTHER:       CODE:       [4] 1] 1]         COOL:       TYPE WATER [2], SOIL [], FOOD [], OTHER:       CODE:       [4] 1] 1]         COOL:       TYPE WATER [2], SOIL [], FOOD [], OTHER:       CODE:       [4] 1] 1]         COOL:       TYPE WATER [2], SOIL [], FOOD [], OTHER:       COOL:       [4] 1] 1]         COOL:       TYPE WATER [2], SOIL [], FOOD [], OTHER:       COOL:       [4] 1] 1]         COOL:       TYPE MATER [2], SOIL [], FOOD [], OTHER:       COOL:       [4] 1] 1]         COOL:       TYPE MATER [2], SOIL [], FOOD [], OTHER:       COOL:       [4] 1] 1] 1] 1] 1] 1] 1] 1] 1] 1] 1] 1] 1]			······································	
N.M. 011 Conservation Division       DATE REC.       4-2437         P. O. Box 2088       PRIORITY         Santa Fe, N.M. 87504-2088       PRIORITY         BUDMITTER:       David Boyer       CODE: [2 [6]0]         SAMPLE COLLECTION CODE: (YYMADDHHMAMII) [G 71014] FE11/131/151       AME         SAMPLE TYPE: WATER [Z], SOIL [], FOOD [] OTHER:       CODE: [] [] [] [] [] [] [] [] [] [] [] [] []	EPORT TO:	David Boyer	S.L.D. No. OR	7 C
P. 0. Box 2088         Santa Fe, N.H. 87504-2088         PHONE(5):         B27-5812         UBMATTER:         David Boyer         GODE: [2]: 6 10.]         SAMPLE COLLECTION CODE: (YYSACDOBHEMAMIN) (A 71014137)         AMPLE: TYPE: WATER [2], SOIL [], POOD [], OTHER:         COUNTY:         SAMPLE: TYPE: WATER [2], SOIL [], POOD [], OTHER:         COUNTY:         SAMPLE: TYPE: WATER [2], SOIL [], POOD [], OTHER:         COUNTY:         SAMPLE: TYPE: WATER [2], SOIL [], POOD [], OTHER:         COUNTY:         Sample: Sampl		N.M. Oil Conservation Division	DATE REC	2737
Santa Fe, N.M. 87504-2088       PRIORITY         SHONE(S):       827-5812       USER CODE: [3]2]2]3]5         SAMPLE COLLECTION CODE: (YYMMODHHMMIII) [3]7]1]1]4]2]1/131/151       LAS         SAMPLE CITPE: WATER [3], SOIL ], FOOD ], OTHER:       CODE: []1]1         COUNTY:       Gardan       GTY:         SAMPLE CITPE: WATER [3], SOIL ], FOOD ], OTHER:       CODE: []1]1         LOCATION CODE: (Tovalib-Range-Section-Tracts)       [2]1]1/2]1/131/151         LOCATION CODE: (Tovalib-Range-Section-Tracts)       [2]1]1/2]1/11/10/11/3         LOCATION CODE: (Tovalib-Range-Section-Tracts)       [2]1]1/2]1/11/11/11/11/11/11/11/11/11/11/11/11/1	•	P. 0. Box 2088	· · · ·	
BEDNE(S):       B27-5812       USER CODE:       [3] [2] [2] [3] [5]         DUBMITTER:       David Boyer       CODE:       [2] [6] [0]         SAMPLE COLLECTION CODE:       (YYAMODDHHAMMIN)       [3] 7] [1] [1] [3] [1] [1] [1]       [3] [1] [1] [1] [1] [1] [1] [1] [1] [1] [1		Santa Fe, N.M. 87504-2088	PRIORITY	
David Boyer       code: [2 6 10]         SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) [3 71014132/131/151 1251         SAMPLE TYPE: WATER [2], SOIL [], FOOD [], OTHER:       cODE: []]]         SAMPLE TYPE: WATER [2], SOIL [], FOOD [], OTHER:       cODE: []]]         SAMPLE TYPE: WATER [2], SOIL [], FOOD [], OTHER:       cODE: []]]         SAMPLE TYPE: WATER [2], SOIL [], FOOD [], OTHER:       cODE: []]]         SCONTON CODE: (Township-Range-Section-Tracts) [2] [2] [2] + /1/ [10/ + /13 + /1/ [] [10N0622332         ANALYEES REQUESTED: Please check the appropriate bar(=) below to indicate the type of analytical terresting equired. Whenever possible list operation [] [761] Altphatic SCREENS]         (753) Altphatic Purgebles       [] (760] Organochlorize Petiticides         [] (754) Anomatic & Existence       [] (760] Organochlorize Petiticides         [] (764) Tribulonathane       [] (760] Organochlorize Petiticides         [] (761) Tribulonathane       [] (760] Organochlorize Petiticides         [] (761) Tribulonathane       [] (761) Organochlorize Petiticides         [] (761) Organochlorize Petiticides       [] (761) Organochlorize Petiticides         [] (761) Organochlorize Petiticides       [] (761) Organochlorize Petiticides         [] (762) This/organochlorize Petiticides       [] (761) Organochlorize Petiticides         [] (762) This/organochlorize Petiticides       [] (761) Organochlorize Petiticides         [] (762) This/o	HONE(S):	827-5812	USER CODE: 18 2 2 3	5
SAMPLE COLLECTION CODE: (YYMANDDHHMAMII) [370] [22] [22] [23] [25] [25] [25] [25] [25] [25] [25] [25	UBMITTER:	David Boyer	CODE: 12 6 0	
SAMPLE. TYPE: WATER (Q), SOIL [], POOD [], OTHERCODE: [] COUNTY:CODE: [] COUNTY:CODE: [] CODE: [] CODE	AMPLE COLLE	CTION CODE: (YYMMDDHHMMIII) [51710]	1221/131/151 1	DR
COUNTY: Some constants and constants of the second sequence of the s	AMPLE TYPE:	WATER IXI. SOIL . FOOD . OTHER.	CODE:	
COCATION CODE: (Township-Range-Section-Traces) [2] [2] [1] [1] [1] [1] [1] [1] [1] [1] [1] [1		- Cuan : CITY: Floring Leal	CODE: 1 1 1	1 1
ARALYTES REQUESTED: Please check the appropriate box(et) balow to indicate the type of analytical screens equired. Meanver possible list specific compounds suspected or required. PURCEABLE SCREENS (753) Alphatic Purgeables (1-3 Carbon) (751) Alphatic Purgeables (1-3 Carbon) (753) Alphatic Purgeables (755) Mass Spectrometer Purgeables (756) Mass Spectrometer Purgeables (757) Polycholodiated Elpheny's (PCB') (751) Organochhorine Pesticides (753) Mass Spectrometer Purgeables (753) Mass Spectrometer Purge	OCATION COD	$\mathbf{F}: (Townshin_Range_Section_Tracts)   \mathcal{T}  \mathcal{S}  \mathcal{A} + \dots$	$\frac{1}{1} \frac{1}{1} \frac{1}$	
ANALYSES       EXTRACTABLY       Freed check the applophics only only only on analytical screens         (753)       Mightic Purgeables       [751]       Aliphatic Extractables         (753)       Aliphatic Purgeables       [750]       Organochlorins       Period         (753)       Aliphatic Purgeables       [750]       Organochlorins       Period         (755)       Mass Spectrometer Purgeables       [750]       Organochlorins       Period         (760)       Organochlorins       Period       [761]       Aliphatics         (761)       Aliphatics       Organochlorins       Period       [753]         (766)       Organochlorins       Period       [761]       Organochlorins       Period         (761)       Organochlorins       Period       [761]       Organochlorins       Period         (761)       Organochlorins       Period       [762]       Organochlorins       Period         (763)       Status       Status       [763]       Status       Period       [763]       Status       Period         (761)       Organochlorins       Period       [763]       Status       Period       Period       [763]       Period       Period       Period       Period       Period	NIT YES DRO		the indicate the true of proletical	
PURCEABLE SCREENS       EXTRACTABLE SCREENS         [733] Aliphatic Purgeables (1-3 Carbons)       [751] Aliphatic Screenses         [753] Mas Spectrometer Purgeables       [756] Organochlorine Paticides         [766] Trihalomethanes       [758] Herbicides, Chlorophenoxy acid         [767] Organochlorine Paticides       [759] Bas/Neutral Extractables         [768] Trihalomethanes       [759] Herbicides, Chlorophenoxy acid         [769] Organochlorine Paticides       [750] Organochlorine Paticides         [760] Organochlorine Paticides       [761] Aliphatic Paticides         [761] Aliphatic Compounds or Classes       [763] Organochlorine Paticides         [760] Organochlorine Paticides       [761] Organochlorine Paticides         [761] Aliphatic Compounds or Classes       [763] Organochlorine Paticides         [762] Organochlorine Paticides       [763] Organochlorine Paticides         [763] Margeneiter       [764] Polynuclear Aromatic Hydrocarbons         [764] Polynuclear Aromatic Hydrocarbons       [764] Polynuclear Aromatic Hydrocarbons         [765] Margeneiter       [767] Organochlorine Paticides         [766] Trihalogi and Lematics       [767] Polychlorina Paticides         [767] Polychlorina Paticides       [767] Polychlorina Paticides         [766] Trihalogi and Paticides       [767] Polychlorina Paticides         [767] Polychlorina Paticides <t< td=""><td>equired. Wheney</td><td>er possible list specific compounds suspected or requir</td><td>ed.</td><td></td></t<>	equired. Wheney	er possible list specific compounds suspected or requir	ed.	
[753] Aliphatic Purgeables       [751] Aliphatic Bydrocarbons         [753] Aliphatic Purgeables       [760] Organochlorine Pesticides         [765] Mass Spectrometer Purgeables       [753] Base/Neutral Extractables         [766] Tribalomethanes       [753] Berbicides, Chlorophenoxy acid         Other Specific Compounds or Classes       [750] Berbicides, Chlorophenoxy acid         [766] Tribalomethanes       [750] Berbicides, Chlorophenoxy acid         [767] Organochlorine Pasticides       [760] Organochlorine Pasticides         [768] Tribalomethanes       [761] Organochlorine Pasticides         [776] Organochlorine Pasticides       [767] Polychlorinatel Biphenyle (PCB's)         [778] Tribalomethanes       [761] Organochlorine Pasticides         [779] Polychlorinatel Biphenyle (PCB's)       [761] Organochlorine Pasticides         [779] Polychlorinatel Biphenyle (PCB's)       [762] SDWA Pasticides & Herbicides, Tributor         [771] Polychlorinatel Biphenyle (PCB's)       [762] SDWA Pasticides & Herbicides, Tributor         [772] Polychlorinatel Biphenyle (PCB's)       [763] SDWA Pasticides         [772] Polychlorinatel Biphenyle (PCB's)       [764] Polynuclear Aromatic (PCB's)         [772] Polychlorinatel Biphenyle (PCB's)       [772] Polychlorinatel Pasticides         [772] Polychlorinatel Biphenyle (PCB's)       [772] Polychlorinatel Pasticides         [773] Datternet Thermonyle (PCB's)		PURGEABLE SCREENS	EXTRACTABLE SCREENS	
(174)       Arematic & Halogenster Purgeables       (160)       Organizationens Persicides         (1750)       Mass Spectrometer Purgeables       (1753)       Base/Neutral Extractables         (1760)       Organophosphate       Persicides, Chilorophenoxy acid         (1761)       Organophosphate       Persicides, Chilorophenoxy acid         (1761)       Organophosphate       Persicides, Chilorophenoxy acid         (1761)       Organophosphate       Persicides         (1761)       Organophosphate       Persicides         (1761)       Organophosphate       Persicides         (1761)       Organophosphate       Persicides         (1762)       SDWA       Persicides         (1763)       DATA:       Provid       Mathematic         (1764)       Point       Mathematic       mg/l         PIELD       DATA:       Provid       Mathematic         (1762)       SDWA       Persicides       Mathematic         Prizz       Schematrivity=2500 mino/cm at       21/200 °C; Chilorine       Residual=mg/l         Prizz       Schematrivity=2500 mino/cm at       21/200 °C; Chilorine       Mathematic         Prizz       Schematrivity=2500 mino/cm at       21/200 °C; Chilorine       Mathemat	(753) Alipha	tic Purgeables (1-3 Carbons)	(751) Aliphatic Hydrocarbons	
[109] Utility of the spectrum of spect	(754) Aroma (755) Mass	tic & Halogenated Purgeables	[760] Organochlorine Pesticides	· .
Other Specific Compounds or Classes       [739] Herbicides, Triasines         [760] Organophosphate Pesticides         [771] Organophosphate Pesticides         [772] Polychlorinate Biphenyls [PCB's]         [774] Polychlorinate Biphenyls [PCB's]         [775] Organophosphate Pesticides         [776] Organophosphate Pesticides         [776] Polychlorinate Biphenyls [PCB's]         [776] Organophosphate Pesticides         [776] Polychlorinate Biphenyls [PCB's]         [776] Organophosphate Pesticides         [778] Data:         [778] DATA:         [778] Pesticides & Herbicides         Remarks:         [779] Polychlorinate Biphenyls [PCB's]         [778] Organophosphate Pesticides         [778] Data:         [779] Polychlorinate Biphenyls [PCB's]         [779] Polychlorinate Biphenyls [PCB's]         [780] Polychlorinate Biphenyls [PCB's]         [781] DATA:         [782] Polychlorinate Biphenyls [PCB's]         [783] Polychlorinate Biphenyls [PCB's]         [780] Polychlorinate Biphenyls [PCB's]	(766) Trihalo	methanes	(758) Herbicides, Chlorophenoxy	acid
Image: Second	Other	Specific Compounds or Classes	(759) Herbicides, Triazines	
□       [761] Organophosphate Pesticides         □       [761] Organophosphate Pesticides         □       [761] Polychlotinated Biphenyls (PCB's)         □       [761] Polychlotinated Biphenyls (PCB's)         □       [761] Polychlotinated Biphenyls (PCB's)         □       [762] SDWA Pesticides & Herbicides         Remarks:       £	<b></b> · · ·	ا الاستان الم	(760) Organochlorine Pesticides	
□       [767] Polychlorinated Biphenyls (PCB's)         □       [762] Polychlorinated Biphenyls (PCB's)         □       [762] SDWA Pesticides & Herbicides         Remarks:       function         µ=       [762] SDWA Pesticides & Herbicides         PTELD DATA:       [762] SDWA Pesticides & Herbicides         µ=       \$\$\frac{1}{2}\$ SDWA Pesticides & Herbicides         µ=       \$\$\frac{1}{2}\$ SDWA Pesticides & Herbicides         µ==       \$\$\frac{1}{2}\$ SDWA Pesticides & Herbicides         Partice       \$\$\frac{1}{2}\$ SDWA Pesticides & Herbicides         Sampling Location, Mesticides and Remarks (Le. odors, etc.)       \$\$\frac{1}{2}\$ SDWA Pesticides and Pesticides and Pesticides & Herbicides         I certify that the remins in this block accurately reflect the remults of my field analyses, observations and scriptilize (signatures collector);       \$\$\frac{1}{2}\$ Model Addition for the pesticides analyses, observations and the statements in this block are correct.         NP:       No Preser	]		[] (761) Organophosphate Pesticider	6.
□       (764) Polynuclear Aromatic Hydrocarbons         □       (762) SDWA Pesticides & Herbicides         Remarks:       Sum Terms         y==       SUMA         Sumples       SUMA         y==       Sumple         y==			[] (767) Polychlorinated Biphenyls	(PCB's)
Image: State of the state of the state of the state marks:       Image: State of the state of t		·····	[] (764) Polynuclear Aromatic Hyd	rocarbons
Remarks: <u></u>			[ (762) SDWA Pesticides & Herb	icides
FIELD DATA:         pH=	Remarks:	-leva fond a (My	202)	
PTELD DATA:       Strain         pH=		Licte		
p==	FIELD DATA:	All and the second s		
Dissoived Oxygen=mg/l; Alkalinity=mg/l; Flow Rate/ Depth to waterh; Depth of weilft.; Perforation Intervalft.; Casing: Sampling Location, Mesther's and Remarks (Le. odors, etc.) <u>C1:W-CLCUTCACM NAME SAMPLE</u> SAMPL SAMPT AlanTh Sile <u>TLACK I.MCD Allance Times</u> . <u>ME accl.</u> <u>Jack Times Times</u> of Leentify that the results in this block accuracity rediect the results of my field analyses, observations and activities.(signature collector); <u>WWMM ICAC</u> Method of Shipment to the Lab: <u>Howlow</u> This form accompanies <u>Septum</u> Vials, <u>Glass Jury</u> , and/or Samples were preserved as follows: <u>NP:</u> No Preservation; Sample stored at room temperature. <u>NP:</u> No Preservation; Sample stored in an ice bath (Not Frosen). <u>P-Na S O</u> Sample Preserved with Sodium Thiosulfate to remove chlorine residual. CHAIN OF CUSTODY I certify that this sample was transferred from to to and that the statements in this block are correct. Evidentiary Seals: Not Sealed <u>Seales Intact</u> : Yes <u>No</u> <u>No</u> Signatures	$= \frac{7}{2} \frac{502}{2}$	acinetivity=2500 mino/es at _2/ °C; Chlorine	Residual=mg/l	
Depth to water fl.; Depth of weil fl.; Perforation Interval fl.; Casing: Sampling Location, Meethods and Remarks (Le. odors, etc.) <u>C1:0-Clock Signame Software</u> / Scattle Statt NonTh Signatures I carrier that the semita in this block accurately redect the results of my field analyses, observations and activities.(signature collector): <u>VUVCS</u> / Statt This form accompaniesSeptum Vials,Glass Jugy, and/or Samples were preserved as follows: <u>NP:</u> No Preservation; Sample stored at room temperature. <u>NP:</u> No Preservation; Sample stored at room temperature. <u>NP:</u> P-Ice Sample reserved with Sodium Thiosulfate to remove chlorine residual. CHAIN OF CUSTODY I certify that this sample was transferred from on to at (location) on on to Signatures Salas: Not Sealed Seals: Intact: Yes No	Dissoived Oxygen	= mg/l: Alkaimity= mg/l: Flow Rate		
Sampling Location, Mesticks and Remarks (i.e. odors, etc.) <u>C1W-Given Signamy Angel</u> , SomMe Signam Nighth Signa for and that the statements in this block are correct. Evidentiary Seales: Not Sealed [] Seale Intact: Yes [] No []	Depth to water	5 Decth of mail ft Perforation Inter		
Sampling Location, Methods and Remarks (i.e. odors, etc.)  C 10 - C. S. S. M. R. M. S. S. M. S. M. S. S. M. North S. M. S. S. S. M. North S. M. S. S. S. M. S. S. S. M. S.			You ter, Gasting:	· ·
Image: Stand Your Your Your Merid State Not Sealed Seals Intact: Yes         Interview         Interview     <		C, Methods and Remarks (Le. odors, etc.)	ale Second as T	
Indick       Indid       Indick       Indick	<u> </u>	and they were the	Re safri North	Sel -
I certify that the mentits in this block accurately reflect the results of my field analyses, observations and activities (signature collector): ////////////////////////////////////	ILACK	- Indeh Auther Wom. A	12 och, pristic	1. (15)
activities (signature milector):	I certify that it	e results in this block accuracely reflect the secults of	if my field analyses, observations an	ıd .
This form accompanies Septum Vials, Glass Juge, and/or         Samples were preserved as follows:         NP:       No Preservation; Sample stored at room temperature.         P-Ice       Sample stored in an ice bath (Not Frozen).         P-Na S O       Sample Preserved with Sodium Thiosulfate to remove chlorine residual.         CHAIN OF CUSTODY       I         I certify that this sample was transferred from	activities.(signam	a milectory: Vanak 1824	_ Method of Shipment to the Lab:	Londcar
Samples were preserved as follows: NP: No Preservation; Sample stored at room temperature. P-Ice Sample stored in an ice bath (Not Frozen). P-Na S O Sample Preserved with Sodium Thiosulfate to remove chlorine residual. CHAIN OF CUSTODY I certify that this sample was transferred from	This form accor	manies Septum Vials, Glass Jugs, and/	or	
INF:       No Freservation; Sample stored at room temperature.         Image: Price       Sample stored in an ice bath (Not Frosen).         Image: Price       Sample stored in an ice bath (Not Frosen).         Image: Price       Sample Preserved with Sodium Thiosulfate to remove chlorine residual.         CHAIN OF CUSTODY       I certify that this sample was transferred from	Samples were pr	eserved as follows:		
Image: A state of the stat		Sample stored in an ice bath (Mat Berger)	Je	
CHAIN OF CUSTODY I certify that this sample was transferred from	R P-Na S O	Sample Preserved with Sodium Thiosulfate to more	e chlorine residual	
I certify that this sample was transferred from to at (location) on/ and that the statements in this block are correct. Evidentiary Seals: Not Sealed Seals: Intact: Yes No Signatures	CHAIN OF CU	STODY		
at (location) on on and that the statements in this block are correct. Evidentiary Seals: Not Sealed 🔲 Seals Intact: Yes 🗍 No 🗍 Signatures	I certify that th	is sample was transferred from	to	· .:
the statements in this block are correct. Evidentiary Seals: Not Sealed Seals Intact: Yes Signatures	at (location)	······································		and that
signatures	•ba ••••••••			
Signatures	the statements i	n this block are correct. Evidentiary Seals: Not Seale	1 Seals Intact: Yes No	
	Signatures	ـــــــــــــــــــــــــــــــــــــ	· ·	· · ·

ANALYSES	PERFOR	Ð
----------	--------	---

THIS PAGE FOR LABORATORY RESULTS ONLY

LAB. N

OR- 691

This sample was tested using the analytical screen PURGEABLE SCREENS (753) Aliphatic Purgeables (1-3 Carbons) (754) Aromatic & Halogenated Purgeables (765) Mass Spectrometer Purgeables	ing method(s)	checked below: <u>EXTRACTABLE SCREENS</u> (751) Aliphatic Hydrocarbons (760) Organochlorine Pesticides (755) Base/Neutral Extractables	
(766)       Trihalomethanes         Other       Specific         Compounds       or         Classes       Classes         Classes       Classes <t< td=""><td></td><td><ul> <li>(758) Herbicides, Chlorophenoxy acid</li> <li>(759) Herbicides, Triazines</li> <li>(760) Organochlorine Pesticides</li> <li>(761) Organophosphate Pesticides</li> <li>(767) Polychlorinated Biphenyls (PCB's)</li> <li>(764) Polynuclear Aromatic Hydrocarbons</li> <li>(762) SDWA Pesticides &amp; Herbicides</li> </ul></td><td></td></t<>		<ul> <li>(758) Herbicides, Chlorophenoxy acid</li> <li>(759) Herbicides, Triazines</li> <li>(760) Organochlorine Pesticides</li> <li>(761) Organophosphate Pesticides</li> <li>(767) Polychlorinated Biphenyls (PCB's)</li> <li>(764) Polynuclear Aromatic Hydrocarbons</li> <li>(762) SDWA Pesticides &amp; Herbicides</li> </ul>	
AN	ALYTICA	L RESULTS	•
COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC.
aromatic pudrecarting	N.D.		
Alexander the dreathers	N.D		
		· · · · · · · · · · · · · · · · · · ·	
	· · ·	·	· ·
*****	( / )		
ABBREVIATIONS USED: N D = NONE DETECTED AT OR ABOVE T R = DETECTED AT A LEVEL BELOW [ RESULTS IN BRACKETS ] ARE UNCONE	THE STATE THE STATE THE STATE THE AND/	D DETECTION LIMIT D DETECTION LIMIT (NOT CONFIRMED) CE WITH APPROXIMATE QUANTITATION	
LABORATORY REMARKS:			
	- ·		
	: :: :: ::		
CERTIFICA	TE OF ANAL	YTICAL PERSONNEL	
Seal(s) Intact: Yes $\square$ No $\square$ . Seal(s) broken by I certify that I followed standard laboratory procedu that the statements on this page accurately reflect to Date(s) of analysis: $5/\mu/37$	res on handlin the analytical production of the second sec	ate:	block.
Reviewers signature: Kmeyzhi -	<u></u> .		•••
	· · · · ·		· · · · · · · · · · · · · · · · · · ·

