AP - 001

ANNUAL MONITORING REPORT

YEAR(S):
1994

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4709 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

May 26, 1994

Request ID No. 014374

ANALYTICAL REPORT
SLD Accession No. WC-94-1188

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

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

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Nonpres/No sampl. submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Cis . . .	MW-9[illegible]5
At: 10:40 hrs.	*In/Near:* Sunland Park	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	2[illegible].00		mG/L
magnesium	107.00		mG/L
potassium	[illegible].00		mG/L
sodium	1440.00		mG/L
bicarbonate	712.00		mG/L
carbonate	0.00		mG/L
chloride	1199.00		mG/L
fluoride	0.80		mG/L
sulfate	2102.00		mG/L
Ion Balance	96.20		%
total diss resid	5730.00		mG/L

Reviewed By: _____
C. Rachael Howell 05/18/94
Analyst, Water Chemistry Section

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
AIR & HEAVY METALS SECTION [505]-841-2553

May 11, 1994

Request ID No. 014373

ANALYTICAL REPORT
SLD Accession No. IC-94-0046

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: R. Anderson
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 water,Nonpres/No sample submitted to this laboratory on March 28, 1994**

User:
NM Energy & Min - Oil Conserv.
, NM

DEMOGRAPHIC DATA

COLLECTION
On: 25-Mar-94 *By:* Ols . . .
At: 10:40 hrs. *In/Near:* Sunland Park

LOCATION
MW-95

ANALYTICAL RESULTS in mG/L

Analysis		Value	Analysis		Value	Analysis		Value
Aluminum		1.80	Copper	<	0.10	Silver	<	0.10
Barium	<	0.10	Iron		13.00	Strontium		5.70
Beryllium	<	0.10	Lead	<	0.10	Tin	<	0.10
Boron		1.10	Magnesium		110.00	Vanadium	<	0.10
Cadmium	<	0.10	Manganese		3.90	Zinc	<	0.10
Calcium		350.00	Molybdenum	<	0.10	Mercury	<	0.0005
Chromium	<	0.10	Nickel	<	0.10	Selenium	<	0.0050
Cobalt	<	0.05	Silicon		0.80			

Laboratory Remarks:

ICP by method 200.7 on 4/29/94 by RAH.
Mercury by method 245.1 on 4/13/94 by SD.
Selenium by method 270.2 on 4/8/94 by RAH.

Reviewed By: _____
Jim F. Ashby 05/11/94
Supervisor, Air & Heavy Metals Section

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 0 3 2 0

3 Request ID No.: (Place Form ID Sticker Here)

4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Brickland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-95

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1040 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter _____ WSS # _____ Organization _____

12 Latitude (DDMMSS) _____ " Longitude (DDDMMSS) _____ " 2 Digit ID (if needed) _____

13 Report To: Name: Roger Anderson

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
- [ ] Check
- [x] Monitoring
- [ ] Special

- [x] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [x] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.1, Conductivity: 634 umhos @ 65.2 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [x] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/Sample #: Monitor Well MW-95

19 Sample Type: [x] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____

This form accompanies a **single sample** consisting of:
1 - 1 liter cubitainers (1 quart)
_____ - 4 liter cubitainers (1 gallon)
_____ - _____

20 Preservation:
- [ ] WNF Water Not Preserved; Filtered
- [x] WNN Water Not Preserved; Not Filtered
- [ ] WPF Water Preserved with Nitric Acid (HNO3); Filtered
- [ ] WPN Water Preserved with Nitric Acid; Not Filtered
- [x] WNL Water Not Preserved in Field; Please Add HNO3 at Lab
- [x] ICE Water Iced
- [ ] Other _____

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

- [x] (704) ICAP Scan
- [ ] (720) SDWA Group I Only
- [ ] (721) SDWA Group I + other parameter(s) marked below

[ ] Aluminum	[ ] Lead	[ ] Vanadium
[ ] Arsenic	[ ] Manganese	[ ] Zinc
[ ] Barium	[x] Mercury	[ ] _____
[ ] Cadmium	[ ] Molybdenum	[ ] _____
[ ] Chromium	[ ] Nickel	[ ] _____
[ ] Cobalt	[x] Selenium	[ ] _____
[ ] Copper	[ ] Silver	[ ] _____
[ ] Iron	[ ] Uranium	[ ] _____

Remarks:

SLD 8912-HM Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

OIL CONSERVATION DIVISION
RECEIVED
'94 JUL 5 AM 8 50

May 23, 1994

Request
ID No. 028742

ANALYTICAL REPORT
SLD Accession No. OR-94-0915

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: Roger Anderson
NM Oil Consv. 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, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Purgeable sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . . .	MW-11
At: 12:45 hrs.	*In/Near:* Sunland Park	

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

Parameter	Value	Note	PQL	Units
Benzene	127.00		10.00	ppb
Toluene	2.40	T	10.00	ppb
Ethylbenzene	1.90	T	10.00	ppb
p- & m-Xylene	8.40	T	10.00	ppb
o-Xylene	3.00	T	10.00	ppb
Isopropylbenzene	15.30		10.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

PQL = Practical Quantitation 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 [X]; Intact: No [ ], Yes [ ] & Broken By: _____ Date: _____

Laboratory Remarks:

Foamy sample; unable to achieve a lower detection limit.

Reported compound identities were confirmed by GC/MS.

Compound	Note	Value	PQL (ppb)
n-Propylbenze		29	10
1,2,4-Trimethylbenzene	T	3.2	10
sec-Butylbenzene	T	6.9	10
n-Butylbenzene	T	6.3	10
Naphthlene		23.7	10
Methylene chloride		10.9	10
1,2-Dichloroethane	T	2.7	10

(Continued on page 2.)

