

GW - 40

INSPECTIONS & DATA

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

LABORATORY SAMPLE RECORD

[illegible]

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

June 11, 1991

Request
ID No. 004355**ANALYTICAL REPORT**
SLD Accession No. WC-91-1054Distribution☐ User 70320
☒ Submitter 905
☒ SLD Files

To: David G. Boyer
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

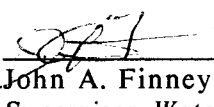
Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	Travel Center Discharge
At: 11:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	13.00		mG/L
magnesium	23.00		mG/L
potassium	26.00		mG/L
sodium	394.00		mG/L
hardness	127.10		mG/L
bicarbonate	509.00		mG/L
carbonate	0.00		mG/L
chloride	146.00		mG/L
sulfate	525.00		mG/L
Ion Balance	87.00		%
total diss resid	1432.00		mG/L

Reviewed By: John A. Finney 06/10/91
Supervisor, Water Chemistry Section**RECEIVED**

JUN 17 1991

OIL CONSERVATION DIV.
SANTA FE

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

June 11, 1991

Request
ID No. 004358**ANALYTICAL REPORT**
SLD Accession No. WC-91-1053Distribution☐ User 70320☒ Submitter 905☒ SLD Files

To: David G. Boyer
New Mexico Oil Conservation Division
P.O. 2088
Santa Fe, New Mexico 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

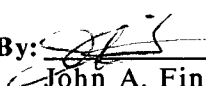
Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

<u>COLLECTION</u>		<u>LOCATION</u>
On: 2-May-91	By: Bro ...	Aeration Lagoon #2 Discharge
At: 11:20 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS

<u>Analysis</u>	<u>Value</u>	<u>D. Lmt.</u>	<u>Units</u>
calcium	136.80		mG/L
magnesium	36.60		mG/L
potassium	215.00		mG/L
sodium	1293.00		mG/L
hardness	492.30		mG/L
bicarbonate	437.00		mG/L
carbonate	109.00		mG/L
chloride	1385.00		mG/L
sulfate	1320.00		mG/L
Ion Balance	95.00		%
total diss resid	4808.00		mG/L

Reviewed By: John A. Finney 06/10/91
Supervisor, Water Chemistry Section**RECEIVED**

JUN 17 1991

OIL CONSERVATION DIV.
SANTA FE

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

June 11, 1991

Request
ID No. 007174**ANALYTICAL REPORT**
SLD Accession No. WC-91-1051Distribution☐ User 70320
☒ Submitter 905
☒ SLD Files

To: David G. Boyer
New Mexico Oil Conservation Division
P.O. 2088
Santa Fe, New Mexico 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	OW-13
At: 14:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	9.60		mG/L
magnesium	1.40		mG/L
potassium	3.00		mG/L
sodium	297.00		mG/L
hardness	29.40		mG/L
bicarbonate	549.00		mG/L
carbonate	0.00		mG/L
chloride	23.40		mG/L
sulfate	151.00		mG/L
Ion Balance	106.00		%
total diss resid	812.00		mG/L

Reviewed By:

John A. Finney 06/10/91
Supervisor, Water Chemistry Section

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JUN 17 1991

OIL CONSERVATION DIV.
SANTA FE

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

June 11, 1991

Request
ID No. 007177**ANALYTICAL REPORT**
SLD Accession No. WC-91-1050Distribution☐ User 70320☒ Submitter 905☒ SLD Files

To: David G. Boyer
New Mexico Oil Conservation Div.
P.O. 2088
Santa Fe, New Mexico 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	OW-14
At: 15:00 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	34.10		mG/L
magnesium	9.20		mG/L
potassium	3.00		mG/L
sodium	340.00		mG/L
hardness	122.90		mG/L
bicarbonate	691.00		mG/L
carbonate	0.00		mG/L
chloride	182.00		mG/L
sulfate	30.60		mG/L
Ion Balance	101.00		%
total diss resid	1000.00		mG/L

Reviewed By:

John A. Finney 06/10/91
Supervisor, Water Chemistry Section

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JUN 17 1991

OIL CONSERVATION DIV.
SANTA FE

BRUCE KING
GOVERNOR

MICHAEL J. BURKHART
SECRETARY

LINDA M. KEHOE
DEPUTY SECRETARY

LORIS HUGHES, Ph.D.
DIVISION DIRECTOR



OIL CONSERVATION DIVISION
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JUN 27 1991

June 27, 1991

David Boyer
NM Oil Conservation Division
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

Dave,

Steve Davis asked me to write you in regards to attached water report forms, Lab #1640 thru #1651.

We are only billing you for eight samples which were analyzed on the first run in the correct amount of time. Upon review of other four, we were unable to reanalyze in the span of the correct turn around time.

Please look these over and do not hesitate to call Steve at 841-2570 if you should have any questions.

Thanks.

Neil Dean
Neil Dean
841-2519

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, N.E.
Post Office Box 4700
Albuquerque, New Mexico 87196-4700
(505) 841-2500

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 19, 1991

Request
ID No. 007172**ANALYTICAL REPORT**
SLD Accession No. OR-91-1649Distribution☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	OW-12
At: 13:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	1.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____Laboratory Remarks:

One early eluting compound at approximately 100 ppb detected by the photoionization detector but not identified.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: <u>N/A</u>
Lab Code: <u>N/A</u> Case No.: <u>N/A</u>	SAS No.: <u>N/A</u> SDG No.: <u>N/A</u>
Matrix: (soil/water) <u>Water</u>	Lab Sample ID: <u>OR-91-1649</u>
Sample wt/vol: <u>5.0</u> (g/mL) <u>mL</u>	Lab File ID: _____
Level: (low/med) <u>Low</u>	Date Received: <u>5/3/91</u>
% Moisture: not dec. <u>N/A</u> dec. <u>N/A</u>	Date Extracted: <u>N/A</u>
Extraction: (SepF/Cont/Sonc) <u>N/A</u>	Date Analyzed: <u>6/11/91</u>
GPC Cleanup: (Y/N) <u>No</u> pH: _____	Dilution Factor: <u>1</u>
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): <u>ug/L</u>

This sample was analyzed for the following compounds

9h 11 08 82 NNO 16.

(Continued on page 2.)

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OIL CONSERVATION DIVISION

ANALYTICAL REPORT
 SLD Accession No. OR-91-1649
 Continuation, Page 2 of 4

using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	5.0	U
71-43-2	Benzene	1.0	U
108-86-1	Bromobenzene	1.0	U
74-97-5	Bromochloromethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
78-93-3	2-Butanone (MEK)	5.0	U
104-51-8	n-Butylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	5.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
67-66-3	Chloroform	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
74-95-3	Dibromomethane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-4	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
590-20-7	2,2-Dichloropropane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
1006-01-5	cis-1,3-Dichloropropene	1.0	U
1006-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
98-82-8	Isopropylbenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U
75-09-2	Methylene chloride	5.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1649
 Continuation, Page 3 of 4

90-12-0	1-Methylnaphthalene	1.0	U
91-57-6	2-Methylnaphthalene	1.0	U
91-20-3	Naphthalene	1.0	U
103-65-1	Propylbenzene	1.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
109-99-9	Tetrahydrofuran (THF)	5.0	U
108-88-3	Toluene	1.0	U
87-61-5	1,2,3-Trichlorobenzene	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
75-01-4	Vinyl chloride	1.0	U
95-47-6	o-Xylene	1.0	U
N/A	p- & m-Xylene	1.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1649
Continuation, Page 4 of 4

in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

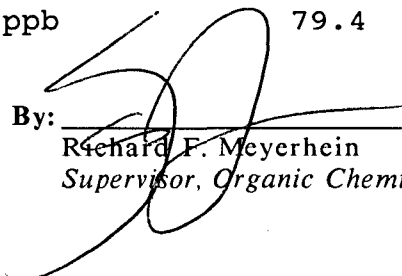
SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	50.0 ppb	99.2
2-Bromo-1-chloropropane	30.0 ppb	105.7

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: 

Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: 

Richard F. Meyerhein 06/18/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2577

SLD No.

OR91-1649-C

Date

Received: 5-3-91

Request ID No. 007172-C

2 User Code #: 70320 3 Request ID No.:

4 Priority Code #: 3 (*** or ** call EIC-SLD Coordinator!)

5 Facility Name: Giant Ciniza Refinery 6 County: McKinley 7 City: Gallup 8 State: NM

9 Sample Location: OW-12

10 Collected By: Kathy Brown On: 91/05/02 At: 1330 hrs. First Last Date: (YY/MM/DD) Time: 24 hr clock 3:00 am = 1500 hrs.

11 Codes: Submitter WSS # Organization 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: David G. Boyer 14 Phone #: (505) 827-5812

Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088 15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Flow Proportioned ☐ Equal Aliquot ☒ Sample Split w/Permittee ☐ Chain of Custody

16 Field Data: pH: 11.5 Conductivity: 1425 umhos @ 14.5 °C. Temperature: °C. Chlorine Residual: mg/l. Flow:

17 Sample Source: ☒ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☒ Well; Depth: ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: 18 Field Notes/Sample #: 910502133019 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other This form accompanies a single sample consisting of: 2 septum vial(s) (volume = 40 ml) glass jugs (volume =) (volume =) 20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other Hg 101

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.

Volatile Screens:

- ☐
- (753) Aliphatic Headspace (1-5 Carbons)
-
- ☒
- (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)
-
- ☐
- (765) Mass Spectrometer Purgeables (EPA 624)
-
- ☐
- (766) SDWA Total Trihalomethanes (EPA 501.1)
-
- ☐
- (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)
-
- ☐
- (775) SDWA VOC's II [EDB & DBCP] (EPA 504)

Other Specific Compounds or Classes:

- ☐
- ()
-
- ☐
- ()
-
- ☐
- ()

Semivolatile Screens:

- ☐
- (763) Acid Extractables
-
- ☐
- (751) Aliphatic Hydrocarbons
-
- ☐
- (755) Base/Neutral Extractables (EPA 625)
-
- ☐
- (756) Base/Neutral/Acid Extractables (EPA 8270)
-
- ☐
- (758) Herbicides, Chlorophenoxy Acid
-
- ☐
- (759) Herbicides, Triazines
-
- ☐
- (760) Organochlorine Pesticides
-
- ☐
- (761) Organophosphate Pesticides
-
- ☐
- (767) Polychlorinated Biphenyls (PCB's)
-
- ☐
- (764) Polynuclear Aromatic Hydrocarbons
-
- ☐
- (762) SDWA Pesticides & Herbicides

Remarks:

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 19, 1991

Request
ID No. 004356ANALYTICAL REPORT
SLD Accession No. OR-91-1651

Distribution

☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	Travel Center Discharge
At: 11:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	10.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;

T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____

Laboratory Remarks:

One early eluting compound at approximately 50 ppb and thirty late eluting compounds at 10 to 20 ppb in the C3 substituted benzene region detected by the photoionization detector but not identified.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water Lab Sample ID: OR-91-1651
Sample wt/vol: 5.0 (g/mL) mL Lab File ID: _____
Level: (low/med) Low Date Received: 5/3/91
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 6/9/91
GPC Cleanup: (Y/N) No pH: _____ Dilution Factor: 10
CONCENTRATION UNITS:
(ug/L or ug/Kg): _____ ug/L

91 JUN 28 AM 11 49

(Continued on page 2.)

RECEIVED
OIL CONSERVATION DIVISION

ANALYTICAL REPORT
 SLD Accession No. OR-91-1651
 Continuation, Page 2 of 4

This sample was analyzed for the following compounds
 using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	50.0	U
71-43-2	Benzene	10.0	U
108-86-1	Bromobenzene	10.0	U
74-97-5	Bromochloromethane	10.0	U
75-27-4	Bromodichloromethane	10.0	U
75-25-2	Bromoform	10.0	U
78-93-3	2-Butanone (MEK)	50.0	U
104-51-8	n-Butylbenzene	10.0	U
135-98-8	sec-Butylbenzene	10.0	U
98-06-6	tert-Butylbenzene	10.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	50.0	U
56-23-5	Carbon tetrachloride	10.0	U
108-90-7	Chlorobenzene	10.0	U
67-66-3	Chloroform	10.0	U
95-49-8	2-Chlorotoluene	10.0	U
106-43-4	4-Chlorotoluene	10.0	U
96-12-8	1,2-Dibromo-3-chloropropane	10.0	U
124-48-1	Dibromochloromethane	10.0	U
106-93-4	1,2-Dibromoethane	10.0	U
74-95-3	Dibromomethane	10.0	U
95-50-1	1,2-Dichlorobenzene	10.0	U
541-73-1	1,3-Dichlorobenzene	10.0	U
106-46-7	1,4-Dichlorobenzene	10.0	U
75-71-8	Dichlorodifluoromethane	10.0	U
75-34-3	1,1-Dichloroethane	10.0	U
107-06-2	1,2-Dichloroethane	10.0	U
75-35-4	1,1-Dichloroethene	10.0	U
156-59-4	cis-1,2-Dichloroethene	10.0	U
156-60-5	trans-1,2-Dichloroethene	10.0	U
78-87-5	1,2-Dichloropropane	10.0	U
142-28-9	1,3-Dichloropropane	10.0	U
590-20-7	2,2-Dichloropropane	10.0	U
563-58-6	1,1-Dichloropropene	10.0	U
1006-01-5	cis-1,3-Dichloropropene	10.0	U
1006-02-6	trans-1,3-Dichloropropene	10.0	U
100-41-4	Ethylbenzene	10.0	U
87-68-3	Hexachlorobutadiene	10.0	U
98-82-8	Isopropylbenzene	10.0	U
99-87-6	4-Isopropyltoluene	10.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1651
 Continuation, Page 3 of 4

75-09-2	Methylene chloride	50.0	U
90-12-0	1-Methylnaphthalene	10.0	U
91-57-6	2-Methylnaphthalene	10.0	U
91-20-3	Naphthalene	10.0	U
103-65-1	Propylbenzene	10.0	U
100-42-5	Styrene	10.0	U
630-20-6	1,1,1,2-Tetrachloroethane	10.0	U
79-34-5	1,1,2,2-Tetrachloroethane	10.0	U
127-18-4	Tetrachloroethene	10.0	U
109-99-9	Tetrahydrofuran (THF)	50.0	U
108-88-3	Toluene	10.0	U
87-61-5	1,2,3-Trichlorobenzene	10.0	U
120-82-1	1,2,4-Trichlorobenzene	10.0	U
71-55-6	1,1,1-Trichloroethane	10.0	U
79-00-5	1,1,2-Trichloroethane	10.0	U
79-01-6	Trichloroethene	10.0	U
75-69-4	Trichlorofluoromethane	10.0	U
96-18-4	1,2,3-Trichloropropane	10.0	U
95-63-6	1,2,4-Trimethylbenzene	10.0	U
108-67-8	1,3,5-Trimethylbenzene	10.0	U
75-01-4	Vinyl chloride	10.0	U
95-47-6	o-Xylene	10.0	U
N/A	p- & m-Xylene	10.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1651
Continuation, Page 4 of 4