DATE: Pasing Hereit Filler L	LAB USE	a _	. <u> </u>	1 00	225	······
RECEIVED		E 5930	0 . 59600 .	OTHER: 82	<u></u>	<del></del>
04 22 87 Collection TIME			SUNTERRA	- Ku7	-2 TLA	NT
1315 Collected by - Person/Agency	Callect	tion site descriptio	n	Pr	ND 2	•
BOVER / ANDERSO	~ /0CD					
ENVIDONME						
SEND NM OIL CO	VSERVATION DIVISI	ON				
FINAL State Lan	d Office Bldg, PO NM 87504-2088	Box: 208	8			
An- David R						
	lyer		· .	Stand		
Phone: 827-9	1812			well code		
SAMPLING CONDITIONS				Owner		
□ Bailed □ Pump X Dipped □ Tap	Water level		Discharge		Sample type	, · ·
PH (00400) - STAIR	Conductivity (Uncorrecte	d)	Water Temp. (00010)	· · · · · ·	Conductivity	at 25°C (00094)
Toldoommer	1258	$\gamma \mu mho$	<u> </u>	<u></u>	l	μ
Field comments (Set 1	ICC Forms	Sen Cl	Call Magnill		• •	
SAMPLE FIELD TREATMER No. of samples submitted	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify:	$\frac{\text{Kes} - \frac{1}{2} \frac$	Filbrol only a field with morane fillor 5ml conc. ENO,	$2 \text{ mI H}_2 \text{SO}_4$	Ladded A: 4m1 fu	ming HNO <sub>2</sub> ad
SAMPLE FIELD TREATMER No. of samples submitted III	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered ir	Filbre boly field with morane filter 5ml conc. ENO <sub>3</sub>	$2 \text{ mI H}_2 \text{SO}_4$	Ladded A: 4ml fu	ming HNO <sub>3</sub> ad
SAMPLE FIELD TREATME No. of samples submitted I NA: No acid added I ANALYTICAL RESULTS fro	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units	Kes - Are F: Filtered ir CAS - arm CA: Date analyze	Filbrok baly field with morane filter 5ml conc. ENO <sub>3</sub> rd	$2 \text{ mI H}_2 \text{SO}_4$ added $\square I$ , NA Sample	Ladded A: 4ml fu	ming HNO <sub>3</sub> ad
SAMPLE FIELD TREATMER No. of samples submitted I NA: No acid added I ANALYTICAL RESULTS fro NA X <sup>7</sup> Conductivity (Corrected) 25°C (00095)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500	Kes J Pro F: Filtered ir GAS Jame Date analyze	$\frac{\text{SitEvel} + \text{Site}}{\text{Site}}$	$2 \text{ mI H}_2 \text{SO}_4/$ added $\Box I$ , NA Sample	Ladded A: 4ml fu	Date Analyzed
SAMPLE FIELD TREATME No. of samples submitted II NA: No acid added II ANALYTICAL RESULTS fro NA X'Conductivity (Corrected) 25°C (00095)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units	$\frac{xes}{F} = \frac{\beta}{c_{45}} \frac{\beta}$	$\frac{\text{Fitbrow broly}}{\text{Infield with}} = A:$ $\frac{\text{Sml conc. } \text{ENO}_3}{\text{From } \frac{1}{Du2} \text{ From } \frac{1}{$	2 mI H <sub>2</sub> SO <sub>4</sub> / added $\Box$ A , NA Sample $\lambda I b$	Ladded A: 4ml fu A: mg/l_	Date Analyzed 5/14
SAMPLE FIELD TREATME No. of samples submitted I NA: No acid added I ANALYTICAL RESULTS fro NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umbo	$\frac{\text{Kes} - \frac{1}{2} \frac$	Silfore Sonly infield with informeration Sml conc. HNO <sub>3</sub> From <u>Due</u> S Calcium X Potassium	$2 \text{ mI H}_2 \text{SO}_4 / 2 \text{ added} \qquad \square 1 / 2 \text{ added} \qquad \square 1 / 2 \text{ (.5)}$	Ladded A: 4ml fu A: 4ml fu e: mg/l_	Date Date <u>Analyzed</u> <u>5/14</u> Slid
SAMPLE FIELD TREATMER No. of samples submitted II XNA: No acid added II ANALYTICAL RESULTS fro NA X <sup>7</sup> Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) X Other: DA	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umbo	$\frac{1}{55}$	Filbrel Broly a field with Sml conc. HNO <sub>3</sub> From <u>Bre</u> S A Calcium X Potassium X Magnesium	$2 \text{ mI H}_2 \text{SO}_4 /$ added $\square I$ , NA Sample $\frac{216}{21.5}$ $44$	Ladded A: 4m1 fu :: mg/1mg/1mg/1	Date Analyzed 5/14 5/14 5/14
SAMPLE FIELD TREATME No. of samples submitted I XNA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Other: p A Other: p A	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo	$\frac{1}{55}$	Silfore ( broly infield with infield with Sml conc. HNO <sub>3</sub> Main From <u>Dre 9</u> A Calcium X Potassium X Sodium	$2 \text{ mI H}_2 \text{SO}_4 / 2 \text{ added}$ added $2 \text{ is}$ , NA Sample $2 \text{ is}$ $2 \text{ is}$ $4 \text{ is}$ $36 \text{ is}$	Ladded A: 4ml fu e: mg/1mg/1 mg/1mg/1	Date Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u>
SAMPLE FIELD TREATMER No. of samples submitted I NA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cother: PH	NT — Check proper box NF: Whole sample (Non-filtered) $\swarrow$ Other-specify: m SAMPLES Units 2.500 umbo $= 2.4 \odot$	$\frac{\text{Kes} - \frac{1}{2} \frac$	Silforel troly field with find and Sml conc. HNO <sub>3</sub> From Dre S A Calcium X Potassium X Sodium X Sodium	$2 \text{ mI H}_2 \text{SO}_4 / 2 \text{ added}$ added $\square I$ , NA Sample $216$ $21.5$ $-44$ $364$ te $I = 228$	Ladded A: 4ml fu 	Date Analyzed 5/14 5/14 5/14 5/14 5/14 5/14
SAMPLE FIELD TREATME No. of samples submitted I XNA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo	$\frac{xes - \frac{1}{2} \frac{1}$	<u>Silforol boly</u> Ifield with Intrane-filtor Sml conc. ENO <sub>3</sub> Caicium A caicium A caicium A caicium X Potassium X Sodium X Sodium X Sodium X Sodium	$2 \text{ ml H}_2 \text{SO}_4 / 2 \text{ added}$ added $2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 6 / 2 / 2$	Ladded A: 4ml fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_	$\frac{\text{Data}}{\text{Data}}$ $\frac{\text{Data}}{\frac{\text{Analyzed}}{\frac{5/14}{\frac{5/14}{\frac{5/14}{\frac{5/14}{\frac{5/14}{\frac{5/14}{\frac{5/14}{\frac{5/5}{\frac{5}{\frac{5}{\frac{5}{\frac{5}{\frac{5}{\frac{5}{\frac$
SAMPLE FIELD TREATMER No. of samples submitted I XNA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cother: Other: Cother: AH-SO. Nitrate-N +, Nitrate-N brat (00530)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umbo	$\frac{\text{Kes}_{3} \beta_{10}}{\text{F: Filtered ir}}$ $\Box A:$ $Date analyze$ $\frac{5/2.4}{5}$	Silforel only field with micrane-filter Sml conc. HNO <sub>3</sub>	$2 \text{ ml } H_2 SO_4/$ added $\square I$ added $\square I$ , NA Sample $216$ $216$ $21.5$ $44$ $364$ te $1228$ $119$ $147$	Ladded A: 4m1 fu 	Date Analyzed 5/14 5/14 5/14 5/14 5/14 5/14 5/14 5/15 5/12
SAMPLE FIELD TREATME No. of samples submitted I XNA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Total non-filterable residue (suspended) (00530) Other: Other: Cother: Cother: AH-SO. Nitrate-N +, Nitrate-N total (00630)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo 	$\frac{1}{55}$	Silfore ( broly infield with A: 5ml conc. ENO <sub>3</sub> Mal From <u>Dre S</u> A Calcium X Potassium X Sodium X Sodium X Sodium X Sicarona X Sulfate X Total Sul	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\Box$ / , NA Sample 216 21.5 21.5 21.5 26% 1228 119 147 ids 230	L added A: 4ml fu mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ 7 mg/l_	ming $HNO_3$ ad Data <u>Analyzed</u> <u>S/14</u> <u>S/14</u> <u>S/14</u> <u>S/14</u> <u>S/15</u> <u>S/15</u> <u>S/15</u> <u>S/17</u> <u>S/17</u>
SAMPLE FIELD TREATMER No. of samples submitted I NA: No acid added I ANALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Total non-filterable residue (suspended) (00530) Other: Other: Cther: AH-SO. Nitrate-N +, Nitrate-N total (00630) Ammonia-N total (00610) Total Kjeldani-N	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umbo	$\frac{\text{Kes} - \frac{1}{2} \frac$	Silforel troly infield with informe-filler Sml conc. HNO <sub>3</sub> ind From Dre S A Calcium X Potassium X Sodium X Sodium	$2 \text{ ml H}_2 \text{SO}_4/$ added , NA Sample 21.5 21.5 21.5 24.4 364 te 1228 119 147 ids 230	L added A: 4ml fu mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_	Date Analyzed 5/14 5/14 5/14 5/14 5/14 5/14 5/15 5/15
SAMPLE FIELD TREATME         No. of samples submitted         NA: No acid added         XNA: No acid added         ANALYTICAL RESULTS from NA         X'Conductivity (Corrected)         25°C (00095)         Total non-filterable residue (suspended)         (00530)         Cother:         Other:         Cher:         AH-SO.         Nitrate-N +, Nitrate-N total (00630)         Armonia-N total (00610)         Total Kjekcani-N ()         Cherrical oxvgen	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo 	$\frac{1}{55}$	Silfore ( broly infield with infield with Sml conc. HNO <sub>3</sub> Calcium A calcium A calcuna A cal	$2 \text{ ml H}_2 \text{SO}_4/$ added , NA Sample 216 216 21.5 44 363 te 1228 1/9 147 ids 230	L added A: 4ml fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_	ming HNO <sub>3</sub> ad Data <u>Analyzed</u> 5/14 5/14 5/14 5/14 5/15 5/15 5/15 5/12 -5/11 5/5
SAMPLE FIELD TREATMER         No. of samples submitted         NA: No acid added         XNA: No acid added         ANALYTICAL RESULTS from NA         X*Conductivity (Corrected) 25°C (00095)         Total non-filterable residue (suspended) (00530)         X Other:         AH-SO.         Nitrate-N +, Nitrate-N total (00630)         AH-SO.         Nitrate-N +, Nitrate-N total (00630)         Ammonia-N total (00610)         Total Kjeldani-N ()         Chemical oxygen demand (00340)	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umho mg/l mg/l	$\frac{xes}{5} = \frac{2}{2} \frac{2}{2} \frac{2}{2} \frac{2}{3} $	Silforel boly field with micrane-filter Sml conc. HNO <sub>3</sub> Calcium X Calcium X Sodium X Sodium	$2 \text{ ml H}_2 \text{SO}_4/$ added , NA Sample 216 216 216 216 263 44 363 te 1228 119 147 ids 230	L added A: 4m1 fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_	Date Analyzed 5/14 5/14 5/14 5/14 5/14 5/14 5/15 5/15
SAMPLE FIELD TREATME         No. of samples submitted         NA: No acid added         XNA: No acid added         ANALYTICAL RESULTS from NA         X Conductivity (Corrected) 25°C (00095)         Total non-filterable residue (suspended) (00530)         Other:         Arti-SQ.         Nitrate-N +, Nitrate-N total (00630)         Cther:         Arti-SQ.         Nitrate-N +, Nitrate-N total (00630)         Cther:         Arti-SQ.         Nitrate-N +, Nitrate-N total (00630)         Chemical oxygen demand (00340)         Total organic carbon (	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo mg/l mg/l mg/l	$\frac{xes}{3}\frac{\beta}{2}\frac{\beta}{2}$ F: Filtered ir $\frac{\alpha}{5}\frac{45}{2}\frac{4}{3}$ Date analyze	Silfore ( broly infield with infield with Sml conc. HNO <sub>3</sub> Calcium A calcium A calcium	2 ml H₂SO₄/ added □/ , NA Sample 216 21.5 44 36% te 1228 1/9 147 ids 230 0	L added A: 4ml fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_ 7_mg/1_	ming HNO <sub>3</sub> ad Data <u>Analyzed</u> 5/14 5/14 5/14 5/14 5/14 5/15 5/15 5/15 5/12 -5/11 5/12
SAMPLE FIELD TREATMER         No. of samples submitted         Submitted         XNA: No acid added         ANALYTICAL RESULTS from NA         X*Conductivity (Corrected) 25°C (00095)         25°C (00095)         Total non-filterable residue (suspended) (00530)         X Other:         Other:         Other:         AH-SC.         Nitrate-N +, Nitrate-N total (00630)         Ammonia-N total (00610)         Total organic carbon (         Cherr:         Other:         Other:         Total organic carbon (         Cther:	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2_500 umbo mg/l mg/l	$\frac{xes}{5} \frac{p}{2} $	Silforel boly field with micrane-filter Sml conc. HNO <sub>3</sub> A Calcium A Calcium A Calcium X Potassium X Sodium X Calcide X Calcide X Calcide X Calcide X Calcide X Calcide X Calcide X Sodium X Sodium	2 ml H <sub>2</sub> SO <sub>4</sub> / added □1 , NA Sample <u>216</u> <u>216</u> <u>216</u> <u>216</u> <u>26</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>44</u> <u>36</u> <u>47</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>7</u>	L added A: 4ml fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ 2_mg/1_2_ 2_mg/1_2	ming $HNO_3$ ad Date <u>Analyzed</u> <u><math>5/14</math></u> <u><math>5/14</math></u> <u><math>5/14</math></u> <u><math>5/14</math></u> <u><math>5/14</math></u> <u><math>5/15</math></u> <u><math>5/12</math></u> <u><math>-5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u> <u><math>5/12</math></u>
SAMPLE FIELD TREATME         No. of samples submitted         NA: No acid added         XNA: No acid added         ANALYTICAL RESULTS from NA         X Conductivity (Corrected)         25°C (00095)         Total non-filterable residue (suspended)         (00530)         Other:         Other:         Arti-SO.         Nitrate-N +, Nitrate-N total (00630)         Total Kjekcant-N ()         Chemical oxygen demand (00340)         Cherr:         Other:         Other:         Other:         Chemical oxygen demand (00340)         Cherr:         Other:         Other:         Other:         Other:         Other:	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo 	$\frac{xes}{3} \frac{\beta}{2} \frac{\gamma_{2}}{2}$ F: Filtered ir $\frac{\beta}{45} \frac{\beta}{2} \frac{\alpha}{3}$ Date analyze $\frac{5}{2} \frac{4}{3}$	Silfore ( broly infield with infield with infield with Sml conc. HNO <sub>3</sub> Calcium A Calcium A Calcium Sodium Sodium Sodium Sodium Sodium Calcride IN Sulfate IN Sulfate IN Cation/ Analyst	2 ml H₂SO₄/ added □/ , NA Sample 216 21.5 44 365 te 1228 1/9 14-7 ids 230 c /Anion Ba	L added A: 4ml fu mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ mg/1_ 2_mg/1_mg/1_ 2_mg/1_mg/1_mg/1_mg/1_mg/1_mg/1_mg/1_mg/1	Date Analyzed S/14 S/
SAMPLE FIELD TREATME         No. of samples submitted         NA: No acid added         XNA: No acid added         ANALYTICAL RESULTS from NA         X*Conductivity (Corrected) 25°C (00095)         Z*Conductivity (Corrected) 25°C (00095)         X*Conductivity (Corrected) (00530)         X*Other:         Other:         Other:         Other:         AH-SC.         Nitrate-N +, Nitrate-N total (00630)         Ammonia-N total (00610)         Total organic carbon (         Cher:         Other:         Other:	NT — Check proper box NF: Whole sample (Non-filtered) Other-specify: m SAMPLES Units 2.500 umbo mg/l mg/l mg/l	$\frac{xes}{5} \frac{p}{2} $	Silforel bally afield with micrane-filter Sml conc. HNO <sub>3</sub> A Calcium A Calcium A Calcium A Calcium A Sodium Sodium Sodium A Sodium A Sodium Calcride IY Sulfzte A Cation/ Analyst	$2 \text{ ml } \text{H}_2 \text{SO}_4 /$ added $\square I$ added $\square I$ , NA Sample $\frac{216}{2(.5)}$ $\frac{246}{44}$ $\frac{369}{149}$ te $\frac{1228}{1/9}$ $\frac{149}{147}$ ids $\frac{230}{6}$ $Anion Ba$ $\square Date R$	L added A: 4ml fu mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ mg/l_ 7 mg/l_ 7 mg/l_	Date Analyzed 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/14 5/2 5/2 5/2 5/2 5/2 5/2 5/14 5/2

·

•

-

•

.

	CATIONS	. •					ANIONS	
ANALYT	E MEQ.	PPM	DE	r.LIMIT	1	ANALYTE	E MEQ.	PPM
Ca Mg Na K	10.78 3.61 16.01 0.55	216.00 44.00 368.00 21.50	< < < < <	3.0 10.0 10.0 0.5		HCO3 S04 Cl	20.12 3.06 3.36	1228.00 147.00 119.00
Mn Fe	0.00	0.00 0.00				NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	30.95	649.50					26.54	1494.00
TDS (me	easured) =	2302.00	pp	m		- i.		. ~ .* .
Ion Ba	alance =	116.60	95			Sample Date d	≥ No. out/By	=8701472 

•



TO: Sunterra Gas Processing DATE: 29 May 1937 ATTN: Gary Jordan 0661 PO Box 2106 Albuquerque, NM 87103

SAMPLE ID : #4

ANALYTE

ANALYTICAL RESULTS NOMINAL DETECTION LIMITS

As	<0.05 mg/	1 0.05	ma/l
Ba	<1.0 mg/	· · · · · · · · · · · · · · · · · · ·	
Cđ	<0.01 mg/		
Cr	<0.05 mg/		$m_{\sigma}/1$
CN			$m_{G}/1$
F	0.63 mg/		mg/1
Pb			mg/1
Total Ho	$\frac{1}{\sqrt{0}} \frac{1}{\sqrt{0}} \frac{1}{\sqrt{0}$		mg/L
NO 3 as N	20.7  mg/		mg/l
Se			mg/l
Ac	0.098 mg/		mg/1
	(0.05 mg/		mg/1
Toluene	(0.001 mg/		mg/l
	(0.001 mg/		mg/1
1 2 Dichloroethano	(U.UL mg/		mg/l
1 1 Dichlorochalane	KU.UUI mg/	1 0.001	mg/l
1 1 2 2 Wotworklawsothulans	<0.001 mg/	0.001	mg/l
1,1,2,2 lettachiorbethylene	<0.001 mg/	1 0.001	mg/l
T,T,Z IIICHIDFOEthylene	<0.001 mg/	0.001	mg/l
Aciyi Benzene Yalooos	<0.001 mg/	1 0.001	mg/l
Aylenes Mothellene Chlauddu	<0.001 mg/	1 0.001	ng/l
Metaylene Caloride	<0.001 mg/	1 0.001	EÇ/l
	<0.001 mg/	I <b>0.</b> 001	l
1,1 Dichloroethane	<0.001 mg/	1 0.001	mg/l
	<0.001 mg/	1 0.001	mg/l
1,1,1 Trichleroethane	<0.001 mg/	'I 0.001	mg/l
1,1,2 Trichloroethane	<0.001 mg/	1 0.001	mg/l
1,1,2,2 Tetrachloroethane	<0.001 mg/	1 0.001	mg/l
Vinyl Chloride	<0.001 mg/	1 0.001	mg/l
Cu	<0.01 mg/	1 0.01	mg/l
Cl .	437 mg/	1.0	mg/l
Fe	<0.3 mg/	1 0.3	mg/l
Mn	<0.01 mg/	1 0.01	mg/l
SO 4	1750 mg/	1.0	mg/l
Za	<0.008 mg/	1 0.008	mg/l
Al	<0.1 mg/	1 0.1	mg/l
В	0.515 mg/	· · · · · · · · · · · · · · · · · · ·	mg/l
Co	<0.03 mg/	1 0.03	mg/l
Мо	<0.05 mg/	 /l 0.05	mg/l
Ni	0.268 mg/	1 0.01	mg/l

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director

BRROPE TO	David Bover		on the 688
REPORT TO:	N.M. Oil Conservation Division	S.L.D. NO.	- U-20-8
	P. 0. Box 2088	DAIL REV	
	Santa Fe. N.M. 87504-2088		· ·
PHONE(S).	827-5812		2,2,3,5,
SUBMITTER.	David Boyer	USER CODE: [1]	
SAMPLE COLLE	CTION CODE: (YYAMDEERAMII) 1 21 71	KI 2121 /131	RIDI I API
SAMPLE COLLE			
COUNTY. S.	WATER [], SOLL [], FOOD [], OTHER_		
LOCATION COD	E: (Township-Range-Section-Tracts)	$+ / / / \omega + / 3 +$	(10N06E24342
required. Wheney	UESTED: Please check the appropriate box(es) l er possible list specific compounds suspected or t	low to indicate the type of quired.	f analytical screens
	PURGEABLE SCREENS	EXTRACTABLE	SCREENS
(753) Alipha	tic Purgeables (1-3 Carbons)	🔲 (751) Aliphatic Hyd	rocarbons
2 (754) Aroms	tic & Halogenated Purgeables	(760) Organochlorine	Pesticides
(765) Mass	Spectrometer Purgeables	(755) Base/Neutral	Extractables
[_] (766) Trihald	methanes	(758) Herbicides, Ci	dorophenoxy scid
. Other	Specific Compounds or Classes	(759) Herbicides, Tr	iasines
		(760) Organochlorine	Pesticides
닐		(761) Organophosphi	ate Pesticides
닐	······	(767) Polychlorinated	i Biphenyls (PCB's)
L · ····-		(764) Polynuclear A	romatic Hydrocarbons
L		(762) SDWA Pestic	ides & Herbicides
Remarks:	unTerra Kuta Pond	3 (lower)	
-	ب ب	· · · · · ·	
	N73-7987 712-		······································
FIELD DATA:	j the side and		and a second
PH= D. 5; 0	nductivity=00	ine Residual= mg/l	n an
		·	
Dissolved Oxygen	=mg/l; Alkalinity=mg/l; Flow R	ie	•
Depth to water	ft.; Depth of wellft.; Perforation	Intervalfi; C.	
Sampling Locatio	n, Methods and Remarks (i.e. odors, etc.)		•
Fran 11	without 1st1 - 15.	Doras F	La Bo In-The
- Altena	cri and tois of the	mon on	conten uncle
clean.	MD al'	· · · · · · · · · · · · · · · · · · ·	
I certify that th	a results in this block accuracy reflect the res	te of me field analyses on	and the second
activities (signatu	re collector): What mike Rang	Marbod of Shimmen	to the Taballandras
This form accorr	manies O Senore Viale Glass dure	nd/or	
Samples were pr	eserved as follows:		
NP-	No Preservation: Sample stand at more terms		: •
	Sample should in an ine bath (Net Brann)	KULA.	, , , , , , , , , , , , , , , , , , ,
	Sample Bergement with Soliter Striker,	· · · · · · · · ·	•
CHAIN OF CT	Sample reserved with Sodium Thiosulfate to	move chlorine residual.	
		·	
I certify that th	is sample was transferred from	to	
at (location)			فيطو المتدري والم
,		- ***	and snat
the statements is	n this block are correct. Evidentiary Seals: Not	ealed 🛄 Seals Intact: Ye	
	and the second state of th	di tana	
Signatures			

### ANALYSES PERFO

THIS PAGE FOR LABORATORY RESULTS ONLY

N

LAB.

OR- 688

This sample was tested using the analytical screen	aing method(s)	checked below:	
PURGEABLE SCREENS		EXTRACTABLE SCREENS   (751) Aliphatic Hydrocarbons  (760) Organochlorine Pesticides  (755) Base/Neutral Extractables  (758) Herbicides, Chlorophenoxy acid  (759) Herbicides, Triazines  (760) Organochlorine Pesticides  (761) Organophosphate Pesticides  (767) Polychlorinated Biphenyls (PCB's)  (764) Polynuclear Aromatic Hydrocarbons  (762) SDWA Pesticides & Herbicides	
<u>AN</u>	ALYTICA	L RESULTS	
COMPOUND(S) DETECTED	CONC. IPPBI	COMPOUND(S) DETECTED	CONC.
anomatic supporter	N.D		
Exterante al ausarable	A/. D.		
A A A A A A A A A A A A A A A A A A A	1 <u>v</u> 1. U.C.	·····	
		and the second second second	
	<u> </u> ]		
· · · · · · · · · · · · · · · · · · ·			
	<b></b>		
• DETECTION LIMIT • X	25-15/2	+ DETECTION LIMIT +	
ABBREVIATIONS USED: N D = NONE DETECTED AT OR ABOVE T R = DETECTED AT A LEVEL BELOW [ BESULTS IN BRACKETS ] ARE UNCONN	THE STATES THE STATES FIRMED AND/	D DETECTION LIMIT D DETECTION LIMIT (NOT CONFIRMED) OR WITH APPROXIMATE QUANTITATION	
LABORATORY REMARKS:			
			·
	····		
:	·		·
CERTIFICA Seal(s) Intact: Yes $\square$ No $\square$ . Seal(s) broken b I certify that I followed standard laboratory procedu that the statements on this page accurately reflect Date(s) of analysis: $5/4/57$ Analyst's si	TE OF ANAL y: ures on handlin the analytical is ignature:	g and analysis of this sample unless otherwise note results for this sample.	d and
I certify that I have reviewed and concur/with the	analytical resu	its for this sample and with the statements in this	biock.
Reviewers signature: Knowenher	· · · · · · · · · · · · · · · · · · ·		

-----

-----

EIVED	AB 102 -14/17		o □ 59600 🕅 a	THER: 82235	
122187 Con TIME	SITE INFORM- > ATION		SHUTERRA -	- Кит=	PLANT
S cted by Person/Agency	/0CD	Collection site description	۱ 	Pous -	3
ENVIRONMEN NM OIL CON State Land Santa Fe, Attn: David Bo Phone: 827-5	ITAL BUREAU ISERVATION DI 1 Office Bldg NM 87504-208 Dyer 812	VISION J. PO Box 2088 38	3	Station/ well code	
APLING CONDITIONS	•	•	• •	Owner	
Sailed D Pump	Water level		Discharge	Sam	ple type
	Conductive				GRAB
8,5	Conductivity (Unc	S 9 8-7) µmho	water lemp. (00010)	2/°C Conc	uctivity at 25°C (00094) ערול
d comments	TOC Go	a Cast 2-	To Ti		
	ive vom	(VA)CAM	man kil		
·····					
	IT _ Chack and			<u> </u>	
1 P L P P [ C L L L H H H H L L M H H					
a of samples	Whole sample	Filtered in	field with		
a of samples	IF: Whole sample (Non-filtered)	F: Filtered in 0.45 µme	field with CA: 2	ml H₂SO₄/L add	ded
APLE FIELD TREATMER	IF: Whole sample (Non-filtered) Other-specify:	F: Filtered in 0.45 µmer	field with CA: 2 mbrane filter 5mL conc. HNO <sub>3</sub> add	miH₂SO₄/Lado ded □A:	ded 4ml fuming HNO <sub>3</sub> adde
A of samples	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in 0.45 µme	field with CA: 2 mbrane filter 5ml conc. HNO <sub>3</sub> add	miH₂SO₄/Lado ded □A:	ded 4ml fuming HNO <sub>3</sub> adde
A of samples bibmitted I No A NA: No acid added A ALYTICAL RESULTS from NA Conductivity (Corrector)	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in 0.45 µmer	field with $\Box A: 2$ mbrane filter $\Box A: 2$ $5\pi L conc. ENO_3 add$	miH₂SO₄/Lado ded ⊡A: IA Sampie:	ded 4ml fuming HNO <sub>3</sub> adde Date
ANA: No acid added C ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095)	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmei Q45 µmei Q45 Units Date analyze	field with $\Box A: 2$ mbrane filter $\Box A: 2$ 5ml conc. $HNO_3$ add	miH₂SO₄/Lado ded □A: IA Sampīe:	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u>
APLE FIELD TREATMER a of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total convittancele	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in 0.45 µmer A: Units Date analyzed µmho	field with mbrane filter $\Box A: 2$ 5ml conc. $HNO_3$ add From $\underline{\leftarrow}$ , N	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\Box$ A: IA Sempte: g/F	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1//4
APLE FIELD TREATMER a. of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filteraple residue (suspended)	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □A: Units Date analyze	field with mbrane filter $\Box$ A: 2 5m1 conc. $HNO_3$ add From $\underline{f}$ , N $\Delta$ Calcium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sempte: $g4^{-}$ 0.39	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//3</u>
APLE FIELD TREATMER a. of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable resicue (suspended) (00530)	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmei Q45 µmei Q45 µmei S/24 =	field with mbrane filter A: 2 5ml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium N Potassium	mi H₂SO₄/L add ded □A: IA Sampie: 84 0.39	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u>5/14</u> mg/1 <u>5/14</u>
APLE FIELD TREATMER a of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Tiotal non-filteraple residue (suspended) (00530) Cther: Cither:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in 0.45 µmer I A: Units Date analyzer µmho	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium Potassium Magnesium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Semplie: $84^{-}$ 0.39 53 8.75	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u>
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □A: Units Date analyzed µmho	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Celcium N Celcium N Celssium Magnesium Socium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sempte: $g \neq -$ 0.39 53 g = 5	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u><math>5//\mu</math></u> mg/1 <u><math>5//\mu</math></u> mg/1 <u><math>5//\mu</math></u> mg/1 <u><math>5//\mu</math></u> mg/1 <u><math>5//\mu</math></u>
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cither:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □A: Units Date analyzed µmho	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium N Calcium N Calcium N Socium Socium Socium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sample: g/- 0.39 53 53 53 53 53 53 53	ded 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u><math>5/14</math></u> mg/1 <u><math>5/14</math></u> mg/1 <u><math>5/14</math></u> mg/1 <u><math>5/14</math></u> mg/1 <u><math>5/14</math></u> mg/1 <u><math>5/14</math></u>
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in 0.45 µmer □ A: Units Date analyze µmho	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , M Calcium N Calcium Magnesium Magnesium Socium Socium Chloride	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sample: $\frac{84}{0.39}$ $\frac{53}{835}$ $\frac{29}{455}$	ded $4m1 \text{ fuming HNO}_3 \text{ adde}$ Date Analyzed $mg/1 \leq // u$ $mg/1 \leq // u$
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □A: Units Date analyzed µmho	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , M Calcium N Calcium N Calcium Socium Socium Socium Calcium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sempte: $84^{+}$ 0.39 53 835 37 $455^{+}$ $145^{+}$ 1707	ded         4ml fuming HNO3 adde         Date         Analyzed         mg/1       5/14
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Tictal non-filterable residue (suspended) (00530) Cther: Cther: Cther: ALSCA Nitrate-N+, Nitrate-N total (00630)	Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □ A: Units Date analyzed µmho mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Czicium Czicium N Czicium N Czicium Socium Socium Scium Scium Scium Scium Scium Scium Scium Scium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: HA Sempte: $\frac{84}{0.39}$ $\frac{53}{535}$ $\frac{39}{1455}$ 1707	ded $4ml fuming HNO_3 adde Date Analyzed mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14mg/1 5/14$
A of samples bmitted A of samples bmitted ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: A-H_SC4 Nitrate-N +, Nitrate-N total (00630) Ammonia-N total (00610) Total KieldahLN	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F: Filtered in Q45 µmer □ A: Units Date analyzed µmho mg/l mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium N Calcium N Calcium N Calcium N Socium	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sample: 84 0.39 53 835 37 456 1707 53 3172	ded         4ml fuming HNO3 adds         Date         Analyzed         mg/1       5/14         mg/1       5/17         mg/1       5/17         mg/1       5/17
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: A-H_SCA Nitrate-N +, Nitrate-N total (00530) Ammonia-N total (00610) Total Kjeldahl-N	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F:       Filtered in 0.45 μmen         Units       Date analyze         units       Date analyze         μmho       5/7.4/         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , M Calcium N Potassium Magnesium Sodium Sodium Sicarbonate N Sulfate X Sulfate X Total Solid X CO 2	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\Box$ A: IA Sample: 87 0.39 53 835 37 1757 5377 53777 53777 53777	ded         4ml fuming HNO3 adde         Date         Analyzed         mg/1         5/14         mg/1         5/14         mg/1         5/14         mg/1         5/14         mg/1         5/14         mg/1         5/14         mg/1         5/15         mg/1         5/15         mg/1         5/16         mg/1         5/17         mg/1         5/17         mg/1         5/17
A of samples bmitted  ALYTICAL RESULTS from NA  Conductivity (Corrected)  25°C (00095)  Total non-filterable residue (suspended)  (00530)  Cther:  Cther:  AH-SO2  Nitrame-N +, Nitrame-N  total (00630)  Ammonia-N total (00610)  Cthemical oxygen  Chemical oxygen	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F:       Filtered in 0.45 μmer         Units       Date analyzer         units       Date analyzer         μmho       5/7.4/         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , M Calcium Calcium Calcium Magnesium Magnesium Sodium Sodium Sodium Sulfate Magnesid Sulfate	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\Box$ A: HA Sempte: $84^{+}$ 0.39 53 835 37 $145^{+}$ 1707 5 - 31 = 2 23 - 3	ded $4ml fuming HNO_3 adde addeadde addeadde addea$
A of samples bmitted  ALYTICAL RESULTS from NA  Conductivity (Corrected) 25°C (00095)  Total non-filterable residue (suspended) (00530)  Cther: Cther: Cther: AH-SO4  Nitrate-N+, Nitrate-N total (00630)  Cther:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES	F:       Filtered in 0.45 μmer         Units Date analyze         μmho       5/7.4/         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium Calcium Calcium Magnesium Sodium Sodium Sodium Sulfate Total Solid Correct	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\Box$ A: IA Sempte: 84 0.39 53 35 35 29 155 1707 53 3177 23 (0,0)	ded $4m1 fuming HNO_3 adde 4m1 fuming HNO_3 adde 4m1 fuming HNO_3 adde mg/1 \leq 1/12mg/1 \leq 1/12mg/1 \leq 1/3mg/1 $
A of samples       IN         bmitted       IN         bmitted       IN         CALYTICAL RESULTS from NA       INA         Conductivity (Corrected)       25°C (00095)         Conductivity (Corrected)       25°C (00095)         Total non-filterable       residue (suspended)         (00530)       Internet         Cther:       Internet         A-H_SC4       Internet         Nitrate-N + , Nitrate-N       Internet         Cther:       Internet         A-H_SC4       Internet         Nitrate-N + , Nitrate-N       Internet         Chemical 006500       Internet         Ammonia-N total (00610)       Internet         Chemical oxygen       Internet         Internet       Inte	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES U362	F: Filtered in Q.45 µmei □ A: Units Date analyzed µmho mg/l mg/l mg/l mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium Calcium Magnesium Magnesium Socium Socium Socium Socium Socium Socium Chloride Magnesium Coloride Colorida	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\Box$ A: IA Sample: 84 0.39 53 35 37 455 1707 5 37 53 35 37 455 37 53 37 37 53 37	ded $ \begin{array}{c} \text{Date} \\ \underline{\text{Analyzed}} \\ \text{mg/1} \\ \underline{\text{S}/12} \\ \underline{\text{S}/1$
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Ct	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES U362	F:       Filtered in 0.45 μmer         Units       Date analyzer         μmho       5/7.4         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From, M Calcium Calcium Calcium Calcium Magnesium Socium Socium Chloride Calcindate Calcindate Calcium / Calcium /	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sample: $\frac{87}{-}$ 0.39 53 835 37 1707 s $3772$ 3772 23 (nion Balan	ded         4ml fuming HNO3 adde         Date         Analyzed         mg/1       5/14         mg/1       5/15
ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total organic carbon NA Conductivity (Corrected) 25°C (00095) Total organic carbon () Cther: Cher:	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES U362	F:       Filtered in 0.45 μmer         Units Date analyze         μmho       5/2.4/         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From, N Calcium Calcium Calcium Magnesium Sodium Sodium Solicate Chloride Sulfate Calcion/Ar Analyst	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: HA Sampie: g/f 0.39 53 35 37 1757 s $3772$ 23 27 1757 s $3772$ 23 0 1757 23 0 1757 1777 17	ded $4ml fuming HNO_3 adde addeadde addeadde addeadde addeadde addeadd$
APLE FIELD TREATMER a. of samples bimitted ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: Cther: A-1,5C4 Nitrate-N +, Nitrate-N total (00530) Ammonia-N total (00610) Total Kjeidahl-N ( ) Chemical oxygen demand (00340) Total organic carbon ( ) Other: Other: Cther: Cher: Chemical oxygen Chemical oxygen Chem	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES U362	F: Filtered in Q45 µmet □ A: Units Date analyzed µmho = /7.4 = mg/l mg/l mg/l mg/l mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From <u>F</u> , N Calcium N Calcium N Calcium N Calcium N Sodium Sodium Sodium Sulfate N Sulfate Chlorice Cation/Ar Analyst	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: WA Sample: 84 0.39 53 35 37 456 1707 5 31=2 23 ( nion Balan Date Reports 5 26	ded $4m1 \text{ fuming HNO}_3 \text{ adde}$ adde $addeadde addeadde addeadde addeadde addeadd$
APLE FIELD TREATMER a. of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: A-H-SC4 Nitrate-N +, Nitrate-N total (00630) Ammonia-N total (00610) Total Kjeldahl-N (I) Chemical oxygen demand (00340) Total organic carbon (I) Other: Other: Cther: Cther: Chemical oxygen Conductive (Content on total (00610) Content organic carbon (I) Chemical oxygen Content organic carbon Content: Content of total organic carbon Content: Content of total organic carbon Content of total organic carbon	IF: Whole sample (Non-filtered) Other-specify: m SAMPLES U362 = 9.61	F:       Filtered in 0.45 μmer         Units Date analyzer         μmho       5/2.4 -         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From, M Calcium Calcium Calcium Calcium Magnesium Magnesium Socium Socium Chloride Chloride Calcion/Ar Analyst	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: IA Sample: 87 0.39 53 835 37 1707 s $37$ 537 3	ded $4m1 \text{ fuming HNO}_3 \text{ adde}$ $adde Date Analyzed mg/1 \leq 1/12mg/1 \leq 1/12mg/1 \leq 1/3mg/1 \leq $
APLE FIELD TREATMER a. of samples ibmitted IN NA: No acid added I ALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095) Total non-filterable residue (suspended) (00530) Cther: Cther: Cther: A-1-504 Nitrate-N +, Nitrate-N total (00530) Ammonia-N total (00610) Total organic carbon (IIII) Chemical oxygen demand (00340) Total organic carbon (IIII) Cther: Cther: Cther: Cther: Conductivity (Corrected) Conductivity (Corrected	H = Check prop IF: Whole sample (Non-filtered) Other-specify: $M SAMPLES$ $U362$ $= 9.61$	F:       Filtered in 0.45 μmer         Units Date analyze         μmho       5/7.4/         mg/l	field with mbrane filter A: 2 Sml conc. HNO <sub>3</sub> add From M C2icium Analyst	mi H <sub>2</sub> SO <sub>4</sub> /L add ded $\square$ A: A Sampie: $\frac{84}{53}$ $\frac{53}{5}$ $\frac{53}{5}$ $\frac{53}{5}$ 5	ded $4ml fuming HNO_3 adde Date Analyzed mg/1 5//4mg/1 5//4$

-	
	_

· .

.

	CATIONS				ANIONS	
ANALYT	E MEQ.	PPM	DET.LIMIT	ANALYT	E MEQ.	PPM
Ca Mg Na K	4.19 4.35 36.32 0.01	84.00 53.00 835.00 0.39	< 3.0 < 10.0 < 10.0 < 0.5	HCO3   S04   C1	0.64 35.56 12.86	39.00 1707.00 456.00
Mn Fe	0.00 0.00	0.00 0.00		NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	44.87	972.39			49.06	2202.00
TDS (me	asured) =	3172.00	ppm		· • • • • • • • •	:
Ion Ba	lance =	91.46	સ્	Sampl Date	e No. out/By _	=8701471 

-

\_ \_ ....