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-94-915
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 127
Level: (low/med) Low Date Received: 3/28/94
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 4/05/94
GPC Cleanup: (Y/N) No pH: Dilution Factor: 10
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.	Q	PQL
67-64-1	Acetone		U	50.0
71-43-2	Benzene	127		10.0
108-86-1	Bromobenzene		U	10.0
74-97-5	Bromochloromethane		U	10.0
75-27-4	Bromodichloromethane		U	10.0
75-25-2	Bromoform		U	10.0
78-93-3	2-Butanone (MEK)		U	50.0
104-51-8	n-Butylbenzene	6.3	J	10.0
135-98-8	sec-Butylbenzene	6.9	J	10.0
98-06-6	tert-Butylbenzene		U	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	50.0
56-23-5	Carbon tetrachloride		U	10.0
108-90-7	Chlorobenzene		U	10.0
67-66-3	Chloroform		U	10.0
95-49-8	2-Chlorotoluene		U	10.0
106-43-4	4-Chlorotoluene		U	10.0
96-12-8	1,2-Dibromo-3-chloropropane		U	10.0
124-48-1	Dibromochloromethane		U	10.0
106-93-4	1,2-Dibromoethane		U	10.0
74-95-3	Dibromomethane		U	10.0
95-50-1	1,2-Dichlorobenzene		U	10.0
541-73-1	1,3-Dichlorobenzene		U	10.0
106-46-7	1,4-Dichlorobenzene		U	10.0
75-71-8	Dichlorodifluoromethane		U	10.0
75-34-3	1,1-Dichloroethane		U	10.0
107-06-2	1,2-Dichloroethane	2.7	J	10.0

(Continued on page 3.)

75-35-4	1,1-Dichloroethene		U	10.0
156-59-4	cis-1,2-Dichloroethene		U	10.0
156-60-5	trans-1,2-Dichloroethene		U	10.0
78-87-5	1,2-Dichloropropane		U	10.0
142-28-9	1,3-Dichloropropane		U	10.0
590-20-7	2,2-Dichloropropane		U	10.0
563-58-6	1,1-Dichloropropene		U	10.0
1006-01-5	cis-1,3-Dichloropropene		U	10.0
1006-02-6	trans-1,3-Dichloropropene		U	10.0
100-41-4	Ethylbenzene	1.9	J	10.0
87-68-3	Hexachlorobutadiene		U	10.0
98-82-8	Isopropylbenzene	15.3		10.0
99-87-6	4-Isopropyltoluene		U	10.0
75-09-2	Methylene chloride	10.9		10.0
90-12-0	1-Methylnaphthalene		U	10.0
91-57-6	2-Methylnaphthalene		U	10.0
91-20-3	Naphthalene		U	10.0
103-65-1	n-Propylbenzene	29		10.0
100-42-5	Styrene		U	10.0
630-20-6	1,1,1,2-Tetrachloroethane		U	10.0
79-34-5	1,1,2,2-Tetrachloroethane		U	10.0
127-18-4	Tetrachloroethene		U	10.0
109-99-9	Tetrahydrofuran (THF)		U	50.0
108-88-3	Toluene	2.4	J	10.0
87-61-5	1,2,3-Trichlorobenzene		U	10.0
120-82-1	1,2,4-Trichlorobenzene		U	10.0
71-55-6	1,1,1-Trichloroethane		U	10.0
79-00-5	1,1,2-Trichloroethane		U	10.0
79-01-6	Trichloroethene		U	10.0
75-69-4	Trichlorofluoromethane		U	10.0
96-18-4	1,2,3-Trichloropropane		U	10.0
95-63-6	1,2,4-Trimethylbenzene	3.2	J	10.0
108-67-8	1,3,5-Trimethylbenzene		U	10.0
75-01-4	Vinyl chloride		U	10.0
95-47-6	o-Xylene	3	J	10.0
N/A	p- & m-Xylene	8.4	J	10.0
N/A	Total Xylenes	11.4	J	20.0

* CONC = CONCENTRAION DETERMINED
  PQL = Practical Quantitation Limit (Approximately 10 times MDL)
* Q = Qualifier Definitions:

(Continued on page 4.)

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.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene	25.0 ppb	95.6
2-Bromo-1-chloropropane	25.0 ppb	90.8

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
No exceptions	. ppb	.

Analyst: Patrick Basile
Patrick F. Basile
Analyst, Organic Chemistry

Reviewed By: R. Sherl
Richard F. Meyerhein 05/04/94
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. OR94 0915 C

Request ID No. 028742-C

Date Received: 3-28-94

2 User Code #: 70320

3 Request ID No.:

4 Priority Code #: (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Brickland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-11

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1245 hrs. (Time: 24 hr. clock 1:00 pm = 1300 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (If needed)

13 Report To: Name: Roger Anderson

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
- [ ] Check
- [X] Monitoring
- [ ] Special

- [X] Grab
- [ ] Composite (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.62, Conductivity: 472 umhos @ 71.1 °F, Temperature: ____ °C, Chlorine Residual: ____ mg/l, Flow: ____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [X] Well; Depth: ____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: ____

18 Field Notes/ Sample #: Monitor Well - MW-11

19 Sample Type: [X] 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
- [X] 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)
- [X] Other — H_2O_2

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)
- [X] (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:

SLD 8912-OR Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700 **700 Camino de Salud, NE**
Albuquerque, NM 87196-4700 **[505]-841-2500**
WATER CHEMISTRY SECTION [505]-841-2555

May 26, 1994

Request ID No. 028744

ANALYTICAL REPORT
SLD Accession No. WC-94-1191

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

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

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Nonpres/No sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . .	MW-11
At: 12:45 hrs.	*In/Near:* Sunland Park	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	50.00		mG/L
magnesium	60.00		mG/L
potassium	15.00		mG/L
sodium	1120.00		mG/L
bicarbonate	1756.00		mG/L
carbonate	0.00		mG/L
chloride	363.00		mG/L
fluoride	2.80		mG/L
sulfate	3.80		mG/L
Ion Balance	106.00		%
total diss resid	3798.00		mG/L

Reviewed By: _____
C. Rachael Howell 05/18/94
Analyst, Water Chemistry Section

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 #: 7 0 3 2 0 | 3 Request ID No.: (Place Form ID Sticker Here) | 4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Bridgeland Refinery | 6 County: Dona Ana | 7 City: Sunland Park | 8 State: NM

9 Sample Location: MW-11

10 Collected By: William Olivas (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1245 hrs. (Time: 24 hr. clock, 3:00 pm = 1500 hrs.)