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	50.0 ppb	93.9
2-Bromo-1-chloropropane	30.0 ppb	100.6

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: _____

Gary C. Eden
Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: _____

Richard F. Meyerhein
Richard F. Meyerhein 06/18/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Organic Chemistry Section - Telephone: (505) 841-2577

SLD No. **091-1651-C**Date Received: **5-3-91**

2 User Code #: 7 0 3 2 0		3 Request ID No.: 004356-C		4 Priority Code #: 3		(If "1" or "2", call EID-SLD Coordinator)	
5 Facility Name: Giant Ciniza Refinery		6 County: McKinley		7 City: Gallup/Ciniza		8 State: NM	
9 Sample Location: TRAVEL CENTER DISCHARGE							
10 Collected By: Kathy Brown		On: 91/05/02		At: 1110 hrs.		Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter WSS # Organization 		12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed) 					
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812		15 Sampling Information: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody			
Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088							
16 Field Data: pH: 7 , Conductivity: 2000 umhos @ 21 °C, Temperature: °C, Chlorine Residual: mg/l, Flow: 							
17 Sample Source: ☐ -Stream ☐ -Well; Depth: ☐ -Lake ☐ -Spring ☐ -Drain ☐ -Distribution ☐ -Pool ☐ -Point-of-Entry ☐ -WWTP ☒ -Other: Weir Box				18 Field Notes/ Sample #: 9105021105			
19 Sample Type: ☐ -Water, ☐ -Soil, ☐ -Food, ☒ -Wastewater, ☐ -Other This form accompanies a <u>single sample</u> consisting of: 2 - septum vial(s) (volume = 40ml) - glass jugs (volume =) - (volume =)				20 Preservation: ☐ - NP No Preservation; Sample stored at room temperature ☒ - P-Ice Sample stored in an ice bath (Not Frozen) ☐ - P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ - P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ - Other HgCl			
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.							
Volatile Screens: ☐ - (753) Aliphatic Headspace (1-5 Carbons) ☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☐ - (765) Mass Spectrometer Purgeables (EPA 624) ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504) Other Specific Compounds or Classes: ☐ - () ☐ - () ☐ - ()				Semivolatile Screens: ☐ - (763) Acid Extractables ☐ - (751) Aliphatic Hydrocarbons ☐ - (755) Base/Neutral Extractables (EPA 625) ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ - (758) Herbicides, Chlorophenoxy Acid ☐ - (759) Herbicides, Triazines ☐ - (760) Organochlorine Pesticides ☐ - (761) Organophosphate Pesticides ☐ - (767) Polychlorinated Biphenyls (PCB's) ☐ - (764) Polynuclear Aromatic Hydrocarbons ☐ - (762) SDWA Pesticides & Herbicides			
Remarks:							

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 19, 1991

Request
ID No. 004359**ANALYTICAL REPORT**
SLD Accession No. OR-91-1650Distribution☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	Aeration Lagoon #2 Discharge
At: 11:20 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	25.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;

T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____Laboratory Remarks:

One early eluting compound at 25 to 50 ppb and three late eluting compounds at approximately 25 to 50 ppb in the C3 substituted benzene region detected by the photoionization detector but not identified.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: <u>N/A</u>
Lab Code: <u>N/A</u> Case No.: <u>N/A</u>	SAS No.: <u>N/A</u> SDG No.: <u>N/A</u>
Matrix: (soil/water) <u>Water</u>	Lab Sample ID: <u>OR-91-1650</u>
Sample wt/vol: <u>5.0</u> (g/mL) <u>mL</u>	Lab File ID: _____
Level: (low/med) <u>Low</u>	Date Received: <u>5/3/91</u>
% Moisture: not dec. <u>N/A</u> dec. <u>N/A</u>	Date Extracted: <u>N/A</u>
Extraction: (SepF/Cont/Sonc) <u>N/A</u>	Date Analyzed: <u>6/9/91</u>
GPC Cleanup: (Y/N) <u>No</u> pH: _____	Dilution Factor: <u>25</u>
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): <u>ug/L</u>

(Continued on page 2.)

91 JUN 28 AM 11 46
RECEIVED
OIL CONSERVATION DIVISION

ANALYTICAL REPORT
 SLD Accession No. OR-91-1650
 Continuation, Page 2 of 4

This sample was analyzed for the following compounds
 using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	125.0	U
71-43-2	Benzene	25.0	U
108-86-1	Bromobenzene	25.0	U
74-97-5	Bromochloromethane	25.0	U
75-27-4	Bromodichloromethane	25.0	U
75-25-2	Bromoform	25.0	U
78-93-3	2-Butanone (MEK)	125.0	U
104-51-8	n-Butylbenzene	25.0	U
135-98-8	sec-Butylbenzene	25.0	U
98-06-6	tert-Butylbenzene	25.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	125.0	U
56-23-5	Carbon tetrachloride	25.0	U
108-90-7	Chlorobenzene	25.0	U
67-66-3	Chloroform	25.0	U
95-49-8	2-Chlorotoluene	25.0	U
106-43-4	4-Chlorotoluene	25.0	U
96-12-8	1,2-Dibromo-3-chloropropane	25.0	U
124-48-1	Dibromochloromethane	25.0	U
106-93-4	1,2-Dibromoethane	25.0	U
74-95-3	Dibromomethane	25.0	U
95-50-1	1,2-Dichlorobenzene	25.0	U
541-73-1	1,3-Dichlorobenzene	25.0	U
106-46-7	1,4-Dichlorobenzene	25.0	U
75-71-8	Dichlorodifluoromethane	25.0	U
75-34-3	1,1-Dichloroethane	25.0	U
107-06-2	1,2-Dichloroethane	25.0	U
75-35-4	1,1-Dichloroethene	25.0	U
156-59-4	cis-1,2-Dichloroethene	25.0	U
156-60-5	trans-1,2-Dichloroethene	25.0	U
78-87-5	1,2-Dichloropropane	25.0	U
142-28-9	1,3-Dichloropropane	25.0	U
590-20-7	2,2-Dichloropropane	25.0	U
563-58-6	1,1-Dichloropropene	25.0	U
1006-01-5	cis-1,3-Dichloropropene	25.0	U
1006-02-6	trans-1,3-Dichloropropene	25.0	U
100-41-4	Ethylbenzene	25.0	U
87-68-3	Hexachlorobutadiene	25.0	U
98-82-8	Isopropylbenzene	25.0	U
99-87-6	4-Isopropyltoluene	25.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1650
 Continuation, Page 3 of 4

75-09-2	Methylene chloride	125.0	U
90-12-0	1-Methylnaphthalene	25.0	U
91-57-6	2-Methylnaphthalene	25.0	U
91-20-3	Naphthalene	25.0	U
103-65-1	Propylbenzene	25.0	U
100-42-5	Styrene	25.0	U
630-20-6	1,1,1,2-Tetrachloroethane	25.0	U
79-34-5	1,1,2,2-Tetrachloroethane	25.0	U
127-18-4	Tetrachloroethene	25.0	U
109-99-9	Tetrahydrofuran (THF)	125.0	U
108-88-3	Toluene	25.0	U
87-61-5	1,2,3-Trichlorobenzene	25.0	U
120-82-1	1,2,4-Trichlorobenzene	25.0	U
71-55-6	1,1,1-Trichloroethane	25.0	U
79-00-5	1,1,2-Trichloroethane	25.0	U
79-01-6	Trichloroethene	25.0	U
75-69-4	Trichlorofluoromethane	25.0	U
96-18-4	1,2,3-Trichloropropane	25.0	U
95-63-6	1,2,4-Trimethylbenzene	25.0	U
108-67-8	1,3,5-Trimethylbenzene	25.0	U
75-01-4	Vinyl chloride	25.0	U
95-47-6	o-Xylene	25.0	U
N/A	p- & m-Xylene	25.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1650
Continuation, Page 4 of 4

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	50.0 ppb	103.4
2-Bromo-1-chloropropane	30.0 ppb	116.1

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: _____

Gary C. Eden
Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: _____

Richard F. Meyerhein
Richard F. Meyerhein 06/18/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 0891-1650-c

Date Received: 5-3-91

2 User Code #: 7 0 3 2 1 0		3 Request ID No.: Request ID No. 004359-C		4 Priority Code #: 3	
5 Facility Name: Giant Ciniza Refinery		6 County: McKinley		7 City: Gallup	
8 State: NM					
9 Sample Location: Aeration Lagoon #2 Discharge					
10 Collected By: Kathy Birrown		On: 9/10/02		At: 1120 hrs.	
First: Kathy		Last: Birrown		Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter WSS # Organization		12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)			
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812		15 Sampling Information: Grab Composite (Composite Time Period) Compliance Check Monitoring Special Flow Proportioned Equal Aliquot Sample Split w/Permittee Chain of Custody	
Address: New Mexico Oil Conservation Division					
P. O. Box 2088					
City, State Zip: Santa Fe, New Mexico 87504-2088					
16 Field Data: pH: 10, Conductivity: 6300 umhos @ 15.5°C, Temperature: °C, Chlorine Residual: mg/l, Flow: _____					
17 Sample Source: Stream Lake Drain Pool WWTP Well; Depth: Spring Distribution Point-of-Entry Other: Lagoon		18 Field Notes/ Sample #: 9105021120			
19 Sample Type: Water Soil Food Wastewater Other		20 Preservation: NP No Preservation; Sample stored at room temperature P-ice Sample stored in an ice bath (Not Frozen) P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) Other HgCl			
This form accompanies a single sample consisting of: 2 septum vial(s) (volume = 40ml) glass jugs (volume =) (volume =)					
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.					
Volatile Screens:			Semivolatile Screens:		
☐ (753) Aliphatic Headspace (1-5 Carbons)			☐ (763) Acid Extractables		
☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)			☐ (751) Aliphatic Hydrocarbons		
☐ (765) Mass Spectrometer Purgeables (EPA 624)			☐ (755) Base/Neutral Extractables (EPA 625)		
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)			☐ (756) Base/Neutral/Acid Extractables (EPA 8270)		
☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)			☐ (758) Herbicides, Chlorophenoxy Acid		
☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)			☐ (759) Herbicides, Triazines		
☐ Other Specific Compounds or Classes:			☐ (760) Organochlorine Pesticides		
☐ ()			☐ (761) Organophosphate Pesticides		
☐ ()			☐ (767) Polychlorinated Biphenyls (PCB's)		
☐ ()			☐ (764) Polynuclear Aromatic Hydrocarbons		
			☐ (762) SDWA Pesticides & Herbicides		
Remarks:					

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 19, 1991

Request
ID No. 012076ANALYTICAL REPORT
SLD Accession No. OR-91-1645Distribution☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	Railroad Lagoon
At: 15:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	25.00	ppb
t-Butylmethylether (MTBE)	195.00		125.00	ppb
Benzene	103.30		25.00	ppb
Toluene	155.80		25.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____Laboratory Remarks:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-91-1645
Sample wt/vol: 5.0 (g/mL) mL	Lab File ID: _____
Level: (low/med) Low	Date Received: 5/3/91
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 6/9/91
GPC Cleanup: (Y/N) No pH: _____	Dilution Factor: 25
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): _____ ug/L

(Continued on page 2.)

91 JUN 28 11 44 AM
RECEIVED
OIL CONSERVATION DIVISION

ANALYTICAL REPORT
 SLD Accession No. OR-91-1645
 Continuation, Page 2 of 4

This sample was analyzed for the following compounds
 using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	125.0	U
71-43-2	Benzene	103.3	
108-86-1	Bromobenzene	25.0	U
74-97-5	Bromochloromethane	25.0	U
75-27-4	Bromodichloromethane	25.0	U
75-25-2	Bromoform	25.0	U
78-93-3	2-Butanone (MEK)	125.0	U
104-51-8	n-Butylbenzene	25.0	U
135-98-8	sec-Butylbenzene	25.0	U
98-06-6	tert-Butylbenzene	25.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	195	
56-23-5	Carbon tetrachloride	25.0	U
108-90-7	Chlorobenzene	25.0	U
67-66-3	Chloroform	25.0	U
95-49-8	2-Chlorotoluene	25.0	U
106-43-4	4-Chlorotoluene	25.0	U
96-12-8	1,2-Dibromo-3-chloropropane	25.0	U
124-48-1	Dibromochloromethane	25.0	U
106-93-4	1,2-Dibromoethane	25.0	U
74-95-3	Dibromomethane	25.0	U
95-50-1	1,2-Dichlorobenzene	25.0	U
541-73-1	1,3-Dichlorobenzene	25.0	U
106-46-7	1,4-Dichlorobenzene	25.0	U
75-71-8	Dichlorodifluoromethane	25.0	U
75-34-3	1,1-Dichloroethane	25.0	U
107-06-2	1,2-Dichloroethane	25.0	U
75-35-4	1,1-Dichloroethene	25.0	U
156-59-4	cis-1,2-Dichloroethene	25.0	U
156-60-5	trans-1,2-Dichloroethene	25.0	U
78-87-5	1,2-Dichloropropane	25.0	U
142-28-9	1,3-Dichloropropane	25.0	U
590-20-7	2,2-Dichloropropane	25.0	U
563-58-6	1,1-Dichloropropene	25.0	U
1006-01-5	cis-1,3-Dichloropropene	25.0	U
1006-02-6	trans-1,3-Dichloropropene	25.0	U
100-41-4	Ethylbenzene	25.0	U
87-68-3	Hexachlorobutadiene	25.0	U
98-82-8	Isopropylbenzene	25.0	U
99-87-6	4-Isopropyltoluene	25.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1645
 Continuation, Page 3 of 4

75-09-2	Methylene chloride	125.0	U
90-12-0	1-Methylnaphthalene	25.0	U
91-57-6	2-Methylnaphthalene	25.0	U
91-20-3	Naphthalene	25.0	U
103-65-1	Propylbenzene	25.0	U
100-42-5	Styrene	25.0	U
630-20-6	1,1,1,2-Tetrachloroethane	25.0	U
79-34-5	1,1,2,2-Tetrachloroethane	25.0	U
127-18-4	Tetrachloroethene	25.0	U
109-99-9	Tetrahydrofuran (THF)	125.0	U
108-88-3	Toluene	155.8	
87-61-5	1,2,3-Trichlorobenzene	25.0	U
120-82-1	1,2,4-Trichlorobenzene	25.0	U
71-55-6	1,1,1-Trichloroethane	25.0	U
79-00-5	1,1,2-Trichloroethane	25.0	U
79-01-6	Trichloroethene	25.0	U
75-69-4	Trichlorofluoromethane	25.0	U
96-18-4	1,2,3-Trichloropropane	25.0	U
95-63-6	1,2,4-Trimethylbenzene	25.0	U
108-67-8	1,3,5-Trimethylbenzene	25.0	U
75-01-4	Vinyl chloride	25.0	U
95-47-6	o-Xylene	25.0	U
N/A	p- & m-Xylene	25.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1645
Continuation, Page 4 of 4

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

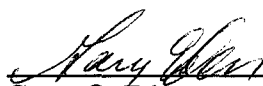
COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

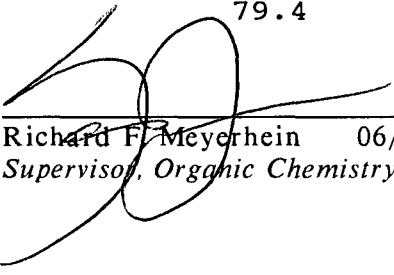
SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	50.0 ppb	101.1
2-Bromo-1-chloropropane	30.0 ppb	106.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: 

Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: 

Richard F. Meyerhein 06/18/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

0R91-1645-C

Date

Received:

5-3-91

Request ID No. 012076-C

4 Priority Code #: 3

(If not or 2, call EID SLD Coordinator)

2 User Code #: 7 0 3 2 1 0

3 Request ID No.:

5 Facility Name: Giant Ciniza Refinery

6 County: McKinley

7 City: Gallup

8 State: NM

9 Sample Location: Rail Road Lagoon

10 Collected By: Kathy Brown

On: 91/05/02

At: 15:05 hrs.