#### PROPOSAL

w<sup>o</sup>gu'

The following proposal is for geologic and hydrologic investigations to furnish information as to the probable rates and paths of seepage from a pond with a single compacted-bentonite lining, and to describe the chemical nature of the ground water, both perched and beneath the regional water table, at the site.

The proposal also includes the installation of equipment for continued monitoring, if the pond is built, and sets forth a plan for continued monitoring after the pond is in service.

1. Exploratory drilling

a. Near the center of the proposed pond, drill a 50- of ft core-hole, with air as the circulating fluid. Unconsolidated material above the bedrock would be described in detail, and a detailed core description of the bedrock would be made. Before each new core run, the hole would be sounded to determine whether perched ground water were present; if present, it would be sampled with a bailer.

Sections of core that represent dominant lithologies would be taken, preserved, and submitted for permeability analysis. For each, a plug would be cut and cleaned, and air- and water-saturated permeability determined.

The hole would be plugged and abandoned by filling with heavy bentonite mud.

b. At a location just cutside the edge of the proposed pond and down-slope from the pond, drill a 50-ft corehole. The procedure would be as described above for the first core-hole. After coring and sampling of perched water has been completed, drill a 4 3/4-in hole to a point below the water table, using air. The estimated total depth of this hole is 300 ft. Set 2-in PVC casing, and allow the hole to stand for at least 24 hours; measure the depth to water and sample with a bailer. After a water sample is taken, pull the 2-in casing, mud up and run gamma-ray and resistivity logs for geologic correlation.

The purpose of this hole is to provide core information as to the first 50 feet below the surface, and to locate the depth to the saturated zone so that a monitor well, with casing cemented to near the water table, can be drilled at another location. This hole will be plugged and abandoned.  $v^{r}$ 

Exhibit

L,

c. At each of two locations just outside the edge of the proposed pond and on roughly opposite sides of it, drill and sample a 50-ft core hole as described in item a, above. Plug each of these holes back to a point within the shallow-



est permeable zone, using bentonite slurry; place a suctioncup lysimeter in silica flour within the shallowest permeable zone for permanent monitoring. Install concrete pad and security cover.

d. At a point near the edge of the proposed pond, install a permanent ground-water monitor well. Drill a 7 7/8-in hole to a point a few feet above the water table, as determined from the exploratory hole described in item b, above. Set and cement 5 1/2-in Schedule 80 PVC casing. Drill out and air-drill 4 1/2-in hole to total depth, estimated at about 300 ft; set 3-in threaded PVC liner from surface to total depth, with PVC screen section at water table. Measure water level and sample with bailer. Install concrete pad and security cover.

e. Install additional lysimeters in shallow drillholes if the investigation suggests that there is uncertainty as to the path that leakage might follow.

f. Determine the datum elevation for each drill hole.

2. Surface mapping, sampling

a. Prepare a detailed geologic map at a scale of 1"=100' or larger, to show the outcrops of lithologic units found in the drilling described above, fractures and fracture density, the locations of seeps, and other hydrogeologic information.

b. Prepare structure contour map(s) and isopach map(s) as appropriate to show the distribution of permeable units in the upper 50 feet of the subsurface, based on the surface mapping and the drilling described above.

c. Sample water reaching seeps, water in the seep below the lowest existing pond, and water in the lowest existing pond. Analyses would include volatile hydrocarbons, polynuclear aromatic hydrocarbons, major inorganic species, and metals.

3. Rate-of-flow calculations

After information as to the distribution of permeability in the subsurface beneath the pond site has been obtained by means of the drill-hole logging, core-analysis, and mapping described above, estimates would be made of the rate of flow which might be expected if leakage from the pond were to occur and the fluid were to enter the natural materials. The estimates of rates of flow, and the projected change in chemical quality with time of water emerging at the surface, would be determined through the use of an appropriate digital ground-water flow and/or masstransport model.

4. Continued monitoring

a. As a part of the proposal, the instrumentation required for measuring the components of the mass balance (with respect to water delivered to the pond), and which would be installed as part of construction of the pond, is described. The instrumentation would include:

i. precipitation gage, to determine the addition to the volume of water in the pond from rain and snow.

ii. staff gage in pond, and survey to establish a stage-capacity curve, to permit calculation of the changein-storage term of the mass balance. It is assumed that the pond will be surrounded by a berm which will divert runoff around it, so that no runoff will enter the pond.

iii. evaporation pan, to allow determination of the rate of evaporation from the pond. It is proposed to construct the pan of large-diameter corrugated pipe, with closed end, set in the pond and filled to the level of the pond bottom with pond-bottom material. A staff gage would be provided for measuring the level in the pan, and a valve would be provided so that the <u>pend</u> could be filled with pond water as required.

b. Monitoring procedure after installation of the pond would consist of the following:

i. Quarterly measurement of water level in the ground-water monitor well, and sampling of the monitor well, the lysimeters, the pond water, the nearest perched-water seeps, and the effluent to the pond. Field conductivity and pH would be taken, and analyses made for volatile hydrocarbons. Other constituents may be added to the list if the initial sampling suggests that there are specific indicators which distinguish the effluent from natural waters.

ii. Daily reading of a totalizing meter on the effluent line, the precipitation gage, the staff gage in the pond, and the staff gage in the evaporation pan. The daily readings would be used to calculate mass balance on a monthly basis, to determine by difference the rate of leakage from the pond. Because the pond is close to the plant, it is assumed that the readings would be taken daily by plant personnel and no recording instruments would be needed.



NOV - 6 1981 Mr. Lindell Greer-

Bureau of Cand Management Caller Service 4104 Farmington, NM 87499-4104

RE: SF 075309

Dear Mr. Greer:

During our phone conversation on October 28, 1987, we discussed the possibility of installing a single lined evaporative pond at our Kutz Plant. Exhibit 1 is an orthophoto of the Kutz Plant showing the present pond system. Exhibit 2 is results of sampling of the three ponds at the Kutz Plant that were duplicate samples taken by us and the New Mexico Oil Conservation Division (OCO). The sample results are a worst case scenario as we plan to install a hydrocarbon/water separator. This separator will remove essentially all of the hydrocarbons in the wastewater.

October 30, 1987

Exhibit 3 is a proposal for geologic and hydrologic investigations to provide information as to probable rates and paths for seepage from a single lined pond. The investigation will also provide depth to groundwater and its chemical nature.

As we discussed in our phone conversation, Sunterra must provide a Wastewater Discharge Plan to OCD by December 23, 1987. We would appreciate your prompt review of the enclosed information.

If further information is required, please call me at (505) 768-6700.

Sincerely Jordan

cc: Mr. David Boyer - OCD Mr. John Renner - Sunterra

STATE OF NEW MEXICO OIL CONSERVATION DIVISION MEMORANDUM OF MEETING OR CONVERSATION Time Date Telephone X Personal 1:40Pm 7/27/87 Originating Party Other Parties John Shomaker - (20109151 Savid Boye Representing SunterRa- King Subject Man Discharge Discussion John nequested the meeting to discuss what would be need for discharge plan for Unlines at Kutz. Specific items as fallows" Geologic investigation - Field mapping allow co in 14 simeter For deep PD biales allali nod 2 tis moni ean mon well. Ver A Specifics WR notrate no impair 1. Apresen St Sutur onl Conclusions or Agreements is elleren No oli an could domand Acrolison mars balance, storage change to be daily. Sunterno stan scope ince SIM owns loga at unlinded na han Signed Distribution Surverno Sill

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION



GARREY CARRUTHERS

GOVERNOR

July 20, 1987

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 87501 (505) 827-5800

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. John Renner General Manager Sunterra Gas Processing Co. P.O. Box 1869 Bloomfield, New Mexico 87413

RE: Discharge Plan GW-45 Kutz Canyon Gas Plant San Juan County, New Mexico

Dear Mr. Renner:

The Oil Conservation Division has received your request, dated July 16, 1987, for an extension for the submission of a discharge plan for the above referenced facility. The notification requiring the filing of a discharge plan was dated April 24, 1987.

Pursuant to Water Quality Control Commission Regulation 3-106.A. and for good cause shown, Sunterra Gas Processing Co. is hereby granted an extension to December 23, 1987 for the submission of a discharge plan for your Kutz Canyon Gas Plant. This extension is granted to allow for engineering and safety evaluation of process changes that will conserve water and reduce waste water volumes.

Pursuant to Water Quality Control Commission Regulation 3-106.A. and for good cause shown, you are further granted an extension to April 24, 1987 to discharge without an approved discharge plan. This extension is granted to allow for receipt and review of the required discharge plan.

If you have any questions or comments please feel free to contact Dave Boyer at (505) 827-5885.

Sincerely, WILLIAM J. LEMAY Director

WJL/RA/cr

cc: OCD-Aztec

# SUNTERRA GAS PROCESSING COMPANY

P. O. BOX 1869 • BLOOMFIELD, NEW MEXICO 87413 (505) 632-8033

July 16, 1987

Mr. William J. Lemay, Director Oil Conservation Division New Mexico Energy, Minerals and Natural Resources Dept. P.O. Box 2088 State Land Office Building Santa Fe, New Mexico 87501

Re: Kutz Canyon Gas Plant Discharge Plan

Dear Mr. Lemay:

Your letter dated April 24, 1987, required Sunterra to prepare and submit to your office a Waste Discharge Plan for the Kutz Plant. Since receipt of your letter, Sunterra has worked diligently on defining the plant waste water discharges. We have also looked at several process changes to conserve water and reduce the volume(s) discharged. We are presently evaluating these process changes from an engineering and safety standpoint.

We request, pursuant to Section 3-106(A) of the New Mexico Water Quality Control Commission, an extension of 120 days from the due date of August 25, 1987, in order to properly evaluate the above mentioned process changes, to submit the Waste Discharge Plan. If you approve our request, this plan will be in your office prior to December 23, 1987. We also request that we be permitted to operate without an approved discharge plan in accordance with Section 3-106(B) for 120 days after December 23, 1987 for the reasons outlined above.

If further information is required, please advise.

Sincerely.

lohn Renner General Manager

JR:1s

1 R 1981 ON DIVISION CONSERVA SANTAF

## SUNTERRA GAS PROCESSING COMPANY

P. O. BOX 1869 • BLOOMFIELD, NEW MEXICO 87413 (505) 632-8033

June 3, 1987

Mr. William J. LeMay, Director New Mexico Energy & Minerals Department Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

Re: Discharge Plan - Kutz Plant

Dear Mr. LeMay:

Our letter to you dated May 7, 1987 promised to provide the lab results of the duplicate samples which were taken on April 22, 1987, and we are enclosing these lab results at this time for your information. We were also informed that all prior lab analyses will be required to be submitted in connection with the discharge plan application. Accordingly we are submitting at this time the lab reports from samples which were obtained at Kutz and Lybrook in December of 1986.

Within the near future we will be in a better position to proceed with a plan preparation schedule, and we will continue to keep you advised of our progress. In the meantime, we would appreciate receiving copies of your lab reports when they become available, and we look forward to working with you in the future.

trulv Verw Gary L. Jordan

GLJ/kam

**Enclosures** 

cc: Southern Union Company Attn: Mr. Thomas E. Morton, Jr.

> Powell, Goldstein, Frazier & Murphy Attn: Mr. G. William Speer

Mr. Ted Morse, Sunterra Mr. John Renner, Sunterra

Keleher & McLeod, P.A. Attn: Mr. Henry F. Narvaez

LVSS 7AM 6/18 000 800 36342 Sim lenne - mon App 17 Application John Rennen 632 6033 3PM 6/19 86652 ENR WORK alman sile joining Basin Misposal 6/18/87 6, 9 months Hen HS reading sprayers - 125 ppm time 1000 pond - 300 ppm Sciller hit water fran taile - Mar from (used 5-60 tobes) 507 20/87 3:30pm Wind W, 10-15 MPH) 507 20/87 3:30pm Wind W, 10-15 MPH) 507 2010 - 12 ppm (5-60 Gaster #3, 15troke pond - 800, 5900pm (100-1600 Gaster #3, 15troke n - 560, 5900pm (100-1600 Gaster #3, 15troke и - 50 ppm, sing Soppm(MSA 1-302)\*3, TSInke 1 ->200, > 200 (Drageon 0-200) 3, 15T. Start-WK 10 AM 6/22 Farmington 26968 Return Sentese-modnight 6/22 87308

8706705 ED6221050 53 VOC Sumple from Kitchen ande from E lies by water fiere Wolf ad al 1 NW 1/450 /4 Scheralty Chiner 2. Funce Steel. "" I une l'ank Sous Steelen ? Cem He I Brocaldon - simple show lab of the Funder A ) Hit males house ender & tear number Delindrator 10 CHH DULY Ruito Frank W ords whe garage "Separate SX/var 0,0 Waxine Welch 334-6065,498,335 RQ Well Since 16, 0000065, N=172 Wailled 35, 25 Sta Minna River, Morel \* well sould to hope bloymout mebile herre en sité Welch Direct in home To NW) Summes 'es sactor welt \* after complaint in late 85 discolore lende ~ 50' down Mrs Wolch south not at Leeper bed Commun 2"1 y review by himeer Jan 87 (Nm et e Chee - Kempilon) summer of lined in with promitted. al wat ume.

Pui Tanke at Schneich bad ComiB' 2:5 (M 28-13N-10W) have NW and Saltal bade W dilinian hart have bake Spen Well at werk - apprant 70 dace. Nac - apprant Well unes in the Son drumming Tusted dallessent M Spring, DK Mow Amoco pits - Workman Fault Louver mit to be Unkernow of schride rune ET 0622135 - Semple Svorn Tep al Aunto well Well (2) Source nanell from huy 550, poleille stag (Shem land arla alme arrive (includingtimore) Marrey & ut let are. - Dut into soring pool Comme R lev 334-5647 d #18, 2343 NZTER 87710 ma along road - Sall Chosterny (Hwy Row Jourg NW 27 House 870632 1245 appendix. profic

3). Can we fil 3 2 21 parciager (3) 10 recence > 12acre 5 / acre 5 / beck R. Rengels that seered loken Jun monaken, etc Humla WW W une no part ? porameter greates that here are and . on. (b) demerid that in uning crokedy , techade etc aptes the Colon Coursed and Refuce Legacould determine type of uner gling. - ctd pet 1 ~ Mom Shere ) at - Dr. Sile of clapet 1 - Mrm Drew W/ leak detection sure have Shuidd that may cause subs Gerthing, ( Alger check Sludge SPT HLO' Charlentined ! New pond It have non-contact wastewater with Wenter hines what we Sine grained cleepen, water et lower level then fit 10(2) Vanner that Kocatien backher around mit had berem cores 4:30 PM - John Renne Jun Reserve - Met To Pp/ Second on So L meretpend wooder were haven <u>E</u>

### KUTZ PLANT SAMPLING LOCATIONS Duplicate Sampling with OCD 4/22/87

### Sample I.D.

1.	Water	Sample	of	Kutz	#1	Cooling	Tower	Sump
----	-------	--------	----	------	----	---------	-------	------

- 2. Water Sample of Flare Pond #1 Southwest Corner
- 3. Water Sample of Pond #2 Middle of North Side

4. Water Sample of Pond #3 Southwest Corner



DECEMBER 1986

Gasoline Plant Sampling Locations

- K-1 Water sample taken near Kutz #1 drain inlet to flare pond
- K-2 Water sample taken near Kutz #2 drain inlet to flare pond
- K-3 Sludge sample taken near Kutz #1 drain inlet to flare pond
- K-4 Sludge sample taken near Kutz #2 drain inlet to flare pond
- K-5 Wasted iron sponge sample from Kutz #2 plant
- K-6 Water sample from upper spring below Kutz flare pond
- K-7 Water sample from lower spring below Kutz flare pond
- L-1 Water sample taken at Lybrook flare pond
- L-2 Sludge sample taken at Lybrook flare pond
- L-3 Water sample taken in arroyo downstream from Lybrook flare pond



TO: Sunterra Gas Processing DATE: 29 May 1987 ATTN: Gary Jordan PO Box 2106 Albuquerque, NM 87103

0661

### SAMPLE ID : #1

ANALYTE

ANALYTICAL RESULTS NOMINAL DETECTION LIMITS

As ,	<0.05 mg/l	0.05 mg/l
Ba	<1.0 mg/l	1.0 mg/l
Cd	<0.01 mg/l	0.01 mg/l
Cr	<0.05 mg/l	0.05 mg/l
CN	<0.01 mg/l	0.01 mg/l
F	0.59 mg/l	0.01 mg/l
Pb	0.05 mg/l	0.01 mg/l
Total Hg	0.0023 mg/l	0.002 mg/l
NO 3 as N	<0.01 mg/l	0.01 mg/l
Se	0.019 mg/l	0.002 mg/l
Ag	<0.05 mg/l	0.05 mg/l
Benzene	<0.001 mg/l	0.001 mg/l
Toluene	<0.001 mg/l	0.001 mg/l
CCL 4	<0.01 mg/l	0.01 mg/l
1,2 Dichloroethane	<0.001 mg/l	0.001 mg/l
1,1 Dichloroethylene	<0.001 mg/l	0.001 mg/l
1,1,2,2 Tetrachloroethylen	e <0.001 mg/l	0.001 mg/l
1,1,2 Trichloroethylene	<0.001 mg/l	0.001 mg/l
Ethyl Benzene	<0.001 mg/l	0.001 mg/l
Xylenes	<0.001 mg/l	0.001 mg/l
Methylene Chloride	<0.001 mg/l	0.001 mg/l
CCL 3	<0.001 mg/l	0.001 mg/l
1,1 Dichloroethane	<0.001 mg/l	0.001 mg/l
EDB	<0.001 mg/l	0.001 mg/l
1,1,1 Trichloroethane	<0.001 mg/l	0.001 mg/l
1,1,2 Trichloroethane	<0.001 mg/l	0.001 mg/l
1,1,2,2 Tetrachloroethane	<0.001 mg/l	0.001 mg/l
Vinyl Chloride	<0.001 mg/l	0.001 mg/l
Cu	0.03 mg/1	0.01 mg/l
Cl	44 mg/l	1.0 mg/l
Fe	<0.3 mg/l	0.3 mg/l
Mn	0.03 mg/l	0.01 mg/l
SO 4	913 mg/l	1.0 mg/l
Zn	0.072 mg/l	0.008 mg/l
Al	<0.1 mg/l	0.1  mg/l
В	0.357 mg/l	0.04 mg/l
Co	<0.03 mg/l	0.03 mg/l
Mo	<0.05 mg/l	0.05 mg/l
Ni	0.150 mg/l	0.01 mg/1
7300 Jetterson, N.E. • A	Ibuquerque, New Mexico 87109	• (505) 345-8964

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158

DATE: 9 January 1987 2152

SAMPLE ID: K-1

ANALYTE	ANALYTICA	L RESULTS	NOMINAL	DETECTION	LIMITS
As	0.15	$m\sigma/1$	(	$0.002 m \sigma / 1$	
Ba	0.20	mg/l		0.005  mg/l	
Cđ	<0.01	mg/l		0.01  mg/l	
Cr	<0.05	mg/l		0.05  mg/l	
Pb	<0.05	mg/l		0.05  mg/l	
Hg	<0.002	mg/l	(	0.002  mg/l	
Se	0.02	mg/l	· (	0.002  mg/l	
Ag	<0.05	mg/l		0.05 mg/l	
Corrosivity	<6.35	mmpy		6.35 mmpy	
pH	7.17			0.01	
Reactivity	non-rea	active			
CN	<0.01	mg/l	,	0.01 mg/l	
TDS	1564	mg/l		1  mg/l	
VOLATILE ORGANICS	•			·	
Benzene	1.34	mg/l	·	0.01 mm/1	
Toluene	0.732	mg/l		$0.01 m \sigma/1$	
Ethyl benzene	0.048	mg/l		0.01  mg/l	
Carbon tetrachloride	<0.01	mg/l	. •	0.01  mg/l	
Chloroform	<0.01	mg/l		0.01 mg/l	
1,1-dichloroethane	<0.01	mg/l		0.01 mg/l	
1,2-dichloroethane	<0.01	mg/l		0.01 mg/l	
1,1-dichloroethylene	<0.01	mg/l		0.01 mg/l	
1,2-dichloropropane	<0.01	mg/l		0.01 mg/l	
1,2-dichloropropylene	<0.01	mg/l	-	0.01 mg/l	
Methylene chloride	<0.01	mg/l	:	0.01 mg/1	
Tetrachloroethylene	. <0.01	mg/l		0.01 mg/l	
1,2-trans-dichloroethyle	ene <0.01	mg/l		0.01 mg/l	
1,1,1-trichloroethane	0.579	mg/l		0.01 mg/l	•
1,1,2-trichloroethane	<0.01	mg/l		0.01 mg/l	
Trichloroethylene	<0.01	mg/l		0.01  mg/l	

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

met V. Smith Jennifer V. Smith, Ph.D. Laboratory Director

-2-



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158 DATE: 9 January 1987 . 2152

SAMPLE ID: K-2

ANALYTE A	NALYTICAI	RESULTS	NOMINAL DETEC	TION	LIMITS
As	<0.002	mg/l	0.002	mc / ]	
Ba	<0.005	$m\sigma/1$	0 005	$m\alpha/1$	
Cd	<0.01	$m\sigma/l$	0 01	$m\sigma/1$	
Cr	<0.05	mg/l	0.01	$m\sigma/1$	
Pb	<0.05	mg/l	0.05	mg/2	
Hg	<0.002	$m\sigma/l$	0 002	mg/2	
Se	0.03	$m\sigma/l$	0.002	$m\alpha/l$	· ·
Ag	<0.05	mg/l	0.05	mg/2	
Corrosivity	<6.35	mmpy	5 35	mmnw	
pH	6.92		0.01	mm P J	
Reactivity	non-rea	active			
CN	<0.01	ma/l	0.01	ma/1	
TDS	1800	mg/l	1	$m\sigma/1$	
VOLATILE ORGANICS				-	
Benzene	0.962	mg/l	0.01	ma/1	
Toluene	0.708	mg/l	0.01	mg/3	
Ethyl benzene	0.034	mg/l	0.01	$m\alpha/1$	
Carbon tetrachloride	<0.01	mg/l	0.01	$m\sigma/l$	
Chloroform	<0.01	mg/l	0.01	$m\sigma/l$	
1,1-dichloroethane	<0.01	mg/l .	0.01	$m\sigma/l$	
1,2-dichloroethane	<0.01	mg/l	0.01	mg/l	
1,1-dichloroethylene	<0.01	mg/l	0.01	ma/l	
1,2-dichloropropane	<0.01	mg/l	0.01	mg/l	
1,2-dichloropropylene	<0.01	mg/l	0.01	mg/l	
Methylene chloride	<0.01	mg/l	0.01	mg/l	
Tetrachloroethylene	<0.01	mg/l	0.01	mg/l	
1,2-trans-dichloroethyle	ene 0.470	mg/l	0.01	mg/l	
1,1,1-trichloroethane	0.550	mg/l	0.01	mg/l	
1,1,2-trichloroethane	<0.01	mg/l	0.01	mg/l	
Trichloroethylene	<0.01	mg/l	0.01	mg/l	
REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director -2-



SOLD	TO:	PNM	
		ATTN: Kent Kantz	
		Alvarado Square	•
		Albuquerque, NM	87158

## SAMPLE ID: K-3

ANALYTE

ANALYTICAL RESULTS

NOMINAL DETECTION LIMITS

DATE: 9 January 1987

2152

As	0.05 mg/l	0.002 mg/l
Ba	<0.005 mg/l	0.005 mg/l
Cd	<0.01 mg/l	0.01 mg/l
Cr	<0.05 mg/l	0.05 mg/l
Pb	<0.05 mg/l	0.05 mg/l
Hg	<0.002 mg/l	0.002 mg/l
Se	<0.002 mg/l	0.002 mg/l
Ag	<0.05 mg/l	0.05 mg/l
Corrosivity	<6.35 mmpy	6.35 mmpy
РH	7.01	0.01
Reactivity	non-reactive	
CN	<0.01 mg/l	0.01 mg/l
Ignitibility	>60°C	
PCB	<1 ug/g	1 ug/g
		Ø

## VOLATILE ORGANICS

Benzene	2.7 ug/g	
Toluene	10.1 ug/g	
Ethyl benzene	5.3 ug/g	
Carbon tetrachloride	<0.1 ug/g	
Chloroform	<0.1 ug/g	
1,1-dichloroethane	<0.1 ug/g	
1,2-dichloroethane	<0.1 ug/g	
1,2-dichloropropane	<0.1 ug/g	
1,2-dichloropropylene	<0.1 ug/g	
Methylene chloride	<0.1 ug/g	
1,1,2,2-tetrachloroethane	<0.1 ug/g	
Tetrachloroethylene	<0.1 ug/g	
1,2-trans-dichloroethylene	<0.1 ug/g	
1,1,1-trichloroethane	<0.1 ug/g	
1,1,2-trichloroethane	<0.1 ug/g	
Trichloroethylene	<0.1 ug/g	

0.1 ug/g 0.1 ug/g

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964

2-chlorophenol 2-nitrophenol Phenol 2,4-dimethylphenol 2,4-dichlorophenol 2,4,6-trichlorophenol p-chloro-m-cresol 2,4-dinitrophenol Pentachlorophenol 4-nitrophenol BASES	<0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g	0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g
DRDBO		
Acenaphthene	3 ug/g	1 ug/g
Fluoranthene	5 ug/g	1 ug/g
Napthalene	<1 ug/g	1 ug/g
Benzo(a)anthracene	<1 ug/g	1 ug/g
Benzo(a)pyrene	<1 ug/g	1 ug/g
Benzo(b)fluoranthene	<1 ug/g	1 ug/g
Benzo(k)fluoranthene	<1 ug/g	l ug/g
Chrysene	<1 ug/g	1 ug/g
Acenaphthylene	<1 ug/g	1 ug/g
Anthracene	2 ug/g	1 ug/g
Benzo(ghi)perylene	<1 ug/g	1 ug/g
Fluorene	5 ug/g	1 ug/g
Phenanthrene	2 ug/g	1 ug/g
Dibenzo(ah)anthracene	<1 ug/g	1 ug/g
Indeno(1,2,3-cd)pyrene	<1 ug/g	l ug/g
Pyrene	<1 ug/g	l ug/g

-2-

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

ACIDS

Jennifer W: Smith, Ph.D. Laboratory Director



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158 DATE: 9 January 1987 2152

SAMPLE ID: K-4

ANALYTE	ANALYTICA	L RESULTS	NOMINAL D	ETECTION	LIMITS
As	<0.05	mg/l	0.	002 mg/l	
Ba	0.34	mg/l	0.	005 mg/l	
Cđ	<0.01	mg/l	0	.01 mg/l	
Cr	<0.05	mg/l	0	.05 mg/1	
рр	<0.05	mg/l	0	.05 mg/l	
Нд	<0.002	mg/l	0.	002 mg/l	
Se	<0.002	mg/l	0.	002 mg/l	
Ag	<0.05	mg/l	. 0	.05 mg/l	
Corrosivity	<6.35	mmpy	6	.35 mmpy	
рH	8.05		0	.01	
Reactivity	non-rea	active			
CN	<0.01	mg/l	0	.01 mg/l	
Ignitibility	>60	°C			
PCB	<1	ug/g		1 ug/g	
VOLATILE ORGANICS					·
Benzene	<0.1	ug/g		0.1 ug/g	
Toluene	<0.1	ug/g		0.1  ug/g	
Ethyl benzene	<0.1	ug/g		0.1  ug/g	
Carbon tetrachloride	<0.1	ug/g		0.1  ug/g	
Chloroform	<0.1	ug/g		0.1  ug/g	
1,1-dichloroethane	<0.1	ug/g		0.1  ug/g	
1,2-dichloroethane	<0.1	ug/g		0.1 ug/g	
1,2-dichloropropane	<0.1	ug/g		0.1 ug/g	
1,2-dichloropropylene	<0.1	ug/g		0.1 ug/g	
Methylene chloride	<0.1	ug/g		0.1 ug/g	
1,1,2,2-tetrachloroetha	ane <0.1	ug/g		0.1 ug/g	
Tetrachloroethylene	<0.1	ug/g		0.1 ug/g	
1,2-trans-dichloroethy]	Lene <0.1	ug/g	·	0.1 ug/g	
1,1,1-trichloroethane	<0.1	ug/g		0.1 ug/g	
1,1,2-trichloroethane	<0.1	ug/g		0.1 ug/g	
Trichloroethylene	<0.1	ug/g		0.1 ug/g	

А	C	11	):	>	
	•	•			

2-chlorophenol 2-nitrophenol Phenol 2,4-dimethylphenol 2,4-dichlorophenol 2,4,6-trichlorophenol p-chloro-m-cresol 2,4-dinitrophenol Pentachlorophenol 4-nitrophenol	<0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g	0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g
BASES		· .
Acenaphthene	<1 ug/g	1 ug/g
Fluoranthene	$\sqrt{1} ug/g$	1  ug/g
Napthalene	<1 ug/g	1 ug/g
Benzo(a)anthracene	$\sqrt{1}$ ug/g	1 ug/g
Benzo(a)pyrene	$\sqrt{1}$ ug/g	1 ug/g
Benzo(b)fluoranthene	<1  ug/g	1 ug/g
Benzo(k)fluoranthene	<1 ug/g	1 ug/g
Chrysene	<1 ug/g	1 ug/g
Acenaphthylene	<1 ug/g	1 ug/g
Anthracene	<1 ug/g	1 ug/g
Benzo(ghi)perylene	<1 ug/g	1 ug/g
Fluorene	<1 ug/g	1 ug/g
Phenanthrene	<1 ug/g	l ug/g
Dibenzo(ah)anthracene	<1 ug/g	1 ug/g
Indeno(1,2,3-cd)pyrene	<1 ug/g	l ug/g
Pyrene	<1 ug/g	l ug/g

-2-

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Chridde ameth

Jenhifer VV Smith, Ph.D. Laboratory Director



DATE: 9 January 1987 2152

SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158

# SAMPLE ID: K-5

- -

ANALYTE	ANALYTICAL R	ESULTS NOMINAL	DETECTION LIMIT	Ŝ
As	<0.05 mg	r/1 (	0.002 mg/l	
Ba	<0.05 mg	/l C	0.005 mg/l	
Cđ	<0.01 mg	r/1	0.01 mg/l	
Cr	<0.05 mg	/1	0.05 mg/l	
Pb	<0.05 mg	/1	0.05 mg/l	
Hg	<0.002 mg	/l · C	0.002 mg/l	
Se	<0.002 mg	r/l (	).002 mg/l	
Ag	<0.05 mg	1/1	0.05 mg/l	
Corrosivity	<6.35 mm	n py	6.35 mmpy	
pH	6.80		0.01	
Reactivity	non-react	ive		
CN	<0.01 mg	J/l	0.01 mg/l	
Ignitibility	>60°C			
PCB	<1 ug	1/g	1 ug/g	
VOLATILE ORGANICS	•.		•	
Benzene	<0.1 ug	1/g	0.1 ug/g	
Toluene	<0.1 ug	1/g	0.1 ug/g	
Ethyl benzene	<0.1 ug	J/g	0.1 ug/g	
Carbon tetrachloride	<0.1 ug	J/g	0.1 ug/g	
Chloroform	<0.1 ug	1/g	0.1 ug/g	
1,1-dichloroethane	<0.1 ug	J/g	0.1 ug/g	
1,2-dichloroethane	<0.1 ug	1/g	0.1 ug/g	
1,2-dichloropropane	<0.1 ug	a/a	0.1 ug/g	
1,2-dichloropropylene	<0.1 ug	J/g	0.1 ug/g	
Methylene chloride	<0.1 ug	l\d	0.1 ug/g	
1,1,2,2-tetrachloroetha:	ne <0.1 ug	a/a	0.1 ug/g	
Tetrachloroethylene	<0.1 ug	ala -	0.1 ug/g	
1,2-trans-dichloroethyl	ene <0.1 ug	a/a	0.1 ug/g	
1,1,1-trichloroethane	<0.1 ug	ala	0.1 ug/g	
1,1,2-trichloroethane	<0.1 ug	a/a	0.1 ug/g	
Trichloroethylene	<0.1 ug	a/a	0.1 ug/g	

2-chlorophenol       <0.01 ug/g       0.01 ug/g         2-nitrophenol       <0.01 ug/g       0.01 ug/g         Phenol       <0.01 ug/g       0.01 ug/g         2,4-dimethylphenol       <0.01 ug/g       0.01 ug/g         2,4-dichlorophenol       <0.01 ug/g       0.01 ug/g         2,4-dichlorophenol       <0.01 ug/g       0.01 ug/g         2,4-dichlorophenol       <0.01 ug/g       0.01 ug/g         2,4-dinitrophenol       <0.01 ug/g       0.01 ug/g         p-chloro-m-cresol       12.8 ug/g       0.01 ug/g         2,4-dinitrophenol       <0.01 ug/g       0.01 ug/g         2,4-dinitrophenol       <0.01 ug/g       0.01 ug/g         4-nitrophenol       <0.01 ug/g       0.01 ug/g         4-nitrophenol       <0.01 ug/g       0.01 ug/g         BASES            Acenaphthene       <1 ug/g       1 ug/g         Fluoranthene       <1 ug/g       1 ug/g         Senzo (a) anthracene       <1 ug/g       1 ug/g         Benzo (b) fluoranthene       <1 ug/g       1 ug/g         Chrysene       <1 ug/g       1 ug/g       1 ug/g         Acenaphthylene       <1 ug/g       1 ug/g       1 ug/g <td< th=""><th>ACIDS</th><th></th><th></th></td<>	ACIDS		
BASESAcenaphthene(1 ug/g1 ug/gFluoranthene(1 ug/g1 ug/gNapthalene(1 ug/g1 ug/gBenzo(a) anthracene(1 ug/g1 ug/gBenzo(a) pyrene(1 ug/g1 ug/gBenzo(a) pyrene(1 ug/g1 ug/gBenzo(b) fluoranthene(1 ug/g1 ug/gBenzo(k) fluoranthene(1 ug/g1 ug/gChrysene(1 ug/g1 ug/gAcenaphthylene(1 ug/g1 ug/gAnthracene(1 ug/g1 ug/gFluorene(1 ug/g1 ug/gPhenanthrene(1 ug/g1 ug/gDibenzo(ah) anthracene(1 ug/g1 ug/gIndeno(1,2,3-cd) pyrene(1 ug/g1 ug/g	2-chlorophenol 2-nitrophenol Phenol 2,4-dimethylphenol 2,4-dichlorophenol 2,4,6-trichlorophenol p-chloro-m-cresol 2,4-dinitrophenol Pentachlorophenol 4-nitrophenol	<0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g <0.01 ug/g 12.8 ug/g U039 H.W. <0.01 ug/g <0.01 ug/g <0.01 ug/g	0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g
Acenaphthene<1 ug/g	BASES		
	Acenaphthene Fluoranthene Napthalene Benzo(a) anthracene Benzo(b) fluoranthene Benzo(b) fluoranthene Chrysene Acenaphthylene Anthracene Benzo(ghi) perylene Fluorene Phenanthrene Dibenzo(ah) anthracene Indeno(1,2,3-cd) pyrene	<1 ug/g <1 ug/g	<pre>1 ug/g 1 ug/g</pre>

-2-

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Baboratory Director



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158

DATE: 9 January 1987 2152

## SAMPLE ID: K-6

ANALYTE ANALYTICAL RESULTS NOMINAL DETECTION LIMITS As <0.002 mg/l 0.002 mg/l Ba <0.005 mg/l 0.005 mg/l Cđ 0.045 mg/l 0.01 mg/l Cr <0.05 mg/l 0.05 mg/l Pb 0.13 mg/l 0.05 mg/l Hg <0.002 mg/l 0.002 mg/l Se 0.31 mg/l 0.002 mg/l λq <0.05 mg/l 0.05 mg/l Corrosivity <6.35 mmpy 6.35 mmpy pН 7.77 0.01 Reactivity non-reactive CN <0.01 mg/l 0.01 mg/l TDS 6864 mg/l 1 mg/l

#### VOLATILE ORGANICS

Benzene	<0.01 mg/l	0.01	ma/l
Toluene	<0.01 mg/l	0.01	$m\sigma/1$
Ethyl benzene	<0.01 mg/l	0.01	mg/l
Carbon tetrachloride	<0.01 mg/l	0.01	mg/l
Chloroform	<0.01 mg/l	0.01	mg/l
1,1-dichloroethane	<0.01 mg/l	0.01	$m\sigma/l$
1,2-dichloroethane	<0.01 mg/l	0.01	mq/l
1,1-dichloroethylene	<0.01 mg/l	0.01	mg/1
1,2-dichloropropane	<0.01 mg/l	0.01	mg/l
1,2-dichloropropylene	<0.01 mg/1	0.01	ma/l
Methylene chloride	<0.01 mg/l	0.01	mg/l
Tetrachloroethylene	<0.01 mg/l	0.01	mg/l
1,2-trans-dichloroethylene	<0.01 mg/l	0.01	mg/l
1,1,1-trichloroethane	<0.01 mg/l	0.01	mg/l
1,1,2-trichloroethane	<0.01 mg/l	0.01	mg/l
Trichloroethylene	<0.01 mg/l	0.01	$m\sigma/1$

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

-....