11 Codes: Submitter | WSS # | Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (if needed)

13 Report To: Name: Roger AAderson
14 Phone #: (505) 827-5812
Address: New Mexico Oil Conservation Division
P. O. 2088
City, State Zip: Santa Fe, New Mexico 87504-2088

15 Sampling Information:
Sample Purpose:
- [ ] Compliance
- [ ] Check
- [X] Monitoring
- [ ] Special

- [X] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.62, Conductivity: 472 umhos @ 71.1 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [X] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #: Monitor Well MW-11

19 Sample Type: [X] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____
This form accompanies a single sample consisting of:
1 - 1 liter cubitainers (1 quart)
_____ - 4 liter cubitainers (1 gallon)
_____ - _____

20 Preservation:
- [ ] WNF Water Not Preserved; Filtered
- [X] 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
- [X] 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 +
- [X] (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) _____
- [X] 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:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
AIR & HEAVY METALS SECTION [505]-841-2553

August 12, 1994

Request ID No. 028743

ANALYTICAL REPORT
SLD Accession No. IC-94-0049

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: R. Anderson
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, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A wat not preserved sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . . .	MW-11
At: 12:45 hrs.	*In/Near:* Sunland Park	

ANALYTICAL RESULTS in mG/L

Analysis		Value	Analysis		Value	Analysis		Value
Aluminum		12.00	Copper	<	0.10	Silver	<	0.10
Barium		1.30	Iron		15.00	Strontium		3.20
Beryllium	<	0.10	Lead	<	0.10	Tin	<	0.10
Boron		1.40	Magnesium		72.00	Vanadium	<	0.10
Cadmium	<	0.10	Manganese		0.89	Zinc	<	0.10
Calcium		120.00	Molybdenum	<	0.10	Mercury	<	0.0005
Chromium	<	0.10	Nickel	<	0.10	Selenium	<	0.0050
Cobalt	<	0.05	Silicon		10.00			

Laboratory Remarks: Acidified and Digested at SLD
ICP by method 200.7 on 7/27/94 by RAH.
Mercury by method 245.1 on 4/13/94 by SD.
Selenium by method 270.1 on 4/8/94 by RAH.

Reviewed By: _____
Jim F. Ashby 08/11/94
Supervisor, Air & Heavy Metals Section

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

1 SLD No.

Date Received:

2 User Code #: 7 0 3 2 1 0

3 Request ID No.: Place Form ID Sticker Here

4 Priority Code #: 3 ["1" or "2", call EID-SLD Coordinator]

5 Facility Name: Bridland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-11

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 12:45 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) " Longitude (DDDMMSS) " 2 Digit ID (if needed)

13 Report To: Roger Anderson

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 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [X] Monitoring
- [ ] Special

Sampling Information:
- [X] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.62, Conductivity: 472 umhos @ 71.1 °F Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [X] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #: Monitor Well MW-11

19 Sample Type: [X] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____
This form accompanies a single sample consisting of:
X - 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
- [X] WNL Water Not Preserved in Field; Please Add HNO3 at Lab
- [X] ICE Water Iced
- [ ] Other _____

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

- [X] (704) ICAP Scan
- [ ] (720) SDWA Group I Only
- [ ] (721) SDWA Group I + other parameter(s) marked below

[ ] Aluminum	[ ] Lead	[ ] Vanadium
[ ] Arsenic	[ ] Manganese	[ ] Zinc
[ ] Barium	[X] Mercury	[ ] _____
[ ] Cadmium	[ ] Molybdenum	[ ] _____
[ ] Chromium	[ ] Nickel	[ ] _____
[ ] Cobalt	[X] Selenium	[ ] _____
[ ] Copper	[ ] Silver	[ ] _____
[ ] Iron	[ ] Uranium	[ ] _____

Remarks:

SLD 8912-HM Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

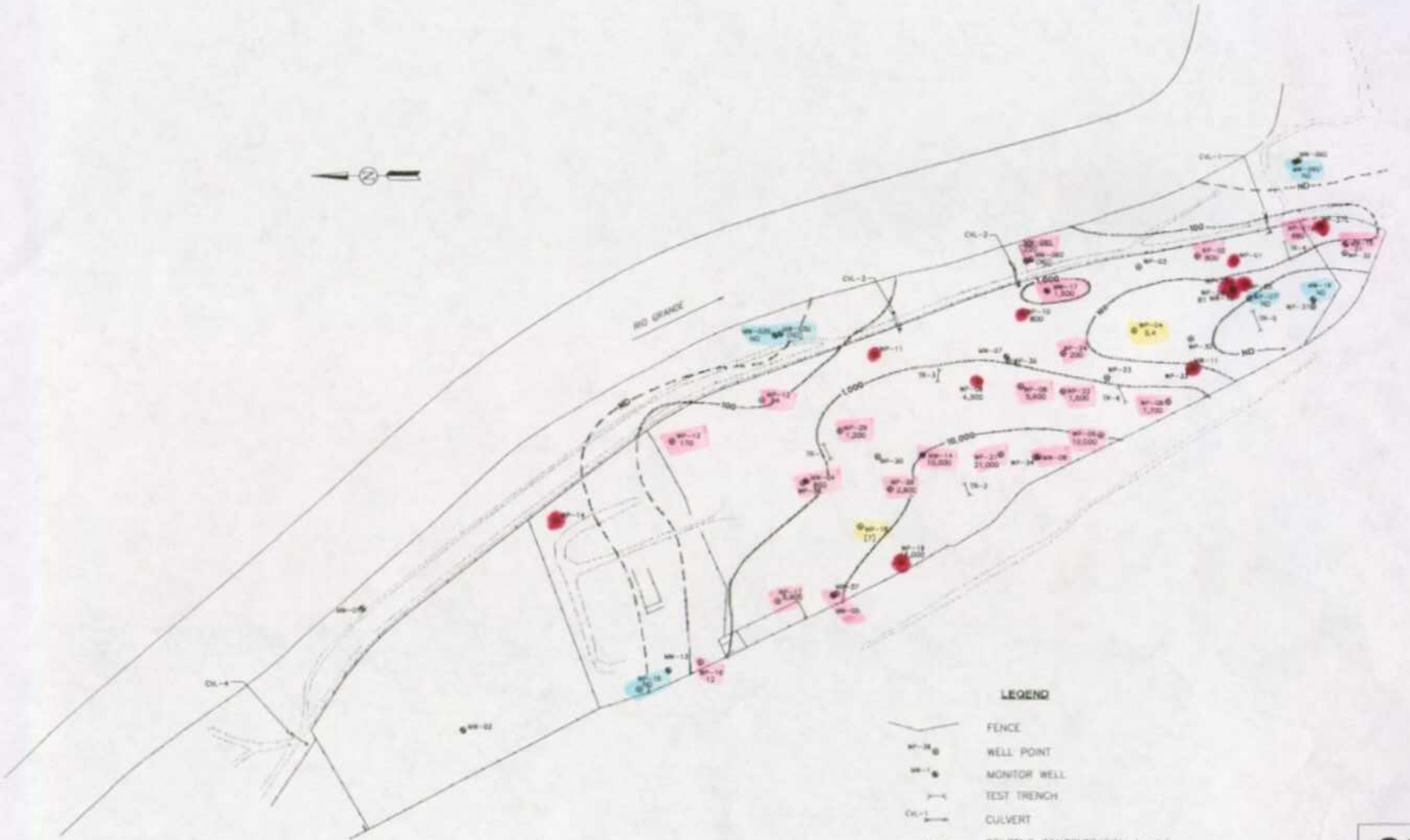

FIGURE 8
BENZENE CONCENTRATION CONTOUR MAP IN 4TH QUARTER (JUNE 1996)
GIBSON REFINERY SITE

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

LABORATORY SAMPLE RECORD

PROJ. NO.	PROJECT NAME: Bridgeland Refinery		NO. OF CONTAINERS	601/602	TCLP Metals	Cations/Anions	REMARKS
SAMPLERS: (Signature) Olson							
DATE	TIME	STATION LOCATION					
940325	1040	Monitor Well MW-9S	4	X	X	X	
"	1130	" MW-6S	4	X	X	X	
"	1200	" MW-3S	4	X	X	X	
"	1245	" MW-11	4	X	X	X	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	
Will Olson	3/28/94 1207	James Montano	SEALS INTACT ☐ YES ☐ NO : (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time / Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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 0 1 3 2 0

3 Request ID No.: Place Form ID Sticker Here

4 Priority Code #: 3 ["1" or "2" call EID-SLD Coordinator]

5 Facility Name: Bridland Refinery

6 County: Doña Ana

7 City: Sunland Park

8 Stat: NM

9 Sample Location: MW-35

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1210 hrs (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) " Longitude (DDDMMSS) " 2 Digit ID (if needed)

13 Report To: Name: Roger Anderson

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 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [ ] Monitoring
- [ ] Special

Sampling Information:
- [x] Grab
- [ ] Composite _____ (Composite time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [x] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.7, Conductivity: 736 umhos @ 65.9 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [x] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #: Monitor Well MW-35

19 Sample Type: [x] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____

This form accompanies a **single sample** consisting of:
- X - 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
- [x] WNL Water Not Preserved in Field; Please Add HNO3 at Lab
- [x] ICE Water Iced
- [ ] Other _____

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

- [x] (704) ICAP Scan
- [ ] (720) SDWA Group I Only
- [ ] (721) SDWA Group I + other parameter(s) marked below

[ ] Aluminum	[ ] Lead	[ ] Vanadium
[ ] Arsenic	[ ] Manganese	[ ] Zinc
[ ] Barium	[x] Mercury	[ ] -
[ ] Cadmium	[ ] Molybdenum	[ ] -
[ ] Chromium	[ ] Nickel	[ ] -
[ ] Cobalt	[x] Selenium	[ ] -
[ ] Copper	[ ] Silver	[ ] -
[ ] Iron	[ ] Uranium	[ ] -

Remarks:

SLD 8912-HM Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

May 4, 1994

Request
ID No. 014378

ANALYTICAL REPORT
SLD Accession No. OR-94-0916

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: Roger Anderson
NM Oil Consv. 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 March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . . .	MW-35
At: 12:00 hrs.	*In/Near:* Sunland Park	

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

Parameter	Value	Note	PQL	Units
EPA 601/2 Volatiles (60)	0.00	N	10.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

PQL = Practical Quantitation 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 [X]; Intact: No [ ], Yes [ ] & Broken By: _____ Date: _____

Laboratory Remarks:

Late eluting compound confirmed by GC/MS as Octanal, a C8 aldehyde.