11 Codes:

Submitter

WSS #

Organization

13 Report To: David G. Boyer

14 Phone #: (505) 827-5812

Address: New Mexico Oil Conservation Division

P. O. Box 2088

City, State Zip: Santa Fe, New Mexico 87504-2088

16 Field Data: pH: 6.9, Conductivity: 975 umhos @ 17 °C, Temperature: °C, Chlorine Residual: mg/l, Flow: _____

17 Sample Source:

☐ Stream☐ Well; Depth: _____☐ Lake☐ Spring☐ Drain☐ Distribution☐ Pool☐ Point-of-Entry☐ WWTP☒ Other: Lagoon

18 Field Notes/ Sample #: 9105021505

Sample from middle of east-central pond

19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other

This form accompanies a single sample consisting of:

- septum vial(s) (volume = _____)

- glass jugs (volume = _____)

- _____ (volume = _____)

20 Preservation:

☐ NP

No Preservation; Sample stored at room temperature

☒ P-ice

Sample stored in an ice bath (Not Frozen)

☒ P-TS

Sample Preserved with Sodium Thiosulfate to remove chlorine residual

☐ P-HCl

Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

☒ Other

H5 Cl

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.

Volatile Screens:

- ☐ - (753) Aliphatic Headspace (1-5 Carbons)
☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)
☐ - (765) Mass Spectrometer Purgeables (EPA 624)
☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)
☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)
☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)

Other Specific Compounds or Classes:

- ☐ - () _____
☐ - () _____
☐ - () _____

Semivolatile Screens:

- ☐ - (763) Acid Extractables
☐ - (751) Aliphatic Hydrocarbons
☐ - (755) Base/Neutral Extractables (EPA 625)
☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)
☐ - (758) Herbicides, Chlorophenoxy Acid
☐ - (759) Herbicides, Triazines
☐ - (760) Organochlorine Pesticides
☐ - (761) Organophosphate Pesticides
☐ - (767) Polychlorinated Biphenyls (PCB's)
☐ - (764) Polynuclear Aromatic Hydrocarbons
☐ - (762) SDWA Pesticides & Herbicides

Remarks:

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 19, 1991

Request
ID No. 007179ANALYTICAL REPORT
SLD Accession No. OR-91-1647

Distribution

☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 2-May-91 By: Bro ...	OW-14
At: 15:00 hrs. In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen (7/24)

Parameter	Value	Note	MDL	Units
1,2-Dichloroethane	4.30		1.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____

Laboratory Remarks:

Thirty-five compounds ranging from early eluting unsaturated compounds through the C3 substituted benzene region at approximately 1 to 50 ppb detected by the photoionization detector but not identified.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-91-1647
Sample wt/vol: 5.0 (g/mL) mL	Lab File ID: _____
Level: (low/med) Low	Date Received: 5/3/91
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 5/10/91
GPC Cleanup: (Y/N) No pH: _____	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): _____ ug/L

(Continued on page 2.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1647
 Continuation, Page 2 of 4

This sample was analyzed for the following compounds
 using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	5.0	U
71-43-2	Benzene	1.0	U
108-86-1	Bromobenzene	1.0	U
74-97-5	Bromochloromethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
78-93-3	2-Butanone (MEK)	5.0	U
104-51-8	n-Butylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	5.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
67-66-3	Chloroform	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
74-95-3	Dibromomethane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	4.3	
75-35-4	1,1-Dichloroethene	1.0	U
156-59-4	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
590-20-7	2,2-Dichloropropane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
1006-01-5	cis-1,3-Dichloropropene	1.0	U
1006-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
98-82-8	Isopropylbenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1647
 Continuation, Page 3 of 4

75-09-2	Methylene chloride	5.0	U
90-12-0	1-Methylnaphthalene	1.0	U
91-57-6	2-Methylnaphthalene	1.0	U
91-20-3	Naphthalene	1.0	U
103-65-1	Propylbenzene	1.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
109-99-9	Tetrahydrofuran (THF)	5.0	U
108-88-3	Toluene	1.0	U
87-61-5	1,2,3-Trichlorobenzene	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
75-01-4	Vinyl chloride	1.0	U
95-47-6	o-Xylene	1.0	U
N/A	p- & m-Xylene	1.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1647
Continuation, Page 4 of 4

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

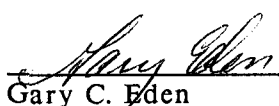
COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

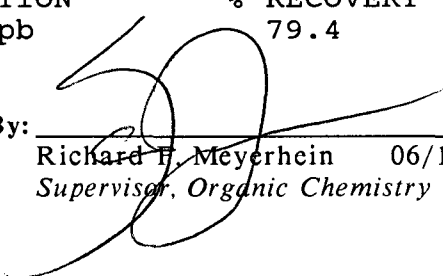
SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	25.0 ppb	101.7
2-Bromo-1-chloropropane	15.0 ppb	120

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: 

Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: 

Richard F. Meyerhein 06/18/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. **OR91-1647-C**Date Received: **5-3-91**

2 User Code #: 7103210		3 Request ID No.: 007179-C		4 Priority Code #: 3		(Initials of SLD Coordinator)	
5 Facility Name: Giant Ciniza Refinery				6 County: McKinley		7 City: Gallup	
8 State: NM							
9 Sample Location: 0, W-14							
10 Collected By: Kathy		10 Collected By: BROWN		On: 91/05/02		At: 1500 hrs.	
First		Last		Date: (YY/MM/DD)		Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes:				12 Latitude (DDMMSS)			
Submitter				Longitude (DDMMSS)			
WSS #				2 Digit ID (if needed)			
Organization							
13 Report To: David G. Boyer				14 Phone #: (505) 827-5812			
Address: New Mexico Oil Conservation Division				15 Sampling Information:			
P. O. Box 2088				☒ Grab ☐ Composite ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Flow Proportioned ☐ Equal Aliquot ☒ Sample Split w/Permittee ☐ Chain of Custody			
City, State Zip: Santa Fe, New Mexico 87504-2088							
16 Field Data: pH: 7 , Conductivity: 1225 umhos @ 13 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____							
17 Sample Source:				18 Field Notes/Sample #: 9105021500			
☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP				☒ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: _____			
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other				20 Preservation:			
This form accompanies a <u>single sample</u> consisting of:				☐ NP No Preservation; Sample stored at room temperature ☒ P-ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other HSC1			
42 - septum vial(s) (volume = 40ml) _____ - glass jugs (volume = _____) _____ (volume = _____)							
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.							
Volatile Screens: ☐ (753) Aliphatic Headspace (1-5 Carbons) ☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)				Semivolatile Screens: ☐ (763) Acid Extractables ☐ (751) Aliphatic Hydrocarbons ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (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			
Other Specific Compounds or Classes: _____ _____ _____							
Remarks:							

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 26, 1991

Request
ID No. 012079

ANALYTICAL REPORT

SLD Accession No. OR-91-1646

Distribution

☐ User 70320
☒ Submitter 260
☒ SLD Files

To: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	OW-20
At: 15:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen (75%)

Parameter	Value	Note	MDL	Units
Benzene	150.00	A	1.00	ppb
Toluene	127.00		1.00	ppb
Ethylbenzene	4.60		1.00	ppb
p- & m-Xylene	28.80		1.00	ppb
1,2-Dimethylbenzene	3.50		1.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____

Laboratory Remarks:

Note: The value for benzene (150) is approximate.
Fifteen early eluting unsaturated compounds at approximately
100 to 500 ppb detected by the photoionization detector but not
identified.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water Lab Sample ID: OR-91-1646
Sample wt/vol: 5.0 (g/mL) mL Lab File ID: _____
Level: (low/med) Low Date Received: 5/3/91
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A

(Continued on page 2.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1646
Continuation, Page 2 of 4

Extraction: (SepF/Cont/Sonc) N/A
GPC Cleanup: (Y/N) No pH:

Date Analyzed: 5/10/91
Dilution Factor: 1
CONCENTRATION UNITS:
(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds
using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
67-64-1	Acetone	5.0	U
71-43-2	Benzene	150	
108-86-1	Bromobenzene	1.0	U
74-97-5	Bromochloromethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
78-93-3	2-Butanone (MEK)	5.0	U
104-51-8	n-Butylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	5.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
67-66-3	Chloroform	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
74-95-3	Dibromomethane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-4	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
590-20-7	2,2-Dichloropropane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
1006-01-5	cis-1,3-Dichloropropene	1.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1646
 Continuation, Page 3 of 4

1006-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	4.6	
87-68-3	Hexachlorobutadiene	1.0	U
98-82-8	Isopropylbenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U
75-09-2	Methylene chloride	5.0	U
90-12-0	1-Methylnaphthalene	1.0	U
91-57-6	2-Methylnaphthalene	1.0	U
91-20-3	Naphthalene	1.0	U
103-65-1	Propylbenzene	1.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
109-99-9	Tetrahydrofuran (THF)	5.0	U
108-88-3	Toluene	127	
87-61-5	1,2,3-Trichlorobenzene	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
75-01-4	Vinyl chloride	1.0	U
95-47-6	o-Xylene	3.5	
N/A	p- & m-Xylene	28.8	

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

(Continued on page 4.)



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



GRANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86



Giant Bloomfield
Burn Pit seep pipe
1/29/87



GIANT BLOOMFIELD

6/5/86



Giant Bloomfield

Water from seep pipe
& wells GBR-5, 7, 6

(from left)

1/29/87



Giant Bloomfield
Burn Pit seep drain pipe



Giant Bloomfield

6/3/86

(Shrimmy Burnpit
Excavation)



Giant Bloomfield
Excavation at Burn
Pit 6/5/86



Grant Bloomfield 4/5/86
Excavation at Burn pit



Giant Bloomfield
Excavation at
Burn pit 6/5/86



Giant Bloomfield
"Burn pit" Seeps
6/5/86



GIANT BLOOMFIELD

6/5/86



GIANT BLOOMFIELD

6/5/86

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

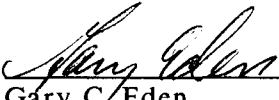
COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

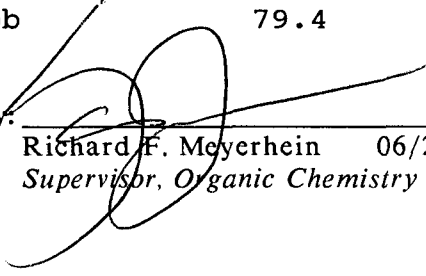
SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	25.0 ppb	107.
2-Bromo-1-chloropropane	15.0 ppb	100.9

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst: 
Gary C. Eden
Analyst, Organic Chemistry

Reviewed By: 
Richard F. Meyerhein 06/25/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2577

SLD No.