JenniferUV. Smith, Ph.D. Laboratory Director



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158

SAMPLE ID: K-7

. ANALYTE	ANALYTICAL RESULTS	NOMINAL DETECTION	LIMITS
As	<0.002 mg/l	0.002 mg/l	
Ba	<0.005 mg/l	0.005 mg/l	
Cđ	0.060 mg/l	0.01 mg/l	
Cr	<0.05 mg/l	0.05 mg/l	
Pb	0.18 mg/l	0.05 mg/l	
Hg	<0.002 mg/l	0.002 mg/l	
Se	0.54 mg/l	0.002 mg/l	
Ag	<0.05 mg/l	0.05 mg/l	
Corrosivity	<6.35 mmpy	6.35 mmpy	
pH	7.82	0.01	
Reactivity	non-reactive	_	
CN	<0.01 mg/1	0.01 mg/l	
TDS	9882 mg/l	1 mg/l	
VOLATILE ORGANICS			·
Benzene	<0.01 mg/l	0.01 mg/l	
Toluene	<0.01 mg/l	0.01 mg/l	
Ethyl benzene	<0.01 mg/l	0.01 mg/l	
Carbon tetrachloride	<0.01 mg/l	0.01 mg/l	· ·
Chloroform	<0.01 mg/l	0.01 mg/l	
1,1-dichloroethane	<0.01 mg/l	0.01 mg/l	
1,2-dichloroethane	<0.01 mg/l	0.01 mg/l	
1,1-dichloroethylene	<0.01 mg/l	0.01 mg/l	
1,2-dichloropropane	<0.01 mg/l	0.01 mg/l	
1,2-dichloropropylene	<0.01 mg/l	0.01 mg/l	
Methylene chloride	<0.01 mg/l	0.01 mg/l	:
Tetrachloroethylene	<0.01 mg/l	0.01 mg/l	
1,2-trans-dichloroethy]	lene <0.01 mg/l	0.01 mg/l	
1,1,1-trichloroethane	<0.01 mg/l	0.01 mg/l	
1,1,2-trichloroethane	<0.01 mg/l	0.01 mg/l	
Trichloroethylene	<0.01 mg/l	0.01 mg/l	

DATE: 9 January 1987

2152

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

W. Amith Jennifer VU Smith, Ph.D. Laboratory Director



SOLD TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158

DATE: 9 January 1987 2152

SAMPLE ID: L-1

ANALYTE	ANALYTICAL RESULTS	NOMINAL DETECTION	LIMITS
₩As	0.80 mg/l	0.002 mg/l	
✓Ba	0.43  mg/l	0.002 mg/1	
rCd	<0.01 mg/l	0.000  mg/r	
rCr	<0.05 mg/l	$\begin{array}{c} 0.01 \text{ mg/l} \\ 0.05 \text{ mg/l} \end{array}$	
(Pb	<0.05 mg/l		
⊬Hg	<0.002 mg/l	0.002  mg/	
∽Se	0.06  mg/l	0.002  mg/	
∠Ag	<0.05 mg/l		
Corrosivity	<6.35 mmpy		
pH	9,15	0.01	
Reactivity	non-reactive	0.01	
∽ CN -	< 0.01  mg/l		,
TDS	2900 mg/1		•
VOLATILE ORGANICS		· ·	
Benzene	0.307 mg/l		
✓Toluene	0.535 mg/l	0.01  mg/l	
∨Ethyl benzene	<0.01 mg/l	0.01  mg/l	
$\sim$ Carbon tetrachloride	<0.01 mg/1		
~Chloroform	<0.01 mg/l	0.01  mg/	
✓1,1-dichloroethane	<0.01 mg/l	0.01 mg/1	
$\sim$ 1,2-dichloroethane	<0.01 mg/l	0.01 mg/1	
<pre>~1,1-dichloroethylene</pre>	<0.01 mg/l	0.01 mg/l	
1,2-dichloropropane	<0.01 mg/l	0.01 mg/1	
1,2-dichloropropylene	<0.01 mg/l	0.01 mg/1	
-Methylene chloride	<0.01 mg/l	$0.01 m_{\pi}/1$	
✓Tetrachloroethylene	<0.01 mg/l	0.01 mg/1	
1,2-trans-dichloroethyle	ene $\langle 0.01 \text{ mg/l} \rangle$	0.01 mg/1	
<li>1,1,1-trichloroethane</li>	0.473  mg/l	0.01 m / 1	
<pre>/1,1,2-trichloroethane</pre>	<0.01 mg/l	0.01  mg/	
Trichloroethylene	<0.01 mg/l	0.01  mg/l	
	<u> </u>	409/4	

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jum Li, V. Smith Jenhifer W. Smith, Ph.D. Laboratory Director



SOLD	TO:	PNM ATTN: Kent Kantz Alvarado Square	DATE: 2152	9	January	1987
		Albuquerque, NM 87158				

SAMPLE ID: L-2

ANALYTE	ANALYTICAL	L RESULTS	NOMINAL DETE	CTION LIMIT	S
As	0.09	mg/l	0.002	mg/l	
Ba	0.18	mg/l	0.005	mg/l	
Cđ	<0.01	mg/l	0.01	ma/l	
Cr	0.05	mg/l	0.05	ma/l	
Pb	<0.05	mg/l	0.05	mg/l	
На	<0.002	mg/l	0.002	mg/l	
Se	<0.002	mg/l	0.002	ma/l	
Aq	<0.05	mg/l	0.05	mg/l	
Corrosivity	<6.35	mmpy	6.35	mmpy	
PH	7.32	• -	0.01		
Reactivity	non-rea	active			
CN	<0.01	mg/l	0.01	mg/l	
Ignitibility	>60	°C			
PCB	<1	ug/g .	1	<b>ug/</b> g	
VOLATILE ORGANICS					
Benzene	. 0.5	ug/g	0.1	ug/g	
Toluene	2.7	ug/g	0.1	ug/g	
Ethyl benzene	. 8.0	ug/g	0.1	ug/g	
Carbon tetrachloride	<0.1	ug/g	0.1	ug/g	
Chloroform	<0.1	ug/g	0.1	ug/g	
1,1-dichloroethane	<0.1	ug/g	0.1	ug/g	
1,2-dichloroethane	<0.1	ug/g	0.1	ug/g	
1,2-dichloropropane	<0.1	ug/g	0.1	ug/g	
1,2-dichloropropylene	<0.1	ug/g	. 0.1	ug/g	
Methylene chloride	<0.1	ug/g	0.1	ug/g	
1,1,2,2-tetrachloroetha	ane <0.1	ug/g	0.1	ug/g	
Tetrachloroethylene	<0.1	ug/g	0.1	ug/g	
1,2-trans-dichloroethyl	lene <0.1	ug/g	0.1	ug/g	
1,1,1-trichloroethane	<0.1	ug/g	0.1	ug/g	
1,1,2-trichloroethane	<0.1	ug/g	0.1	ug/g	
Trichloroethylene	<0.1	ug/g	0.1	ug/g	

## ACIDS

0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g 0.01 ug/g
1 10/0
1 ug/g
$\frac{1}{2} \frac{1}{2} \frac{1}$
1 100/0
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
i ug/g
1 ug/g
1 ug/g
1 ug/g
1 ug/g

REFERENCES: "Test Methods for Evaluating Solid Waste,-Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D.

Laboratory Director



TO: PNM ATTN: Kent Kantz Alvarado Square Albuquerque, NM 87158 DATE: 21 January 1987 2159

SAMPLE ID: L-3

ANALYTE	ANALYTICAL RESULTS	NOMINAL DETECTION LIMITS
As	0.25 mg/l	0.05 mg/l
Ва	<0.05 mg/l	0.05 mg/l
Cđ	0.013 mg/l	0.01 mg/l
Cr	<0.05 mg/l	0.05 mg/l
Pb	<0.05 mg/l	0.05 mg/l
Hg	<0.002 mg/l	0.002 mg/l
Se	0.03 mg/l	0.002 mg/l
Ag	<0.05 mg/l	0.05 mg/l
Corrosivity	<6.35 mmpy	6.35 mmpy
рH	9.04	0.01
Reactivity	non-reactive	
CN	<0.01 mg/l	0.01 mg/l
TDS -	3056 mg/l	1 mg/l

REFERENCES: "Test Methods for Evaluatin Solid Waste,-Physical/Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

nth

Jennifer V. Smith, Ph.D. Laboratory Director



TO: Sunterra Gas Processing ATTN: Gary Jordan PO Box 2106 Albuquerque, NM 87103

SAMPLE ID : #2

**A1** 

В

Co

Mo

Ni

ANALYTE ANALYTICAL RESULTS NOMINAL DETECTION LIMITS As 0.28 mg/l0.05 mg/lBa <1.0 mg/l  $1.0 \, mg/l$ Cd <0.01 mg/l 0.01 mg/lCr <0.05 mg/l 0.05 mg/l CN 0.03 mg/l 0.01 mg/lF 0.70 mg/1 0.01 mg/lPb 0.09 mg/l0.01 mg/l Total Hg <0.002 mg/l 0.002 mg/l NO 3 as N <0.01 mg/l 0.01 mg/lSe 0.020 mg/l0.002 mg/lAq < 0.05 mg/l0.05 mg/lBenzene 0.14 mg/l0.001 mg/l Toluene 0.24 mg/l 0.001 mg/lCCL 4 <0.01 mg/l 0.01 mg/l 1,2 Dichloroethane <0.001 mg/l 0.001 mg/l1,1 Dichloroethylene <0.001 mg/l 0.001 mg/l<0.001 mg/l 1,1,2,2 Tetrachloroethylene 0.001 mg/l 1,1,2 Trichloroethylene <0.001 mg/l 0.001 mg/l Ethyl Benzene 0.011 mg/l 0.001 mg/lXylenes 0.12 mg/l0.001 mg/lMethylene Chloride 0.31 mg/l0.001 mg/lCCL 3 <0.001 mg/1 0.001 mg/l 1,1 Dichloroethane <0.001 mg/l 0.001 mg/l <0.001 mg/l EDB 0.001 mg/l 1,1,1 Trichloroethane < 0.001 mg/l0.001 mg/l 1,1,2 Trichloroethane <0.001 mg/l 0.001 mg/1 1,1,2,2 Tetrachloroethane <0.001 mg/l 0.001 mg/lVinyl Chloride < 0.001 mg/l0.001 mg/l Cu 0.03 mg/l 0.01 mg/lC1 89 mg/l 1.0 mg/lFe 2.68 mg/l $0.3 \, mg/l$ Mn 0.39 mg/l0.01 mg/l SO 4 771 mg/l 1.0 mg/l Zn

DATE: 29 May 1987

0661

0.034 mg/l

0.376 mg/l

< 0.03 mg/l

<0.05 mg/1

0.182 mg/l

<0.1 mg/l

0.008 mg/l

0.1 mg/l

0.04 mg/l

0.03 mg/l

0.05 mg/l

0.01 mg/l

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director



TO:	Sunterra Gas Processing	DATE:	29	May	1987
	ATTN: Gary Jordan	0661			
	PO Box 2106				
	Albuquerque, NM 87103				

SAMPLE ID : #3

ANALYTE

ANALYTICAL RESULTS NOMINAL DETECTION LIMITS

 $\sim$ 

As	<0.05 mg/l	0.05 mg/l
Ba	<1.0 mg/l	1.0  mg/l
Cd	<0.01 mg/l	0.01  mg/l
Cr	<0.05 mg/1	0.05 mg/l
CN	<0.01 mg/1	0.01 mg/l
F	0.65 mg/1	0.01  mg/l
Pb	0.08 mg/1	0.01  mg/l
Total Hg	<0.002 mg/1	0.002  mg/l
NO 3 as N	<0.01 mg/1	0.01  mg/l
Se	0.016  mg/l	0.002  mg/l
Aq	(0.05  mg/1)	0.05  mg/l
Benzene	0.004  mg/l	0.001  mg/l
Toluene	0.012  mg/l	0.001  mg/l
CCI, 4	(0.01  mg/1)	0.001  mg/1
1.2 Dichloroethane	<0.001 mg/1	0.01  mg/l
1.1 Dichloroethylene	<0.001 mg/1	0.001  mg/1
1.1.2.2 Tetrachloroethylene	(0.001 mg/1)	0.001  mg/l
1.1.2 Trichloroethylene	<0.001 mg/1	0.001  mg/l
Ethyl Benzene	<0 001 mg/1	0.001  mg/l
Xvlenes	<0.001 mg/1	0.001  mg/l
Methylene Chloride	<0.001 mg/1	0.001  mg/1
CCL 3	< 0.001  mg/l	0.001  mg/l
1.1 Dichloroethane	<0.001 mg/1	0.001  mg/l
EDB	<0.001 mg/1	0.001  mg/l
1.1.1 Trichloroethane	<0.001 mg/1	0.001  mg/l
1.1.2 Trichloroethane	<0.001 mg/1	0.001  mg/l
1.1.2.2 Tetrachloroethane	< 0.001  mg/l	0.001  mg/l
Vinvl Chloride	<0.001 mg/1	0.001  mg/l
Cu	<0.01 mg/1	0.01  mg/l
Cl	107 mg/1	1.0  mg/l
Fe	0.84  mg/l	0.3  mg/l
Mn	0.44  mg/l	0.01  mg/l
SO 4	197 mg/l	1.0  mg/l
Zn	0.066 mg/1	0.008  mg/l
Al	<0.1 mg/1	0.1  mg/l
В	0.139 ma/1	0.04  mg/l
Co	<0.03 mg/1	0.03  mg/l
Мо	<0.05 mg/1	0.05 ma/l
Ni	0.186 mg/l	0.01 mg/l

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director



TO: Sunterra Gas Processing ATTN: Gary Jordan PO Box 2106 Albuquerque, NM 87103

SAMPLE ID : #4

ANALYTE	ANALYTICAL RESULTS	NOMINAL DETECTION LIMITS
<b>A c</b>	$(0, 05, m_{\pi}/1)$	$0.05 m \pi / 1$

0661

DATE: 29 May 1987

AS	(0.05 m	9/1	0.05	mg/T
Ba	<1.0 m	g/l	1.0	mg/l
Cd	<0.01 m	g/l	0.01	mg/l
Cr	<0.05 m	g/l	0.05	mg/l
CN	0.03 m	g/l	0.01	mg/l
F	0.60 m	g/l	0.01	mg/l
Pb	0.11 m	g/l	0.01	mg/l
Total Hg	<0.002 m	g/l 0	.002	mg/l
NO 3 as N	20.7 m	g/l	0.01	mq/l
Se	0.096 m	g/l 0	.002	mg/l
Ag	<0.05 m	g/l	0.05	mg/l
Benzene	<0.001 m	g/l 0	.001	mg/l
Toluene	<0.001 m	g/l 0	.001	mg/l
CCL 4	<0.01 m	g/l	0.01	mg/l
1,2 Dichloroethane	<0.001 m	g/l 0	.001	mg/l
1,1 Dichloroethylene	<0.001 m	g/l 0	.001	mg/l
1,1,2,2 Tetrachloroethylene	<0.001 m	g/l 0	.001	mg/l
1,1,2 Trichloroethylene	<0.001 m	g/l 0	.001	mg/l
Ethyl Benzene	<0.001 m	g/l 0	.001	mg/l
Xylenes	<0.001 m	g/l 0	.001	mg/l
Methylene Chloride	<0.001 m	g/l 0	.001	mg/l
CCL 3	<0.001 m	g/l 0	.001	mg/l
1,1 Dichloroethane	<0.001 m	g/l 0	.001	mg/l
EDB	<0.001 m	g/l 0	.001	mg/l
1,1,1 Trichloroethane	<0.001 m	g/l 0	.001	mg/l
1,1,2 Trichloroethane	<0.001 m	g/l 0	.001	mg/l
1,1,2,2 Tetrachloroethane	<0.001 m	g/l 0	.001	mg/l
Vinyl Chloride	<0.001 m	g/l 0	.001	mg/l
Cu	<0.01 m	g/l	0.01	mg/l
Cl	437 m	g/l	1.0	mg/l
Fe	<0.3 m	g/l	0.3	mg/l
Mn	<0.01 m	g/l	0.01	mg/l
SO 4	1750 m	g/l	1.0	mg/l
Zn	<0.008 m	g/l 0	.008	mg/l
Al	<0.1 m	g/l	0.1	mg/l
В	0.515 m	g/l	0.04	mg/l
Со	<0.03 m	g/l	0.03	mg/l
Мо	<0.05 m	g/l	0.05	mg/l
Ni	0.268 m	g/1	0.01	mg/l

REFERENCE: "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods", USEPA, SW 846, EMSL-Cincinnati, 1982.

An invoice for services is enclosed. Thank you for contacting Assaigai Laboratories.

Sincerely,

Jennifer V. Smith, Ph.D. Laboratory Director

92-C 754 Wf4 700 Camino de Albuquerque, NM 8	Salud NE 7106 841-2570
REPORT TO: David Boyer	S.L.D. No. OR692
N.M. Oil Conservation Division	DATE REC. 4-27-87
P. O. Box 2088	
Santa Fe, N.M. 87504-2088	PRIORITY
PHONE(S): 827-5812	USER CODE: 18 2 2 3 5
SUBMITTER: David Boyer	CODE: 12 16101
SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) [8]7	1014121211214101 KOABI
SAMPLE TYPE: WATER [], SOIL [], FOOD [], OTHER	R: CODE:
COUNTY: Son Juan_; CITY: Blov	mfield CODE:
LOCATION CODE: (Township-Range-Section-Tracts)	$ \mathcal{N} + /  /  \mathcal{N} + 3 3 + /  /    (10N06E24342)$
ANALYSES REQUESTED: Please check the appropriate box(er	s) below to indicate the type of analytical screens
required. Whenever possible list specific compounds suspected of	or required.
<u>PURGEABLE SCREENS</u> ( (753) Aliphatic Purgeables (1-3 Carbons)	[] (751) Aliphatic Hydrocarbons
(754) Aromatic & Halogenated Purgeables	(760) Organochlorine Pesticides
(765) Mass Spectrometer Purgeables	(755) Base/Neutral Extractables
[_] (766) Trihalomethanes	[_] (758) Herbicides, Chlorophenoxy acid
	[_] (769) Aeroicides, Trazines
	[] (761) Organophosphate Pesticides
	(767) Polychlorinated Biphenyls (PCB's)
	(764) Polynuclear Aromatic Hydrocarbons
	[_] (762) SDWA Pesticides & Herbicides
Remarks: Junterra - Xulz Cool	ling Tower
FIELD DATA:	
pH = 7.3; Conductivity = $1300$ umho/cm at $200$ °C;	Chlorine Residual=mg/l
Dissolved Oxygen=mg/l; Alkalinity=mg/l; Flow	Rate//
Depth to waterft.; Depth of wellft.; Perforat	ion Intervalft.; Casing:
Sampling Location, Methods and Remarks (i.e. odors, etc.)	
Dimed Snom Sump, Cooling	tower shuldown previou
week	, <i>ju</i>
I contifu that the second is the first second in the	
activities (signature collector):	Method of Shipment to the Labertan 2004
This form accompanies Septum Vials, Glass Ju	gs, and/or
Samples were preserved as follows:	
NP: No Preservation; Sample stored at room ten	nperature.
r-ice Sample stored in an ice bath (Not Frozen).	to remove chlorine residual
CHAIN OF CUSTODY	o remove chlorine residual.
I certify that this sample was transferred from	to
at (location)	on $//$ - · and that
the statements in this block are correct Evidentiany Coale. N	ot Sealed T Seals Intert: Ves T No T
Signatures	or ocaled [ Deals Misacs. Les [] 110 []
pikueni.cs	_

# ANALYSES PERFORMED

LAB. No.: OR- 692

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screen	ung method(s)	checked below:	
PURGEABLE SCREENS		EXTRACTABLE SCREENS	
(753) Aliphatic Purgeables (1-3 Carbons)		(751) Aliphatic Hydrocarbons	
[] (700) Amphatic & Ungentied Burgesphere		(760) Organochlorine Perticider	
(704) Aromatic & Halogenated Furgeables		(765) Dess (Neutral Estenatables	
[_] (765) Mass Spectrometer Purgeables		(755) Base/Neutral Extractables	
[_] (766) Trihalomethanes		[] (758) Herbicides, Chlorophenoxy acid	
Other Specific Compounds or Classes		[] (759) Herbicides, Triazines	
		[] (760) Organochlorine Pesticides	
		(761) Organophosphate Pesticides	
		(767) Polychlorinated Biphenyls (PCB's)	
$\square$		(764) Polynuclear Aromatic Hydrocarbons	
		(762) SDWA Pesticides & Herbicides	
A N I			
	ALTICA	L RESULTS	
COMPOIND(S) DETECTED	CONC	COMPOIND(S) DETECTED	CONC.
			(PPR]
1 4 00		r	
aromatic susandles	N.D.		
hallow to la in	61.0		
AUX LOODERCONCERT UMARCO & COM	1V.ll.		
	[] ·		
* DETECTION LIMIT * X	180-484	+ DETECTION LIMIT + -+-	
	100 110		!
ABBREVIATIONS USED:			
N D = NONE DETECTED AT OR ABOVE	THE STATED	DETECTION LIMIT	
T R = DETECTED AT A LEVEL BELOW	THE STATED	DETECTION LIMIT (NOT CONFIRMED)	
[ RESULTS IN BRACKETS ] ARE UNCONF	IRMED AND/C	R WITH APPROXIMATE QUANTITATION	
	,	· · · · · · · · · · · · · · · · · · ·	
·			
LABORATORY REMARKS.			
DADORATORI REMARKS.		· · ـــــــــــــــــــــــــــــــــــ	
CERTIFICA	TE OF ANATY	TICAL PERSONNEL	
OBITIFICA.			ł
Seal(s) Intact: Yes 🛄 No 🔃 Seal(s) broken by	"	Alaliadate:	
I certify that I followed standard laboratory procedu	res on handling	and analysis of this sample unless otherwise noted	and
that the statements on this page accurately reflect t	he analytical re	sults for this sample.	l
	/		
Date(s) of analysis: <u>574/87</u> . Analyst's si	gnature:	thy ( . Thes	
I certify that I have reviewed and concur with the	analytical recui	for this sample and with the statements in this	block
	analysical legul	to to the sentre and with the statements in this	UIOCK.
Reviewers signature: <u>Anglehh</u>			
			}

يرون والمحمد المحمد المحمد المحمد والمحمد والمحمد والمحمد المحمد المحمد المحمد والمحمد و