This sample was first analyzed on 4/5/94 and the analytical results were judged unacceptable by the analyst. The sample was re-analyzed on 4/6/94 yielding the results on this form.

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-94-916
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 127
Level: (low/med) Low Date Received: 3/28/94
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 4/05/94
GPC Cleanup: (Y/N) No pH: Dilution Factor: 10
CONCENTRATION UNITS:

(Continued on page 2.)

(ug/L or ug/Kg): ug/L

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

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

(Continued on page 3.)

98-82-8	Isopropylbenzene		U	10.0
99-87-6	4-Isopropyltoluene		U	10.0
75-09-2	Methylene chloride		U	10.0
90-12-0	1-Methylnaphthalene		U	10.0
91-57-6	2-Methylnaphthalene		U	10.0
91-20-3	Naphthalene		U	10.0
103-65-1	n-Propylbenzene		U	10.0
100-42-5	Styrene		U	10.0
630-20-6	1,1,1,2-Tetrachloroethane		U	10.0
79-34-5	1,1,2,2-Tetrachloroethane		U	10.0
127-18-4	Tetrachloroethene		U	10.0
109-99-9	Tetrahydrofuran (THF)		U	50.0
108-88-3	Toluene		U	10.0
87-61-5	1,2,3-Trichlorobenzene		U	10.0
120-82-1	1,2,4-Trichlorobenzene		U	10.0
71-55-6	1,1,1-Trichloroethane		U	10.0
79-00-5	1,1,2-Trichloroethane		U	10.0
79-01-6	Trichloroethene		U	10.0
75-69-4	Trichlorofluoromethane		U	10.0
96-18-4	1,2,3-Trichloropropane		U	10.0
95-63-6	1,2,4-Trimethylbenzene		U	10.0
108-67-8	1,3,5-Trimethylbenzene		U	10.0
75-01-4	Vinyl chloride		U	10.0
95-47-6	o-Xylene		U	10.0
N/A	p- & m-Xylene		U	10.0
N/A	Total Xylenes		U	20.0

TENTATIVELY IDENTIFIED COMPOUNDS DATA SHEET

The following compounds were tentatively identified by Mass Spec:

CAS NO.	COMPOUND	MATCH	RT	EST. CONC.	Q
124-13-0	octanal	974	19.97	1	

* CONC = CONCENTRAION DETERMINED
  PQL = Practical Quantitation Limit (Approximately 10 times MDL)
* Q = 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.

(Continued on page 4.)

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.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene	25.0 ppb	97.2
2-Bromo-1-chloropropane	25.0 ppb	101.0

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
No exceptions	. ppb	.

Analyst: Patrick F. Basile
Patrick F. Basile
Analyst, Organic Chemistry

Reviewed By: R. Meyerhein
Richard F. Meyerhein 05/04/94
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. OR94 0916 C

Request ID No. 014378-C

Date Received: 3-28-94

2 User Code #: 7 0 3 2 0

3 Request ID No.:

4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Bridland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-3S

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1210 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter - WSS # - Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (If needed)

13 Report To: Name: Roger Anderson

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
- [ ] Check
- [x] Monitoring
- [ ] Special

- [x] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [x] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 7.7, Conductivity: 736 umhos @ 65.9 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [x] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #:
Monitor Well - MW-3S

19 Sample Type:
- [x] 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
- [x] 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)
- [x] Other — H_2SO_4

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)
- [x] (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:

SLD 8912-OR Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

June 2, 1994

Request ID No. 028741

ANALYTICAL REPORT
SLD Accession No. WC-94-1190

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

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

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Nonpres/No sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION
On: 25-Mar-94 *By:* Ols . . .
At: 12:00 hrs. *In/Near:* Sunland Park

LOCATION
MW-3X S

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	139.00		mG/L
magnesium	67.30		mG/L
potassium	11.00		mG/L
sodium	1430.00		mG/L
bicarbonate	692.00		mG/L
carbonate	0.00		mG/L
chloride	1659.00		mG/L
fluoride	1.30		mG/L
sulfate	745.00		mG/L
Ion Balance	102.00		%
total diss resid	4424.00		mG/L

Reviewed By: _____
C. Rachael Howell 05/18/94
Analyst, Water Chemistry Section

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 #: 7 0 3 2 0
3 Request ID No.: (Place Form ID Sticker Here)
4 Priority Code #: 3 (If "1" or "2" call EID-SLD Coordinator)

5 Facility Name: Bickland Refinery
6 County: Dona Ana
7 City: Sunland Park
8 State: NM

9 Sample Location: MW-3S

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1210 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter - WSS # - Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (if needed)

13 Report To: Name: Roger Anderson
14 Phone #: (505) 827-5812
Address: New Mexico Oil Conservation Division
P. O. 2088
City, State Zip: Santa Fe, New Mexico 87504-2088

15 Sample Purpose:
☐ - Compliance
☐ - Check
☒ - Monitoring
☐ - Special

Sampling Information:
☒ - Grab
☐ - Composite _____ (Composite time Period)
☐ - Flow Proportioned
☐ - Equal Aliquot
☒ - Sample Split w/Permittee
☐ - Chain of Custody

16 Field Data: pH: 7.7, Conductivity: 736 umhos @ 65.9 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
☐ - Stream
☐ - Lake
☐ - Drain
☐ - P[illegible]
☐ - W[illegible]TP
☒ - Well; Depth: _____
☐ - Spring
☐ - Distribution
☐ - Point-of-Entry
☐ - Other: _____

18 Field Notes/ Sample #: Monitor Well MW-3S

19 Sample Type: ☒ - Water, ☐ - Soil, ☐ - Food, ☐ - Wastewater, ☐ - Other _____
This form accompanies a single sample consisting of:
1 - 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:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