0R91-1646-C

Date

Received: 5-3-91

2 User Code #: 7 0 3 2 0		3 Request ID No.:		Request ID No. 012079-C		4 Priority Code #: 3		(If "1" or "2" call EID-SLD Coordinator)	
5 Facility Name: Giant Ciniza Refinery		6 County: McKinley		7 City: Gallup		8 State: NM			
9 Sample Location: 0.W-2.0									
10 Collected By: Kathy Birrown		On: 9/1/05/02		At: 115310 hrs.		Date: (YY/MM/DD)		Time: 24 hr clock 3:00 am - 1500 hrs.	
11 Codes:		12 Latitude (DDMMSS)		Longitude (DDMMSS)		2 Digit ID (if needed)			
Submitter		WSS #		Organization					
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812							
Address: New Mexico Oil Conservation Division									
P. O. Box 2088									
City, State Zip: Santa Fe, New Mexico 87504-2088									
16 Field Data: pH: 12.0, Conductivity: 45400 umhos @ 13.5°C, Temperature: °C, Chlorine Residual: mg/l, Flow: _____									
17 Sample Source: ☐ -Stream ☒ -Well; Depth: _____ ☐ -Lake ☐ -Spring ☐ -Drain ☐ -Distribution ☐ -Pool ☐ -Point-of-Entry ☐ -WWTP ☐ -Other: _____		18 Field Notes/Sample #: 9105021530							
19 Sample Type: ☒ -Water, ☐ -Soil, ☐ -Food, ☐ -Wastewater, ☐ -Other _____		20 Preservation: ☐ - NP No Preservation; Sample stored at room temperature ☒ - P-100 Sample stored in an ice bath (Not Frozen) ☐ - P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ - P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ - Other HSC1							
This form accompanies a <u>single sample</u> consisting of: 2 - septum vial(s) (volume = 40) - glass jugs (volume =) (volume =)									
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.									
Volatile Screens:					Semivolatile Screens:				
☐ - (753) Aliphatic Headspace (1-5 Carbons)					☐ - (763) Acid Extractables				
☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)					☐ - (751) Aliphatic Hydrocarbons				
☐ - (765) Mass Spectrometer Purgeables (EPA 624)					☐ - (755) Base/Neutral Extractables (EPA 625)				
☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)					☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)				
☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)					☐ - (758) Herbicides, Chlorophenoxy Acid				
☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)					☐ - (759) Herbicides, Triazines				
Other Specific Compounds or Classes:					☐ - (760) Organochlorine Pesticides				
☐ - ()					☐ - (761) Organophosphate Pesticides				
☐ - ()					☐ - (767) Polychlorinated Biphenyls (PCB's)				
☐ - ()					☐ - (764) Polynuclear Aromatic Hydrocarbons				
					☐ - (762) SDWA Pesticides & Herbicides				
Remarks:									

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

June 26, 1991

Request
ID No. 007176ANALYTICAL REPORT
SLD Accession No. OR-91-1648

Distribution

☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Organic Chemistry Section
Scientific Laboratory Division
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, purgeable sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 2-May-91 By: Bro . . . At: 14:30 hrs. In/Near: Gallup	OW-13

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
EPA 601/2 Volatiles (60)	0.00	N	1.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: _____ Date: _____

Laboratory Remarks:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
 Matrix: (soil/water) Water Lab Sample ID: OR-91-1648
 Sample wt/vol: 5.0 (g/mL) mL Lab File ID: _____
 Level: (low/med) Low Date Received: 5/3/91
 % Moisture: not dec. N/A dec. N/A Date Extracted: N/A
 Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 5/11/91
 GPC Cleanup: (Y/N) No pH: _____ Dilution Factor: 1
 CONCENTRATION UNITS:
 (ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds
using EPA Methods 601 & 602

CAS NO.	COMPOUND	CONC.	QUALIFIER
---------	----------	-------	-----------

(Continued on page 2.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1648
 Continuation, Page 2 of 3

67-64-1	Acetone	5.0	U
71-43-2	Benzene	1.0	U
108-86-1	Bromobenzene	1.0	U
74-97-5	Bromochloromethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
78-93-3	2-Butanone (MEK)	5.0	U
104-51-8	n-Butylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
1634-04-4	tert-Butyl methyl ether (MTBE)	5.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
67-66-3	Chloroform	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
74-95-3	Dibromomethane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-4	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
590-20-7	2,2-Dichloropropane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
1006-01-5	cis-1,3-Dichloropropene	1.0	U
1006-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
98-82-8	Isopropylbenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U
75-09-2	Methylene chloride	5.0	U
90-12-0	1-Methylnaphthalene	1.0	U
91-57-6	2-Methylnaphthalene	1.0	U

(Continued on page 3.)

ANALYTICAL REPORT
 SLD Accession No. OR-91-1648
 Continuation, Page 3 of 3

91-20-3	Naphthalene	1.0	U
103-65-1	Propylbenzene	1.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
109-99-9	Tetrahydrofuran (THF)	5.0	U
108-88-3	Toluene	1.0	U
87-61-5	1,2,3-Trichlorobenzene	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
75-01-4	Vinyl chloride	1.0	U
95-47-6	o-Xylene	1.0	U
N/A	p- & m-Xylene	1.0	U

Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected above the concentration listed (Quantitation Limit).

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

(Continued on page 4.)

ANALYTICAL REPORT
SLD Accession No. OR-91-1648
Continuation, Page 4 of 3

COMPOUND DETECTED
No Compounds Detected

CONCENTRATION (PPB)

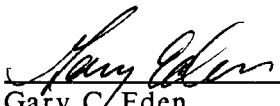
SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Fluorobenzene	25.0 ppb	106.
2-Bromo-1-chloropropane	15.0 ppb	123.

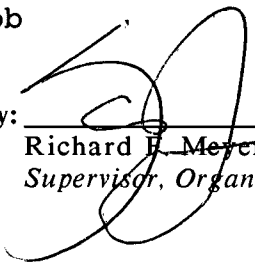
SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
Trichloroethene	25. ppb	79.4

Analyst:


Gary C. Eden
Analyst, Organic Chemistry

Reviewed By:


Richard H. Meyerhein 06/25/91
Supervisor, Organic Chemistry Section

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 0891-1648-C

Date Received: 5-3-91

2 User Code #: 703210		3 Request ID No.: Request ID No. 007176-C		4 Priority Code #: 3	
5 Facility Name: Giant Ciniza Refinery		6 County: McKinley		7 City: Gallup	
8 State: NM		9 Sample Location: OW-13			
10 Collected By: Kathy BROWN		On: 9/105/02		At: 1430 hrs.	
11 Codes: Submitter WSS # Organization		12 Latitude (DDMMSS) Longitude (DDMMSS)		2 Digit ID (if needed)	
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812		15 Sampling Information:	
Address: New Mexico Oil Conservation Division		City, State Zip: Santa Fe, New Mexico 87504-2088		☒ Grab ☐ Composite ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Flow Proportioned ☐ Equal Aliquot ☒ Sample Split w/Permittee ☐ Chain of Custody	
16 Field Data: pH: 7.25, Conductivity: 950 umhos @ 14°C, Temperature: °C, Residual: mg/l, Flow: _____		17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☒ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: _____		18 Field Notes/ Sample #: 9105021430	
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other		20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other HgCl			
21 Analyses Requested:		Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.			
Volatile Screens:		Semivolatile Screens:			
☐ (753) Aliphatic Headspace (1-5 Carbons) ☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)		☐ (763) Acid Extractables ☐ (751) Aliphatic Hydrocarbons ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (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			
Other Specific Compounds or Classes: _____ _____ _____					
Remarks:					

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

June 18, 1991

Request
ID No. 012074

ANALYTICAL REPORT
SLD Accession No. WC-91-1049

Distribution

☐ User 70320
☒ Submitter 905
☒ SLD Files

To: David G. Boyer
New Mexico Oil Conservation Div.
P.O. 2088
Santa Fe, New Mexico 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro...	Rail Road Lagoon
At: 15:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	56.50		mg/L
magnesium	5.80		mg/L
potassium	9.00		mg/L
sodium	238.00		mg/L
hardness	165.00		mg/L
bicarbonate	458.00		mg/L
carbonate	0.00		mg/L
chloride	30.80		mg/L
sulfate	< 5.00		mg/L
⊗ Ion Balance	166.00		%
total diss resid	1284.00		mg/L

Reviewed By: John A. Finney

06/17/91
Supervisor, Water Chemistry Section

⊗ Poor ion balance is due to complex sample matrix.

91 JUL 3 PM 8 43

RECEIVED
OIL CONSERVATION DIVISION

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106

Water Chemistry Section - Telephone: (505) 841-2555

SLD No.

Date _____

Received:

2 User Code #: 710131210		3 Request ID No.: 004355-B		4 Priority Code #: 3		5 Facility Name: Giant Ciniza Refinery		6 County: McKinley		7 City: Gallup		8 State: NM	
9 Sample Location: Travel Center Discharge													
10 Collected By: Kathy Brown				On: 9/10/02				At: 11105 hrs.					
11 Codes: Submitter WSS # Organization													
13 Report To: David G. Boyer				14 Phone #: (505) 827-5812				12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)					
15 Sampling Information: Sample Purpose: ☐ Compliance ☐ Check ☐ Monitoring ☐ Special ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody													
16 Field Data: pH: 7 Conductivity: 2000 umhos @ 21 °C Temperature: °C Chlorine Residual: mg/l Flow:													
17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Well; Depth: ☐ Spring ☐ Distribution ☐ Point-of-Entry ☒ Other: Weir Box				18 Field Notes/Sample #: 9105021105									
19 Sample Type: ☐ Water ☐ Soil ☐ Food ☒ Wastewater ☐ Other				20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ ICE Water Iced ☐ Other									
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.													
Group Analyses: ☐ (854) SDWA Group II (Nitrate as N) ☐ (861) SDWA Group III (Fluoride) ☐ (860) SDWA Complete Secondary ☐ (859) SWQB SS Anion - Cation Group + ☐ (868) SWQB NPS Anion, Cation, Physical + TSS ☐ (869) SWQB Nutrient Analysis Group + ☒ (867) Major Anions & Cations													
Cations: ☐ Calcium (as Ca) ☐ Magnesium (as Mg) ☐ Potassium (as K) ☐ Sodium (as Na) ☐ Total Hardness (as CaCO3) ☐ Alkalinity (as CaCO3) ☐ Bicarbonate (as HCO3) ☐ Carbonate (as CO3) ☐ Chloride (as Cl) ☐ Fluoride (as F) ☐ Sulfate (as SO4) ☒ Ion Charge Balance				Physical Parameters: ☐ Color ☐ Conductance (micromhos @ 25 °C) ☐ Odor ☐ pH ☐ Surfactants ☐ Total Dissolved Solids ☐ Turbidity ☐ Other: ☐ ☐ ☐				Surface and Waste Water: ☐ Biological Oxygen Demand ☐ Total Suspended Solids ☐ Chemical Oxygen Demand ☐ Total Organic Carbon ☐ Cyanide ☐ Nutrients: ☐ Nitrate + Nitrite (as N) ☐ Ammonia (as N) ☐ Total Kjeldahl (as N) ☐ Nitrite (as N) ☐ Orthophosphate (as P) ☐ Total Phosphorus (as P)					
Remarks:													

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2577

SLD No. 1

Date Received: _____

2 User Code #: 7103210		3 Request ID No.: Request ID No. 004356-C		4 Priority Code #: 3 (If "1" or "2", call EIO-SLD Coordinator)	
5 Facility Name: Giant Ciniza Refinery			6 County: McKinley		7 City: Gallup/Ciniza
8 State: NM					
9 Sample Location: TRAVEL CENTER DISCHARGE					
10 Collected By: Kathy Brown First Last		On: 91/05/02 Date: (YY/MM/DD)		At: 1105 hrs. Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter WSS # Organization			12 Latitude (DDMMSS) 		
13 Report To: David G. Boyer Name			14 Phone #: (505) 827-5812		
Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088			15 Sampling Information: Sample Purpose: ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody		
16 Field Data: pH: 7 , Conductivity: 2000 umhos @ 21 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____					
17 Sample Source: ☐ Stream ☐ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☒ Other: Weir Box			18 Field Notes/Sample #: 9105021105		
19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other _____ This form accompanies a <u>single sample</u> consisting of: 2 - septum vial(s) (volume = 40 ml) _____ - glass jugs (volume = _____) _____ (volume = _____)			20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other HgCl		
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.					
Volatile Screens: ☐ (753) Aliphatic Headspace (1-5 Carbons) ☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504) Other Specific Compounds or Classes: ☐ _____ ☐ _____ ☐ _____			Semivolatile Screens: ☐ (763) Acid Extractables ☐ (751) Aliphatic Hydrocarbons ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (758) Herbicides, Chlorophenoxy Acid ☐ (759) Herbicides, Triazines ☐ (760) Organochlorine Pesticides ☐ (761) Organophosphate Pesticides ☐ (767) Polychlorinated Biphenyls (PCB's) ☐ (764) Polynuclear Aromatic Hydrocarbons ☐ (762) SDWA Pesticides & Herbicides		
Remarks: 					

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-2557

SLD No. 1

Date Received: _____

2 User Code #: 71013210	3 Request ID No.: _____	Request ID No. 004357-B	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup	8 State: NM
9 Sample Location: Travel Center Discharge			
10 Collected By: Kathy Birrown		On: 91/05/02	At: 111015 hrs.
11 Codes:		12 Latitude (DDMMSS): _____	
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812	
Address: New Mexico Oil Conservation Division		15 Sampling Information:	
P. O. Box 2088		☒ Grab	
City, State Zip: Santa Fe, New Mexico 87504-2088		☐ Composite	
		☐ Compliance	
		☐ Check	
		☒ Monitoring	
		☐ Special	
		☐ Flow Proportioned	
		☐ Equal Aliquot	
		☐ Sample Split w/Permittee	
		☐ Chain of Custody	
16 Field Data: pH: 7 , Conductivity: 2000 umhos @ 21 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____			
17 Sample Source:		18 Field Notes/Sample #: 9105021105	
☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP		☐ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☒ Other: Weir Box	
19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other		20 Preservation:	
This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)		☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Nitric Acid (HNO ₃); Filtered ☐ WPN Water Preserved with Nitric Acid; Not Filtered ☒ WNL Water Not Preserved in Field; Please Add HNO ₃ at Lab ☐ ICE Water load ☐ Other	

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

☒ - (704) ICAP Scan	☐ - (721) SDWA Group I + other parameter(s) marked below
☐ - (720) SDWA Group I Only	

☐ - Aluminum	☐ - Lead	☐ - Vanadium
☐ - Arsenic	☐ - Manganese	☐ - Zinc
☐ - Barium	☐ - Mercury	☐ - _____
☐ - Cadmium	☐ - Molybdenum	☐ - _____
☐ - Chromium	☐ - Nickel	☐ - _____
☐ - Cobalt	☐ - Selenium	☐ - _____
☐ - Copper	☐ - Silver	☐ - _____
☐ - Iron	☐ - Uranium	☐ - _____

Remarks:

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2557

SLD No. 1

Date Received: _____

2 User Code #: 710131210	3 Request ID No.: 004358-B	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup
8 State: NM		

9 Sample Location: Aeriation Lagoon #2 Discharge

10 Collected By: Kathy Birrown **On:** 91/05/02 **At:** 11:20 hrs.
First Last Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.