	700 Camino de S Albuquerque, NN	alud NE A 87106 — (505) 841-	-2555		and NITR	OGEN ANAL	.YSIS
	27/01 1	AB 402-1468		o □ 59600 ( <del>X</del> X	OTHER: 82	235	
Dilection DATE		SITE INFORM- ► ATION	Sample location	SUN TERRA	- Ky;	rz PL.	AUT
12 40 liected by - Person/Ac	2ency		Collection site description	n	Caa	4106 TO	WER
OYER / H	NOBRSO	N /0CD		· · · · · · · · · · · · · · · · · · ·			
END NAL S PORT S	NVIRONMEN M OIL CONS State Land Santa Fe, David Boy	TAL BUREAU SERVATION DI Office Bldg NM 87504-208	VISION 9 PO Box.208 38	8			
A.U.I		,			Station/		
Phon	e: 827-58	812			well code	<u></u>	
AMPLING COM	NDITIONS						
	□ Pump □ Tap	Water level		Discharge		Sample type	ર
oH (00400) 7, 5	5 (STRIP)	Conductivity (Unc	orrected) 300 μmho	Water Temp. (00010)	,9 °C	Conductivity at 2	25°C (00094) μmł
ield comments	(See	VOC FO	mEar	ommont	7 >		
						**********	
					,	****	
AMPLE FIELD	TREATMEN	T — Check prop	er boxes		···		·····.
AMPLE FIELD No. of samples submitted		T Check prop : Whole sample (Non-filtered)	er boxes XF: <sup>Filtered in</sup> 0.45 μme	field with DA:	2 ml H₂SO₄/	L added	· · · · · ·
AMPLE FIELD No. of samples submitted	TREATMEN           /         □         NI           d added         □         C	T — Check property of the sample (Non-filtered)	er boxes <b>XF:</b> Filtered in 0.45 μme ΠA:	field with mbrane filter <b>A:</b> 5m1 conc. HNO <sub>3</sub> a	2 ml H₂SO₄/ udded □	Ladded A: 4ml fumd	Ing HNO <sub>3</sub> adde
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R	TREATMEN / DNF d added C C ESULTS from	T — Check prop Whole sample (Non-filtered) Other-specify:	er boxes XF: Filtered in 0.45 μme ΠA:	field with □ A: mbrane filter □ A: 5m1 conc. HNO <sub>3</sub> a	2 ml H₂SO₄/ ıdded □	Ladded A: 4ml fumd	Ing HNO <sub>3</sub> adde
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA	TREATMEN / DNF d added DC ESULTS from	T — Check property of the sample (Non-filtered) Dther-specify: SAMPLES	er boxes XF: Filtered in 0.45 μme ΔA: Units Date analyze	field with mbrane filter $\Box$ A: 5m1 conc. HNO <sub>3</sub> a d From F,	2 ml H₂SO₄/ added □/ NA Sample	Ladded A: 4ml fumd	Ing HNO <sub>3</sub> adde
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095)	TREATMEN / DNF d added C C ESULTS from orrected)	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes XF: Filtered in 0.45 μme ΔA: Units Date analyze μmho <u>3/16</u>	field with mbrane filter $\Box$ A: 5m1 conc. HNO <sub>3</sub> a d From $\underline{F}$ ,	2 ml H <sub>2</sub> SO <sub>4</sub> /	Ladded A: 4ml fumd e: <u>A</u> I	Ing HNO <sub>3</sub> adde Date nalyzed
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095)	TREATMEN /	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes	field with mbrane filter $\Box$ A: 5m1 conc. HNO <sub>3</sub> a d From $$ ,	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\Box$ NA Sample 2.2.5	Ladded A: 4ml fumd A: <u>Anl fumd</u> A: <u>An</u> mg/1	Ing HNO <sub>3</sub> add Date nalyzed 5/14
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530)	TREATMEN /	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes XF: Filtered in 0.45 μme ΠA: Units Date analyze μmho <u>3/15</u> °	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium Potassium	$2 \text{ ml } H_2 SO_4/$ $ndded \square/$ $NA \text{ Sample}$ $225$ $4,64$	Ladded A: 4ml fumd A: mg/1 mg/1	Ing HNO <sub>3</sub> adde Date <u>nalyzed</u> <u>5/14</u>
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other:	TREATMEN         /       INF         d added       INF         orrected)       INF         ble       INF         hded)       INF	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES 1943 8.3℃	er boxes XF: Filtered in 0.45 µme □ A: Units Date analyze µmho	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium Potassium Magnesium	$2 \text{ ml } H_2 SO_4/$ $1 \text{ dded} \qquad \square 1$ $NA \text{ Sample}$ $2.2.5$ $4.64$ $4.7$	Ladded A: 4ml fumd a:	Ing HNO <sub>3</sub> adde Date nalyzed 5/14 5/14
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other:	TREATMEN         /       INF         d added       INF         orrected)       INF         ble       INF         hded)       INF	T Check prop Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes f: Filtered in 0.45 µme $\Box$ A: Units Date analyze $\mu$ mho $\frac{5/15}{5}$	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, X Calcium, Magnesium X Sodium	$2 \text{ ml } H_2 SO_4/$ $ndded \square h$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $223$	Ladded A: 4ml fumd e:	Ing HNO <sub>3</sub> adds Date malyzed 5/14 5/14
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: pf Other: Other:	TREATMEN         /       INF         d added       INF         orrected)       INF         ble       INF         hded)       INF         i       INF         i       INF	T Check propo Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes $\chi$ F: Filtered in 0.45 µme $\Box$ A: Units Date analyze $\mu$ mho $3/26$ ° mg/l $-5/5$	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, Magnesium, Sodium, A Bicarbonat	$2 \text{ ml } H_2 SO_4/$ $nd ded \square/$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $77$ $273$ $e 336$	Ladded A: 4ml fumd :: mg/1 mg/1 mg/1 mg/1	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: Other:	TREATMEN         /       Image: Nitron         d added       Image: Original Contracted         orrected)       Image: Original Contracted         ble       Image: Original Contracted         ble       Image: Original Contracted         J       Image: Original Contracted         J       Image: Original Contracted	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES ↓943 8.30	er boxes f: Filtered in 0.45 µme $\Box$ A: Units Date analyze $\mu$ mho $5/25$ mg/l $-5/5$	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, A Galcium, Sodium, Sodium, A Galcium, A Galcium	$2 \text{ ml } H_2 SO_4/$ $ndded \square/$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $77$ $273$ $36$ $336$ $44$	Ladded A: 4ml fumd e: <u>A</u> mg/1 mg/1 mg/1 mg/1	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub>	TREATMEN	T Check propo Whole sample (Non-filtered) Dther-specify: SAMPLES	er boxes $\chi$ F: Filtered in 0.45 µme $\Box$ A: Units Date analyze $\mu$ mho $3/15$ ° mg/l	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, A Calcium, Magnesium X Sodium X Sodium X Chloride	$2 \text{ ml } H_2 SO_4/$ $ndded \square/$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $223$ $4,64$ $47$ $223$ $4,64$ $47$ $223$ $6$ $47$ $223$ $6$ $7$ $200$	L added A: 4m1 fum1 e: <u>A</u> mg/1 mg/1 mg/1 mg/1 mg/1	Ing HNO <sub>3</sub> add Date malyzed 5/14 5/14 5/5 5/5 5/5 5/5
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N + , Nitt total (00630)	TREATMEN         /       INF         d added       INF         essuits       Inf         ble       Inded         inded       Inf         irate-N       Inf	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES ↓943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Calcium, Magnesium, Sodium, Sodium, Sodium, Sodium, Sulfate,	$2 \text{ ml } H_2 SO_4/$ $nd ded \square $ $NA \text{ Sample}$ $223$ $4,64$ $47$ $223$ $223$ $4,44$ $88$	Ladded A: 4ml fumd e: <u>A</u> mg/1 mg/1 mg/1 mg/1 mg/1	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5 5/5 5/5 5/12 5/12
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N <sup>+</sup> , Nit total (00630) Ammonia-N tota	TREATMEN         /       INF         d added       INF         orrected)       Interview         ble       Interview         hded)       Interview         intrate-N       Interview         al (00610)       Interview	T Check propo Whole sample (Non-filtered) Dther-specify: SAMPLES	er boxes XF: Filtered in 0.45 μme □ A: Units Date analyze μmho <u>3/15</u> mg/l <u>5/5</u> mg/l	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, Calcium, Agnesium Sodium, Bicarbonat Chloride, Sulfate, Total Soli	$2 \text{ ml } H_2 SO_4/$ $ndded \square/$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $223$ $4 + 4$ $88$ $45$	L added A: 4m1 fumd e: <u>A</u> mg/1 mg/1 mg/1 mg/1 mg/1 fmg/1 mg/1	Ing HNO <sub>3</sub> add Date malyzed 5/14 5/14 5/5 5/5 5/5 5/12 5/12 5/12
AMPLE FIELD No. of samples submitted X NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N +, Nit total (00630) Ammonía-N tota Total Kjeldahl-N ()	TREATMEN         /       INF         d added       INF         orrected)       INF         ble       Inded)         inded)       Inf         irate-N       Inf         al (00610)       Inf	T — Check prop Whole sample (Non-filtered) Other-specify: SAMPLES 1943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, Calcium, Magnesium Sodium, Sodium, Sodium, Sulfate, Total Soli	$2 \text{ ml } H_2 SO_4/$ $nd ded \square/$ $NA \text{ Sample}$ $225$ $4,64$ $47$ $273$ $4,64$ $47$ $273$ $4,64$ $47$ $88$ $44$ $88$ $45$	L added A: 4ml fumd a:	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5 5/5 5/5 5/12 5/5
AMPLE FIELD No. of samples submitted ANA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N + , Nit total (00630) Ammonia-N total () Chemical oxyge demand (0034)	TREATMEN         /       INF         d added       I         d added       I         corrected)       I         ble       I         nded)       I         diate-N       I         al (00610)       I         Image: Note that the second	T — Check prop Whole sample (Non-filtered) Other-specify: ■ SAMPLES 1943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Calcium, A Calcium, Magnesium Sodium, Sodium, Sodium, Sulfate, Chloride	$2 \text{ ml } H_2 SO_4/$ $ndded \square/$ $NA \text{ Sample}$ $223$ $4,64$ $47$ $223$ $4,64$ $47$ $223$ $4,64$ $47$ $88$ $44$ $88$ $45$	L added A: 4m1 fum1 e: <u>A</u> mg/1 mg/1 mg/1 mg/1 mg/1 fmg/1 g	Ing HNO <sub>3</sub> adds Date malyzed $\frac{5/14}{5/14}$ $\frac{5}{5}$ $\frac{5}{5}$ $\frac{5}{5}$ $\frac{5}{12}$ $\frac{5}{5}$
AMPLE FIELD No. of samples submitted No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N +, Nit total (00630) Ammonia-N tota Total Kjeldahl-N ( ) Chemical oxyge demand (00340 Total organic ca ( )	TREATMEN         /       INF         d added       INF         d added       INF         d added       INF         d added       INF         orrected)       INF         ble       Inded)         inded)       Inf         inf       Inf         inf       Inf         inf       Inf         inf       Inf         inf       Inf         inf </td <td>T — Check prop Whole sample (Non-filtered) Other-specify: ■ SAMPLES 1943 8.30</td> <td>er boxes</td> <td>field with mbrane filter A: 5m1 conc. HNO<sub>3</sub> a From, Calcium, Calcium, Calcium, Calcium, Magnesium Sodium, Sodium, Sodium, Solium, Sulfate, Chloride, Chloride, Magnesium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Sulfate, Sulfate, Solium, Solium, Sulfate, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Solium, Sulfate, Solium,</td> <td>2 ml H<sub>2</sub>SO<sub>4</sub>/ added <math>\square</math> NA Sample 225 4,64 47 223 4,64 47 223 4,64 47 223 24 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 336 4,64 47 223 336 4,64 47 223 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 336 4,64 336 <math>336 </math></td> <td>L added A: 4ml fumd :: An mg/1 mg/1 mg/1 mg/1 mg/1 f_2mg/1   d mg/1</td> <td>Ing <math>HNO_3</math> add Date nalyzed 5/14 5/14 5/5 5/5 5/5 5/12 5/5</td>	T — Check prop Whole sample (Non-filtered) Other-specify: ■ SAMPLES 1943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, Calcium, Calcium, Magnesium Sodium, Sodium, Sodium, Solium, Sulfate, Chloride, Chloride, Magnesium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Solium, Sulfate, Sulfate, Solium, Solium, Sulfate, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Sulfate, Solium, Solium, Solium, Sulfate, Solium,	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\square$ NA Sample 225 4,64 47 223 4,64 47 223 4,64 47 223 24 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 223 336 4,64 47 336 4,64 47 223 336 4,64 47 223 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 4,64 336 336 4,64 336 $336$	L added A: 4ml fumd :: An mg/1 mg/1 mg/1 mg/1 mg/1 f_2mg/1   d mg/1	Ing $HNO_3$ add Date nalyzed 5/14 5/14 5/5 5/5 5/5 5/12 5/5
AMPLE FIELD No. of samples submitted No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N + , Nit total (00630) Ammonia-N tota Total Kjeldahl-N ( ) Chemical oxyge demand (00340 Total organic ca ( ) Other:	TREATMEN         /       INF         d added       I         d added       I         csults from         orrected)         ble         bded)         /         //         inded)         inded)         inded)         inded)      /	T — Check prop Whole sample (Non-filtered) Other-specify: ■ SAMPLES 1943 8.30	er boxes	field with mbrane filter 5m1 conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Potassium Magnesium Sodium, Sodium, Sodium, Soliarbonat Chloride, Sulfate, Cation/2 Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\Box$ / NA Sample 225 4,64 47 223 e 336 44 88 ds 156 Anion Ba	L added A: 4ml fumd 	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5 5/12 5/12 5/12 5/12 5/12 5/12 5/12 5/12 5/12 5/12 5/12
AMPLE FIELD No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N +, Nit total (00630) Ammonia-N tota Total Kjeldahl-N ( ) Chemical oxyge demand (00340 Total organic ca ( ) Other: Other: Other: Other:	TREATMEN         /       INF         d added       I         d added       I         orrected)       I         ble       I         nded)       I         y       I         irate-N       I         al (00610)       I         iraton       I	T Check propo Whole sample (Non-filtered) Other-specify: SAMPLES 1943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a From, Calcium, Calcium, Calcium, Magnesium Sodium, Sodium, Sodium, Solium, Solium, Sulfate, Chloride, Chloride, Chloride, Cation/2 Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\square$ NA Sample 225 4,64 47 223 4 47 223 2 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 273 3 4 47 336 47 376 3	L added A: 4ml fumd mg/1	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/5 5/5 5/12 5/5 iewed by
AMPLE FIELD No. of samples submitted No. of samples submitted NA: No acid NALYTICAL R NA Conductivity (C 25°C (00095) Total non-filteral residue (susper (00530) Other: Other: Other: Other: Other: Nitrate-N +, Nit total (00630) Nitrate-N +, Nit total (00630) Ammonia-N tota Other: Chemical oxyge demand (00340 Chemical oxyge demand (00340 Total organic ca () Other: Other: Other: Other: Other: Other: Chemical oxyge demand (00340 Other: Other: Other: Other: Other: Chemical organic ca () Other: Other: Other: Chemical oxyge demand (00340 Other: Other: Other: Other: Other: Other: Other: Other:	TREATMEN         /       INF         d added       INF         d added       INF         d added       INF         d added       INF         essults       from         inded)       Inf         inf       Inf	T — Check prop Whole sample (Non-filtered) Other-specify: ■ SAMPLES 1943 8.30	er boxes	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Potassium Magnesium Sodium, Sodium, Sodium, Sodium, Sulfate, Chloride, Cation/2 Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> / added $\square$ NA Sample 225 4,64 47 223 e <u>336</u> 44 88 ds <u>156</u> Anion Ba Date R S	L added A: 4ml fumd mg/1mg/1 mg/1mg/1 mg/1 mg/1 mg/1 d_ mg/1 2mg/1 1ance eported Revi 26 87 C	Ing HNO <sub>3</sub> add Date nalyzed 5/14 5/14 5/14 5/5 5/5 5/12

24<sup>%</sup>

	CATIONS					ANIONS	
ANALYTI	E MEQ.	PPM	DET	C.LIMIT	ANALYTH	E MEQ.	PPM
Ca Mg Na K	11.23 3.86 9.70 0.12	225.00 47.00 223.00 4.68	< < < < <	3.0   10.0   10.0   0.5	HCO3 S04 Cl	5.51 18.46 1.24	336.00 886.00 44.00
Mn Fe	0.00 0.00	0.00 0.00			NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	24.91	499.68				25.21	1266.00
TDS (mea	asured) =	1562.00	ppi	m	:`		
Ion Ba	lance =	98.825	8		Sample Date of	≥ No. out/By	=8701468 Br 5h467

----

:'

RecEnved]       4       27       127       No. 4: 4: 527       Collection Date       59300       5986         Collection Date       541       22.167       INFORM- NETON       Sample location       541.02       7         Collection Date       541       22.167       INFORM- ATION       Collection atte description       541.02       7         Collection Time       541.02       1000       Collection atte description       Collection atte description         Collection Time       Sample location       541.02       1000       Collection atte description         Collection Time       Sample Social Collection       1000       Collection atte description       Collection         Send       NM 011       CONSERVATION DIVISION       INF       Not Social Collection       Collection         Sample Social Conductivity (Uncorrected)       Phone:       827-5812       Sample Conductivity (Uncorrected)       Discharge         SAMPLE FIELD TREATMENT - Check proper boxes       No. of samples       Immediate Social Collection       Mater Temp         Field comments       Immediate Social Collection       Immediate Social Collection       Social Collection       Collection filtered)         Social conductivity (Corrected)       Immediate Social Collection       Social Colection       Social Collection <th><u>X</u>OTHER: 82235 2RA - KUTZ PLANT</th>	<u>X</u> OTHER: 82235 2RA - KUTZ PLANT
Sample callion       Sum Trian         Sample callion       Sum Trian         Sample callion       Sum Trian         Collection Title       Collection site description         Collection Title       Collection site description         Collection Title       State Land Office Bildg, PO Box 2088         Attn:       David Boyer         Phone:       827-5812         AMPLING CONDITIONS       Discharge         Bailed       Pump         Vi (00400)       C (Crup)         Conductivity (Uncorrected)       Water Temp         PH (00400)       C (Crup)         Conductivity (Uncorrected)       Water Temp         Piced comments       Immonia         Conductivity (Corrected)       State case         State Conductivity (Corrected)       mg/l         State Conductivity (Corrected)       mg/l         State Conductivity (Corrected)       State         State Conductivity (Corrected)       State         State Conductivity (Corrected)       State         Conductivity (Corrected)	ERA - KUTZ PLANT
Balancity - Present/Meney         COYER         BOYER         Bornal State         END         NM OIL CONSERVATION DIVISION         NAL         State Land Office Bldg, P0 Box 2088         Attn:         David Boyer         Phone:         827-5812         AMPLING CONDITIONS         Bailed       Pump         Vater level       Discharge         Dipped       Tap         PH (00400)       Z.S. Strip         Conductivity (Uncorrected)       Water Temp         Vater Temp       Vater Temp         Pield comments       Conductivity (Uncorrected)         Water Temp       Vater Temp         Tield comments       NF:         Whole sample       F: Filtered in field with         submitted       NF:         NA to acid added       Other-specify:         NA       Units Date analyzed         Conductivity (Corrected)       pot         25*C2 (00095)       pot         MA       Units Date analyzed         Conductivity (Corrected)       Soc         Conductivity (Corrected)       Soc         Other:       Soc         Other: </td <td></td>	
ENV IRONMENTAL BUREAU         ENV IRONMENTAL BUREAU         NM OIL CONSERVATION DIVISION         Santa Fe, NM 87504-2088         Attn:David_Boyer         Phone: 827-5812         AMPLING CONDITIONS         Bailed       Pump       Water level       Discharge         Dipped       Tap       Conductivity (Uncorrected)       Water Temp         pel (00400)       7.5 (5 Traight)       Conductivity (Uncorrected)       Water Temp         ield comments       Image: Conductivity (Uncorrected)       Water Temp         AMPLE FIELD TREATMENT - Check proper boxes         No. of samples       Image: Conductivity (Uncorrected)       Water Temp         submitted       Image: Conductivity (Uncorrected)       Image: Conductivity (Uncorrected)         NA: No acid added       Other-specify:       Image: Conductivity (Corrected)         25°C (00095)       Image: Conductivity (Corrected)       Image: Conductivity (Corrected)         25°C (00095)       Image: Conductivity (Corrected)       Image: Conductivity (Corrected)       Image: Conductivity (Corrected)         25°C (00095)       Image: Conductivity (Image: Conductivity (Corrected)       Image: Conductivity (Corrected)       Image: Conductivity (Corrected)       Image: Conductivity (Correct	COLING DOUER
AMPLING CONDITIONS         Bailed       Pump       Water level       Discharge         Dipped       Tap       Conductivity (Uncorrected)       Water Temp         PH (00400)       7.5 (5 Trup)       Conductivity (Uncorrected)       Water Temp         Field comments       Conductivity (Uncorrected)       Water Temp         AMPLE FIELD TREATMENT — Check proper boxes         No. of samples       NF: Whole sample       F: Filtered in field with         submitted       NF: Whole sample       F: 0.45 µmembrane filter         NA: No acid added       Other-specify:       IA: Sml conc         NALYTICAL RESULTS from SAMPLES       From         NA       Units Date analyzed       From         Conductivity (Corrected)	Station/ well code Owner
C Dipped       □ Tap       □ Tap       □ Tap         pH (00400)       7.5 (5 Trip)       Conductivity (Uncorrected)       / 3 D → µmho         Field comments       □ NF: Whole sample       ØF: Filtered in field with         Outs amples       □ NF: Whole sample       ØF: Filtered in field with         Submitted       /       □ NF: Whole sample       ØF: Filtered in field with         □ NA: No acid added       □ Other-specify:       □ A: Sml conc         NALYTICAL RESULTS from SAMPLES       NA       Units Date analyzed       From         □ Conductivity (Corrected)       25 °C (00095)       µmho       □ Cal         □ Conductivity (Corrected)       25 °C (00095)       µmho       □ Cal         □ Conductivity (Corrected)       25 °C (00095)       □ mg/l       □ Cal         □ Conductivity (Corrected)       25 °C (00095)       □ mg/l       □ Cal         □ Conductivity (Corrected)       0 °C ODb       5/2 2       Soc         ○ Other:       □ A.A.A.       0 °C ODb       5/2 2       Soc         □ Other:       □ Ammonia-N total (00610)       mg/l       □ Cal       □ Cal         □ Ammonia-N total (00610)       mg/l       □ Cal       □ Cal         □ Chemical oxygen       □ mg/l       □ Cal	Sample type
pH (00400)       7. ≤ (≤ Trup)       Conductivity (Uncorrected)       Water Temp         Field comments       /       3. D ≥ μmho       Water Temp         AMPLE FIELD TREATMENT — Check proper boxes       No. of samples       NF: Whole sample       ✓ F: Filtered in field with         Submitted        NF: Whole sample       ✓ F: Filtered in field with         Outs of samples        NF: Whole sample       ✓ F: Filtered in field with         Submitted        NA: No acid added       Other-specify:       □ A: Sml conc         NALYTICAL RESULTS from SAMPLES        From         NA       Units Date analyzed       From         25 °C (00095)	GRAB
AMPLE FIELD TREATMENT — Check proper boxes         No. of samples submitted       NF: Whole sample (Non-filtered)       F: Filtered in field with 0.45 µmembrane filter         NA: No acid added       Other-specify:       IA: Sml conc         NALYTICAL RESULTS from SAMPLES       NA       Units Date analyzed         NA       Units Date analyzed       From         Conductivity (Corrected) 25°C (00095)	10010) C C C C (00094)
$25^{\circ}C (00095) \qquad \mu mho \qquad Ca1 \qquad Ca1 \qquad Pot \qquad Ca1 \qquad Pot \qquad Gostal constraints and 1 \qquad Gostal constraints anotheomote anotheomote anotheomote and 1 $	HNO <sub>3</sub> added A: 4ml fuming HNO <sub>3</sub> adde
□ Total non-filterable residue (suspended) (00530)      mg/l        Pot         ○ Other:           Mag         ○ Other:	
(00530)       mg/l       mg/l         Other:	lummg/1
Other:	mg/1
Other:	um mg/1
A-H <sub>2</sub> SO <sub>4</sub> Ch <sup>-</sup> Nitrate-N + , Nitrate-N total (00630)       mg/l         Ammonia-N total (00610)       mg/l         Total Kjeldahl-N       mg/l         ()       mg/l         Chemical oxygen demand (00340)       mg/l         Total organic carbon       mg/l         ()       mg/l	rbonate mg/1
Nitrate-N +, Nitrate-N       mg/l       Image: Subscript of the subscript of	ride mg/1
Ammonia-N total (00610)       mg/l       mg/l         Total Kjeldahl-N       mg/l       mg/l         Chemical oxygen       mg/l       mg/l         Total organic carbon       mg/l       carbon         Other       mg/l       carbon	ate mg/1
Total Kjeldahl-N       mg/l          Chemical oxygen	l Solids mg/l
Chemical oxygen       mg/l         demand (00340)       mg/l         Total organic carbon       mg/l         ()       mg/l	
Total organic carbon	
( ) mg/l [ ] Ca	
□ Other: Analyst	ion/Anion Balance
aboratory remarks	ion/Anion Balance
,= \$1	ion/Anion Balance Date Reported Reviewed by 6   87 Charley
	ion/Anion Balance Date Reported Reviewed by 6   87 Charley

0- <b>68</b> 9	NFU 754 SCIENTIFIC LABORA 700 Camino de Albuquerque, NM 87	Salud NE 106 841-2570	STATE OF NEW M
REPORT TO:	David Boyer	S.L.D. No. OR-	689
	N.M. Oil Conservation Division	DATE REC	4-27-87
,	P. 0. Box 2088		
	Santa Fe, N.M. 87504-2088	PRIORITY	
PHONE(S):	827-5812	USER CODE: 18 2 2 3	5
SUBMITTER:	David Boyer	CODE: 12 1610	
SAMPLE COLI	ECTION CODE: (YYMMDDHHMMIII)   817	101412121/1215151	OB.
SAMPLE TYPE	: WATER 🖾, SOIL 🛄, FOOD 🛄, OTHER	CODE:	
COUNTY:	m Juan; CITY: 1800m	field CODE: [ ]	
LOCATION CO	DE: (Township-Range-Section-Tracts)	v + / 1 / 1 W + / 13 + / 1 / 1	(10N06E24342)
ANALYSES RE	QUESTED: Please check the appropriate box(es)	below to indicate the type of analytical	screens
required. When	ever possible list specific compounds suspected or	required.	
(753) Alipi	FURGEABLE SCREENS natic Purgeables (1-3 Carbons)	<b>EXTRACTABLE SCHEENS</b> (751) Aliphatic Hydrocarbons	
(754) Aron	natic & Halogenated Purgeables	(760) Organochlorine Pesticides	
(765) Mass	Spectrometer Purgeables	(755) Base/Neutral Extractables	
(766) Triha	lomethanes	(758) Herbicides, Chlorophenoxy	acid
	er Specific Compounds or Classes	[ (759) Herbicides, Triazines	
H		[] (760) Organophosphate Pesticides	
	<b>.</b>	(767) Polychlorinated Biphenyls	(PCB's)
		(764) Polynuclear Aromatic Hyd	rocarbons
$\Box$ _		(762) SDWA Pesticides & Herb	icides
Remarks:	Sun Terra Kutz Pons	1 (upper)	
$\mathbf{FIELD DATA:}$ $\mathbf{pH} = \underbrace{\mathbf{b}, \mathbf{S}}_{\mathbf{i}}$ $\mathbf{Dissolved Oxyg}$	$\frac{2}{2}$ Conductivity= <u>26</u> $\frac{1}{2}$ umho/cm at $\frac{2}{2}$ C; C en=mg/l; Alkalinity=mg/l; Flow	hlorine Residual=mg/l Rate	
Depth to wate	ft.; Depth of wellft.; Perforation	on Intervalft.; Casing:	·
Sampling Locat	ion, Methods and Remarks (i.e. odors, etc.) ⊘	lywale H.C. odorfan	aerobie O
Sem	Terra Pond #1 (a	con Received at	l plant
LL me	Tewale, Lexcept septed	Sample west Side Hore	rslow pit
I certify that activities.(signat	the results in this block accurately reflect the r ure collector):	esults of my field analyses, observations an Method of Shipment to the Lab:	a tond carried
This form acco	mpanies Septum Vials, Glass Jug	3, and/or	
Samples were	preserved as follows:	<b>-</b>	
	Sample stored in an ice both (Not Process)	perature.	
DR P-Na S O	Sample Preserved with Sodium Thiosulfate to	remove chlorine residual.	
CHAIN OF C			
I certify that	this sample was transferred from	to	
at (location) _		on/:	and that
the statements	in this block are correct. Evidentiary Seals: No	t Sealed 🔲 Seals Intact: Yes 🦳 No	
Signatures		-	·····
			<del>-</del>
For OCD	Use: Date Owner Notified	Phone or Letter?	Initials

# ANALYSES PERFORMED

LAB. No.: OR- 689

THIS PAGE FOR LABORATORY RESULTS ONLY

nnla	woa	tontod	uning	the	analytical	ecreening	method(a)	checked	helow	

This sample was tested using the analytical screen	ning method(s)	checked below:	
PURGEABLE SCREENS		EXTRACTABLE SCREENS	
(753) Aliphatic Purgeables (1-3 Carbons)		(751) Aliphatic Hydrocarbons	
(754) Aromatic & Halogenated Burgeables		[] (760) Organochlorine Pesticides	
(765) Mass Spectrometer Burgeshler		(755) Bage/Neutral Extractables	
[ (700) Wass Spectrometer Furgeables		[_] (750) Base/Meuria Extractables	
[_] (700) Irmalomethanes		(756) Herbicides, Chiorophenoxy actu	
Other Specific Compounds or Classes		[] (759) Herbicides, Triazines	
		(760) Organochlorine Pesticides	
		(761) Organophosphate Pesticides	
		(767) Polychlorinated Biphenyls (PCB's)	
		(764) Polynuclear Aromatic Hydrocarbons	
		(762) SDWA Pesticides & Herbicides	
AN	ALYTICA	L RESULTS	
COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC.
halassantad anna Mar	lun		
Mangeriouer Allegerter	All		
Aromatic purpeables			
seagend 1	100	·	
toluene	86		
ethulbensene	TIR.		
an ruleine	TIR.		
	25		
- mo-veycene			
O-Mylcare	$\left  \frac{1}{\sqrt{K_{L}}} \right $		
* DETECTION LIMIT * 1	25 98/4	+ DETECTION LIMIT +	
ABBREVIATIONS USED:			
N D - NONE DETECTED AT OR ABOVE	THE STATE	D DETECTION LIMIT	
T B = DETECTED AT A LEVEL BELOW	THE STATE	DEFECTION LINIT (NOT CONFIDMED)	
DEGUING IN DRACKETS   ADD UNCON	INE SIAIEI	OD HUTH ADDONINATE OUNTRATION	
[ RESOLIS IN BRACKEIS ] ARE UNCON	TRMED AND/	OR WITH APPROXIMATE QUANTITATION	
LABORATORY REMARKS. Thank and	1. 1. 4.	lift up that and	
LABORATORT REMARKS: 10000 UNIO	g esus	Ma Xugne Annalleres Comp	LA A
detected wills the photoion	realion	a despetor but not isem	iliect.
CERTIFICA	TE OF ANAL	YTICAL PERSONNEL	
	A	1 1	
Seal(s) intact: Yes [_] No []. Seal(s) broken b	. not	date: date:	······
I certify that I followed standard laboratory procedu	res on handlin	g and analysis of this sample unless otherwise noted	i and
that the statements on this page accurately reflect (	the analytical i	results for this sample.	
Date(s) of analysis: 00/2/86	gnature:	any C-Edlen	
I certify that I have reviewed and concur with the	analytical resu	lt for this sample and with the statements in this	block.
Reviewers signature: Kmeyerhein			
1			

. ... . 

alt	w Mexico Heal CIENTIFIC LAB O Camino de S Duquerque, NM	th and Envire ORATORY DOOI alud NE 1 87106 (505) 841-	Department N 2555		GENERAL W and NITR	VATER CHEMISTRY OGEN ANALYSIS
DATE RECEIVED	7 8 1 1	18 WE-14/09	USER CODE  59300	) 🗌 59600 🕅	X <sub>OTHER:</sub> 822	235
Collection DATE	<u></u>	SITE INFORM-► ATION	Sample location	IT GRRA -	Kutz F	CANT
Callected by - Person/Agen	CY DERSOA	ر /0CD	Collection site description	1	Poro	1
EN END END END EN EN EN EN EN EN EN EN EN EN	VIRONMENT OIL CONS ate Land nta Fe, M David Boy : 827-58 DITIONS	TAL BUREAU SERVATION DI Office Bldg NM 87504-208 Ver	VISION , PO Box 2088 8	8 •	Station/ well code Owner	
Bailed	Pump	Water level		Discharge		Sample type
pH (00400)	(STrin)	Conductivity (Unco	prrected)	Water Temp. (00010)	74500	Conductivity at 25°C (00094)
SAMPLE FIELD T No. of samples		T — Check property of the sample state of t	er boxes	field with		***
submitted	added 🗆 C	(Non-filtered) Other-specify:	Δ. F. 0.45 μmer Δ. A:	mbrane filter <b>A:</b> 5ml conc. HNO <sub>3</sub>	$2 \text{ ml } H_2 SO_4 / I$ added	Ladded A: 4ml fuming HNO <sub>3</sub> adde
submitted	added 🗆 C	(Non-filtered) Other-specify: SAMPLES	Units Date analyze	mbrane filter A:	$2 \text{ ml H}_2 \text{SO}_4 / l$ added $A$	Ladded A: 4ml fuming HNO <sub>3</sub> adde
Submitted ANA: No acid a ANALYTICAL RES NA Conductivity (Conductivity (Conductivit	added  C SULTS from rected)	・(Non-filtered) Other-specify: SAMPLES ころらし	$\mu$ T · 0.45 $\mu$ mei $\Box$ A: Units Date analyzed $\mu$ mho $5/24$	brane filter □ A: 5ml conc. HNO <sub>3</sub>	$2 \text{ ml } H_2 SO_4/l$ added $4$ ,	Ladded A: 4ml fuming HNO <sub>3</sub> adder C. Date <u>Analyzed</u>
submitted SNA: No acid a ANALYTICAL RES NA Conductivity (Corr 25°C (00095) Total non-filterable residue (suspend (00530)	added C SULTS from rected) e ed)	・(Non-filtered) Other- <i>specify:</i> SAMPLES えろらし	μmho	d From ∑ Calcium	2 ml H <sub>2</sub> SO <sub>4</sub> /l added A , MA SAMP 292 7,41	Ladded A: 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//3</u>
Submitted SNA: No acid a ANALYTICAL RES NA Conductivity (Corr 25°C (00095) Total non-filterable residue (suspende (00530) Other: Other: Other:	added  C SULTS from rected) e ed)	・(Non-filtered) Other- <i>specify:</i> SAMPLES ころらし	μmho	From Calcium Magnesium Sodium	$2 \text{ ml } H_2 \text{SO}_4 / I$ added $MA \text{Sample}$ $\frac{100}{292}$ $\frac{7.41}{36}$	Ladded 1: 4ml fuming HNO <sub>3</sub> adde 2: Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u>
submitted SNA: No acid a ANALYTICAL RES NA Conductivity (Corr 25°C (00095) Total non-filterable residue (suspender (00530) Other: Other: Other:	added  C SULTS from rected) e ed)	・(Non-filtered) Other- <i>specify:</i> SAMPLES ころらし		d From A Calcium Calcium Calcium Magnesium Sodium Bicarbona	2 ml H <sub>2</sub> SO <sub>4</sub> /l added A , MA SAMP 292 7.41 36 308 te 702	Ladded A: 4ml fuming HNO <sub>3</sub> adde Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u>
submitted  Submitted  NA: No acid a  NALYTICAL RES NA  Conductivity (Corr 25°C (00095)  Total non-filterable residue (suspende (00530)  Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N ± Nitrat	added  C SULTS from rected) e ed)	・(Non-filtered) Other- <i>specify:</i> SAMPLES ころらし	μmho	d From Calcium Calcium Calcium Calcium Magnesium Sodium Sodium Chloride	$2 \text{ ml } H_2 \text{SO}_4 / I$ added $MA \text{ Sample}$ $292$ $292$ $7.41$ $36$ $308$ te $702$ $88$	Ladded A: 4ml fuming HNO <sub>3</sub> adde
Submitted	added  C SULTS from rected) e ed) te-N (00610)	・(Non-filtered) Other- <i>specify:</i> SAMPLES えろらし		A: mbrane filter A: 5m1 conc. HNO <sub>3</sub> Calcium Calcium Calcium A Calcium Calciu	2 ml H <sub>2</sub> SO <sub>4</sub> /l added A , MA SAMP 292 7.41 36 308 te 702 88 629 ids 225	Ladded A: 4ml fuming HNO <sub>3</sub> adde Date Analyzed mg/1 5//4 mg/1 5//4
Submitted	added C SULTS from rected) e ed) te-N (00610)	(Non-filtered) Other- <i>specify:</i> SAMPLES えろらし		A: mbrane filter A: 5ml conc. HNO <sub>3</sub> Calcium Calcium Calcium A Calcium	$2 \text{ ml } H_2 \text{SO}_4 / I$ added $MA \text{Sample}$ $292$ $-7.41$ $36$ $308$ $\text{te} -702$ $88$ $629$ $\text{ids} -228$	Ladded A: 4ml fuming HNO <sub>3</sub> adde
submitted	added  C SULTS from rected) e ed) te-N (00610) con	(Non-filtered) Other-specify: A SAMPLES 2.566		A: mbrane filter A: 5ml conc. HNO <sub>3</sub> Calcium Calcium Calcium Magnesium Sodium Sodium Chloride Sulfate Chloride Chloride Chloride Chloride Chloride Chloride	2 ml H <sub>2</sub> SO <sub>4</sub> /l added A , MA SAMP 292 7.41 36 308 te 702 88 629 ids 228 Anion Ba	Ladded A: 4ml fuming HNO <sub>3</sub> adde
Submitted  SUBMITTICAL RES  NA  Conductivity (Corr 25°C (00095)  Conductivity (Corr 25°C (00095)  Cother: Coth	added  C SULTS from rected) e ed) te-N (00610)	(Non-filtered) Other-specify: A SAMPLES 2 ご ち し	μ       0.45 μmer         Linits Date analyzed       Image: Signal for the second secon	A: mbrane filter A: 5ml conc. HNO <sub>3</sub> From Calcium Potassium Magnesium Sodium Sodium Chloride Sulfate Chloride Sulfate Chloride Chloride Chloride Chloride Chloride	$2 \text{ ml } H_2 \text{SO}_4 / I$ added $4$ $MA \text{ Sample}$ $292$ $292$ $7.41$ $36$ $308$ $te -702$ $88$ $629$ $70$	Ladded A: 4ml fuming HNO <sub>3</sub> adder Date <u>Analyzed</u> mg/1 <u>5//4</u> mg/1 <u>5//4</u> mg/
submitted  SUNA: No acid a  ANALYTICAL RES  NA  Conductivity (Corr 25°C (00095)  Total non-filterable residue (suspend (00530)  Other: Other: Other: Other: Other: A-H <sub>2</sub> SO <sub>4</sub> Nitrate-N +, Nitrat total (00630) Ammonia-N total Otal Kjeldahl-N () Chemical oxygen demand (00340) Chemical oxygen demand (00340) Chemical oxygen demand (00340) Other: Other: Other: Other: Chemical oxygen demand (00340) Other: Other: Other: Chemical oxygen demand (00340)	added  C SULTS from rected) e e ed) te-N (00610)	(Non-filtered) Other-specify: A SAMPLES 2566		Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> /l added A MASAMP 292 7.41 36 308 te 702 88 629 ids 228 Anion Ba Date Re S	Ladded A: 4ml fuming $HNO_3$ adde mg/1 $5//4$ mg/1 $5//4$ mg/