May 23, 1994

Request ID No. 014375

ANALYTICAL REPORT
SLD Accession No. OR-94-0917

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: Roger Anderson
NM Oil Consv. 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, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Purgeable sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION
On: 25-Mar-94 *By:* Ols . . .
At: 11:30 hrs. *In/Near:* Sunland Park

LOCATION
MW-6

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

Parameter	Value	Note	PQL	Units
Tetrahydrofuran	11.00	T	50.00	ppb
Benzene	101.00		10.00	ppb
Toluene	2.60	T	10.00	ppb
Ethylbenzene	46.00		10.00	ppb
p- & m-Xylene	13.00		10.00	ppb
o-Xylene	8.90	T	10.00	ppb
Isopropylbenzene	21.00		10.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

PQL = Practical Quantitation 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 [X]; Intact: No [ ], Yes [ ] & Broken By: _____ Date: _____

Laboratory Remarks:

Foamy sample; unable to achieve a lower detection limit.

Reported compound identities were confirmed by GC/MS.

Compound	Note	Value	PQL(ppb)
n-Propylbenzene		52	10
1,2,4-Trimethylbenzene		270	10
Naphthlene		13	10
Methylene chloride		29	10

VOLATILE ORGANICS ANALYSIS DATA SHEET

(Continued on page 2.)

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-94-917
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 127
Level: (low/med) Low Date Received: 3/28/94
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 4/05/94
GPC Cleanup: (Y/N) No pH: Dilution Factor: 10
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.	Q	POL
67-64-1	Acetone		U	50.0
71-43-2	Benzene	101		10.0
108-86-1	Bromobenzene		U	10.0
74-97-5	Bromochloromethane		U	10.0
75-27-4	Bromodichloromethane		U	10.0
75-25-2	Bromoform		U	10.0
78-93-3	2-Butanone (MEK)		U	50.0
104-51-8	n-Butylbenzene		U	10.0
135-98-8	sec-Butylbenzene		U	10.0
98-06-6	tert-Butylbenzene		U	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	50.0
56-23-5	Carbon tetrachloride		U	10.0
108-90-7	Chlorobenzene		U	10.0
67-66-3	Chloroform		U	10.0
95-49-8	2-Chlorotoluene		U	10.0
106-43-4	4-Chlorotoluene		U	10.0
96-12-8	1,2-Dibromo-3-chloropropane		U	10.0
124-48-1	Dibromochloromethane		U	10.0
106-93-4	1,2-Dibromoethane		U	10.0
74-95-3	Dibromomethane		U	10.0
95-50-1	1,2-Dichlorobenzene		U	10.0
541-73-1	1,3-Dichlorobenzene		U	10.0
106-46-7	1,4-Dichlorobenzene		U	10.0
75-71-8	Dichlorodifluoromethane		U	10.0
75-34-3	1,1-Dichloroethane		U	10.0
107-06-2	1,2-Dichloroethane		U	10.0
75-35-4	1,1-Dichloroethene		U	10.0
156-59-4	cis-1,2-Dichloroethene		U	10.0

(Continued on page 3.)

156-60-5	trans-1,2-Dichloroethene		U	10.0
78-87-5	1,2-Dichloropropane		U	10.0
142-28-9	1,3-Dichloropropane		U	10.0
590-20-7	2,2-Dichloropropane		U	10.0
563-58-6	1,1-Dichloropropene		U	10.0
1006-01-5	cis-1,3-Dichloropropene		U	10.0
1006-02-6	trans-1,3-Dichloropropene		U	10.0
100-41-4	Ethylbenzene	46		10.0
87-68-3	Hexachlorobutadiene		U	10.0
98-82-8	Isopropylbenzene	21		10.0
99-87-6	4-Isopropyltoluene		U	10.0
75-09-2	Methylene chloride	29		10.0
90-12-0	1-Methylnaphthalene		U	10.0
91-57-6	2-Methylnaphthalene		U	10.0
91-20-3	Naphthalene	13		10.0
103-65-1	n-Propylbenzene	52		10.0
100-42-5	Styrene		U	10.0
630-20-6	1,1,1,2-Tetrachloroethane		U	10.0
79-34-5	1,1,2,2-Tetrachloroethane		U	10.0
127-18-4	Tetrachloroethene		U	10.0
109-99-9	Tetrahydrofuran (THF)	11	J	50.0
108-88-3	Toluene	2.6	J	10.0
87-61-5	1,2,3-Trichlorobenzene		U	10.0
120-82-1	1,2,4-Trichlorobenzene		U	10.0
71-55-6	1,1,1-Trichloroethane		U	10.0
79-00-5	1,1,2-Trichloroethane		U	10.0
79-01-6	Trichloroethene		U	10.0
75-69-4	Trichlorofluoromethane		U	10.0
96-18-4	1,2,3-Trichloropropane		U	10.0
95-63-6	1,2,4-Trimethylbenzene	270		10.0
108-67-8	1,3,5-Trimethylbenzene		U	10.0
75-01-4	Vinyl chloride		U	10.0
95-47-6	o-Xylene	8.9	J	10.0
N/A	p- & m-Xylene	13		10.0
N/A	Total Xylenes	21.9		20.0

TENTATIVELY IDENTIFIED COMPOUNDS DATA SHEET

The following compounds were tentatively identified by Mass Spec:

CAS NO.	COMPOUND	MATCH	RT	EST. CONC.	Q
637-50-3	1-propenylbenzene	953	20.65	200	

(Continued on page 4.)

933-98-2	1-ethyl-2,3-dimethyl-benzene	974	21.35	100	
7525-62-4	1-ethenyl-3-ethyl-benzene	900	21.60	100	
874-41-9	1-ethyl-2,4-dimethyl-benzene	834	21.17	100	
611-14-3	1-ethyl-2-methyl-benzene	973	19.29	90	
488-23-3	1,2,3,4-tetramethyl-benzene	968	22.12	90	
824-63-5	2,3-dihydro-2-methyl-1h-indene	970	22.62	50	

* CONC = CONCENTRAION DETERMINED
  PQL = Practical Quantitation Limit (Approximately 10 times MDL)
* Q = 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.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY

(Continued on page 5.)