11 Codes: Submitter WSS # Organization	12 Latitude (DDMMSS) Longitude (DDMMSS)
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13 Report To: David G. Boyer Address: New Mexico Oil Conservation Division P. O. 2088 City, State Zip: Santa Fe, New Mexico 87504-2088	14 Phone #: (505) 827-5812 15 Sampling Information: Sample Purpose: ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☒ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/ Permittee ☐ Chain of Custody
--	---

16 Field Data: pH: 10, Conductivity: 6300 umhos @ 15.5°C, Temperature: _____°C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☒ Other: Lagoon	18 Field Notes/ Sample #: 9105021120
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19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)	20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ ICE Water Iced ☐ Other _____
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21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

Group Analyses: ☐ (854) SDWA Group II (Nitrate as N) ☐ (861) SDWA Group III (Fluoride) ☐ (860) SDWA Complete Secondary	☐ (859) SWQB SS Anion - Cation Group + ☐ (868) SWQB NPS Anion, Cation, Physical + TSS ☐ (869) SWQB Nutrient Analysis Group + ☒ (867) Major Anions & Cations
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Cations: ☐ Calcium (as Ca) ☐ Magnesium (as Mg) ☐ Potassium (as K) ☐ Sodium (as Na) ☐ Total Hardness (as CaCO3) Anions: ☐ Alkalinity (as CaCO3) ☐ Bicarbonate (as HCO3) ☐ Carbonate (as CO3) ☐ Chloride (as Cl) ☐ Fluoride (as F) ☐ Sulfate (as SO4) ☒ Ion Charge Balance	Physical Parameters: ☐ Color ☐ Conductance (Micromhos @ 25°C) ☐ Odor ☐ pH ☐ Surfactants ☐ Total Dissolved Solids ☐ Turbidity Other: ☐ _____ ☐ _____ ☐ _____	Surface and Waste Water: ☐ Biological Oxygen Demand ☐ Total Suspended Solids ☐ Chemical Oxygen Demand ☐ Total Organic Carbon ☐ Cyanide Nutrients: ☐ Nitrate + Nitrite (as N) ☐ Ammonia (as N) ☐ Total Kjeldahl (as N) ☐ Nitrite (as N) ☐ Orthophosphate (as P) ☐ Total Phosphorus (as P)
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Remarks:

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 1

Date Received: _____

2 User Code #: <u>7 0 3 2 0</u>		3 Request ID No.: _____		Request ID No. 004359-C		4 Priority Code #: <u>3</u>		(M-F or T, call EIO-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>		8 State: <u>NM</u>	
9 Sample Location: <u>Aeration Lagoon #2 Discharge</u>									
10 Collected By: <u>Kathy</u>		<u>Brown</u>		On: <u>91/05/02</u>		At: <u>1120</u> hrs.		Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: _____									
13 Report To: <u>David G. Boyer</u>		14 Phone #: <u>(505) 827-5812</u>		12 Latitude (DDMMSS) _____		Longitude (DDMMSS) _____		2 Digit ID (if needed) _____	
Address: <u>New Mexico Oil Conservation Division</u>				15 Sampling Information: ☒ Grab ☐ Composite (Composite Time Period)					
<u>P. O. Box 2088</u>				☐ Compliance ☐ Check ☒ Monitoring ☐ Special					
<u>Santa Fe, New Mexico 87504-2088</u>				☐ Flow Proportioned ☐ Equal Aliquot ☒ Sample Split w/Permittee ☐ Chain of Custody					
16 Field Data: pH: <u>10</u> , Conductivity: <u>6300</u> umhos @ <u>15.5</u> °C, Temperature: _____°C, Chlorine Residual: _____ mg/l, Flow: _____									
17 Sample Source: ☐ -Stream ☐ -Lake ☐ -Drain ☐ -Pool ☐ -WWTP ☐ -Well; Depth: _____ ☐ -Spring ☐ -Distribution ☐ -Point-of-Entry ☒ -Other: <u>Lagoon</u>				18 Field Notes/Sample #: <u>9105021120</u>					
19 Sample Type: ☐ -Water, ☐ -Soil, ☐ -Food, ☒ -Wastewater, ☐ -Other				20 Preservation: ☐ -NP No Preservation; Sample stored at room temperature ☒ -P-ice Sample stored in an ice bath (Not Frozen) ☐ -P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ -P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ -Other <u>fgc</u>					
This form accompanies a <u>single sample</u> consisting of: <u>2</u> - septum vial(s) (volume = <u>40ml</u>) _____ - glass jugs (volume = _____) _____ - _____ (volume = _____)									

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.

Volatile Screens:

- ☐ - (753) Aliphatic Headspace (1-5 Carbons)
- ☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)
- ☐ - (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)
- ☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)

Other Specific Compounds or Classes:

- ☐ - () _____
- ☐ - () _____
- ☐ - () _____

Semivolatile Screens:

- ☐ - (763) Acid Extractables
- ☐ - (751) Aliphatic Hydrocarbons
- ☐ - (755) Base/Neutral Extractables (EPA 625)
- ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ - (758) Herbicides, Chlorophenoxy Acid
- ☐ - (759) Herbicides, Triazines
- ☐ - (760) Organochlorine Pesticides
- ☐ - (761) Organophosphate Pesticides
- ☐ - (767) Polychlorinated Biphenyls (PCB's)
- ☐ - (764) Polynuclear Aromatic Hydrocarbons
- ☐ - (762) SDWA Pesticides & Herbicides

Remarks:

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-2553

SLD No. 1

Date Received: _____

2 User Code #: 710131210	3 Request ID No.: _____	Request ID No. 007170-B	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup	8 State: NM
9 Sample Location: Aerial view in Laigloim #2 Discharge			
10 Collected By: Kathy Birlohn First Last	On: 9/1/05/02 Date: (YY/MM/DD)	At: 11120 hrs. Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter: _____ WSS #: _____ Organization: _____		12 Latitude (DDMMSS): _____ Longitude (DDMMSS): _____ 2 Digit ID (if needed): _____	
13 Report To: David G. Boyer Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088		14 Phone #: (505) 827-5812	
		15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody	
16 Field Data: pH: 10 Conductivity: 6300 umhos @ 15.5°C Temperature: _____°C Chlorine Residual: _____ mg/l Flow: _____			
17 Sample Source: ☐ Stream ☐ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☒ Other: Lagoon		18 Field Notes/ Sample #: 9105021120	
19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other _____ This form accompanies a <u>single sample</u> consisting of: _____ 1 liter cubitainers (1 quart) _____ 4 liter cubitainers (1 gallon)		20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Nitric Acid (HNO ₃); Filtered ☐ WPN Water Preserved with Nitric Acid; Not Filtered ☒ WNL Water Not Preserved in Field; Please Add HNO ₃ at Lab ☒ ICE Water Iced ☐ Other _____	

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

- | | |
|---|---|
| ☒ - (704) ICAP Scan | ☐ - (721) SDWA Group I + other parameter(s) marked below |
| ☐ - (720) SDWA Group I Only | |
-
- | | | |
|---|--|-------------------------------------|
| ☐ - Aluminum | ☐ - Lead | ☐ - Vanadium |
| ☒ - Arsenic | ☐ - Manganese | ☐ - Zinc |
| ☐ - Barium | ☒ - Mercury | ☐ - _____ |
| ☐ - Cadmium | ☐ - Molybdenum | ☐ - _____ |
| ☐ - Chromium | ☐ - Nickel | ☐ - _____ |
| ☐ - Cobalt | ☒ - Selenium | ☐ - _____ |
| ☐ - Copper | ☐ - Silver | ☐ - _____ |
| ☐ - Iron | ☐ - Uranium | ☐ - _____ |

Remarks: Added As, Hg & Se to analysis by phone with SLD, 1:50 PM, 6/3/91. Change taken by Russell, Air & Heavy Metals Section. *[Signature]*

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2577

SLD No. 1

Date Received: _____

2 User Code #: 7 0 3 2 0		3 Request ID No.: _____		Request ID No. 007172-C		4 Priority Code #: 3		(If "1" or "2", call EIO-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>		8 State: <u>N.M.</u>	
9 Sample Location: <u>OW-1,2</u>									
10 Collected By: <u>Kathy</u> <u>Brown</u> <u>ILalt.....</u>									
On: <u>91/05/02</u> At: <u>1330</u> hrs.									
11 Codes:									
Submitter		WSS #		Organization		12 Latitude (DDMMSS)		Longitude (DDMMSS)	
13 Report To: <u>David G. Boyer</u>		14 Phone #: <u>(505) 827-5812</u>		15 Sampling Information:		Sample Purpose:		2 Digit ID (if needed)	
Address: <u>New Mexico Oil Conservation Division</u>				☒ Grab		☐ Composite		(Composite Time Period)	
<u>P. O. Box 2088</u>				☐ Compliance		☐ Flow Proportioned		☐ Equal Aliquot	
Ctry, State Zip <u>Santa Fe, New Mexico 87504-2088</u>				☐ Check		☒ Sample Split w/Permittee		☐ Chain of Custody	
16 Field Data: pH: <u>11.5</u> Conductivity: <u>1425</u> umhos @ <u>14.5</u> °C. Temperature: _____ °C. Chlorine Residual: _____ mg/l. Flow: _____				18 Field Notes/ Sample #: <u>9105021330</u>					
17 Sample Source:				19 Preservation:					
☐ Stream ☒ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☐ Other: _____				☐ NP No Preservation; Sample stored at room temperature ☒ P-ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other <u>HgCl</u>					
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other				20 This form accompanies a <u>single sample</u> consisting of:					
<u>2</u> - septum vial(s) (volume = <u>40 ml</u>)				_____ (volume = _____)					
_____ (volume = _____)				21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.					
Volatile Screens:					Semivolatile Screens:				
☐ (753) Aliphatic Headspace (1-5 Carbons)					☐ (763) Acid Extractables				
☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)					☐ (751) Aliphatic Hydrocarbons				
☐ (765) Mass Spectrometer Purgeables (EPA 624)					☐ (755) Base/Neutral Extractables (EPA 625)				
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)					☐ (756) Base/Neutral/Acid Extractables (EPA 8270)				
☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)					☐ (758) Herbicides, Chlorophenoxy Acid				
☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)					☐ (759) Herbicides, Triazines				
Other Specific Compounds or Classes:					☐ (760) Organochlorine Pesticides				
☐ () _____					☐ (761) Organophosphate Pesticides				
☐ () _____					☐ (767) Polychlorinated Biphenyls (PCB's)				
☐ () _____					☐ (764) Polynuclear Aromatic Hydrocarbons				
☐ () _____					☐ (762) SDWA Pesticides & Herbicides				
Remarks:									

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-

SLD No. 1

Date Received: _____

2 User Code #: 710131210	3 Requi ID No: _____	Request ID No. 007173-B
5 Facility Name: <u>Giant Ciniza Refinery</u>	6 County: <u>McKinley</u>	7 City: <u>Gallup</u>
9 Sample Location: <u>01W-112</u>		
10 Collected By: <u>Kathy Birrown</u> On: <u>91/05/02</u> At: <u>113310</u> hrs. First Last Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.		
11 Codes: Submitter: _____ WSS #: _____ Organization: _____		12 Latitude (DDMMSS) _____ Longitude (DDMMSS) _____
13 Report To: <u>David G. Boyer</u> Address: <u>New Mexico Oil Conservation Division</u> <u>P. O. Box 2088</u> City, State Zip: <u>Santa Fe, New Mexico 87504-2088</u>		14 Phone #: (505) 827-5812 15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody
16 Field Data: pH: <u>11.5</u> , Conductivity: <u>1425</u> umhos @ <u>14.5</u> °C, Temperature: _____°C, Residual: _____ mg/l, Flow: _____		
17 Sample Source: ☐ -Stream ☒ -Well; Depth: _____ ☐ -Lake ☐ -Spring ☐ -Drain ☐ -Distribution ☐ -Pool ☐ -Point-of-Entry ☐ -WWTP ☐ -Other: _____	18 Field Notes/ Sample #: <u>9105021330</u>	
19 Sample Type: ☒ -Water, ☐ -Soil, ☐ -Food, ☐ -Wastewater, ☐ -Other _____ This form accompanies a <u>single sample</u> consisting of: <u>1</u> - 1 liter cubitainers (1 quart) <u> </u> - 4 liter cubitainers (1 gallon)	20 Preservation: ☐ - WNF Water Not Preserved; Filtered ☒ - WNN Water Not Preserved; Not Filtered ☐ - WPF Water Preserved with Nitric Acid (HNO3); Filtered ☐ - WPN Water Preserved with Nitric Acid; Not Filtered ☒ - WNL Water Not Preserved in Field; Please Add HNO3 at Lab ☒ - ICE Water Iced ☐ - Other _____	

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

☒ - (704) ICAP Scan ☐ - (720) SDWA Group I Only ☐ - Aluminum ☐ - Arsenic ☐ - Barium ☐ - Cadmium ☐ - Chromium ☐ - Cobalt ☐ - Copper ☐ - Iron	☐ - (721) SDWA Group I + other parameter(s) marked below ☐ - Lead ☐ - Manganese ☐ - Mercury ☐ - Molybdenum ☐ - Nickel ☐ - Selenium ☐ - Silver ☐ - Uranium	☐ - Vanadium ☐ - Zinc ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____
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Remarks:

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-255

SLD No. 1

Date Received: _____

2 User Code #: 710131210	3 Request ID No.: 007174-B	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup
8 State: NM		
9 Sample Location: O.W. - 13		
10 Collected By: Kathy Birnbaum On: 91/05/02 At: 14:30 hrs. Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.		
11 Codes: Submitter WSS # Organization		12 Latitude (DDMMSS) Longitude (DDMMSS)
13 Report To: David G. Boyer Address: New Mexico Oil Conservation Division P. O. 2088 City, State Zip: Santa Fe, New Mexico 87504-2088		14 Phone #: (505) 827-5812
15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/ Permittee ☐ Chain of Custody		
16 Field Data: pH: 7.25 , Conductivity: 950 umhos @ 14 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____		
17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☒ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: _____	18 Field Notes/ Sample #: 9105021430	
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)	20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ ICE Water load ☐ Other	
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.		
Group Analyses: ☐ (854) SDWA Group II (Nitrate as N) ☐ (861) SDWA Group III (Fluoride) ☐ (860) SDWA Complete Secondary ☐ (859) SWQB SS Anion - Cation Group + ☐ (868) SWQB NPS Anion, Cation, Physical + TSS ☐ (869) SWQB Nutrient Analysis Group + ☒ (867) Major Anions & Cations		
Cations: ☐ Calcium (as Ca) ☐ Magnesium (as Mg) ☐ Potassium (as K) ☐ Sodium (as Na) ☐ Total Hardness (as CaCO3) Anions: ☐ Alkalinity (as CaCO3) ☐ Bicarbonate (as HCO3) ☐ Carbonate (as CO3) ☐ Chloride (as Cl) ☐ Fluoride (as F) ☐ Sulfate (as SO4) ☒ Ion Charge Balance	Physical Parameters: ☐ Color ☐ Conductance (micromhos @ 25 °C) ☐ Odor ☐ pH ☐ Surfactants ☐ Total Dissolved Solids ☐ Turbidity Other: ☐ _____ ☐ _____ ☐ _____	Surface and Waste Water: ☐ Biological Oxygen Demand ☐ Total Suspended Solids ☐ Chemical Oxygen Demand ☐ Total Organic Carbon ☐ Cyanide Nutrients: ☐ Nitrate + Nitrite (as N) ☐ Ammonia (as N) ☐ Total Kjeldahl (as N) ☐ Nitrite (as N) ☐ Orthophosphate (as P) ☐ Total Phosphorus (as P)
Remarks: 		

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-2557

SLD No. 1

Date Received:

2 User Code #: 71013210	3 Request ID No.:	Request ID No. 007175-B	4 Priority Code #: 3	(If "1" or "2", call EID-SLD Coordinator)
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup	8 State: NM	
9 Sample Location: 10W-13				
10 Collected By: Kathy Brown		On: 9/10/02	At: 1430 hrs.	
First Last		Date: (YY/MM/DD)	Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter WSS # Organization		12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)		
13 Report To: David G. Boyer		14 Phone #: (505) 827-5812		
Address: New Mexico Oil Conservation Division		15 Sampling Information:		
P. O. Box 2088		Sample Purpose: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody		
City, State Zip: Santa Fe, New Mexico 87504-2088		Chlorine Residual: mg/l. Flow:		
16 Field Data: pH: 7.25, Conductivity: 950 umhos @ 14 °C, Temperature: °C		17 Sample Source: ☒ -Stream ☐ -Lake ☐ -Drain ☐ -Pool ☐ -WWTP ☒ -Well; Depth: ☐ -Spring ☐ -Distribution ☐ -Point-of-Entry ☐ -Other:		
18 Field Notes/ Sample #: 9105021430		19 Sample Type: ☒ -Water, ☐ -Soil, ☐ -Food, ☐ -Wastewater, ☐ -Other		
This form accompanies a single sample consisting of: 1 - 1 liter cubitainers (1 quart) 4 - 4 liter cubitainers (1 gallon)		20 Preservation: ☐ - WNF Water Not Preserved; Filtered ☐ - WNN Water Not Preserved; Not Filtered ☐ - WPF Water Preserved with Nitric Acid (HNO3); Filtered ☐ - WPN Water Preserved with Nitric Acid; Not Filtered ☒ - WNL Water Not Preserved in Field; Please Add HNO3 at Lab ☒ - ICE Water Iced ☐ - Other		

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

- | | | |
|---|---|-------------------------------------|
| ☒ - (704) ICAP Scan | ☐ - (721) SDWA Group I + other parameter(s) marked below | |
| ☐ - (720) SDWA Group I Only | | |
| ☐ - Aluminum | ☐ - Lead | ☐ - Vanadium |
| ☐ - Arsenic | ☐ - Manganese | ☐ - Zinc |
| ☐ - Barium | ☐ - Mercury | |
| ☐ - Cadmium | ☐ - Molybdenum | |
| ☐ - Chromium | ☐ - Nickel | |
| ☐ - Cobalt | ☐ - Selenium | |
| ☐ - Copper | ☐ - Silver | |
| ☐ - Iron | ☐ - Uranium | |

Remarks:

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 1

Date Received: _____

2 User Code #: <u>7 0 3 2 0</u>		3 Request ID No.: _____		Request <u> </u> ID No. <u>007176-C</u>		4 Priority Code #: <u>3</u> (If "1" or "2", call EIS-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>	
8 State: <u>N.M.</u>							
9 Sample Location: <u>OW-13</u>							
10 Collected By: <u>Kathy</u> <u>BROWN</u> First Last		On: <u>9/105/02</u> Date: (YY/MM/DD)		At: <u>1430</u> hrs. Time: 24 hr. clock 3:00 pm = 1500 hrs.			
11 Codes: _____ Submitter WSS # Organization				12 Latitude (DDMMSS) _____ Longitude (DDMMSS) _____ 2 Digit ID (if needed)			
13 Report To: <u>David G. Boyer</u> Name Address <u>New Mexico Oil Conservation Division</u> <u>P. O. Box 2088</u> <u>Santa Fe, New Mexico 87504-2088</u>				14 Phone #: <u>(505) 827-5812</u> 15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Check ☐ Monitoring ☒ Special ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody			
16 Field Data: pH: <u>7.25</u> , Conductivity: <u>950</u> umhos @ <u>14</u> °C, Temperature: _____°C, Chlorine Residual: _____ mg/l, Flow: _____							
17 Sample Source: ☐ Stream ☒ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☐ Other: _____				18 Field Notes/ Sample #: <u>9105021430</u>			
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other This form accompanies a <u>single sample</u> consisting of: <u>2</u> - septum vial(s) (volume = <u>40 ml</u>) _____ - glass jugs (volume = _____) _____ (volume = _____)				20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other <u>HgCl</u>			
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.							
Volatile Screens: ☐ - (753) Aliphatic Headspace (1-5 Carbons) ☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☒ - (765) Mass Spectrometer Purgeables (EPA 624) ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504) Other Specific Compounds or Classes: ☐ - () _____ ☐ - () _____ ☐ - () _____				Semivolatile Screens: ☐ - (763) Acid Extractables ☐ - (751) Aliphatic Hydrocarbons ☐ - (755) Base/Neutral Extractables (EPA 625) ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ - (758) Herbicides, Chlorophenoxy Acid ☐ - (759) Herbicides, Triazines ☐ - (760) Organochlorine Pesticides ☐ - (761) Organophosphate Pesticides ☐ - (767) Polychlorinated Biphenyls (PCB's) ☐ - (764) Polynuclear Aromatic Hydrocarbons ☐ - (762) SDWA Pesticides & Herbicides			
Remarks: _____ _____ _____ _____							

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

SLD No. 1

Date Received: _____

2 User Code #: 710131210	3 Request ID No.: _____	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery		6 County: McKinley
7 City: Gallup		8 State: NM
9 Sample Location: O.W.-114		
10 Collected By: Kathy Birloir On: 91/05/02 At: 1151010 hrs.		
11 Codes: Submitter: _____ WSS # _____ Organization: _____		
13 Report To: Name: David G. Boyer Address: New Mexico Oil Conservation Division P. O. 2088 City, State Zip: Santa Fe, New Mexico 87504-2088		14 Phone #: (505) 827-5812
16 Field Data: pH: 7 Conductivity: 1225 umhos @ 13 °C. Temperature: _____ °C. Chlorine Residual: _____ mg/l. Flow: _____		12 Latitude (DDMMSS): _____ Longitude (DDMMSS): _____ 2 Digit ID (if needed): _____
17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☒ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: _____		15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody
19 Sample Type: ☒ Water ☐ Soil ☐ Food ☐ Wastewater ☐ Other: _____ This form accompanies a <u>single sample</u> consisting of: <u>1</u> - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)		18 Field Notes/ Sample #: 9105021500
20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ ICE Water Iced ☐ Other: _____		
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.		
Group Analyses: ☐ (854) SDWA Group II (Nitrate as N) ☐ (859) SWQB SS Anion - Cation Group + ☐ (861) SDWA Group III (Fluoride) ☐ (868) SWQB NPS Anion, Cation, Physical + TSS ☐ (869) SWQB Nutrient Analysis Group + ☒ (860) SDWA Complete Secondary ☒ (867) Major Anions & Cations		
Cations: ☐ Calcium (as Ca) _____ ☐ Magnesium (as Mg) _____ ☐ Potassium (as K) _____ ☐ Sodium (as Na) _____ ☐ Total Hardness (as CaCO3) _____ Anions: ☐ Alkalinity (as CaCO3) _____ ☐ Bicarbonate (as HCO3) _____ ☐ Carbonate (as CO3) _____ ☐ Chloride (as Cl) _____ ☐ Fluoride (as F) _____ ☐ Sulfate (as SO4) _____ ☒ Ion Charge Balance _____	Physical Parameters: ☐ Color _____ ☐ Conductance (Micromhos @ 25 C) _____ ☐ Odor _____ ☐ pH _____ ☐ Surfactants _____ ☐ Total Dissolved Solids _____ ☐ Turbidity _____ Other: _____	Surface and Waste Water: ☐ Biological Oxygen Demand _____ ☐ Total Suspended Solids _____ ☐ Chemical Oxygen Demand _____ ☐ Total Organic Carbon _____ ☐ Cyanide _____ Nutrients: ☐ Nitrate + Nitrite (as N) _____ ☐ Ammonia (as N) _____ ☐ Total Kjeldahl (as N) _____ ☐ Nitrite (as N) _____ ☐ Orthophosphate (as P) _____ ☐ Total Phosphorus (as P) _____
Remarks: _____		

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-255

SLD No. 1

Date Received: _____

2 User Code #: 1710131210	3 Request ID No.: 007178-B	4 Priority Code #: 3
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup
8 State: NM		
9 Sample Location: OW-14		
10 Collected By: Kathy Birgoin On: 91/05/02 At: 1500 hrs. First Last Date: (YY/MM/DD) Time: 24 hr. clock 3:00 pm = 1500 hrs.		
11 Codes: Submitter WSS # Organization		12 Latitude (DDMMSS) Longitude (DDMMSS)
13 Report To: David G. Boyer Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088		14 Phone #: (505) 827-5812 15 Sampling Information: ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☒ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody
16 Field Data: pH: 7 , Conductivity: 1225 umhos @ 13 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____		18 Field Notes/ Sample #: 9105021500
17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☒ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: _____		20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Nitric Acid (HNO ₃); Filtered ☐ WPN Water Preserved with Nitric Acid; Not Filtered ☒ WNL Water Not Preserved in Field; Please Add HNO ₃ at Lab ☒ ICE Water Iced ☐ Other _____
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other _____ This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)		

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

☒ - (704) ICAP Scan ☐ - (720) SDWA Group I Only	☐ - (721) SDWA Group I + other parameter(s) marked below	☐ - Vanadium ☐ - Zinc
☒ - Aluminum ☒ - Arsenic ☒ - Barium ☒ - Cadmium ☐ - Chromium ☐ - Cobalt ☐ - Copper ☐ - Iron	☒ - Lead ☐ - Manganese ☐ - Mercury ☐ - Molybdenum ☐ - Nickel ☐ - Selenium ☐ - Silver ☐ - Uranium	☐ - Vanadium ☐ - Zinc ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____ ☐ - _____

Remarks:

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 1

Date Received: _____

2 User Code #: <u>7 0 3 2 0</u>		3 Request ID No.: _____		Request ID No. 007179-C		4 Priority Code #: <u>3</u>		(If "1" or "2", call EID-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>		8 State: <u>NM</u>	
9 Sample Location: <u>0, W-14</u>									
10 Collected By: <u>Kathy</u>		<u>BROWN</u>		On: <u>91/05/02</u>		At: <u>11500</u> hrs.		Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: _____									
Submitter		WSS #		Organization		12 Latitude (DDMMSS)		2 Digit ID (if needed)	
13 Report To: <u>David G. Boyer</u>		14 Phone #: <u>(505) 827-5812</u>		Longitude (DDMMSS)		Sample Purpose:		Sampling Information:	
Address: <u>New Mexico Oil Conservation Division</u>				15		☒ - Grab		☐ - Composite (Compos. Time Period)	
<u>P. O. Box 2088</u>				☐ - Compliance		☐ - Flow Proportioned		☐ - Equal Aliquot	
City, State Zip: <u>Santa Fe, New Mexico 87504-2088</u>				☒ - Check		☒ - Monitoring		☒ - Sample Split w/Permittee	
				☐ - Special		☐ - Chain of Custody			
16 Field Data: pH: <u>7</u> , Conductivity: <u>1225</u> umhos @ <u>13</u> °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____									
17 Sample Source:				18 Field Notes/Sample #: <u>9105021500</u>					
☐ - Stream				☒ - Well; Depth: _____					
☐ - Lake				☐ - Spring					
☐ - Drain				☐ - Distribution					
☐ - Pool				☐ - Point-of-Entry					
☐ - WWTP				☐ - Other: _____					
19 Sample Type: ☒ - Water, ☐ - Soil, ☐ - Food, ☐ - Wastewater, ☐ - Other				20 Preservation:					
This form accompanies a <u>single sample</u> consisting of:				☐ - NP No Preservation; Sample stored at room temperature					
<u>12</u> - septum vial(s) (volume = <u>40ml</u>)				☒ - P-ice Sample stored in an ice bath (Not Frozen)					
_____ - glass jugs (volume = _____)				☐ - P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual					
_____ (volume = _____)				☐ - P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)					
				☒ - Other <u>HgCl</u>					

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.

Volatile Screens:

- ☐ - (753) Aliphatic Headspace (1-5 Carbons)
- ☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602)
- ☒ - (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2)
- ☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)

Other Specific Compounds or Classes:

- ☐ - ()
- ☐ - ()
- ☐ - ()

Semivolatile Screens:

- ☐ - (763) Acid Extractables
- ☐ - (751) Aliphatic Hydrocarbons
- ☐ - (755) Base/Neutral Extractables (EPA 625)
- ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ - (758) Herbicides, Chlorophenoxy Acid
- ☐ - (759) Herbicides, Triazines
- ☐ - (760) Organochlorine Pesticides
- ☐ - (761) Organophosphate Pesticides
- ☐ - (767) Polychlorinated Biphenyls (PCB's)
- ☐ - (764) Polynuclear Aromatic Hydrocarbons
- ☐ - (762) SDWA Pesticides & Herbicides

Remarks:

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

SLD No. 1

Date Received: _____

2 User Code #: 710121210	3 Request ID No.: _____	Request ID No. 012074-B
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup
8 State: NM		
9 Sample Location: Rail Road Lagoon		
10 Collected By: Kathy Brown On: 91/05/02 At: 11505 hrs.		
11 Codes: 		
12 Latitude (DDMMSS): 	12 Longitude (DDMMSS): 	
13 Report To: David G. Boyer	14 Phone #: (505) 827-5212	
Address: New Mexico Oil Conservation Division		
P. O.: 2088		
City, State Zip: Santa Fe, New Mexico 87504-2088		
15 Sampling Information:		
Sample Purpose: ☒ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody		
16 Field Data: pH: 6.9 , Conductivity: 975 umhos @ 17 °C. Temperature: _____ °C. Chlorine Residual: _____ mg/l. Flow: _____		
17 Sample Source:	18 Field Notes/ Sample #:	
☐ -Stream ☐ -Well; Depth: _____ ☐ -Lake ☐ -Spring ☐ -Drain ☐ -Distribution ☐ -Pool ☐ -Point-of-Entry ☐ -WWTP ☒ -Other: Lagoon	9105021505 Sample from middle of east-central lagoon	
19 Sample Type: ☐ -Water, ☐ -Soil, ☐ -Food, ☒ -Wastewater, ☐ -Other _____ This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)	20 Preservation:	
☐ - WNF Water Not Preserved; Filtered ☒ - WNN Water Not Preserved; Not Filtered ☐ - WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ - WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ - WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ - ICE Water Iced ☐ - Other _____		
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.		
Group Analyses:		
☐ - (854) SDWA Group II (Nitrate as N) ☐ - (859) SWQB SS Anion - Cation Group + ☐ - (861) SDWA Group III (Fluoride) ☐ - (868) SWQB NPS Anion, Cation, Physical + TSS ☐ - (860) SDWA Complete Secondary ☒ - (869) SWQB Nutrient Analysis Group + ☒ - (867) Major Anions & Cations		
Cations:	Physical Parameters:	Surface and Waste Water:
☐ - Calcium (as Ca) _____ ☐ - Magnesium (as Mg) _____ ☐ - Potassium (as K) _____ ☐ - Sodium (as Na) _____ ☐ - Total Hardness (as CaCO3) _____ Anions: ☐ - Alkalinity (as CaCO3) _____ ☐ - Bicarbonate (as HCO3) _____ ☐ - Carbonate (as CO3) _____ ☐ - Chloride (as Cl) _____ ☐ - Fluoride (as F) _____ ☐ - Sulfate (as SO4) _____ ☒ - Ion Charge Balance _____	☐ - Color _____ ☐ - Conductance (micromhos @ 25 C) _____ ☐ - Odor _____ ☐ - pH _____ ☐ - Surfactants _____ ☐ - Total Dissolved Solids _____ ☐ - Turbidity _____ Other: ☐ _____ ☐ _____ ☐ _____	☐ - Biological Oxygen Demand _____ ☐ - Total Suspended Solids _____ ☐ - Chemical Oxygen Demand _____ ☐ - Total Organic Carbon _____ ☐ - Cyanide _____ Nutrients: ☐ - Nitrate + Nitrite (as N) _____ ☐ - Ammonia (as N) _____ ☐ - Total Kjeldahl (as N) _____ ☐ - Nitrite (as N) _____ ☐ - Orthophosphate (as P) _____ ☐ - Total Phosphorus (as P) _____
Remarks: _____ _____ _____		