	CATIONS				ANIONS	
ANALYTI	E MEQ.	PPM	DET.LIMIT	ANALYTI	E MEQ.	PPM
Ca Mg Na K	14.57 2.96 13.40 0.19	292.00 36.00 308.00 7.41	< 3.0 < 10.0 < 10.0 < 0.5	HCO3 SO4 C1	11.50 13.10 2.48	702.00 629.00 88.00
Mn Fe	0.00 0.00	0.00 0.00		NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	31.11	643.41			27.09	1419.00
TDS (mea	asured) =	2288.00	ppm	-		
Ion Ba	lance =	114.85	ŧ	Sample Date o	e No. out/By _	=8701469 09 5/26/47

•

م. ماللە	New Mexico Hea	Ith and Environment C			Harry	METALS
	SCIENTIFIC LAE 700 Camino de S	BORATORY DISCOUND	opaninom		GENERAL V	VATER CHÉMISTRY
" Environment	Albuquerque, NN	A 87106 — (505) 841-25	555		and with	odrugherbes
DATE RECEIVED	27 87 N	AB	USER CODE 🗌 59300	<u> </u>	X <sub>OTHER:</sub> 822	235
Collection DATE	2 ICAP- 2	SITE SITE	Sample location 54	NTERRA -	KUTZ 1	PLANT
1255 Collected by - Person	/Agency		Collection site description		Par	00 /
BOYBR/	HNOGRBON			· · · · · · · · · · · · · · · · · · ·		•
		TAL BURFAU				
SEND	NM OIL CON	SERVATION DIV	ISION			
EPORT	State Land	Office Bldg, NM 87504-2088	PO Box. 2088	3	·	
0 •	David Boy	Vor	, 	۲.	······	
Au		y. <del>C.</del> L	**********	***************************************	Station/	
Pho	ne: 827-58	312			well code	· · · · · · · · · · · · · · · · · · ·
SAMPLING CO	ONDITIONS				Owner	
Bailed S Dipped	🗆 Pump 🗋 Tap	Water level		Discharge		Sample type
рн (00400) 6	. S (Strip)	Conductivity (Uncor	rected)	Water Temp. (00010)	24.5.00	Conductivity at 25°C (00094)
Field comments	ISON I	100 Shoo	TEACS	mmanta		
	(see D	iee onee	10100	minenco		*****
						·
SAMPLE FIEL	D TREATMEN	T — Check proper	boxes	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
No. of samples submitted		F: Whole sample (Non-filtered)	F: Filtered in	field with <b>A:</b>	2 ml H₂SO₄/	L added
		Other-specify:		Sml conc. HNO	added XA	A: 4ml fuming HNO added
				3	<u></u>	
MALY HCAL	RESULIS from	N SAMPLES	Inits Date analyzed	1)		Da ta
	(Corrected)		*	From	, NA Sample	Analyzed
25°C (00095)		μ	mho			
Total non-filte residue (susc	rable					mg/1
(00530)			ng/l			mg/1
Other:	40	JAP JCHU				
Other:						ng/1
A-H <sub>2</sub> SO <sub>4</sub>		·····				mg/1
□ Nitrate-N+, I	Nitrate-N					ng/1
total (00630)		······································	ng/l			uy/ 1
Total Kjeldahl	-N		iiy/i		.us	
		r	ng/l			
demand (003	40)		ng/l	-   Ll		
□ Total organic ( )	carbon	r	ng/l	- Cation/	Anion Ba	lance
Other:		······		Analyst	Date R	eported Reviewed by
		······································		-	5	18 87 Jun (Lahlor
Laboratory rema	rks J.Oml	HNO3 all	dat SLD.			tal
					7	Jugarton
FOR OCD US	SE Date (	Dwner Notified	1	Phone or Let	tter?	initals

···- :---

-----

ICAP SCAN

SLD Lab No. TOP 226 5/6/87 Analyst QB

lo'

Reviewed by: (in Cally Date Reported: 5/18/87

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum		
Barium	0.4	
Beryllium	40.)	
Boron	0.3	
Cadmium	20.	
Calcium	360.	
Chromium	40.	
Cobalt	40.05	
Copper	40.1	
Iron	1.4	
Lead	40.1	
Magnesium	43.	
Manganese	0.52	
Molybdenum	<0.	
Nickel	40.1	
Silicon	18.	
Silver	40.1	
Strontium	45	
Tin	20.1	
Vanadium	<0:1	
Zinc	20.1	
Arsenic		
Selenium		
Mercury		
_		
		. <u> </u>

New Mexico H SCIENTIFIC L 700 Camino de Albuquerque, I	ealth and Environment I ABORATORY DIvesION & Salud NE NM 87106 — (505) 841-2	Department 555	لم من 2 5 - 2 سام س GE a	NERAL V	VATER CHEM OGEN ANALY	ISTRY 'SIS
RECEIVED 4 21 87	NO. W1469 SITE	CODE 59300 Sample location	<u>59600</u>	HER: 82	235	, <u></u> _, <u></u>
04 22 87 Collection TIME		<u> </u>	ELLA - BU	TZ PL	ANT	
1255 Collected by - Person/Agency		Collection site description		POND	1	
BOYER / ANDERSOL	ر					*****
ENVIRONME NM OIL CO INAL State Lan Santa Fe, Attn:David_B	NTAL BUREAU NSERVATION DIV d Office Bldg, NM 87504-2088 oyer	ISION PO Box 2088	}			
Dhono: 927-1	5012			Station/ well code		
SAMPLING CONDITIONS	5612	LIAN 2.9 10.2	7 1	Owner		
□ Bailed□ Pump Ø Dipped □ Tap	Water level		-Discharge		Sample type	
pH (00400) 7 (Strip)	Conductivity (Uncor	rected) Σ <i>Oz</i> ) μmho	Water Temp. (00010)	_/ °C	Conductivity at 25	°C (00094) µmho
submitted / U	NF: (Non-filtered) Other- <i>specify:</i>	0.45 μmer	mbrane filter <b>A</b> : 2 f		L added A: 4 <del>m1 fumir</del> <i>2m1 H</i> ;	ng HNO added
NF, NA	L. L.	Jnits Date analyzed	F, NA		Units	Date analyzed
Conductivity (Corrected) 25 °C (00095)	μ	mho	<ul> <li>Calcium (00915)</li> <li>Magnesium (00925)</li> </ul>		mg/l _ mg/l _	
Total non-filterable			<ul> <li>Sodium (00930)</li> <li>Potassium (00935)</li> </ul>		mg/l . mg/l .	
residue (suspended) (00530)	I	mg/l	Bicarbonate (00440)		mg/l	
□ Other:			□ Chloride (00940) □ Sulfate (00945)		mg/i _ mg/i _	
□ Other:	· · · · · · · · · · · · · · · · · · ·		<ul> <li>Total filterable residue</li> <li>(dissolved) (70300)</li> </ul>		ma/l	
NF, A-H₂SO₄	·····		Other:		····,•·· ·	
Nitrate-N + , Nitrate-N	. <u></u>		F, A-H₂ SO₄			
total (00630)	ł	mg/l ma/l	Nitrate-N + , Nitrate-N	00	, cf	5/12
Total Kjeldahl-N			dissolved (00631) Ammonia-N dissolved	1 <u></u>	/ mg/l _	<u> </u>
Chemical oxygen		mg/i	(00608)		mg/l .	517
demand (00340)	<u></u> I	mg/l		36	.9mg/I	5/15
( )		mg/l	• Other:		· ·	
□ Other:			- Analyst	Date R	eported Review	wed by
Laboratory remarks			1	121	W ST G	/
				****		
·						

- - -

2

in a serie de la composición de la comp

90 -C	Albuquerque, NM	87106 841-2570
EPORT TO:	David Boyer	S.L.D. No. OR- 690
	N.M. Oil Conservation Divisio	DATE REC. 4-278]
•	P. O. Box 2088	
	Santa Fe, N.M. 87504-2088	PRIORITY
PHONE(S):	827-5812	USER CODE: 18 2 2 3 5
UBMITTER:	David Boyer	CODE: 2 6 0
SAMPLE COLL	ECTION CODE: (YYMMDDHHMMIII)	710141221/131/151 DB1
SAMPLE . TYPE	WATER 🔀, SOIL 🛄, FOOD 🛄, OTHI	CODE:
COUNTY: S	an quan; CITY: Boo	wheld code:
OCATION CO	DE: (Township-Range-Section-Tracts)	$ \mathcal{W} + / / \mathcal{W} + / \Im + / /   (10N06E24342)$
ANALYSES REA	QUESTED: Please check the appropriate box(	es) below to indicate the type of analytical screens
equired. Whene	ver possible list specific compounds suspected	or required.
	PURGEABLE SCREENS	EXTRACTABLE SCREENS
(754) Arom	atic Furgeables (1-5 Carbons)	[] (751) Alignatic Hydrocarbons [] (760) Organochloring Pastisides
(765) Mass	Spectrometer Purgeables	[] (755) Base/Neutral Extractables
(766) Triba	lomethanes	(758) Herbicides Chlorophenory acid
(100) Illiu Othe	r Specific Compounds or Classes	(750) Herbicides, Chiefophenoxy acid
	i Specific Compounds of Classes	(760) Orgenochloring Resticides
={		(761) Organophosphote Besticides
		[] (767) Polychlorinated Binhenyle (PCB's)
		(764) Bolymulant Aromatic Hydrogenborg
=	<del>ه در ان الروز العالمي الماليين الماليين العاليين العاليين العاليين.</del>	[] (764) Folyhaclear Afomatic Hydrocarbons
		[_] (102) SDWA Festicides & Herbicides
Remarks: <u>S</u>	interna fond a	(middle)
	futz	
FIELD DATA:		
H= J Str	and uctivity = $2500$ mmho/cm at $21^{\circ}$ C:	Chlorine Residual= mg/l
Dissolved Ovyge	$m_{\rm eff} = m_{\rm eff} / h_{\rm eff} = m_{\rm eff} / h_{\rm$	
Denth to water	ft · Depth of well ft · Deptor	ation Interval
Sempling Locati	N, Depen of wenN, Terror	inon mervarit., Casing
Over S	Con Sirom ponk 1	Somple Srom North Siele
BLack	- Water Jusper Tiro	n. mooil particulates
I certify that t	he results in this block accurately reflect the	results of my field analyses, observations and
activities.(signati	ire collector): Wanzb Ray	Method of Shipment to the Lab: Aboud Ca
This form accou	npanies Septum Vials. Glass J	ugs, and/or
Samples were	reserved as follows:	7
NP:	No Preservation: Sample stored at room to	emperature.
P-Ice	Sample stored in an ice hath (Not Frozen	).
P-Na SO	Sample Preserved with Sodium Thiosulfate	to remove chlorine residual
CHAIN OF CU	STODY	
I certify that t	his sample was transferred from	to
at (location)		on/ and that
the statements	in this block are correct. Evidentiary Seals:	Not Sealed Seals Intact: Yes No
	-	raaman taanal taamad

# ANALYSES PERFORMED

LAB. No.: OR- 690

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screer	ning method(s)	checked below:			
	,	DUTE A CORADI D. CODEENC			
PURGEABLE SCREENS		EXTRACTABLE SCALENS			
[_] (753) Aliphatic Purgeables (1-3 Carbons)		[_] (751) Aliphatic Hydrocarbons			
(754) Aromatic & Halogenated Purgeables		[_] (760) Organochlorine Pesticides			
[_] (765) Mass Spectrometer Purgeables		[ (755) Base/Neutral Extractables			
(766) Trihalomethanes		[_] (758) Herbicides, Chlorophenoxy acid			
Other Specific Compounds or Classes		(759) Herbicides, Triazines			
		[] (760) Organochlorine Pesticides			
		[_] (761) Organophosphate Pesticides			
		[_] (767) Polychlorinated Biphenyls (PCB's)			
		[_] (764) Polynuclear Aromatic Hydrocarbons			
	·····	[_] (762) SDWA Pesticides & Herbicides			
<u>_AN</u>	ALYTICA	L RESULTS			
COMPOUND(S) DETECTED	CONC.	COMPOUND(S) DETECTED	CONC.		
	[PPB]		[PPB]		
T. I I					
anamalae pupperensions					
halogeneted hadroearkons	N.D	· · · · · · · · · · · · · · · · · · ·			
	· []		·		
	1 [				
			·		
	1		1		
·	11 <sup>·</sup>	· ·			
		······································			
	<b>┦─────</b> ┤│				
* DETECTION LIMIT * *	50 48/2	+ DETECTION LIMIT + +			
ABBREVIATIONS USED:					
N D = NONE DETECTED AT OR ABOVE	THE STATED	DETECTION LIMIT			
T R = DETECTED AT A LEVEL BELOW	THE STATED	DETECTION LIMIT (NOT CONFIRMED)			
I RESULTS IN BRACKETS   ARE UNCONF	TIRMED AND/C	DR WITH APPROXIMATE OUANTITATION			
	111120 11107		• -		
·	····				
LABORATORY REMARKS:					
		···			
	<u></u>				
	······································				
CERTIFICA	TE OF ANALV	TICAL PERSONNEL			
	· · · · · · · · · · ·	<i>( )</i>			
Seal(s) Intact: Yes 🗌 No 🖵. Seal(s) broken by	r: <u></u>	date: date:			
I certify that I followed standard laboratory procedu	res on handling	and analysis of this sample unless otherwise noted	l and		
that the statements on this page accurately reflect t	he analytical re	sults for this sample.			
Date(s) of analysis: 5/4/87 Analyst's sig	gnature:	Jany C. Edler			
I certify that I have reviewed and concur/with the	analytical resul	ts for this sample and with the statements in this	block.		
Reviewers signature: Kmenchh					
	· · · · · · · · · · · · · · · · · · ·		······································		
New Memory heads and Environment and Environment and NTROGEN ANALYSIS         Contained on Sample of Sample result NE Theory in the sample of the sample o	11		860 0		•••
--	------------------------------------	---	--	-----------------------	---
Prod Camino de Saud NE and NITROGEN ANALYSIS       and NITROGEN ANALYSIS         Profile       1 2 7 1 7 1 MB & C (1/2) Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       1 2 7 1 7 1 MB & C (1/2) Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and NITROGEN ANALYSIS       Sector States and NITROGEN ANALYSIS         Profile       Notes and State Fe, MISSING, NOTES       Sector States and NITROGEN ANALYSIS         Phone:       827-5812       Sector State	New Mexico H	ealth and Environment Department	with		
REFERENCE       I       2.7       1.7       1.8       No       1	700 Camino de Albuquerque,	Salud NE NM 87106 — (505) 841-2555	e	and NITR	OGEN ANALYSIS
Water B2       INSTRUCT       Surger based       Surger based       Surger based       Kur z febsor         1313       ATON       ATON       Total	ATE IECEIVED 4 2.7 87	LAB WC - 14 72 USER 593	00 🗆 59600 🕅	OTHER: 82	235
335       Annu       Total consistence $32042 = 7600000000000000000000000000000000000$	ollection DATE	SITE Sample location	SUNTERRA	- Ku7	-2 PLANT
EXVIRONMENTAL BUREAU         ENVIRONMENTAL BUREAU         ENVIRONMENTAL BUREAU         No Moll CONSENTION DIVISION         Phone: 827-5812         Ant::::::::::::::::::::::::::::::::::::	1315 Dillected by Person/Agency	Collection site description	on	Pa	ND 2
ENVIRONMENTAL BUREAU         NM OIL CONSERVATION DIVISION         WAT         Santa Fe, NM 87504-2088         Attr:       David Effice Bldg, PO Box 2088         Attr:       David Effice Bldg, PO Box 2088         Attr:       David Effice Bldg, PO Box 2088         AMPLING CONDITIONS       Discharge         Balled       Pump         View of the efficience of the effic	BOYER / HNDERS			<u> </u>	*******
End       ENT NOUNCLINE DISCOUNTSION         WO       State Land Office Bidg, P0 Box 2088         Attr:       David Boyer         Phone:       827-5812         AMPLINC CONDUTIONS       Discharge         Balled       Pump         Water fewel       Discharge         Conductivity (Uncorrected)       2.5 00 µmho         2.5 00 µmho       2.6 00000         1.6 (00000)       2.6 00000         1.6 (00000)       2.6 000000         2.6 (000000)       2.6 0000000         2.6 (000000)       2.6 0000000         2.6 (000000000000000000000000000000000000					
NAL State Land Office Bldg, P0 Box 2088         Attr:::David: Boyer:         Phone::       827-5312         AMPLING CONDITIONS       Deexharge         Balled       Pupp         Water fevel       Discharge         Balled       Pupp         Conductivity (Uncorrected)       Discharge         Conductivity (Uncorrected)       Conductivity at 25°C (00064)         PH (00400)       2 (STRUP)         Conductivity (Uncorrected)       Discharge         Conductivity at 25°C (00064)       Conductivity at 25°C (00064)         PH (00400)       2 (STRUP)         Conductivity at 25°C (00064)       Conductivity at 25°C (00064)         Philosoft Conductivity at 25°C (00064)       Conductivity at 25°C (00064)         Philosoft Conductivity at 25°C (00064)       Conductivity at 25°C (00064)         No. of samples       INF: Whole sample         Submitted       INF: Whole sample         Sec (000650)       INF: Whole sample         NALYTICAL RESULTS from SAMPLES       From $\frac{1}{120}$ Magnesitum       2.5°C         Magnesitum       2.16 mg/1         Conductivity Corrected)       2.5°C         (00036)       2.5°C         (00036)       2.5°C         Conduc	END NM OIL CO	NSERVATION DIVISION			
Santa Pe, NM 8/504-2088         Atm:David_Boyer	NAL State Lar	d Office Bldg, PO Box 208	38		
Attr:::::::::::::::::::::::::::::::::::	Santa Fe	NM 8/504-2088			
Phone:       827-5312         AMPLING CONDITIONS       Owner         Balled       Pump       Water level       Discharge       Samgle type         Conductivity (Uncorrected)       2.5 Dr.p. µmho       Discharge       Samgle type         Filed comments       Samgle type       Conductivity at 25°C (00094)       µmh         Filed comments       Samgle type       Conductivity at 25°C (00094)       µmh         AMPLE FIELD TREATMENT - Check proper boxes of the of the wath authited       At 2 mi H <sub>2</sub> SO <sub>4</sub> /L added         No of samples authited       NF: Whole sample submitted       At 2 mi H <sub>2</sub> SO <sub>4</sub> /L added         NA: No acid added       Other-specify:       At 5 mi conc. BNO <sub>3</sub> added       At 4mi fuming BNO <sub>3</sub> adde         NALYTICAL RESULTS from SAMPLES       Magnesi un       21.5       Sift and the sample sign and the	Attn: <u>David</u> B	oyer			
AMPLING CONDITIONS       Dever         Bailed       Pump       Waterlevel       Discharge       Sample type         Bailed       Pump       Waterlevel       Discharge       Sample type         Bailed       Onductivity (Uncorrected)       2.5 87.5 µmho       Water Temp. (00010)       2.7 eC       Conductivity at 25°C (00094)         #MPLE FIELD TREATMENT - Check proper boxes       2.9 Conductivity (Art 25°C (00094)       ymmho       At 2 mit H_2SO_4/L added         AMPLE FIELD TREATMENT - Check proper boxes       2.9 Conductivity (Art 25°C (00094)       ymmho       At 2 mit H_2SO_4/L added         No of sample       NF:       Whole sample       Set 16%C 6%My       At 2 mit H_2SO_4/L added         Submitted       NF:       Whole sample       At 2 mit H_2SO_4/L added       Malter 14% Mit 14%         KMA: No acid added       Other-specify:       At 3 fall conc. RNO_3 added       At 4 fall funding RNO_3 added         You concurve (consol)       2.500       µmho       \$2.4 (Conductivity (Corrected))       2.500       µmho         You concurve (consol)       2.500       µmho       \$2.4 (Consolid)       Ymmho       Ymmho         You concurve (consol)       2.500       µmho       \$2.4 (Consolid)       Ymmho       Ymmho         You concurve (consol)       2.500	Phone: 827-	5812		Station/ well code	
□ Balled       □ Pump       Water level       Discharge       Sample type         □ Balled       □ Rup       □ Conductivity (Uncorrected)       □ / °C       Conductivity at 25°C (00094)         □ Pield comments       ○ See       ↓ / ∞C       Conductivity (Uncorrected)       □ / °C       Conductivity at 25°C (00094)         ■ Net       ○ See       ↓ / ∞C       ○ Conductivity at 25°C (00094)       □ / mmh         ■ Net       ○ See       ↓ / ∞C       ○ Conductivity at 25°C (00094)       □ / mmh         ■ Net       ○ See       ↓ / ∞C       ○ Conductivity at 25°C (00094)       □ / mmh         ■ No. of samples       □ NF:       Whole sample       ○ F / See / / See / / See / See / See / / See / / See / / See / See / See / See / See / See / / See / See / See / / See / See / See / See / / See / See / /	AMPLING CONDITIONS			Owner	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Bailed Pump	Water level	Discharge		Sample type
prid (00400) $2[S L P]$ Conductivity (Uncorrected) $2f \circ C$ Conductivity at 25°C (00094)         ifield comments $Sell$ $VCC$ $Serrer       Pre Serrer       Conductivity at 25°C (00094)         AMPLE FIELD TREATMENT - Check proper boxes       Pre Serrer       Serer       Serrer       Serre$	Dipped 🗆 Tap			· · · ·	GRAB
Field comments       (See VCX Semm Sen Centiments)         AMPLE FIELD TREATMENT - Check proper boxes $_{2}$ ( $h_{2}$	2 (STRIP)	Conductivity (Uncorrected) 2507 µmho	Water Temp. (00010)	21 .0	Conductivity at 25°C (00094) µmł
AMPLE FIELD TREATMENT - Check proper boxes a Pro Site of the denty         No. of samples submitted       NF: Whole sample (Nor-filtered)         State of the dent o	Field comments	IN EALDERC	DIL MIDIN TI	\	· ·
AMPLE FIELD TREATMENT — Check proper boxes $\frac{1}{2}$	Lee 1	10 TEMPSEL	- TUPULANS	)	
AMPLE FIELD TREATMENT - Check proper boxes 2 2/2 Sites (br/y)         No. of samples       NF: Whole sample         submitted       NF: Whole sample         What No acid added       Other-specify:         AAS #Amendrame-Hiles       A: 2 mi H <sub>2</sub> SO <sub>4</sub> /L added         What No acid added       Other-specify:         AAS #Amendrame-Hiles       A: 2 mi H <sub>2</sub> SO <sub>4</sub> /L added         MALYTICAL RESULTS from SAMPLES       Inits Date analyzed         NALYTICAL RESULTS from SAMPLES       From <u>bre</u> S, NA Sample:         Date       Date         ACConductivity (Corrected)       2.50C         25°C (00095)       2.50C         mp/l       Start         Coller:       DA	********				*****
No. of samples submitted $\square$ NF: Whole sample (Non-filtered) $\square$ F: Filtered in field with $\Delta 45 \ \mu membrare-Sites$ $\square$ A: $2 \mbox{ ml } H_2 SO_4/L added         \square NA: No acid added       \square Other-specify:       \square A: 5 \mbox{ ml } Sml \ conc. HNO_3 added       \square A: 4 \mbox{ ml } ml \ mbox{ ml } ml \ ml \ mbox{ ml } ml \ ml \ mbox{ ml } ml \ ml \ ml \ ml \ ml \ ml } ml \ ml \$	AMPLE FIELD TREATME	NT — Check proper boxes אין אין	Fither Analy		
submitted       Image: Market interviewed by a state of the second state interviewed by a state of the second state interviewed by a state interviewed by a state of the second state interviewed by a state interv	No. of samples	NF. Whole sample	n field with	2 ml HaSO4/	Ladded
NA: No acid added       Other-specify: $\Box A: Sml conc. HNO_3 added$ $\Box A: 4ml funding HNO_3 added$ NA       Units Date analyzed $From \beta_{22} S$ , NA Sample:       Date Analyzed         NA       Units Date analyzed $From \beta_{22} S$ , NA Sample:       Date Analyzed         Conductivity (Corrected) $2.50C$ $\mu mho$ $5/24$ $Analyzed$ Total non-filterable $residue (suspended)$ $godd = 3/24$ $Analyzed$ $S/24$ Other: $A$ $T.4C$ $S/24$ $Analyzed$ $S/24$ Other: $A$ $T.4C$ $Magnesium$ $21.5$ $mg/1$ $S/1/4$ Magnesium $4/4$ $mg/1$ $S/1/4$ $Magnesium$ $4/4$ $mg/1$ $S/1/4$ Other: $Analyst$ $Magnesium$ $Aralyst$ $Sold um$ $S/27$ $S/27$ Other: $mg/1$ $mg/1$	submitted	(Non-filtered) 77 045-µm	embrane-filter		
NA       Units Date analyzed         NA       Units Date analyzed         %       Conductivity (Corrected) $2.500$ $\mu$ mho $s/2.9$ Cold column $2.500$ $\mu$ mho $s/2.9$ Total non-filterable       residue (suspended) $g/4$ $g/1$ $5/14$ Coll cium $2.500$ $mg/1$ $g/1$ $g/1$ Coll cium $2.500$ $mg/1$ $g/1$ $g/1$ Coll cium $2.60$ $mg/1$ $g/1$ $g/1$ Coll cium $2.60$ $mg/1$ $g/1$ $g/1$ Coll cium $g/1$ $g/1$ $g/1$ $g/1$ $g/1$ Coll cium $g/1$ $g/1$ $g/1$ $g/1$	XNA: No acid added	Other-specify:	5ml conc. HNO3 a	dded 🗖	A: 4ml fuming HNO <sub>3</sub> adde
Gene enterminute         Virtual	NALYTICAL RESULTS fro	OM SAMPLES	ed		
25°C (00095) $2.500$ µmho $5/29$ $Ald$ mg/l $5/l/4$ Total non-filterable residue (suspended) (00530)       mg/l $5/s$ $2.500$ mg/l $5/s$ Q Other: $Ald$ $7.40$ $5/s$ Magnesium $4.4$ mg/l $5/l/4$ $5/s$ Other: $Ald$ $3/s$ Other: $Ald$ $3/s$ Algo: $3/s$ $3/s$ Nitrate-N +, Nitrate-N total (00630) $mg/l$ $3/s$ Mamonia-N total (00610) $mg/l$ $3/s$ Chemical oxygen demand (00340) $mg/l$ $3/s$ Chemical oxygen demand (00340) $mg/l$ $3/s$ Other: $mg/l$ $3/s$ $3/s$ Other: $mg/l$ $3/s$ $3/s$ Other: $mg/l$ $3/s$ $3/s$ Chemical oxygen demand (00340) $mg/l$ $3/s$ $3/s$ Other: $3/s$ $3/s$ <td>Conductivity (Corrected)</td> <td></td> <td>From Bre Y,</td> <td>NA Sample</td> <td>: Date Analyzed</td>	Conductivity (Corrected)		From Bre Y,	NA Sample	: Date Analyzed
Total non-filterable       residue (suspended) $mg/l$ $f/f/4$ (00530) $mg/l$ $f/f/4$ $f/f/4$ Q ther: $f/f/4$ $f/f/4$ $f/f/4$ Q ther: $f/f/4$ $f/f/4$ $g/l$ Q ther: $f/f/4$ $f/f/4$ $g/l$ Q ther: $f/f/4$ $g/l$ $f/f/4$ Q ther: $f/f/4$ $g/l$ $f/f/4$ Q ther: $f/f/4$ $g/l$ $f/f/4$ Q ther: $f/f/f/4$ $g/l$ $g/l/4$ Nitrate-N +, Nitrate-N total (00610) $mg/l$ $g/l/f/f/f/4$ Nitrate-N + (00630) $mg/l$ $g/l/f/f/f/f/f/f/f/f/f/f/f/f/f/f/f/f/f/f/$	25°C (00095)	<u>2.500                                   </u>			Anaryzeu .
residue (suspended) (00530)       mg/l       Img/l       Img/l <td< td=""><td>Total non-filterable</td><td></td><td>🗛 Calcium</td><td>216</td><td>mg/15/14</td></td<>	Total non-filterable		🗛 Calcium	216	mg/15/14
a Other: $7.4\%$ $5/4\%$ $5/4\%$ Other: $36\%$ $mg/1$ $5/1\%$ Other: $36\%$ $mg/1$ $5/1\%$ AH <sub>2</sub> SO <sub>4</sub> $36\%$ $mg/1$ $5/1\%$ Nitrate-N +, Nitrate-N total (00630) $mg/1$ $1/2.2\%$ $mg/1$ $5/1\%$ Nitrate-N +, Nitrate-N total (00610) $mg/1$ $mg/1$ $5/1\%$ $5/1\%$ Ammonia-N total (00610) $mg/1$ $mg/1$ $5/1\%$ $5/1\%$ Chemical oxygen demand (00340) $mg/1$ $mg/1$ $5/5\%$ $5/5\%$ Other: $mg/1$ $mg/1$ $3/5\%$ $5/5\%$ $5/5\%$ Other: $mg/1$ $mg/1$ $3/5\%$ $5/5\%$ $5/5\%$ Other: $mg/1$ $3/5\%$ $3/5\%$ $5/5\%$ $5/5\%$ Other: $mg/1$ $3/5\%$ $3/5\%$ $5/5\%$ $5/5\%$ Other: $3/5\%$ $3/5\%$ $3/5\%$ $3/5\%$ $3/5\%$ Other: $3/5\%$ $3/5\%$ $3/5\%$ $3/5\%$ $3/5\%$ aboratory remarks $3/5\%$ $3/$	residue (suspended) (00530)	ma/l	🛛 Potassium	21.5	mg/1 <u></u>
Other:       ////////////////////////////////////	I Other: DA	7.48 55	🗌 🕅 Magnesium	44	mg/1
Other:       Bicarbonate       1228 mg/1       5/5         A-H_2SO_       Chloride       1/9 mg/1       5/5         Nitrate-N +, Nitrate-N total (00610)       mg/1       Sulfate       14-7 mg/1       5/12         Ammonia-N total (00610)       mg/1       Total Solids       2302 mg/1       5/14         Total Kjeldahi-N       mg/1       X       Total Solids       2302 mg/1       5/19         Chemical oxygen       mg/1       X       Total Solids       2302 mg/1       5/5         Chemical oxygen       mg/1       X       Cation/Anion Balance       202       5/5         Other:       mg/1       X       Cation/Anion Balance       202       202       202         Other:       Malyst       Date Reported       Reviewed by       202       202       202         aboratory remarks       S       28 %2       C2       202       202       202	Other: /	······	- X Sodium	364	mg/1 5/14
AH <sub>2</sub> SO <sub>4</sub> X Chloride       //9       mg/l       5/5         Nitrate-N +, Nitrate-N total (00610)       mg/l       X Sulfate       //47       mg/l       5/12         Ammonia-N total (00610)       mg/l       X Total Solids       2302       mg/l       5/14         Total Kjeldah-N       mg/l       X Coloride       2302       mg/l       5/14         Chemical oxygen       mg/l       X Cation/Anion Balance       5/5       5/5         Other:       mg/l       X Cation/Anion Balance       Reviewed by         Other:       Analyst       Date Reported       Reviewed by       5         aboratory remarks       S 25/8       92       92       114	Other:		- M Bicarbonat	e 1228	3 mg/1 =5/5-
Nitrate-N +, Nitrate-N       mg/l       Image: Second seco	A-H <sub>2</sub> SO <sub>4</sub>		A Chloride	119	mg/1 5/5
total (00630)       mg/l       mg/l </td <td>☐ Nitrate-N + , Nitrate-N</td> <td></td> <td></td> <td>147</td> <td>mg/1 5/12</td>	☐ Nitrate-N + , Nitrate-N			147	mg/1 5/12
Animonal (coold)       Ing/l       A Total Solitos       2000 mg/l       Silital         Total Kjeldahl-N       mg/l       Img/l       Img/l       Silital       Silital         Chemical oxygen       mg/l       Img/l       Img/l       Silital       Silital         Total organic carbon       mg/l       Img/l       Img/l       Img/l       Img/l       Img/l         Other:       Img/l       I	total (00630)	mg/l	- A Surrace -	10 230	
( )       mg/l       GO 2       3/5         Chemical oxygen demand (00340)       mg/l       GO 2       6       3/5         Total organic carbon ( )       mg/l       Go 2       GO 2       6       3/5         Other:       mg/l       Go 2       Go 2       Go 2       Go 2         Other:       mg/l       Go 2       Go 2       Go 2       Go 2         .aboratory remarks       S 2% % 2       GO 2       Go 2       Go 2	□ Total Kjeldahl-N	mg/i		as <u>200</u>	
Chemical oxygen       mg/l       mg/l       Img/l	( ) <u> </u>	mg/l	-   A - CO3	<u> </u>	>
Total organic carbon       mg/l       Analyst       Date Reported       Reviewed by         Other:       Analyst       Date Reported       Reviewed by         .aboratory remarks       5       2%       %7       29	demand (00340)	mg/i	_ 0		
Other:	Total organic carbon			- · · ·	
Other:     Date Reported     Reviewed by	( ) ⊒ Other:	mg/i	- Cation/A	nion Ba	lance
Laboratory remarks	☐ Other:		Analyst	Date R ろし	eported Reviewed by 28 87 CP
FOR OCD USE Date Owner Notified Phone or Letter? Initals	_aboratory remarks		<u></u>	<u>L</u>	
TOR OCD USE Date Owner Notified Phone or Letter? Initals			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		***************************************
TOR OCD USE Date Owner Notified Phone or Letter? Initals	******************				*******
	TOR OCD USE Date	Owner Notified	Phone or Lett	er?	Initals

l

ŀ

·

ļ

!

	CATIONS				ANIONS	
ANALYTE	MEQ.	PPM	DET.LIMIT	ANALYTE	MEQ.	PPM
Ca Mg Na K	10.78 3.61 16.01 0.55	216.00 44.00 368.00 21.50	< 3.0 < 10.0 < 10.0 < 0.5	HCO3 S04 Cl	20.12 3.06 3.36	1228.00 147.00 119.00
Mn Fe	0.00 0.00	0.00 0.00		NO3 CO3 NH3 PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	30.95	649.50			26.54	1494.00
TDS (mea	asured) =	2302.00	ppm	·		· · · ·
Ion Bal	lance =	116.60	ż	Sample Date d	e No. Dut/By	=8701472 shskj

\*

<sup>س</sup> 3-88	Albuquerque, NM	e Salud NE 87106 841-2570
REPORT TO:	David Boyer	S.L.D. No. OR- 015 688
	N.M. Oil Conservation Division	DATE REC. 4-28-87
	P. O. Box 2088	
	Santa Fe, N.M. 87504-2088	PRIORITY
PHONE(S):	827-5812	USER CODE:   8   2   2   3   5
SUBMITTER:	David Boyer	CODE: 12 16101
SAMPLE COLL	ECTION CODE: (YYMMDDHHMMIII)	710412121/1313101 1981
SAMPLE. TYPE	: WATER 🖾, SOIL 🛄, FOOD 🛄, OTHE	R: CODE:
COUNTY:	~ Juan; CITY: Bloom	nfield CODE: []
LOCATION CO	DE: (Township-Range-Section-Tracts) $ 2 8$	n  +
ANALYSES RE	QUESTED: Please check the appropriate box(	es) below to indicate the type of analytical screens
required. Whene	ver possible list specific compounds suspected	or required.
(753) Aliph	atic Purgeables (1-3 Carbons)	(751) Aliphatic Hydrocarbons
(754) Arom	atic & Halogenated Purgeables	(760) Organochlorine Pesticides
(765) Mass	Spectrometer Purgeables	(755) Base/Neutral Extractables
[] (766) Triha	lomethanes	(758) Herbicides, Chlorophenoxy acid
Othe	er Specific Compounds or Classes	(759) Herbicides, Triazines
		(760) Organochlorine Pesticides
Ē —		(761) Organophosphate Pesticides
<u> </u>		(767) Polychlorinated Biphenyls (PCB's)
		(764) Polynuclear Aromatic Hydrocarbons
<u> </u>		(762) SDWA Pesticides & Herbicides
·	e = i = 0	
Remarks:	Sonterra Rula Pon	3 3 (lower)
FIELD DATA:	ATZ-3980 2130	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
pH= 3.5;	onductivity=	Chlorine Residual=mg/l
Dissolved Oxyge	n=mg/l; Alkalinity=mg/l; Flo	w Rate/
Depth to water	ft.; Depth of wellft.; Perform	tion Intervalft.; Casing:
Sampling Locati	on, Methods and Remarks (i.e. odors, etc.)	
Froml	Veriand, Lots of Sal	I deposite on combe, wale,
clear,	Maoil	/ / / / /
I certify that t	the results in this block accurately reflect the	results of my field analyses, observations and
activities.(signati	ure collector): Ward Range	Method of Shipment to the Lab: And Cam
This form accor	mpanies Septum Vials, Glass A	ugs, and/or
Samples were p	preserved as follows:	
NP:	No Preservation; Sample stored at room to	mperature.
P-Ice	Sample stored in an ice bath (Not Frozen	).
P-Na SO	Sample Preserved with Sodium Thiosulfate	to remove chlorine residual.
CHAIN OF CU	JSTOD Y	
I certify that t	this sample was transferred from	to
at (location)	·····	on/; and that
the statements	in this block are correct. Evidentiary Seals:	Not Sealed 🔲 Seals Intact: Yes 🦳 No 🥅
<b>.</b> .	-	-manager tangging

\_\_\_\_\_

## ANALYSES PERFORMED

LAB. No.: OR- 688

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screer	ing method(s)	checked below:	·····
PURGEABLE SCREENS		EXTRACTABLE SCREENS	
(753) Aliphatic Purgeables (1-3 Carbons)		(751) Aliphatic Hydrocarbons	.•
(754) Aromatic & Halogenated Purgeables		(760) Organochlorine Pesticides	
(765) Mass Spectrometer Purgeables		(755) Base/Neutral Extractables	
(766) Tribalomethanes		(758) Herbicides, Chlorophenoxy acid	
Other Specific Compounds or Classes		(759) Herbicides, Triazines	
		[] (760) Organochlorine Pesticides	
		[_] (761) Organophosphate Pesticides	
		[ (707) Polychlorinated Binhenvle (PCB's)	
		[] (764) Polynuclear Aromatic Hydrocarbons	•
		(762) SDWA Posticides & Herbicides	
AN	ALYTICA	L RESULTS	
COMPOUND(S) DETECTED	CONC	COMPOIND(S) DETECTED	CONC.
	[PPB]		[PPB]
anomatia nursapplia			
annue Annue			
halaanatos Juralables	No D.		
	{ { }		I
······································	┨┦╷		
·			
······································			
* DETECTION LIMIT * *	25498K	+ DETECTION LIMIT +	
ABBREVIATIONS USED:			
N D = NONE DETECTED AT OR ABOVE	THE STATED	DETECTION LIMIT	
T R = DETECTED AT A LEVEL BELOW	THE STATED	DETECTION LIMIT (NOT CONFIRMED)	
[ RESULTS IN BRACKETS ] ARE UNCONF	IRMED AND/C	OR WITH APPROXIMATE QUANTITATION	_
		· · · · · · · · · · · · · · · · · · ·	
LABORATORY REMARKS:			
		· ·	·
CERTIFICA	TE OF ANALY	TICAL PERSONNEL	[
Seal(s) Intact: Yes No 🧭 Seal(s) broken by	" not re	date: date:	
I certify that I followed standard laboratory procedu	res on handling	and analysis of this sample unless otherwise noted	i and
that the statements on this page accurately reflect t	he analytical re	sults for this sample.	
Date(s) of analysis: 5/4/87	gnature:	any C. Eller	
I certify that I have reviewed and concur/with the	analytical resul	to for this sample and with the statements in this	block.
Reviewers signature:			
neviewers signature: p			
<i>UUUUU</i>			

	•
CONSERVATION ((())) MEMORANDUM OF MEETIN	G OR CONVERSATION
and me of	
Telephone Personal Time OVS	Date
	2/11/80
Originating Party	Other Parties
- Koger anders	Kelly Crossman Gw/HW
	EID
Subject Data time of H(4)	a la stariti
	- Company answer
Discussion	
I called to determ	une if spent opidined
inter anona a una th	(2) Pracedon analysis
- And Aprilian and the	it B B
Alcenta pron Drill	und - alloched , Dosen
an the analysis I gave	over the phone
-Kelly said it does not	appen to be HW.
I said use user a gin	to contral where
and Man was any	Poul P
<u>Conclusions or Agreements</u>	
Distribution Si	gned
	5. Citruction
	-



Test Report No. C86-1211

CLIENT: Southern Union Processing Company P. O. Box 1869 Bloomfield, New Mexico 87413 Attention: Ralph Morris

P. O. #13784-8268

MATERIAL: One (1) bag of wood chips received 12/12/86 and identified as "wood chips from iron sponge."

**TESTING:** 1. Chemical analysis for ignitability, sulfide, and corrosivity according to <u>Test Methods for Evaluating</u> Solid Waste, SW-846.

- 2. Prior to analysis for pH (corrosivity) and sulfate the sample was extracted in hot water. Sulfate analyzed according to EPA method 375.4
- 3. Prior to anlaysis of iron, for ferrous sulfate, the sample was ashed, dissolved in acid and analyzed by atomic absorption spectroscopy.
- 4. The reaction product of mercaptans is sulfide and is determined as indicated in #1 above.

#### **RESULTS:**

Analysis	Method	Obtained Value
Ignitability	1010	>170 <sup>0</sup> F
Reactivity Sulfide Cyanide	9030	< 1 mg/L not required
Corrosivity, pH	9040	6.3
Reaction product of mercaptans		see sulfide <sup>,</sup>
Ferrous sulfate, FeSO <sub>4</sub>		1.41 %
Total iron		26.2 3
TESTS SUPERVISED BY:	TES	STS CONDUCTED BY:

Michael Cheney Chemical Technician

Olga Piel Chemical Technician

1979 - A.

file: SOU010 ms

Snepard

Analytical Chemist/Inorganic Supervisor

٠.



Test Report No. C86-1211

CLIENT: Southern Union Processing Company P. O. Box 1869 Bloomfield, New Mexico 87413 Attention: Ralph Morris

P. O. #13784-8268

MATERIAL: One (1) bag of wood chips received 12/12/86 and identified as "wood chips from iron sponge."

TESTING:

- 1. Chemical analysis for ignitability, sulfide, and corrosivity according to <u>Test Methods for Evaluating</u> Solid Waste, SW-846.
  - 2. Prior to analysis for pH (corrosivity) and sulfate the sample was extracted in hot water. Sulfate analyzed according to EPA method 375.4
  - 3. Prior to anlaysis of iron, for ferrous sulfate, the sample was ashed, dissolved in acid and analyzed by atomic absorption spectroscopy.
  - 4. The reaction product of mercaptans is sulfide and is determined as indicated in #1 above.

RESULTS:

Analysis	Method	Obtained Value
Ignitability	1010	>170 <sup>0</sup> f
Reactivity Sulfide Cyanide	9030	< l mg/L not required
Corrosivity, pH	9040	6.3
Reaction product of mercaptans		see sulfide
Ferrous sulfate, FeSO <sub>4</sub>		1.41 %
Total iron		26.2 3
TESTS SUPERVISED BY:	TEC	STS CONDUCTED BY:

Shepard

Analytical Chemist/Inorganic Supervisor

.....

Michael Cheney Chemical Technician

Olga Piel Chemical Technician

Ξ.

file: SOU010 ms

Russel Buss 904 Mountain View aztec, NM 87410

ÉCEIVED 4 27 87 N	0. uc -1471	CODE 5930	<u>0 □ 59600 XX</u>	OTHER: 822	35		
Hection DATE 4   22   87 Hection TIME	SITE INFORM-►	Sample location	SHNTERRA	- Kurz	z PER	3NT	
Ilected by - Person/Agency		Collection site description	n	Povo	3	·	
	/0CD						
FNVTRONMEN	FAL BUREAU						
ND NM OIL CONS	SERVATION DIV	ISION	0				
PORT State Land Santa Fe, I	NM 87504-208	s FU DUX. 200					
Attn: David Boy	yer						
DI				Station/			
Phone: 82/-58	312			· Owner			
Bailed Pump	Water level		Discharge		Sample type	1	
CDipped 🗆 Tap	-				G	RAB	
H (00400)	Conductivity (Unco	rrected) G & μmho	Water Temp. (00010)	2100	Conductivity	at 25°C (00094)	μmł
eld comments		Co l Que	The The				<u> </u>
( XEV	U- FOYM	177 Com	Arcen es		************************	****************	
			. /				
MPLE FIELD TREATMEN	T — Check prope	ar boxes	· · · · · · · · · · · · · · · · · · ·		•		
AMPLE FIELD TREATMEN	T — Check prope	er boxes	field with	2 ml H2SO4/L	added		
AMPLE FIELD TREATMEN No. of samples submitted	T — Check prope : Whole sample (Non-filtered)	er boxes <b>XF:</b> Filtered in 0.45 μme	field with DA:	2 ml H <sub>2</sub> SO <sub>4</sub> /L	added		
AMPLE FIELD TREATMEN No. of samples submitted II NF	T — Check prope : Whole sample (Non-filtered) Other-specify:	er boxes ▼F: Filtered in 0.45 μme □A:	field with mbrane filter A: 5m1 conc. HNO <sub>3</sub> a	$2 \text{ mI H}_2 \text{SO}_4 / \text{L}$	added : 4ml f	uming HNO <sub>3</sub> a	adde
MPLE FIELD TREATMEN No. of samples submitted III NF	T — Check prope Whole sample (Non-filtered) Other-specify:	er boxes ▼F: Filtered in 0.45 μme □A:	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a	2 ml H₂SO₄/L .dded □A	added : 4m1 f	uming HNO <sub>3</sub> a	adde
MPLE FIELD TREATMEN No. of samples submitted INF NA: No acid added IC NALYTICAL RESULTS from NA	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES	er boxes F: Filtered in 0.45 μme ΔA: Units Date analyze	field with mbrane filter $\Box$ A: 5m1 conc. HNO <sub>3</sub> a	2 ml H₂SO₄/L dded □A NA Sample	added : 4m1 f	uming HNO <sub>3</sub> a	adde
MPLE FIELD TREATMEN No. of samples submitted INF NA: No acid added IC NALYTICAL RESULTS from NA Conductivity (Corrected) 25°C (00095)	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	The formula for the formula f	field with mbrane filter $\Box$ A: 5m1 conc. HNO <sub>3</sub> a d From $\underline{F}$ ,	2 ml H₂SO₄/L dded □A NA Sample	_ added : 4m1 f	uming HNO <sub>3</sub> a Date <u>Analyzed</u>	adde
NMPLE FIELD TREATMEN         No. of samples         submitted         Submitted         NA: No acid added         Conductivity (Corrected)         25 °C (00095)         Total non-filterable	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes F: Filtered in 0.45 $\mu$ me IA: Units Date analyze umho $5/2\%^{\circ}$	field with mbrane filter $\Box A$ : 5m1 conc. HNO <sub>3</sub> a $d$ From $\underline{f}$ ,	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded $\Box A$ NA Sample	_ added : 4m1 f : 	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u>	adde
MPLE FIELD TREATMEN No. of samples submitted INF NA: No acid added IC NALYTICAL RESULTS from NA Conductivity (Corrected) 25 °C (00095) Total non-filterable residue (suspended) (00530)	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes F: Filtered in 0.45 μme ΔA: Units Date analyze umho <u>5/28</u> °	field with mbrane filter 5ml conc. HNO <sub>3</sub> a From <u></u> , Calcium Potassium	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded $\square$ A NA Sample 84 0,39	_ added : 4m1 f : mg/1 /mg/1	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>S/14</u> S/13	adde
Imple Field TReatment         No. of samples         submitted         Imple NR	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes F: Filtered in 0.45 μme ΩA: Units Date analyze umho	field with mbrane filter	$2 \text{ ml } H_2 \text{SO}_4 / L$ $dded \square A$ $NA \text{ Sample}$ $\frac{84}{0.39}$ $53$	_ added : 4m1 f :	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u>	adde
Imple Field TReatment         No. of samples         submitted         Submitted         Imple Field TReatment         Imple Field Treatment         Submitted         Imple Field Treatment         Imple Field Treatment      <	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes → F: Filtered in 0.45 µme □ A: Units Date analyze µmho^/2 % ° mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From <u>F</u> , Calcium Potassium Magnesium Sodium	$2 \text{ ml } H_2 SO_4/L$ $dded \square A$ $NA \text{ Sample}$ $\frac{84}{0.39}$ $\frac{53}{8.35}$	_ added : 4m1 f : mg/1_ mg/1_ mg/1_	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>6</u> (13	adde
MPLE FIELD TREATMEN         No. of samples         submitted         Submitted         ANA: No acid added         Conductivity (Corrected)         25 °C (00095)         Total non-filterable         residue (suspended)         (00530)         Other:         Other:         Other:	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	$F: \begin{array}{c} F: \\ 0.45 \\ \mu me \\ \hline 0.45 \\ \mu me \\ \hline 1 \\ A: \\ \hline 1 $	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From <u>F</u> , Calcium Potassium Magnesium Sodium Bicarbonat	2 ml H₂SO₄/L dded □A NA Sample 84 0,36 53 8 35 e _39	_ added : 4m1 f 	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u>	adde
Imple Field TReatment         No. of samples         submitted         Imple Field Treatment         Submitted         Imple Field Treatment         Imple Treatment	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes F: Filtered in 0.45 μme ΩA: Units Date analyze umho <u>5/28</u> ° mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From, Calcium, Calcium, Magnesium Sodium Bicarbonat Chloride	$2 \text{ ml } H_2 \text{SO}_4/L$ $dded \square A$ $NA \text{ Sample}$ $\frac{84}{0.39}$ $\frac{53}{8.35}$ $e \underline{-39}$ $\frac{456}{456}$	_ added : 4m1 f : mg/1 mg/1 mg/1 mg/1	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u>	adde
Imple Field TReatment         No. of samples         submitted         Imple Field Treatment         Submitted         Imple Field Treatment         Submitted         Imple Field Treatment         Imple Field Treatment      <	T — Check prope ∴ Whole sample (Non-filtered) Other-specify: Dther-specify: U367	er boxes → F: Filtered in 0.45 µme □ A: Units Date analyze umho^/2 & * mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From, Calcium, Calci	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded □A NA Sample: 84 0,39 53 8 35 e _39 456 1707	_ added : 4m1 f : mg/1 mg/1 mg/1 mg/1 7mg/1	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/12</u>	adde
Imple Field TReatment         No. of samples         submitted         Imple NA: No acid added         Immonia-N total (00610)	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a G From, Calcium, Calc	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded $\square$ A NA Sample: 84 0.39 53 8 35 e9 456 1707 ds39	_ added : 4m1 f	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/12</u> <u>5/19</u>	adde
MPLE FIELD TREATMEN   No. of samples   submitted   NA: No acid added   ANA: No acid added   Conductivity (Corrected)   25 °C (00095)   1 Total non-filterable   residue (suspended)   (00530)   2 Other:   Other:   Other:   Other:   Other:   Nitrate-N +, Nitrate-N   total (00630)   Ammonia-N total (00610)	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes F: Filtered in 0.45 μme □ A: Units Date analyze umho mg/l mg/l mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a G From, Calcium, Coloride, CO, CO,	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded □A NA Sample: $84^{-}$ 0.39 53 8 35 e9 456 1707 ds2		uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u>	adde
Image: Ample Field Treatment         No. of samples         submitted         Image: No. of samples         Image: No. of s	T — Check prope ∴ Whole sample (Non-filtered) Other-specify: n SAMPLES U367	er boxes         F:       Filtered in 0.45 μme         0.45 μme         Image:	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a From <u>F</u> , Calcium Potassium Magnesium Sodium Sodium X Bicarbonat Chloride Sulfate Total Soli	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded $\square$ A NA Sample: 84 0,39 53 8 35 e 39 456 1707 ds 31 2		uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/5</u> <u>5/12</u> <u>5/12</u> <u>5/12</u>	adde
Imple Field TReatment         No. of samples         submitted         Imple Field Added	T — Check prope : Whole sample (Non-filtered) Other-specify: <b>SAMPLES</b> U367	er boxes F: Filtered in 0.45 μme □ A: Units Date analyze umho^/2 & ° mg/l mg/l mg/l mg/l	field with mbrane filter Sml conc. HNO <sub>3</sub> a G From, Calcium, Colu	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded □A NA Sample 84 0.39 53 8 35 e _39 456 1707 ds _3/2 2		uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>6</u> (13) <u>5/14</u> <u>6</u> (13) <u>5/14</u> <u>5</u> (13) <u>5/5</u> <u>5</u> (5) <u>5</u> (12) <u>5</u> (12) <u>5</u> (12) <u>5</u> (12)	adde
Imple Field TReatment         No. of samples         submitted         Imple Field Added	T — Check prope ∴ Whole sample (Non-filtered) Other-specify: Dther-specify: ↓367	er boxes → F: Filtered in 0.45 µme □ A: Units Date analyze µmho^/2 / ° mg/l mg/l mg/l mg/l mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Calcium, Magnesium, Sodium, Sodium, Sodium, Sodium, Sodium, Sodium, Solium, Chloride, Chloride, Chloride, Chloride, Cor, C	2 ml H <sub>2</sub> SO₄/L dded □A NA Sample: 84 0,39 53 8 35 e 39 456 1707 ds 31 2 Anion Bal	_ added : 4m1 f : mg/1 mg/1 mg/1 mg/1 7mg/1 7mg/1 3mg/1 3// // //	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/15</u> <u>5/15</u> <u>5/17</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/15</u> <u>5/17</u>	adde
Imple Field TReatment         No. of samples         Submitted         Imple Submittee<	T — Check prope Whole sample (Non-filtered) Other-specify: SAMPLES U367	er boxes	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a Calcium Calcium Potassium Magnesium Sodium Sodium Sodium Sodium Chloride Sulfate Cation/P Analyst	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded []A NA Sample: 84 0,36 53 8 35 e9 456 1707 ds7 ds7 Anion Bal	added : 4m1 f 	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/12</u> <u>-5/17</u> <u>5/17</u> <u>5/5</u>	
AMPLE FIELD TREATMENT         No. of samples submitted       INF         Submitted       INF         ANA: No acid added       IC         ALYTICAL RESULTS from NA       IC         Conductivity (Corrected)       25 °C (00095)         I Total non-filterable residue (suspended) (00530)       IC         Other:       IC         I Total (00630)       IC         I Total organic Carbon (IC)       IC         I Other:       IC	T — Check prope ∴ Whole sample (Non-filtered) Other-specify: n SAMPLES U367	er boxes → F: Filtered in 0.45 μme □ A: Units Date analyze umho^/2 % ° mg/l mg/l mg/l mg/l mg/l	field with mbrane filter A: 5ml conc. HNO <sub>3</sub> a G From, Calcium, Calcium, Potassium, Magnesium, Sodium, Sodium, Sodium, Sodium, Chloride, Chloride, Chloride, Chloride, Chloride, Magnesium, Chloride, Chloride, Chloride, Chloride, Magnesium, Chloride, Chloride, Magnesium, Chloride, Chloride, Com, Cation/F	2 ml H <sub>2</sub> SO <sub>4</sub> /L dded $\square$ A NA Sample: 84 0,39 53 8 35 e 39 456 1707 ds 31 2 Anion Bal Date Re 5 2	added : 4m1 f	uming HNO <sub>3</sub> a Date <u>Analyzed</u> <u>5/14</u> <u>5/14</u> <u>5/14</u> <u>5/5</u> <u>5/5</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u> <u>5/17</u>	

	CATIONS				ANIONS	
ANALYT	E MEQ.	PPM	DET.LIMIT	ANALYI	E MEQ.	PPM
Ca Mg Na K	4.19 4.35 36.32 0.01	84.00 53.00 835.00 0.39	< 3.0 < 10.0 < 10.0 < 0.5	HCO3   SO4   Cl	0.64 35.56 12.86	39.00 1707.00 456.00
Mn Fe	0.00 0.00	0.00 0.00		NO3   CO3   NH3   PO4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
SUMS	44.87	972.39			49.06	2202.00
TDS (me	asured) =	3172.00	ppm			* e
Ion Ba	lance =	91.46	6	Sampl Date	e No. out/By	=8701471 Ø shekt

2

3

:

ę

|

\_\_\_\_



May 7, 1987

Mr. William J. LeMay Director New Mexico Energy & Mineral Department Oil Conservation Division P.O. Box 2088 State Land Office Building Santa Fe, New Mexico 87501

RE: Discharge Plan Kutz Plant

Dear Mr. LeMay:

We acknowledge receipt of your letter of April 24 requiring the filing of a discharge plan for our Kutz Plant. Gathering of preliminary information is already in progress. As soon as we receive the analyses of your samples taken on April 22, and have a better definition of our needs the plan: preparation schedule will be completed. Analysis of the duplicate samples, which we took, are expected next week and will be shared with your department.

Thank you for the copy of the regulations and preparation guide. We will be in contact as soon as the analytical data is available.

Sincerely,

John Renner General Manager

JR:c1b

- cc: R. Buss
  - G. Jordan
  - H. Navarues
  - D. Boyer NMOCD-Aztec

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

**OIL CONSERVATION DIVISION** 



GARREY CARRUTHERS

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-5800

1)

April 24, 1987

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. John Renner General Manager Sunterra Gas Processing Co. P.O. Box 1869 Bloomfield, New Mexico 87413

RE: Discharge Plan requirement Kutz Canyon Gas Plant San Juan County, New Mexico

Dear Mr. Renner:

Under the provisions of the Water Quality Control Commission (WQCC) regulations, you are hereby notified that the filing of a discharge plan is required for your existing Kutz Canyon Gas Plant located in Section 13, Township 28 North, Range 11 West (NMPM), San Juan County New Mexico.

This notification of discharge plan requirement is pursuant to Sections 3-104 and 3-106 of the WQCC regulations. The discharge plan, defined in Section 1-101.P of the WQCC Regulations, should cover all discharges of effluent or leachate at the plant site or adjacent to the plant site. A copy of the regulations is enclosed for your convenience. Also enclosed is a copy of an OCD guide to the preparation of discharge plans for gas processing plants. Three copies of your discharge plan should be submitted for review purposes.

Section 3-106.A. of the regulations requires a submittal of the discharge plan within 120 days of receipt of this notice unless an extension of this time period is sought and approved for good cause. Section 3-106.A also allows the discharge to continue without an approved discharge plan until 240 days after written notification by the director that a discharge plan is required. An extension of this time may be sought and approved for good cause.

If there are any questions on this matter, please feel free to call David Boyer or Roger Anderson at (505) 827-5812 as they have the assigned responsibility for review of all discharge plans.

Sincerely, 0 William J. LeMay Director WJL/RCA/cr

Enclosure

xc: OCD-Aztec Gary Jordan, Sunbelt Mining

STATE OF NEW MEXICO OIL CONSERVATION DIVISION MEMORANDUM OF MEETING OR CONVERSATION Time Date **Telephone** Personal Originating Party Other Parties OCI in 2021 DU Subject Sponge Gas P. Discussion etter an ved my 10 and as 1-0 sen? 2.11 1 l. 2a spasal. ant nt 0 10002 , was 70 n th ann anu Agréements Cone 2220 70 gang nn m were 1. 20 ho Wee in 217 Signed Distribution Sunhelt file 110

STATE OF NEW MEXICO

### ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION



February 18, 1987

GARREY CARRUTHERS GOVERNOR

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-5800

Mr. Russel Buss 904 Mountain View Aztec, N.M. 87401

RE: IRON SPONGE REFUSE DISPOSAL

Dear Mr. Buss:

The OCD has evaluated the laboratory analysis of the spent iron sponge you supplied. Based on 40 CFR 261 Subpart C, Characteristics of Hazardous Wastes, and consultation with Environmental Improvement Division Hazardous Waste personnel, it appears the spent iron sponge has oxidized to the point it will not be classified as a hazardous waste. Therefore, this waste can be disposed of by landfill procedures.

Prior to final disposal, the site must be approved by this office. If a commercial or community landfill is utilized, the local EID Field Office should be notified. The following are the criteria that will be used by OCD in determining the appropriateness of the site and must be supplied by the disposer:

- Location in 1/4, 1/4. Section , Township , and Range .
- 2. Name and address of land owner.
- 3. Depth to ground water.
- 4. Description of soil and underlying geological formation.

The following construction criteria will be required:

- 1. Refuse will be deposited below ground.
- Refuse will be covered with a minimum of twelve (12) inches of dirt.
- 3. The dirt will be mounded to insure water runoff and no pooling of water above the refuse.

- 4. The area will be protected and properly signed to ensure there is no unauthorized dumping or entry.
- 5. Only oxidized, non-hazardous spent iron sponge will be disposed of at that particular location.

Please be advised that approval of a disposal site and method does not relieve you of liability should your disposal result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

If there are any questions, do not hesitate to contact me at (505) 827-5885.

Sincerely,

man 100

ROGER C. ANDERSON Environmental Engineer

RCA:dp

cc: OCD-Aztec Garry Jordan - Sunbelt Mining SEC January 14, 1987

Test Report No. C86-1211

CLIENT: Southern Union Processing Company P. O. Box 1869 Bloomfield, New Mexico 87413 Attention: Ralph Morris

P. O. #13784-8268

MATERIAL: One (1) bag of wood chips received 12/12/86 and identified as "wood chips from iron sponge."

Chemical analysis for ignitability, sulfide, and TESTING: 1. corrosivity according to Test Methods for Evaluating Solid Waste, SW-846.

- Prior to analysis for pH (corrosivity) and sulfate 2. the sample was extracted in hot water. Sulfate analyzed according to EPA method 375.4
- 3. Prior to anlaysis of iron, for ferrous sulfate, the sample was ashed, dissolved in acid and analyzed by atomic absorption spectroscopy.
- The reaction product of mercaptans is sulfide and is 4. determined as indicated in #1 above.

**RESULTS:** 

Analysis	Method	Obtained Value
Ignitability	1010	>170 <sup>0</sup> F
Reactivity Sulfide Cyanide	9030 <sup>w</sup>	< 1 mg/L not required
Corrosivity, pH	9040	б.3
Reaction product of mercaptans		see sulfide
Ferrous sulfate, FeSO <sub>4</sub>		1.41 %
Total iron		26.2 3
TESTS SUPERVISED BY:	TESTS	CONDUCTED BY:

Michael Cheney Chemical Technician

> Olga Piel Chemical Technician

file: SOU010 ms

an a se sue

and standard

Analytical Chemist/Inorganic Supervisor

.; . .

a a series a standarda

. . . .

Pamela Shepard



TONEY ANAYA GOVERNOR

December 15, 1986

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501-2088 (505) 827-5800

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Russell A. Buss, President Southern Union Processing Co. P. O. Box 1869 Bloomfield, New Mexico 87413

RE: IRON SPONGE DISPOSAL

Dear Mr. Buss:

As per our phone conversations of December 8 and 9, 1986, I am enclosing copies of correspondence between the N.M. Environmental Improvement Division and the Bureau of Land Management, and a USEPA determination on the exemption of iron sponge refuse pursuant to the oil and gas waste exemption of RCRA. EPA has determined that waste "iron sponge" is not exempt and, therefore, subject to the RCRA hazardous waste regulatory program if it is determined to be hazardous.

As we discussed, the spreading of the iron sponge should allow it to oxidize. Please be aware of the hazards of iron sulfide and take the proper precautions to prevent the formation of  $H_2S$  gas or the ignition of the iron sponge. Please submit your plans to accomplish oxidation, the topography and ground water level where the iron sponge is spread and the security measures to be taken to prevent unauthorized entry and/or disposal and to assure the protection of ground water.

There may also be unanticipated compounds present that may be classified as hazardous, therefore, after it is determined that oxidation is complete, you are required to test and analyze the refuse for the following:

- 1. RCRA EP-Toxicity
- 2. RCRA Ignitability
- 3. RCRA Reactivity
- 4. Presence of iron sulfide
- 5. Presence of mercaptans
- 6. Presence of halogenated hydrocarbons

Once these tests are completed, please supply a copy of the analysis for our review. After review of the data, a determination on disposal method will be made.

Page 2

6

₹~., d

If I can be of further assistance or if there are any questions, please do not hesitate to call me at (505) 827-5885.

ſ

ł.

'n.

Sincerely,

ander 00

ROGER C. ANDERSON Environmental Engineer

RCA:dp

Enc.

cc: OCD-Aztec



(512) 454-1348 U.S. WATS 1-800-531-5169 Texas WATS 1-800-252-8157



# **Procedures Aid Iron Sponge Disposal**

Brett Jay Davis Project Engineer Physichem Technologies, Inc. Austin

> Reprinted from the August 1986 edition of The American Oil and Gas Reporter. Copyrighted 1986 by Domestic Petroleum Publishers, Inc.

# Procedures Aid Iron Sponge Disposal

Editor's Note: Spent iron sponge can exhibit the hazardous characteristics of ignitability and reactivity as defined in U.S. Environmental Protection Agency regulations, CFR 40. However, if properly handled prior to disposal, it is not considered a hazardous waste under federal regulations, and may be disposed of without the extensive testing, paperwork and permitting required of hazardous waste disposal. As a manufacturer of iron sponge, Physichem Technologies Inc. provides the following guide to proper handling of spent iron sponge. These pre-disposal handling procedures developed by Physichem have been approved by the Texas Railroad and Water Commissions, and are generally accepted throughout the domestic oil patch.

#### By Brett Jay Davis

AUSTIN, TX.—Iron sponge consists of hydrated iron oxide uniformly impregnated on a substrate material, most commonly wood. It is used to remove hydrogen sulfide and mercaptans from gas and light liquid hydrocarbon streams. H2S removal produces iron sulfides and water, while mercaptan removal produces iron mercaptides and water. Both iron sulfides and iron mercaptides can be dangerous materials, and if not properly handled can be pyrophoric (self-igniting). In addition, these compounds can release deadly hydrogen sulfide gas and/or sulfuric acid gas when contacted by acidic compounds.

BRETT JAY DAVIS is a project engineer with Physichem Technologies Inc., with primary responsibility for production operations at Physichem's iron sponge plant in Waelder, Tx. His other duties include engineering and design of gas and liquid treating systems for sulphur removal. He has authored computer programs for gas measurement as well as treating, and has presented numerous seminars on natural gas sweetening. Davis received a bachelors in chemical engineering from the University of Texas at Austin. He is a member of the Gulf Coast Gas Measurement Society, the Gas Processors Suppliers Association, and the American Gas Association.

Fortunately, waste iron sponge will revert to non-hazardous iron oxide fairly rapidly in the presence of air. If precautions are taken to ensure this exothermic reaction proceeds without producing enough heat to ignite the waste, iron sponge can be disposed of as a simple, non-hazardous waste.

Spent iron sponge will often become slightly "cemented" in the sweetening vessel, and thus can be quite difficult to remove. Whether or not this is the case, the recommended removal procedure is to "wash" spent iron sponge from the vessel with water. This washing ensures the spent material is completely wetted.

After removal from the vessel, the spent iron sponge should be spread into a thin layer on the ground, or preferably a cement slab. Once spread to a thickness of a few inches, the material should be periodically raked and rewetted for a few days.

When the material has sufficiently reoxidized so that it is no longer potentially ignitable, spent iron sponge may be disposed of as a non-hazardous waste. This determination is commonly made when the spent iron sponge is no longer black, but has become uniformly another color ranging from gray-red to red-brown to deep red. The spent iron sponge should not come into contact with acidic solutions, either before or after it is judged safe for disposal, to avoid possible reaction.

If these pre-disposal techniques are followed, most states allow the disposal of spent iron sponge by burial onsite, or when accepted by the licensed operator, in a public landfill. Some states may require an inexpensive disposal permit or test for evolvable H2S gas.

In all cases, the proper state regulatory agencies should be contacted prior to spent-iron sponge disposal. These agencies are always cooperative in helping a waste generator develop safe and legal disposal plans. Physichem Technologies Inc. is also available to assist operators in developing proper handling and disposal techniques. For information contact the company at P.O. Box 15484, Austin, Tx. 78761; phone 1-800-531-5169 (1-800-252-8157 in Texas).

# Proper Handling and Disposal of Spent Iron Sponge

#### INTRODUCTION

As a manufacturer of iron sponge, Physichem Technologies, Inc. has encountered a great deal of confusion as to the accepted legal handling and disposal methods for the spent material. Spent iron sponge is primarily composed of a mixture of iron sulfides/mercaptides and iron oxides on a supporting wood chip/ shaving substrate. If not properly handled prior to disposal, this spent material can take on the characteristics of a hazardous waste as defined in the Code of Federal Regulations, Title 40 (40 CFR), Part 261. Disposal of a hazardous waste involves extensive chemical testing, large volumes of paperwork for the necessary permits, and expensive handling, transportation, and disposal costs. In order to help producers of spent iron sponge avoid the unnecessary time and expense associated with disposal as a hazardous waste, this paper will discuss predisposal handling procedures that are currently accepted by the hazardous and solid waste regulatory agenices in Texas and several of the surrounding states.

#### DISCUSSION

#### **Chemical Composition**

Iron sponge consists of hydrated iron oxide ( $Fe_2O_3$ :xH<sub>2</sub>O) uniformly impregnated upon a substrate material. Most commonly, this substrate material is wood. The product is used to remove hydrogen sulfide (H<sub>2</sub>S) and mercaptans (RSH) from gas and liquid streams. As indicated by Equation 1, the H<sub>2</sub>S removal reaction produces iron sulfides (e.g.,  $Fe_2S_3$ ) and water. In a similar fashion, mercaptan removal produces iron mercaptides and water.

 $\begin{array}{c} 2\text{Fe}_2\text{O}_3\text{·xH}_2\text{O} + 6\text{H}_2\text{S} \rightarrow 2\text{Fe}_2\text{S}_3 + 6\text{H}_2\text{O} \\ (\text{desulfurization}) \qquad (1) \end{array}$ 

$$\begin{array}{c} 2Fe_2S_3 + 3O_2 \rightarrow 2Fe_2O_3 + 6S(s) \\ (reversion) \end{array}$$
(2

Iron sulfides and iron mercaptides can be dangerous materials. If not properly handled, they can be pyrophoric (selfigniting) and can release deadly hydrogen sulfide gas and/or sulfuric acid gas when contacted with acidic compounds.

Fortunately, waste iron sponge will revert back to iron oxide in the presence of air (oxygen) fairly rapidly, as indicated in Equation 2. If precautions are taken to insure that this exothermic reaction proceeds without producing enough heat to ignite the waste, the spent iron sponge can be disposed of as simply a nonhazardous solid waste.

#### **Hazardous Wastes**

It is the responsibility of the waste producer to make the determination of whether a waste is hazardous. This determination is based upon the guidelines presented in 40 CFR, Part 261. Iron sponge and iron sulfides/mercaptides are not specifically listed as hazardous materials in this statute.

However, in 40 CFR, Part 261, Subpart C, several characteristics of hazardous wastes are listed. A waste that exhibits any of these characteristics is considered hazardous. The definition of the characteristic of ignitability includes any waste that "is not a liquid and is capable, under standard temperature and pressure, of causing fire through ... spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard." The definition of the characteristic of reactivity includes any waste that "is a . . . sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment."

In a July 12, 1985 memorandum, the Office of Solid Waste and Emergency Response of the Environmental Protection Agency (EPA) defined as hazardous those wastes that release more than 500 mg  $H_2S$  per Kg of waste. Tests run by a consultant for the EPA Region 5 office in Chicago found that spent iron sponge generated by a large mid-western utility did not produce more than 500 mg  $H_2S$  per Kg by the test specified in the EPA memorandum. These results support the premise that spent iron sponge does not exhibit the characteristic of *reactivity*, as presently defined.

As described above, spent iron sponge can possess the characteristic of *ignitability* if allowed to re-oxidize too quickly. Although contact with large quantities of an acidic compound may not yield the characteristic of *reactivity*, such contact should not be permitted to occur.

#### **Regulatory Agencies**

40 CFR gives the EPA the authority to regulate hazardous wastes on the Federal level. In many states, enforcement of the regulations in 40 CFR and any additional state statutes is performed by local agencies.

## Proper Handling and Disposal Procedures

The following is a summary of the recommended spent iron sponge handling and disposal procedures in Texas, Oklahoma, Kansas, Louisiana, and New Mexico.

#### TEXAS

In Texas, the responsibility for hazardous waste management belongs to the Texas Water Commission. All nonhazardous wastes associated with production of natural gas and oil are the responsibility of the Texas Railroad Commission. Thus, disposal of spent iron sponge is regulated by the Railroad Commission unless it is determined to be hazardous waste.

As discussed above, the classification of spent iron sponge as non-hazardous is very advantageous to the waste generator. Several pre-disposal handling techniques recommended by the Railroad Commission will insure that the spent iron sponge is not hazardous waste while it undergoes reversion in air. These predisposal handling procedures must be followed to insure that spent iron sponge does not fit the characteristics of a hazardous waste during its reversion to predominately iron oxide, which is a nonhazardous material.

Following reversion, the material can be disposed as a non-hazardous solid waste. If these procedures are not followed and the spent material is not immediately disposed, then it may have to be transported to a Water Commissic n authorized hazardous waste landfill. Obviously, such disposal would require sophisticated and expensive handling techniques along with voluminous paperwork.

Spent iron sponge often will become slightly "cemented" in the sweetening vessel and, thus, can be quite difficult to remove. Whether or not this is the case, the recommended removal procedure is to always "wash" the spent iron sponge from the vessel with water. This washing insures that the spent material is completely wetted. After this material is removed from the vessel, it should be spread into a thin layer upon the ground or preferably onto a cement slab. Once spread to a thickness of only several inches, the material should be periodically raked and rewetted for a few days.

When the material has sufficiently reoxidized such that it no longer presents the potential hazardous characteristic of *ignitability*, even when allowed to dry, it can be buried. This determination is commonly made when the spent iron sponge is no longer black but has become uniformly another color ranging from grayred to red-brown to deep red. The spent iron sponge should not come into contact with acidic solutions, either before or after the above determination is made. This procedure will insure that the hazardous characteristic of *reactivity* is avoided. Usually, no permits are required for either the pre-disposal handling the on-site disposal process for the hazardous material. This permit exemption is described in the Texas Solid Waste Disposal Act, section 4(f).

However, if the waste cannot be buried on-site, arrangements must be made through a licensed landfill operator for final disposal. The landfill operator may require that several chemical tests be performed on the material to meet his legal obligations to confirm that the spent iron sponge is non-hazardous. And because of the unpredictable timing of the waste's reversion reaction, these tests may be required before each disposal.

#### **OKLAHOMA**

Disposal of wastes associated with the exploration and production of oil and gas in the state of Oklahoma is regulated by the Corporation Commission. The proper disposal techniques for spent iron sponge are included in the Commission pamphlet entitled "Guidelines for Petroleum and Emergency Field Situations in the State of Oklahoma."

Spent iron sponge should be "landfilled on-site or other suitable site with the approval of the land owner and the District Manager of the Oklahoma Corporation Commission Oil and Gas Conservation Division." The Corporation Commission does not consider spent iron sponge to be a hazardous waste. However, as an added safety precaution to avoid the possible dangers associated with the reversion of the iron sulfides/ mercaptides, it is recommended that the spent iron sponge pre-disposal techniques previously detailed be followed prior to landfill disposal.

#### KANSAS

The Department of Health and Environment must be given a detailed plan for the disposal of spent iron sponge including the expected volumes. The generator of spent iron sponge must contact the Department with disposal plans prior to implementation. Both on-site and public landfill disposal are allowed in Kansas.

The Department requires the purchase of an inexpensive permit, valid for one year, prior to on-site disposal. County landfills are available for spent iron sponge disposal and there are no restrictions on the transportation of the material. However, it is again recommended that the pre-disposal treatment techniques be followed prior to disposal and especially before transportation to a county landfill.

#### LOUISIANA

Both the Department of Environmental Quality and the Office of Conservation regulate the disposal of spent iron sponge. The generator of this material should contact both agencies with disposal plans prior to implementation. Both on-site and public landfill disposal are allowed

The Office of Conservation requires that the pre-treatment techniques listed

previously be followed before disposal, They also specify a test for evolvable H<sub>2</sub>S be performed to determine when the spent iron sponge has completed the reversion process. The Department of Environmental Quality requires that a permit be obtained prior to on-site disposal.

#### **NEW MEXICO**

07-

The generator of spent iron sponge must notify the Energy and Minerals Department of disposal plans. Both on-site and public landfill disposal are allowed.

On-site disposal is allowed if the material will not come into contact with acidic compounds or groundwater. The Department recommends that the disposal site be marked with a sign that includes the statement "buried iron sulfide, add no acid." Public landfill disposal is recommended in the southeast portion of the state because of the low depth of the groundwater. Again, it is recommended that the pre-disposal techniques for spent iron sponge be followed in New Mexico. -1

#### CONCLUSIONS

Spent iron sponge is potentially hazardous. If left unattended, dry, and piled, this material can self-ignite, possibly producing flames which could be disastrous in a dry area or near the oil/gas well itself. If the spent iron sponge is con-

tacted with large quantities of acidic campounds, potentially lethal gases may 🔊 evolved. In order to avoid these dangerous situations, several simple, inexpensive pre-disposal handling procedures are recommended by the Texas Railroad Commission. These procedures apply equally well in Texas and many other states.

Spent iron sponge will rapidly undergo reversion from iron sulfides/mercaptides back to iron oxide in the presence of air. Keeping the waste wetted and raked while in a thin layer insures that the material will not self-ignite. Additionally, the spent material should be kept away from acidic materials.

Once these procedures have been carefully followed and the reversion is sufficiently complete, the spent iron sponge can be disposed by burial on-site or, when accepted by the licensed operator, in a public landfill. In some states, permits are required prior to disposal.

In all cases, the proper state regulatory agencies should be confacted with a proposal for spent iron sponge disposal. These agencies are always cooperative in aiding the waste generator to develop disposal plans that are safe and legal. However, these same agencies take a very dim view of those generators requesting assistance only after an accident has occurred.

#### WASTE DISPOSAL AGENCIES

AREA	ADDRESS	PHONE NUMBER
EPA Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)	EPA Region 6 1201 Elm Street Dallas, Texas 75270	214-767-2600
EPA Region 7 (Iowa, Kansas, Missouri, Nebraska)	EPA Region 7 324 East 11th Street Kansas City, Missouri 64101	816-374-5493
Kansas	Department of Health and Environment Building 321 Topeka, Kansas 66620	913-862-9360
Louisiana	Department of Environmental Quality Solid Waste Division PO Box 94307 Baton Rouge, Louisiana 70804	<sup>-</sup> 504-342-9091
New Mexico	Energy and Minerals Department Oil Conservation Division PO Box 2088 Santa Fe, New Mexico 87504-20%	505-827-5812 &
Oklahoma	Corporation Commission Oil and Gas Conservation Division Jim Thorpe Office Building Oklahoma City, Oklahoma 73105	405-521-2301
Texas	Railroad Commission 1701 N. Congress Ave. Austin, Texas 78711	512-463-7288
	Water Commission 1700 N. Congress Ave. Austin, Texas 78711	512-463-7830

Gang Jordag - Compliance Manager Such Lat Maring 21.7 - 6700 PO. Boy. 2106 Alter 2003 (Translasenlare maning - Anterte 10:30  $\sim$ 3, 51

Russe Bass Bassing Co 120% Ro let f Blans 122 10 × 10 2 50.2 Lan. in the second of · - · · · · · · · · A201. a marchier. 1. and the Son Dest parties a stranger garager is nER Bol Grom: RUSSEL A. BUSS X Information To: Roger anderson □ Comments article cl discussed with you on telephone 12-4-86. Please call me if you have question @ 505-632-8033 02 632-8034 EGERNIE Thanks DEC - 5 1986 Lussel Buss CONSERVATION BIVISTON SAMTA FE





February 27, 1985

Energy and Minerals Department P.O. Box 2088 State Land Office Building Santa Fe, New Mexico 87501

Gentlemen:

Please be advised of the noted changes in the capacities of Southern Union Refining Company Gas Processing Plants. The address is also changed.

Regarding the Lovington facility, the Lovington Refinery of Southern Union Refining Company was closed down as of September 1, 1984. It has been out of service since that date. Any correspondence regarding the oil refinery should be sent to the Hobbs address. Any correspondence regarding the gas processing plants should be sent to the Bloomfield address, to the attention of Mr. Russel Buss, Vice President.

Yours truly,

Russel Buss

Russel Buss Vice President Natural Gas Liquids Production

RAB:bb

	MMc	:fd		Pr	oduction	1,000 gai	Average	based on	the past 12	months)	
iompany, plant, location	Gas capacity	through- put	Process method	Ethane	Prop.	isobut.	or unsplit butane	LP-gas mix	NGL mix	nat. gaso.	Other
IGPC—Fairview, Richland Co., 24-25n-58e hell Western E&P Inc.—Cabin Creek,	6.0	3.9	3		8.4		<i>.</i>	7.9		• • • • •	
Fallon Co., 18-10n-58e Little Beaver, Fallon Co., 17-4n-62e South Pine, Wibaux Co., 10-11n-57e	1.9 0.4 1.2	1.9 0.4 1.2	3 3 4	  	• • • • • • • • • • • • •	  	· · · · · · · · · · · · · · · · · · ·	· · · · · ·	7.0 1.4 5.4	· · · · · · · · · ·	· · · · · · · · ·
ue Oil Co.—Bob Rhodes, Richland Co., ne 4-25n-58e tex Oil Co.—Stateline, Richland Co	4.0	1.0	3	• • • • •	2.3				8.1		
nw1/4 sw1/4 8-23n-59e	12.0	3.0	3	· · · · ·	8.9		 	134	8.0	15	<sup>11</sup> 1.5
	/0.0	33.3			42.3	ö.∡	0.4	13.4	22.4	1. <del>3</del>	1.7
JEBRASKA ties Service Co.—Kimball, Kimball Co.,	15	10	2						5.0		
arathon Oil Co*West Sidney, Cheyenne Co., 4-12n-50w	1.5	2.1	د 2		2.8		2.1	· · · ·		1.7	
Total	13.5	3.1			2.8		2.1	····	5.0	1.7	····
NEW MEXICO dobe Oil & Gas Corp.—Antelope Ridge. Lea											
Co. 15-23s-34e moco Production Co.—*Empire Abo, Eddy Co.,	30.0	11.0	7			••••			24.0	· · · ·	• • • •
3-18s-27e abot Corp.—Hobbs, Lea Co., 28-18s-36e ities Service Co.—Abo. Eddy Co., 35-17s-27e	42.0 61.0 4.0	40.8 22.3 4.0	/ 7 7	84.5	49.8		23.6	• • • •	43.1 8.0	23.5	• • • •
Bluitt, Roosevelt Co., 15-8s-36e. Burton Flats, Eddy Co., 14-20s-28e NMPM.	25.0 8.0	25.0 3.0	2 7	· · · · · · · · ·	· · · · · · · · · ·	· · · · · · · · ·	· · · · · · · · ·	••••	99.0 11.0	· · · · · · · · ·	· · · · · · · · ·
21-17s-32e Paso Natural Gas Co.—Blanco, San Juan Co.,	50.0	36.7	7						135.3		
n2-n2 14-29n-11w Chaco, San Juan Co., sw4 16-26n-12w Jal No. 3 Lea Co. nw4-sw4 33-24s-37e	558.0 594.0 225.0	379.6 409.8 95.9	1 2 2	• <i>•</i> • • •	 	 	. <b>.</b> 	<i></i>	311.3 605.0 121.2	 	· · · · · · · · ·
Jal No. 4A, Lea Co., se4-se4 31-23s-37e and s2-sw4 32-23s-37e	185.0	97.2	1	. <i>.</i>	· · · · ·	· · · · ·		• • • • • • • • •	68.2	· · · · ·	· · · · ·
Jal No. 4B, Lea Co., se4-se4 31-23s-37e and s2-sw4 32-23s-37e San Juan Co. 1-29n-15w	71.0	44 R	† 1		(52.7)		(64.7)		••••	(72.0)	
Wingate. McKinley Co., 16&17-15n-17w as Co. of New Mexico, Division of New Mexico Public Service Co.—Avalon,		44.0 . <i>.</i>	† ÷	••••	(366.9)	(101.6)	(189.9)	· · · · ·	• • • • • • • •	(260.9)	
Eddy Co., 9-21s-27e arathon Oil Co.—Indian Basin, Eddy Co.,	30.0	14.6	<b>~</b> <sup>2</sup>	• • • •	• • • •			••••	13.0		
esa Petroleum Co.—South Blanco Creek, 6-7w-23n	210.0	2.6	/ 3						184.5	• • • •	14.2
linerals inc.—Hobbs, Lea Co., sw1/4-sw1/4- ne1/4 36-18s-36e	45.0	40.8	7				••••	55.6		- - 	
Kermac, Eddy Co., 12 4-21s-31e itcheil Energy & Development Corp.— Pecos Diamond No. 1. Eddy Co	6.0 20.0	3.6 5.1	6 7	• • • • • • • • • •	• • • • •	· · · ·		1.9	· · · · · 7.7		• • • •
Pecos Diamond No. 2, Eddy Co White Ranch, Chaves Co	20.0 7.5	5.1 1.5	, 7 7	• • • • •	· · · · · · · · ·	· · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	7.7 6.9	••••	<sup>11</sup> 0.2
lorthern Natural Gas Co.—Hodds, Lea Co., 6-19s-37e Phillips Petroleum Co.—Artesia, Eddy Co.,	220.0	114.0	2		• • • • •				137.0		
s2 se4 7-18s-28e Eunice, Lea Co., ne4 3-22s-37e	43.0 80.0	NR NR	7 7	· · · · ·	· • • • • · • • •	. <b></b> . 	· · · · ·	••••	· · · · ·	· · · · ·	· · · · ·
17s-35e Lusk, Lea Co., nw4 ne4 19-19s-32e	35.0 60.0	NR NR	7 2	• • • • •	<b>.</b> . 			 			••••
outhern Union Refining Co.—Kutz No. 1, San Juan Co., nw4 13-28n-11w Kutz No. 2, San Juan Co., nw4 13-28n-11w.	100.0	67.4 74 3	27					• • • •	175.6	• • • •	
Lybrook, Rio Arriba Co., nw1/4 14-23n-7w enneco Oil Co.—Gallegos Canyon, San Juan	85.0	51.5	, 7	• • • •	· · · · ·	 . <i>.</i>		••••	177.1	••••	••••
Co., se <sup>1</sup> / <sub>4</sub> -sw <sup>1</sup> / <sub>4</sub> -13-25n-10w NMPM exaco-Buckeye, Lea Co., se <sup>1</sup> / <sub>4</sub> of se <sup>1</sup> / <sub>4</sub> 36-17s&18c-34e + mi se of Buckeye	19.4 25.0	5.4	7			,		• • • • •	22.1		`•`• <i>•</i>
Eunice No. 1, Lea Co., 27 22s-37e	105.0	78.4	7	· · · · ·	73.1	11.8	38.0	• • • • •	0.6	57.2	<sup>5</sup> 206.5
Arren Petroleum Co.—Eunice, Lea Co., 2-7-155-37e	15.0 NR	4.0 50.3	7					• • • •	35.0		••••
Monument, Lea Co., sw4 36-19s-36e Saunders, Lea Co., 34-14s 33e Snvder Ranch. Eddy Co., sw4-sw4 15-	NR	48.7 28.5	7 6	· · · · · · · ·	••••	• • <i>• •</i> • • • <i>• •</i> •	· · · · · · · · · ·	• • • • • • • • • •	212.4 212.4 220.2	• • • • • • • • • •	· · · · · · · · ·
19s-31e Vada, Lea Co., sw2-sw4-пw4 23-10s-33e	NR NR	12.0 8.9	7 6		••••	• • • •	••••	• • • • •	19.8 55.8	· · · · ·	•••• ••••
Total	3,255.2	2,078.4		84.5	131.3	11.8	73.4	57.5	3,278.0	94.0	224.2

С

is ge pl ga pl

ci de ov ar a

Th tec and rap lead

 $T\tilde{h}\epsilon$ 

Amoco Production Co...-Killdeer, Dunn Co., 6-145n-94w..... Cittes Service Co...-Lignite, Burke Co., nw4 7-162n-91w.... 2.5 1.4 2 3.8 110.4 . 11.0 8.0 14.0 2 17.0 . . . . • • . . .... . . . . . . . . . . . .

۰.



January 24, 1979

Mr. Eddie Seay Oil Conservation Division P.O. Box 1980 Hobbs, New Mexico 88240

Dear Mr. Seay:

Per your request, attached are maps of surface pits operated by Southern Union Refining Company in New Mexico. The maps show the section, township, and range of the location of the pits per your request. If you have any further questions, please notify.

Very truly yours,

Russel a. Buss

Russel A. Buss General Manager

RAB:jj

attch. (2)

2000



KUTZ PLANT

0

GASOLINE PLANT SUMMARY 1984

	GROOLINE TERMI SUTTIARI 1904	-		
OPERATOR	PLANT	DESIGN TAPACITY MMCF/D *>		
Amoco Production Company P. O. Box 68 Hobbs, New Mexico 88240	Empire Abo Gasoline	42		
Cubet Corporation 7120 I-40 West Amarillo, Texas 79106	Hobbs	65		
Cities Service Company Box 300 Tulsa, Oklahoma 74102	Bluitt Abo Burton Flats	27 4 7 5		
Conoco Inc. Box 2197	Maljamar	36		
Houston, Texas 77001				
El Paso Natural Gas Company P. O. Box 1492 El Paso, Texas 79978	Jal No. 1 Jal No. 3 Jal No. 4 Blanco Chaco San Juan River	303 225 185 558 594 71		
• • •	Wingate	(1) 1,328,000 Gal/D		
Florida Hydrocarbons Company P. O. Box 973 Hobbs, New Mexico 88240	Antelope Ridge	30		
Gas Company of New Mexico First International Building Dallas, Texas 75270	Indian Hills	30		
Getty Oil Company Eunice, New Mexico 88231	Eunice No. 1 Eunice No. 2 Grama Ridge (Shut Down)	130 40 15		
Intrastate Gathering Corporation P. O. Box 32999 San Antonio, Texas 78216	Gallup	1.2		
Liquid Energy Corporation P. O. Box 618 Artesia, New Mexico 88210	Pecos Diamond	60		
Marathon Oil Company Box 1324 Artesia, New Mexico 88210	Indian Basin	180		
Mesa Petroleum Co. P. O. Box 2009 Amarillo, Texas 79189	South Blanco	6		
Minerals, Inc. P. O. Box 1320 Hobbs, New Mexico 88240	Hobbs Kerr Mac	45 6		
Navajo Refined Helium Company Box 312 Otis, Kansas 67565	Red Rock	4		
Northern Natural Gas Company 2223 Dodge St. Omaha, Nebraska 68102	Hobbs	222		
Pecos River Gas Plant, Ltd. P. O. Box 5939 Roswell, New Mexico 88202	White Ranch	7.5		
Perry Gas Processors, Inc. P. O. Box 7059 Odessa, Texas 79760	Antelope Ridge	10		
Phillips Petroleum Company Bartlesville, Oklahoma 74004	Artesia Eunice Hobbs (Shut Down) Lee	43 80 38 35		
	Lee Lovington (Shut Down) Lusk	10 60		

OPERTOR	PLANT	DESIGN CAPACITY MMCF/D
V Southern Union Refining Company Sol-N. Linam P.O. Box 1869	Kutz Canyon Kutz No. 2	100-125 85
Hobbs, New Maxico 88240- BLOOMFIELD N.M. &I	Lybrook 14/3	85
Texaco Inc. Box 3109 Midland, Texas 79702	Buckeye	23
Tipperary Resources Corporation Box 3179 Midland, Texas 79702	Denton	15
Warren Petroleum Corporation P. O. Box 2100 Houston, Texas 77001	Eunice Snyder Ranch Monument Saunders Area Vada	70 22.6 77 26 10
Yates Petroleum Corporation 207 So. 4th	Yates Gathering and Transwestern Processing	(2) 5
Artesia, New Mexico 88210	Penasco Gas Processing	5
TOTAL	46	3,776.6

(1) The Wingate Plant is a central fractionation plant that receives its feed from the Blanco and Chaco absorption plants.

(2) The processing plant is owned and operated by Transwestern Pipeline Company for all gas gathered by Yates Petroleum and transported by Yates Petroleum with capacity of 3.25 MMCFPD.

	NEW MEXICO	OIL REFINE	RIES, 1983		
NAME AND ADDRESS	PLANT	RUNS TO BBLS/YEAR	STILLS BBLS/DAY	CAPACITY BBLS/DAY	EMPLOYEES
Caribou Four Corners, Inc. Box 457 Afton, Wyoming 83110	Kirtland (Shut Down	-0-	-0-	3,500	0
Giant Refining Box 256 Farmington, New Mexico 87401	Bloomfield (Shut Down	-0-	-0-	13,500	2
Giant Refining Star Route 3 Box 7 Gallup, New Mexico 87301	Ciniza	8,146,652	22,320	18,000	95
Navajo Refining Company P. O. Drawer 159 Artesia, New Mexico 88210	Artesia	12,179,914	33,369 *(Navajo North *(Navajo South	*35,000 5,000) 30,000)	305
Plateau, Inc. Suite 200 4775 Indian School Road Albuquerque, New Mexico 87110	Bloomfield	3,769,409	10,327	16,900	68
Southern Union Refining Company Box 980 Hobbs, New Mexico 88240	Lovington	12,533,229	34,338	36,100	123
Southern Union Refining Company Box 980 Hobbs, New Mexico 88240	Monument (Shut Down	-0-	-0-	5,400	•
Thriftway Oil Company Box 1367 Farmington, New Mexico 87401	Bloomfield	411,545	1,128	7,500	15
TOTAL		37,040,799	101,482	135,900	606
Receipts: 27,686,243 barrels crude and 97.5% New Mexico origin	l condensate		Receipts of c 36.8% of New down from 39.	crude and condensate Mexico Production fo 5% in 1982.	equal or 1983,
33,846,417 barrels total all 97.4% New Mexico origin	l receipts				