Bromofluorobenzene	25.0	ppb	90.0
2-Bromo-1-chloropropane	25.0	ppb	92.0

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
No exceptions	. ppb	.

Analyst: Patrick Basile
Patrick F. Basile
Analyst, Organic Chemistry

Reviewed By: R. Sherman
Richard F. Meyerhein 05/04/94
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. OR94 0917 C

Request ID No. 014375-C

Date Received: 3-28-94

2 User Code #: 7 0 3 2 0

3 Request ID No.:

4 Priority Code #: 3 (If "1" or "2", call ED-SLD Coordinator)

5 Facility Name: Bricktland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-6S

10 Collected By: William (First) Alison (Last) On: 94/03/25 (Date: YY/MM/DD) At: 1130 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter | WSS # | Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (If needed)

13 Report To: Name: Roger Anderson

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
- [ ] Check
- [X] Monitoring
- [ ] Special

- [X] Grab
- [ ] Composite (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 6.89, Conductivity: 660 umhos @ 66.6 °F, Temperature: ____ °C, Chlorine Residual: ____ mg/l, Flow: ____

17 Sample Source:
- [ ] -Stream
- [ ] -Lake
- [ ] -Drain
- [ ] -Pool
- [ ] -WWTP
- [X] -Well; Depth: ____
- [ ] -Spring
- [ ] -Distribution
- [ ] -Point-of-Entry
- [ ] -Other: ____

18 Field Notes/ Sample #:
Monitor Well MW-6S

19 Sample Type:
- [X] -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
- [X] -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)
- [X] -Other H_2O_2

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)
- [X] - (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:

This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700 700 Camino de Salud, NE
Albuquerque, NM 87196-4700 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

May 26, 1994

Request ID No. 014376

ANALYTICAL REPORT
SLD Accession No. WC-94-1189

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

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

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Nonpres/No sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . . .	MW-6 S
At: 11:30 hrs.	*In/Near:* Sunland Park	

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	147.00		mG/L
magnesium	108.00		mG/L
potassium	16.00		mG/L
sodium	1575.00		mG/L
bicarbonate	1772.00		mG/L
carbonate	0.00		mG/L
chloride	1796.00		mG/L
fluoride	1.00		mG/L
sulfate	107.00		mG/L
Ion Balance	104.00		%
total diss resid	5200.00		mG/L

Reviewed By: _____
C. Rachael Howell 05/18/94
Analyst, Water Chemistry Section

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 #: 7 0 3 2 0

3 Request ID No.: (Place Form ID Sticker Here)

4 Priority Code #: 3 (If "1" or "2", call EIO-SLD Coordinator)

5 Facility Name: Bridland Refinery

6 County: Doña Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-65

10 Collected By: Grillan Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1130 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) " Longitude (DDDMMSS) " 2 Digit ID (If needed)

13 Report To: Name: Roger Anderson

14 Phone #: (505) 827-5812

Address: New Mexico Oil Conservation Division
P. O. 2088
City, State Zip: Santa Fe, New Mexico 87504-2088

15 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [X] Monitoring
- [ ] Special

Sampling Information:
- [X] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 6.89, Conductivity: 660 umhos @ 66.6 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [X] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #: Monitor Well MW-65

19 Sample Type: [X] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____

This form accompanies a single sample consisting of:
1 - 1 liter cubitainers (1 quart)
_____ - 4 liter cubitainers (1 gallon)
_____ - _____

20 Preservation:
- [ ] WNF Water Not Preserved; Filtered
- [X] 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
- [X] 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 +
- [X] (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) _____
- [X] 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:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700 **700 Camino de Salud, NE**
Albuquerque, NM 87196-4700 **[505]-841-2500**
AIR & HEAVY METALS SECTION [505]-841-2553

May 11, 1994

Request ID No. 014377

ANALYTICAL REPORT
SLD Accession No. IC-94-0047

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: R. Anderson
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 water,Nonpres/No sample submitted to this laboratory on March 28, 1994**

User:
NM Energy & Min - Oil Conserv.
, NM

DEMOGRAPHIC DATA

COLLECTION
On: 25-Mar-94 *By:* Ols . . .
At: 11:30 hrs. *In/Near:* Sunland Park

LOCATION
MW-6S

ANALYTICAL RESULTS in mG/L

Analysis		Value	Analysis		Value	Analysis		Value
Aluminum		4.40	Copper	<	0.10	Silver	<	0.10
Barium		1.40	Iron		12.00	Strontium		4.90
Beryllium	<	0.10	Lead	<	0.10	Tin	<	0.10
Boron		1.20	Magnesium		100.00	Vanadium	<	0.10
Cadmium	<	0.10	Manganese		1.30	Zinc	<	0.10
Calcium		270.00	Molybdenum	<	0.10	Mercury	<	0.0005
Chromium	<	0.10	Nickel	<	0.10	Selenium	<	0.0050
Cobalt	<	0.05	Silicon		0.20			

Laboratory Remarks:

ICP by method 270.2 on 4/29/94 by RAH.
Mercury by method 245.1 on 4/13/94 by SD.
Selenium by method 270.2 on 4/8/94 by RAH.