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-2553

SLD No. 1

Date Received: _____

2 User Code #: 7 1 0 1 3 1 2 1 0	3 Request ID No.: _____	Request ID No. 012075-B
5 Facility Name: Giant Ciniza Refinery	6 County: McKinley	7 City: Gallup
9 Sample Location: Rail Road Lagoon		
10 Collected By: Kerthy Birpwn On: 9/10/02 At: 11:50:15 hrs.		
11 Codes: Submitter _____ WSS # _____ Organization _____		
13 Report To: David G. Boyer Address: New Mexico Oil Conservation Division P. O. Box 2088 City, State Zip: Santa Fe, New Mexico 87504-2088		12 Latitude (DDMMSS) _____ Longitude (DDMMSS) _____ 2 Digit ID (if needed) _____
14 Phone #: (505) 827-5812		15 Sampling Information: Sample Purpose: ☐ Compliance ☐ Check ☒ Monitoring ☐ Special ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody
16 Field Data: pH: 6.9 , Conductivity: 975 umhos @ 17 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____		
17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Well; Depth: _____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☒ Other: Lagoon		18 Field Notes/Sample #: 9105021505 Sample from middle of east-central pond
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other _____ This form accompanies a <u>single sample</u> consisting of: _____ 1 liter cubitainers (1 quart) _____ 4 liter cubitainers (1 gallon)		20 Preservation: ☐ WNF ☒ WNN ☐ WPF ☐ WPN ☒ WNL ☐ ICE ☐ Other Water Not Preserved; Filtered Water Not Preserved; Not Filtered Water Preserved with Nitric Acid (HNO₃); Filtered Water Preserved with Nitric Acid; Not Filtered Water Not Preserved in Field; Please Add HNO₃ at Lab Water load

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

- ☒ - (704) ICAP Scan
☐ - (720) SDWA Group I Only

☐ - (721) SDWA Group I + other parameter(s) marked below
- ☐ - Aluminum
☐ - Arsenic
☐ - Barium
☐ - Cadmium
☐ - Chromium
☐ - Cobalt
☐ - Copper
☐ - Iron

☐ - Lead
☐ - Manganese
☐ - Mercury
☐ - Molybdenum
☐ - Nickel
☐ - Selenium
☐ - Silver
☐ - Uranium

☐ - Vanadium
☐ - Zinc
☐ - _____
☐ - _____
☐ - _____
☐ - _____
☐ - _____
☐ - _____

Remarks: _____

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 1

Date Received: _____

2 User Code #: <u>703210</u>		3 Request ID No.: _____		Request ID No. <u>012076-C</u>		4 Priority Code #: <u>3</u>		(If "1" or "2", call EID-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>		8 State: <u>NM</u>	
9 Sample Location: <u>Rail Road Lagoon</u>									
10 Collected By: <u>Ruthy Brown</u> First Last				On: <u>91/05/02</u> Date: (YY/MM/DD)		At: <u>1505</u> hrs. Time: 24 hr. clock 3:00 pm = 1500 hrs.			
11 Codes: _____ Submitter WSS # Organization					12 Latitude (DDMMSS) _____ Longitude (DDMMSS) _____ 2 Digit ID (if needed) _____				
13 Report To: <u>David G. Boyer</u> Address: <u>New Mexico Oil Conservation Division</u> <u>P. O. Box 2088</u> City, State Zip: <u>Santa Fe, New Mexico 87504-2088</u>				14 Phone #: <u>(505) 827-5812</u>		15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody			
16 Field Data: pH: <u>6.9</u> , Conductivity: <u>975</u> umhos @ <u>17</u> °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____									
17 Sample Source: ☐ Stream ☐ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☒ Other: <u>Lagoon</u>					18 Field Notes/ Sample #: <u>9105021505</u> <u>Sample from middle of</u> <u>east-central pond</u>				
19 Sample Type: ☐ Water, ☐ Soil, ☐ Food, ☒ Wastewater, ☐ Other This form accompanies a <u>single sample</u> consisting of: _____- septum vial(s) (volume = _____) _____- glass jugs (volume = _____) _____- _____ (volume = _____)					20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other <u>HSC</u>				
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.									
<u>Volatile Screens:</u> ☐ - (753) Aliphatic Headspace (1-5 Carbons) ☒ - (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☒ - (765) Mass Spectrometer Purgeables (EPA 624) ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ - (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504) <u>Other Specific Compounds or Classes:</u> ☐ - () _____ ☐ - () _____ ☐ - () _____					<u>Semivolatile Screens:</u> ☐ - (763) Acid Extractables ☐ - (751) Aliphatic Hydrocarbons ☐ - (755) Base/Neutral Extractables (EPA 625) ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ - (758) Herbicides, Chlorophenoxy Acid ☐ - (759) Herbicides, Triazines ☐ - (760) Organochlorine Pesticides ☐ - (761) Organophosphate Pesticides ☐ - (767) Polychlorinated Biphenyls (PCB's) ☐ - (764) Polynuclear Aromatic Hydrocarbons ☐ - (762) SDWA Pesticides & Herbicides				
Remarks: _____ _____ _____ _____									

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

SLD No. 1

Date Received: _____

2 User Code #: 710131210		3 Request ID No.: _____		Request ID No. 012077-B	
5 Facility Name: Grant Ciniza Refinery		6 County: McKinley		7 City: Gallup	
8 State: NM					
9 Sample Location: O.W.-210					
10 Collected By: Kathy Birloiw n		On: 91/105/02		At: 115310 hrs.	
First JLalst....		Date: (YY/MM/DD)		Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: <u> </u> Submitter <u> </u> WSS # <u> </u> Organization			12 Latitude (DDMMSS) <u> </u> Longitude (DDMMSS) <u> </u> 2 Digit ID (if needed)		
13 Report To: David G. Boyer			14 Phone #: (505) 827-5812		
Address: New Mexico Oil Conservation Division			15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☐ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody		
City, State Zip: Santa Fe, New Mexico 87504-2088					
16 Field Data: pH: 12 , Conductivity: 5400 umhos @ 13.5 °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____					
17 Sample Source: ☐ -Stream ☒ -Well; Depth: _____ ☐ -Lake ☐ -Spring ☐ -Drain ☐ -Distribution ☐ -Pool ☐ -Point-of-Entry ☐ -WWTP ☐ -Other: _____			18 Field Notes/ Sample #: 9105021530		
19 Sample Type: ☒ -Water, ☐ -Soil, ☐ -Food, ☐ -Wastewater, ☐ -Other This form accompanies a <u>single sample</u> consisting of: _____ - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)			20 Preservation: ☐ -WNF Water Not Preserved; Filtered ☒ -WNN Water Not Preserved; Not Filtered ☐ -WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered ☐ -WPN Water Preserved with Sulfuric Acid; Not Filtered ☐ -WNL Water Not Preserved in Field; Please Add H2SO4 at Lab ☒ -ICE Water iced ☐ -Other _____		
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.					
Group Analyses: ☐ (854) SDWA Group II (Nitrate as N) ☐ (861) SDWA Group III (Fluoride) ☐ (860) SDWA Complete Secondary ☐ (859) SWQB SS Anion - Cation Group + ☐ (868) SWQB NPS Anion, Cation, Physical + TSS ☐ (869) SWQB Nutrient Analysis Group + ☒ (867) Major Anions & Cations					
Cations: ☐ - Calcium (as Ca) _____ ☐ - Magnesium (as Mg) _____ ☐ - Potassium (as K) _____ ☐ - Sodium (as Na) _____ ☐ - Total Hardness (as CaCO3) _____ Anions: ☐ - Alkalinity (as CaCO3) _____ ☐ - Bicarbonate (as HCO3) _____ ☐ - Carbonate (as CO3) _____ ☐ - Chloride (as Cl) _____ ☐ - Fluoride (as F) _____ ☐ - Sulfate (as SO4) _____ ☒ - Ion Charge Balance _____		Physical Parameters: ☐ - Color _____ ☐ - Conductance (Micromhos @ 25 °C) _____ ☐ - Odor _____ ☐ - pH _____ ☐ - Surfactants _____ ☐ - Total Dissolved Solids _____ ☐ - Turbidity _____ Other: ☐ _____ ☐ _____ ☐ _____		Surface and Waste Water: ☐ - Biological Oxygen Demand _____ ☐ - Total Suspended Solids _____ ☐ - Chemical Oxygen Demand _____ ☐ - Total Organic Carbon _____ ☐ - Cyanide _____ Nutrients: ☐ - Nitrate + Nitrite (as N) _____ ☐ - Ammonia (as N) _____ ☐ - Total Kjeldahl (as N) _____ ☐ - Nitrite (as N) _____ ☐ - Orthophosphate (as P) _____ ☐ - Total Phosphorus (as P) _____	
Remarks: 					

AIR & HEAVY METALS ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Air & Heavy Metals Section - Telephone: (505) 841-2553

SLD No. 1

Date Received: _____

2 User Code #: <u>710131210</u>		3 Request ID No.: _____		Request ID No. 012078-B		4 Priority Code #: <u>3</u> (If "1" or "2", call EIO-SLD Coordinator)	
5 Facility Name: <u>Giant Ciniza Refinery</u>				6 County: <u>McKinley</u>		7 City: <u>Gallup</u>	
8 State: <u>NM</u>							
9 Sample Location: <u>0 W-20</u>							
10 Collected By: <u>Kathy Birnbaum</u>		On: <u>91/05/02</u>		At: <u>1530</u> hrs.		Time: 24 hr. clock 3:00 pm = 1500 hrs.	
11 Codes: _____		12 Latitude (DDMMSS) _____		Longitude (DDMMSS) _____		2 Digit ID (if needed) _____	
13 Report To: <u>David G. Boyer</u>		14 Phone #: <u>(505) 827-5812</u>		15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody			
Address: <u>New Mexico Oil Conservation Division</u> <u>P. O. Box 2088</u> <u>Santa Fe, New Mexico 87504-2088</u>							
16 Field Data: pH: <u>12</u> , Conductivity: <u>5400</u> umhos @ <u>13.5</u> °C, Temperature: _____°C, Chlorine Residual: _____ mg/l, Flow: _____							
17 Sample Source: ☐ Stream ☒ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☐ Other: _____				18 Field Notes/ Sample #: <u>9105021530</u>			
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other _____ This form accompanies a <u>single sample</u> consisting of: <u>1</u> - 1 liter cubitainers (1 quart) _____ - 4 liter cubitainers (1 gallon)				20 Preservation: ☐ WNF Water Not Preserved; Filtered ☒ WNN Water Not Preserved; Not Filtered ☐ WPF Water Preserved with Nitric Acid (HNO3); Filtered ☐ WPN Water Preserved with Nitric Acid; Not Filtered ☒ WNL Water Not Preserved in Field; Please Add HNO3 at Lab ☒ ICE Water Iced ☐ Other _____			

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

- | | |
|--|---|
| ☒ - (704) ICAP Scan | ☐ - (721) SDWA Group I + other parameter(s) marked below |
| ☐ - (720) SDWA Group I Only | |
| ☐ - Aluminum
☐ - Arsenic
☐ - Barium
☐ - Cadmium
☐ - Chromium
☐ - Cobalt
☐ - Copper
☐ - Iron | ☐ - Lead
☐ - Manganese
☐ - Mercury
☐ - Molybdenum
☐ - Nickel
☐ - Selenium
☐ - Silver
☐ - Uranium |
| | ☐ - Vanadium
☐ - Zinc
☐ - _____
☐ - _____
☐ - _____
☐ - _____
☐ - _____
☐ - _____ |

Remarks:

ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106
Organic Chemistry Section - Telephone: (505) 841-257

SLD No. 1Date
Received:

2 User Code #: <u>7103210</u>		3 Request ID No.: <u>012079-C</u>		4 Priority Code #: <u>3</u>		[If "1" or "2", call EIO-SLD Coordinator]	
5 Facility Name: <u>Giant Ciniza Refinery</u>		6 County: <u>McKinley</u>		7 City: <u>Gallup</u>		8 State: <u>NM</u>	
9 Sample Location: <u>OW-20</u>							
10 Collected By: <u>Kathy B. Brown</u>		On: <u>9/1/05</u>		At: <u>1530</u> hrs.		Time: 24 hr clock 3:00 pm = 1500 hrs.	
11 Codes: Submitter _____ WSS # _____ Organization _____		12 Latitude (DDMMSS) _____ Longitude (DDMMSS) _____ 2 Digit ID (if needed) _____					
13 Report To: <u>David G. Boyer</u>		14 Phone #: <u>(505) 827-5812</u>		15 Sampling Information: Sample Purpose: ☒ Grab ☐ Composite (Composite Time Period) ☐ Compliance ☐ Flow Proportioned ☐ Check ☐ Equal Aliquot ☒ Monitoring ☒ Sample Split w/Permittee ☐ Special ☐ Chain of Custody			
Address: <u>New Mexico Oil Conservation Division</u> <u>P. O. Box 2088</u> City, State Zip: <u>Santa Fe, New Mexico 87504-2088</u>							
16 Field Data: pH: <u>12.0</u> , Conductivity: <u>15400</u> umhos @ <u>13.5</u> C, Temperature: _____ C, Chlorine Residual: _____ mg/l, Flow: _____							
17 Sample Source: ☐ Stream ☒ Well; Depth: _____ ☐ Lake ☐ Spring ☐ Drain ☐ Distribution ☐ Pool ☐ Point-of-Entry ☐ WWTP ☐ Other: _____				18 Field Notes/ Sample #: <u>9105021530</u>			
19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other This form accompanies a <u>single sample</u> consisting of: <u>2</u> - septum vial(s) (volume = <u>40</u>) _____ - glass jugs (volume = _____) _____ (volume = _____)				20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☒ Other <u>HSC1</u>			
21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required.							
Volatile Screens: ☐ (753) Aliphatic Headspace (1-5 Carbons) ☒ (754) Aromatic & Halogenated Purgeables (EPA 601 & 602) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☐ (774) SDWA VOC's I [8 Regulated +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504) Other Specific Compounds or Classes: ☐ - () _____ ☐ - () _____ ☐ - () _____				Semivolatile Screens: ☐ (763) Acid Extractables ☐ (751) Aliphatic Hydrocarbons ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (758) Herbicides, Chlorophenoxy Acid ☐ (759) Herbicides, Triazines ☐ (760) Organochlorine Pesticides ☐ (761) Organophosphate Pesticides ☐ (767) Polychlorinated Biphenyls (PCB's) ☐ (764) Polynuclear Aromatic Hydrocarbons ☐ (762) SDWA Pesticides & Herbicides			
Remarks: _____ _____ _____ _____							

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 007173**ANALYTICAL REPORT**
SLD Accession No. IC-91-0306Distribution☐ User 70320☒ Submitter 260☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	OW-12
At: 13:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	2.00	Cobalt	< 0.05	Nickel	< 0.10
Barium	0.20	Copper	< 0.10	Silicon	1.50
Beryllium	< 0.10	Iron	1.00	Silver	< 0.10
Boron	0.40	Lead	< 0.10	Strontium	0.50
Cadmium	< 0.10	Magnesium	0.50	Tin	< 0.10
Calcium	23.00	Manganese	< 0.05	Vanadium	< 0.10
Chromium	< 0.10	Molybdenum	< 0.10	Zinc	< 0.10

Laboratory Remarks: Digested. Acidified at SLD.

Reviewed By:

Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals SectionTS 6 WU 8 804 16.
REC'D
OIL CONSERVATION DIVISION

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 007175**ANALYTICAL REPORT**
SLD Accession No. IC-91-0308Distribution☐ User 70320☒ Submitter 260☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	OW-13
At: 14:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	3.20	Cobalt	< 0.05	Nickel	< 0.10
Barium	< 0.10	Copper	< 0.10	Silicon	0.70
Beryllium	< 0.10	Iron	1.50	Silver	< 0.10
Boron	0.30	Lead	< 0.10	Strontium	1.00
Cadmium	< 0.10	Magnesium	2.10	Tin	< 0.10
Calcium	11.00	Manganese	0.06	Vanadium	< 0.10
Chromium	< 0.10	Molybdenum	< 0.10	Zinc	< 0.10

Laboratory Remarks: Digested. Acidified at SLD.

Reviewed By:

Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals SectionTS 6 001 6 001 16.
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OIL CONSERV

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 004357**ANALYTICAL REPORT**
SLD Accession No. IC-91-0302Distribution☐ User 70320
☒ Submitter 260
☒ SLD Files

To: David Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

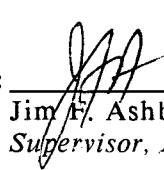
Re: A sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	Travel Center Discharge
At: 11:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	2.50	Cobalt	< 0.05	Nickel	< 0.10
Barium	< 0.10	Copper	< 0.10	Silicon	0.50
Beryllium	< 0.10	Iron	1.30	Silver	< 0.10
Boron	0.40	Lead	< 0.10	Strontium	0.20
Cadmium	< 0.10	Magnesium	23.00	Tin	< 0.10
Calcium	13.00	Manganese	0.08	Vanadium	< 0.10
Chromium	< 0.10	Molybdenum	< 0.10	Zinc	0.20

Laboratory Remarks: Digested. Acidified at SLD.Reviewed By: Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals SectionIS 6-00 8-08 16
RECEIVED
OIL CONSERVATION DIVISION

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 012078**ANALYTICAL REPORT**
SLD Accession No. IC-91-0303Distribution

() User 70320

() Submitter 260

(X) SLD Files

To: David Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	OW-20
At: 15:30 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	2.10	Cobalt	< 0.05	Nickel	< 0.10
Barium	0.80	Copper	< 0.10	Silicon	0.50
Beryllium	< 0.10	Iron	1.10	Silver	< 0.10
Boron	< 0.10	Lead	< 0.10	Strontium	3.30
Cadmium	< 0.10	Magnesium	0.50	Tin	< 0.10
Calcium	210.00	Manganese	< 0.05	Vanadium	< 0.10
Chromium	0.10	Molybdenum	< 0.10	Zinc	< 0.10

Laboratory Remarks: Digested. Acidified at SLD.

Reviewed By:

Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals Section

191 AUG 9 1991

REC'D
OIL CONSERVATION DIVISION

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 012075**ANALYTICAL REPORT**
SLD Accession No. IC-91-0304Distribution☐ User 70320
☒ Submitter 260
☒ SLD Files

To: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

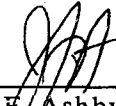
Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	Rail Road Lagoon
At: 15:05 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	0.70	Cobalt	< 0.05	Nickel	< 0.10
Barium	0.20	Copper	< 0.10	Silicon	0.40
Beryllium	< 0.10	Iron	1.00	Silver	< 0.10
Boron	0.10	Lead	< 0.10	Strontium	0.50
Cadmium	< 0.10	Magnesium	6.00	Tin	< 0.10
Calcium	51.00	Manganese	0.71	Vanadium	< 0.10
Chromium	< 0.10	Molybdenum	< 0.10	Zinc	0.10

Laboratory Remarks: Digested. Acidified at SLD.Reviewed By: Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals SectionTS 6 UN 6 MAY 16.
REC'D
NOISIAID N CONSERV DIVISION

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

July 19, 1991

Request
ID No. 012077**ANALYTICAL REPORT**
SLD Accession No. WC-91-1048Distribution☐ User 70320
☒ Submitter 905
☒ SLD FilesTo: David G. Boyer
New Mexico Oil Conservation Div.
P.O. 2088
Santa Fe, New Mexico 87504-2088From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 2-May-91 By: Bro ...	OW-20
At: 15:30 hrs. In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	204.90		mG/L
magnesium	0.05		mG/L
potassium	22.00		mG/L
sodium	333.00		mG/L
hardness	511.90		mG/L
alkalinity	1144.00		mG/L
bicarbonate	61.50		mG/L
carbonate	1311.00		mG/L
chloride	50.20		mG/L
sulfate	9.50		mG/L
Ion Balance	103.00		%
pH	11.70		pH units
total diss resid	1238.00		mG/L

Reviewed By: John A. Finney 07/16/91
Supervisor, Water Chemistry Section

05 8 AM 2 50 16.

OIL CONSERVATION DIVISION
REC'D

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

WATER CHEMISTRY SECTION [505]-841-2555

July 19, 1991

Request
ID No. 007171**ANALYTICAL REPORT**
SLD Accession No. WC-91-1052Distribution☐ User 70320☒ Submitter 905☒ SLD FilesTo: David G. Boyer
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 2-May-91 By: Bro ...	OW-12
At: 13:30 hrs. In/Near: Gallup	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	0.58		mG/L
magnesium	0.04		mG/L
potassium	5.00		mG/L
sodium	274.00		mG/L
hardness	1.55		mG/L
alkalinity	435.00		mG/L
bicarbonate	171.00		mG/L
carbonate	354.00		mG/L
chloride	12.80		mG/L
sulfate	159.00		mG/L
Ion Balance	98.00		%
pH	11.13		pH units
total diss resid	750.00		mG/L

Reviewed By: John A. Finney 07/16/91
Supervisor, Water Chemistry SectionOS 8 11 2 16 16.
RECEIVED
OIL CONSERVATION DIVISION

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 007170**ANALYTICAL REPORT**
SLD Accession No. IC-91-0307Distribution☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro . . .	Aeration Lagoon #2 Discharge
At: 11:20 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	1.00	Copper	< 0.10	Silver	< 0.10
Barium	< 0.10	Iron	4.00	Strontium	2.10
Beryllium	< 0.10	Lead	< 0.10	Tin	< 0.10
Boron	0.30	Magnesium	38.00	Vanadium	< 0.10
Cadmium	< 0.10	Manganese	0.12	Zinc	0.60
Calcium	140.00	Molybdenum	< 0.10	Arsenic	0.0480
Chromium	< 0.10	Nickel	< 0.10	Mercury	0.0011
Cobalt	< 0.05	Silicon	0.30	Selenium	0.0060

Laboratory Remarks: Digested. Acidified at SLD.

Arsenic and Selenium are being reanalyzed to verify the results. If values change significantly, a revised report will be submitted.

Reviewed By: Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals Section

15 6 00 8 00 16.

OIL CONSERVATION DIVISION
RECEIVED

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700700 Camino de Salud, NE
[505]-841-2500

AIR & HEAVY METALS SECTION [505]-841-2553

August 8, 1991

Request
ID No. 007178ANALYTICAL REPORT
SLD Accession No. IC-91-0305Distribution☐ User 70320
☒ Submitter 260
☒ SLD FilesTo: David Boyer
NM Oil Conserv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088From: Air & Heavy Metals Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: A water, Nonpres/No sample submitted to this laboratory on May 3, 1991

DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 2-May-91	By: Bro ...	OW-14
At: 15:00 hrs.	In/Near: Gallup	

ANALYTICAL RESULTS in mg/L

Analysis	Value	Analysis	Value	Analysis	Value
Aluminum	9.50	Copper	< 0.10	Silver	< 0.10
Barium	0.20	Iron	4.60	Strontium	1.50
Beryllium	< 0.10	Lead	< 0.10	Tin	< 0.10
Boron	0.40	Magnesium	11.00	Vanadium	< 0.10
Cadmium	< 0.10	Manganese	0.86	Zinc	< 0.10
Calcium	38.00	Molybdenum	< 0.10	Arsenic	< 0.0050
Chromium	< 0.10	Nickel	< 0.10	Cadmium	< 0.0010
Cobalt	< 0.05	Silicon	0.40	Lead	0.0110

Laboratory Remarks: Digested. Acidified at SLD.

Reviewed By:

Jim F. Ashby 08/08/91
Supervisor, Air & Heavy Metals SectionTS 6 W 8 800 TO
RECEIVED
OIL CONSERVATION DIVISION



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

Case Narrative

On July 18, 1991 a sample set consisting of four samples was received by Inter-Mountain Laboratories - Farmington, NM. Enclosed is a copy of the chain of custody indicating the analytical parameters for which analysis was requested.

It is the policy of this laboratory to employ, whenever possible, analytical methods which have been approved by regulatory agencies. The methods which we use are referenced in SW-846, "Test Methods for Evaluating Solid Waste", USEPA, 1986; "Chemical Analysis of Water and Waste", USEPA, 1978; and other references as applicable. All reports in this package have the analytical methods and the references footnoted.

Quality Assurance reports have been included in this package. These reports can be identified by the title of the report.

Please feel free to call if you have any questions.

A handwritten signature in cursive script that reads 'Tony Tristano'.

Tony Tristano
Senior Analytical Chemist

CASE NARRATIVE

On 16 July, 1991, four water samples were received by Inter-Mountain Laboratories - College Station, Texas. The samples were identified as "Farmington". Analysis was performed for parameters from Methods 8010 and 8020 for one of the samples and Methods 601 and 602 for three of the samples as specified by the Chain of Custody forms accompanying the sample.

It is the policy of this laboratory to employ, whenever possible, analytical methods which have been approved by regulatory agencies. Extraction and analysis protocols are taken from "Test Methods for Evaluating Solid Waste", SW-846, USEPA, 1986, and "Chemical Analysis of Water and Waste", USEPA, 1978, and other appropriate references. All reports in this package indicate the analytical methods utilized and any observations made during the procedures.

Hewlett-Packard Gas Chromatographs were used for the analyses to determine the volatile. Results of the analyses indicated the presence of target compounds in samples "9107151155" and "9107171020".

Quality Control reports are included in the package for your use and can be identified by report title notation.


Ulonda M. Rogers
Project Manager

OCD3447

QUALITY CONTROL REPORT - METHOD BLANK
Method 601 - PURGEABLE HALOCARBONSSample Number: MB072691V1
Sample Matrix: Water

Date Analyzed: 07/26/91

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Bromodichloromethane	ND	1.0
Bromoform	ND	1.0
Bromomethane	ND	1.0
Carbon tetrachloride	ND	1.0
Chlorobenzene	ND	1.0
Chloroethane	ND	1.0
2-Chloroethylvinyl ether	ND	1.0
Chloroform	ND	1.0
Chloromethane	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
Dichlorodifluoromethane	ND	1.0
1,1-Dichloroethane	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Methylene Chloride	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Tetrachloroethene	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Trichloroethene	ND	1.0
Trichlorofluoromethane	ND	1.0
Vinyl chloride	ND	1.0

ND - Analyte not detected at stated detection limit.

QUALITY CONTROL REPORT - METHOD BLANK
Method 601 - PURGEABLE HALOCARBONS
Page 2

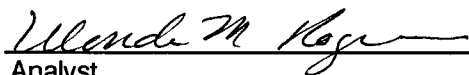
Sample Number: MB072691V1
Sample Matrix: Water

Date Analyzed: 07/26/91

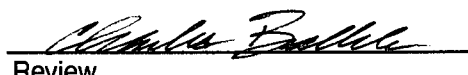
Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	101%	85-110%
	4-Bromofluorobenzene	88.2%	80-105%

Reference: Method 601 - Purgeable Halocarbons
Code of Federal Regulations, 40 CFR Part 136, USEPA, October 1984

Comments:



Analyst



Review

QUALITY CONTROL REPORT - METHOD BLANK
Method 602 - PURGEABLE AROMATICSSample Number: MB072691V1
Sample Matrix: Water

Date Analyzed: 7/26/91

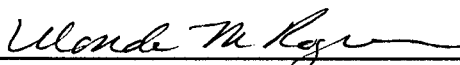
Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Chlorobenzene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.2

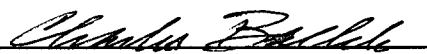
ND - Analyte not detected at stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	100.6%	85-110%
	4-Bromofluorobenzene	88.2%	80-105%

Reference: Method 602 - Purgeable Aromatics
Code of Federal Regulations, 40 CFR Part 136, USEPA, October 1984

Comments:


Analyst


Review