Reviewed By: _____
Jim F. Ashby 05/11/94
Supervisor, Air & Heavy Metals Section

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 0 3 2 0 | 3 Request ID No.: (Place Form ID Sticker Here) | 4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Bickland Refinery | 6 County: Dona Ana | 7 City: Sunland Park | 8 State: NM

9 Sample Location: MW-6S

10 Collected By: William (First) Olson (Last) On: 94/03/25 (Date: YY/MM/DD) At: 1130 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter | WSS # | Organization

12 Latitude (DDMMSS) ° ' " | Longitude (DDDMMSS) ° ' " | 2 Digit ID (if needed)

13 Report To: Name: Roger Anderson | 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 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [X] Monitoring
- [ ] Special

Sampling Information:
- [X] Grab
- [ ] Composite _____ (Composite Time Period)
  - [ ] Flow Proportioned
  - [ ] Equal Aliquot
- [X] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: 6.89, Conductivity: 660 umhos @ 66.6 °F, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [ ] Pool
- [ ] WWTP
- [X] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #:
Monitor Well MW-6S

19 Sample Type: [X] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____
This form accompanies a single sample consisting of:
- X - 1 liter cubitainers (1 quart)
- ____ - 4 liter cubitainers (1 gallon)
- ____ - _____

20 Preservation:
- [ ] WNF Water Not Preserved; Filtered
- [X] WNN Water Not Preserved; Not Filtered
- [ ] WPF Water Preserved with Nitric Acid (HNO3); Filtered
- [ ] WPN Water Preserved with Nitric Acid; Not Filtered
- [X] WNL Water Not Preserved in Field; Please Add HNO3 at Lab
- [X] ICE Water Iced
- [ ] Other _____

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

- [X] (704) ICAP Scan
- [ ] (720) SDWA Group I Only
- [ ] (721) SDWA Group I + other parameter(s) marked below

[ ] Aluminum	[ ] Lead	[ ] Vanadium
[ ] Arsenic	[ ] Manganese	[ ] Zinc
[ ] Barium	[X] Mercury	[ ] _____
[ ] Cadmium	[ ] Molybdenum	[ ] _____
[ ] Chromium	[ ] Nickel	[ ] _____
[ ] Cobalt	[X] Selenium	[ ] _____
[ ] Copper	[ ] Silver	[ ] _____
[ ] Iron	[ ] Uranium	[ ] _____

Remarks:

SLD 8912-HM Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH
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

May 23, 1994

Request ID No. 014372

ANALYTICAL REPORT
SLD Accession No. OR-94-0918

Distribution
( ) User 70320
(X) Submitter 260
(x) SLD Files

To: Roger Anderson
NM Oil Consv. 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, N.E.
P.O. Box 4700
Albuquerque, NM 87196-4700

Re: **A water,Purgeable sample submitted to this laboratory on March 28, 1994**

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*
On: 25-Mar-94	*By:* Ols . . .	MW-9X S
At: 10:40 hrs.	*In/Near:* Sunland Park	

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

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

See Laboratory Remarks for Additional Information

Notations & Comments:

PQL = Practical Quantitation 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 [X]; Intact: No [ ], Yes [ ] & Broken By: _____ Date: _____

Laboratory Remarks:

No target compounds observed, however C8, C9, C10, aldehydes observed on GC/MS, but not quantified.

Reported compound identities were confirmed by GC/MS.

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-94-918
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 127
Level: (low/med) Low Date Received: 3/28/94
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 4/05/94
GPC Cleanup: (Y/N) No pH: Dilution Factor: 1
CONCENTRATION UNITS:
(ug/L or ug/Kg): ug/L

(Continued on page 2.)

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

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

(Continued on page 3.)

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

TENTATIVELY IDENTIFIED COMPOUNDS DATA SHEET

The following compounds were tentatively identified by Mass Spec:

CAS NO.	COMPOUND	MATCH	RT	EST. CONC.	Q
124-19-6	nonanal	967	21.97	5	
112-31-2	decanal	978	23.84	2	
124-13-0	octanal	984	20.	2	
6032-29-7	2-pentanol	839	7.01	2	

* CONC = CONCENTRAION DETERMINED
  PQL = Practical Quantitation Limit (Approximately 10 times MDL)
* Q = 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,

(Continued on page 4.)

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.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION		% RECOVERY
Bromofluorobenzene	25.0	ppb	98.0
2-Bromo-1-chloropropane	25.0	ppb	101.0

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
No exceptions	.	ppb	.

Analyst: Patrick Basile
Patrick F. Basile
Analyst, Organic Chemistry

Reviewed By: R. Sherman
Richard F. Meyerhein 05/04/94
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. 1 OR94 0918 C

Date Received: 3-28-94

Request ID No. 014372-C

2 User Code #: 7 0 3 2 0

3 Request ID No.:

4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Brickland Refinery

6 County: Dona Ana

7 City: Sunland Park

8 State: NM

9 Sample Location: MW-9S

10 Collected By: William Olson (First / Last) On: 94/03/25 (Date: YY/MM/DD) At: 1040 hrs. (Time: 24 hr. clock, 3:00 pm = 1500 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) ° ' "
Longitude (DDDMMSS) ° ' "
2 Digit ID (If needed)

13 Report To: Roger Anderson

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 [ ] Check [X] Monitoring [ ] Special
[X] Grab [ ] Composite _____ (Composite Time Period)
[ ] Flow Proportioned [ ] Equal Aliquot [X] Sample Split w/Permittee [ ] Chain of Custody

16 Field Data: pH: 7.1, Conductivity: 634 umhos @ 65.2 °F Temperature: ____ °C, Chlorine Residual: ____ mg/l, Flow: ____

17 Sample Source:
[ ] Stream [X] Well; Depth: ____
[ ] Lake [ ] Spring
[ ] Drain [ ] Distribution
[ ] Pool [ ] Point-of-Entry
[ ] WWTP [ ] Other: ____

18 Field Notes/ Sample #: Monitor Well MW-9S

19 Sample Type: [X] 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
[X] 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)
[X] 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)
[X] - (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: