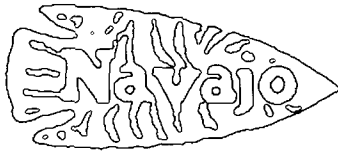


GW - _____

REPORTS

YEAR(S):

2002-1999



REFINING COMPANY

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April 18, 2002

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

RE: 1st Quarter 2002 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the annual report and analysis.

For this quarter we discharged a total of 31,645,000 gallons with all of that total being sent to the farm for irrigation. This number is lower than our usual output due to the fact that the plant was shut down for turnaround for 5 weeks during this quarter. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 1,020,171,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 823,458,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.

cc: USEPA
New Mexico Environment Dept.- Water Quality

An Independent Refinery Serving . . .
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Report Date: March 20, 2002 Order Number: A02031215

N/A

RO Reject

Page Number: 1 of 1

Artesia, NM 88210

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: March 20, 2002

Order ID Number: A02031215

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
192590	RO Reject	Water	3/11/02	9:15	3/12/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 192590 - RO Reject

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		568	mg/L as CaCo3
Total Alkalinity		568	mg/L as CaCo3
Total Mercury		0.00027	mg/L
Chloride		72.7	mg/L
Fluoride		3.55	mg/L
Nitrate-N		2.09	mg/L
Sulfate		1410	mg/L
Dissolved Calcium		533	mg/L
Dissolved Magnesium		192	mg/L
Dissolved Potassium		6.13	mg/L
Dissolved Sodium		64.6	mg/L
Total Aluminum		<0.100	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		<0.100	mg/L
Total Beryllium		<0.0025	mg/L
Total Boron		0.0532	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		<0.010	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		<0.050	mg/L
Total Lead		<0.010	mg/L
Total Manganese		<0.025	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silver		<0.0125	mg/L
Total Uranium		<0.050	mg/L
Total Vanadium		<0.025	mg/L
Total Zinc		<0.025	mg/L



TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
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Lubbock, Texas 79424
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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: March 20, 2002

Order ID Number: A02031215

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

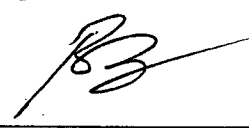
Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
192590	RO Reject	Water	3/11/02	9:15	3/12/02

0

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 192590 - RO Reject

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC18844 Date Analyzed: 3/12/02
Analyst: RS Preparation Method: N/A Prep Batch: PB18253 Date Prepared: 3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		568	mg/L as CaCo3	1	1
Total Alkalinity		568	mg/L as CaCo3	1	1

Sample: 192590 - RO Reject

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC18960 Date Analyzed: 3/19/02
Analyst: BC Preparation Method: N/A Prep Batch: PB18330 Date Prepared: 3/19/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		0.00027	mg/L	1	0.0002

Sample: 192590 - RO Reject

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC18836 Date Analyzed: 3/12/02
Analyst: JS Preparation Method: N/A Prep Batch: PB18249 Date Prepared: 3/12/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		72.7	mg/L	5	0.50
Fluoride		3.55	mg/L	5	0.20
Nitrate-N		2.09	mg/L	5	0.20
Sulfate		1410	mg/L	50	0.50

Sample: 192590 - RO Reject

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC18967 Date Analyzed: 3/18/02
Analyst: BC Preparation Method: S 3005A Prep Batch: PB18261 Date Prepared: 3/15/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		533	mg/L	1	0.50
Dissolved Magnesium		192	mg/L	1	0.50
Dissolved Potassium		6.13	mg/L	1	0.50
Dissolved Sodium		64.6	mg/L	1	0.60

Sample: 192590 - RO Reject

Analysis: Total Metals Analytical Method: E 200.7 QC Batch: QC18840 Date Analyzed: 3/14/02
Analyst: RR Preparation Method: N/A Prep Batch: PB18206 Date Prepared: 3/13/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		<0.100	mg/L	1	0.10
Total Arsenic		<0.050	mg/L	1	0.05

Continued ...

Report Date: March 20, 2002
N/A

Order Number: A02031215
RO Reject

Page Number: 3 of 9
Artesia, NM 88210

... Continued Sample: 192590 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Barium		<0.100	mg/L	1	0.10
Total Beryllium		<0.0025	mg/L	1	0.0025
Total Boron		0.0532	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		<0.010	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		<0.050	mg/L	1	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		<0.025	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Uranium		<0.050	mg/L	1	0.05
Total Vanadium		<0.025	mg/L	1	0.02
Total Zinc		<0.025	mg/L	1	0.02

Quality Control Report Method Blank

Method Blank

QCBatch: QC18836

Param	Flag	Results	Units	Reporting Limit
Chloride		<2.0	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank

QCBatch: QC18840

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.100	mg/L	0.10
Total Arsenic		<0.050	mg/L	0.05
Total Barium		<0.100	mg/L	0.10
Total Beryllium		<0.0025	mg/L	0.0025
Total Boron		0.00692	mg/L	0.005
Total Cadmium		<0.005	mg/L	0.005
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Uranium		<0.050	mg/L	0.05
Total Vanadium		<0.025	mg/L	0.02
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC18844

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank

QCBatch: QC18960

Report Date: March 20, 2002
N/A

Order Number: A02031215
RO Reject

Page Number: 5 of 9
Artesia, NM 88210

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank QCBatch: QC18967

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.60

Quality Control Report Duplicate Samples

Duplicate QCBatch: QC18844

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Bicarbonate Alkalinity		52	50	mg/L as CaCo3	1	3	7
Total Alkalinity		52	50	mg/L as CaCo3	1	3	7

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC18836

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Bromide	2.39	2.37	mg/L	1	2.50	<0.2	95	0	90 - 110	20
Chloride	11.92	12.08	mg/L	1	12.50	<2.0	95	1	90 - 110	20
Fluoride	2.25	2.25	mg/L	1	2.50	<0.2	90	0	90 - 110	20
Nitrate-N	2.31	2.28	mg/L	1	2.50	<0.2	92	1	90 - 110	20
Sulfate	11.94	12.00	mg/L	1	12.50	<2.0	95	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC18840

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Lead	0.457	0.462	mg/L	1	0.50	<0.010	91	1	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC18960

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00102	0.00101	mg/L	1	0.001	<0.0002	102	0	84 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC18967

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	101	104	mg/L	1	100	<0.5	101	2	75 - 125	20
Dissolved Magnesium	101	104	mg/L	1	100	<0.5	101	2	75 - 125	20
Dissolved Potassium	97.3	99.9	mg/L	1	100	<0.5	97	2	75 - 125	20
Dissolved Sodium	95.5	103	mg/L	1	100	<0.5	95	7	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC18836

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	¹ 891.31	² 880.66	mg/L	1	625	305	93	1	52 - 131	20
Fluoride	³ 119.50	⁴ 120.64	mg/L	1	125	3.80	92	1	80 - 113	20
Nitrate-N	⁵ 123.60	⁶ 122.68	mg/L	1	125	4.28	95	1	84 - 105	20
Sulfate	⁷ 907.43	⁸ 905.34	mg/L	1	625	332	92	0	79 - 104	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC18840

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	0.993	1.01	mg/L	1	1	<0.100	99	1	75 - 125	20
Total Arsenic	0.433	0.459	mg/L	1	0.50	<0.050	86	5	75 - 125	20
Total Barium	0.856	0.856	mg/L	1	1	<0.100	85	0	75 - 125	20
Total Beryllium	0.0199	0.0201	mg/L	1	0.02	<0.0025	79	0	75 - 125	20
Total Boron	0.103	0.104	mg/L	1	0.05	0.0532	99	1	75 - 125	20

Continued ...

¹Spikes were ran on the *50 dilution for 192558, but the *10 dilution was reported. The correct %Rec = 96.

²Spikes were ran on the *50 dilution for 192558, but the *10 dilution was reported. The correct %Rec = 94.

³Spikes were ran on the *50 dilution for 192558, but the *5 dilution was reported. The correct %Rec = 87.

⁴Spikes were ran on the *50 dilution for 192558, but the *5 dilution was reported. The correct %Rec = 88.

⁵Spikes were ran on the *50 dilution for 192558, but the *5 dilution was reported. The correct %Rec = 90.

⁶Spikes were ran on the *50 dilution for 192558, but the *5 dilution was reported. The correct %Rec = 89.

⁷Spikes were ran on the *50 dilution for 192558, but the *10 dilution was reported. The correct %Rec = 95.

⁸Spikes were ran on the *50 dilution for 192558, but the *10 dilution was reported. The correct %Rec = 95.

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Cadmium	0.185	0.185	mg/L	1	0.25	<0.005	74	0	75 - 125	20
Total Chromium	0.083	0.0822	mg/L	1	0.10	<0.010	83	0	75 - 125	20
Total Cobalt	0.198	0.198	mg/L	1	0.25	<0.025	79	0	75 - 125	20
Total Copper	0.111	0.110	mg/L	1	0.12	<0.0125	88	0	75 - 125	20
Total Iron	0.425	0.424	mg/L	1	0.50	<0.050	85	0	75 - 125	20
Total Lead	0.373	0.371	mg/L	1	0.50	<0.010	74	0	75 - 125	20
Total Manganese	0.202	0.203	mg/L	1	0.25	<0.025	80	0	75 - 125	20
Total Molybdenum	0.433	0.431	mg/L	1	0.50	<0.050	86	0	75 - 125	20
Total Nickel	0.192	0.191	mg/L	1	0.25	<0.025	76	0	75 - 125	20
Total Selenium	0.431	0.413	mg/L	1	0.50	<0.050	86	4	75 - 125	20
Total Silver	0.106	0.106	mg/L	1	0.12	<0.0125	84	0	75 - 125	20
Total Uranium	0.409	0.412	mg/L	1	0.50	<0.050	81	0	75 - 125	20
Total Vanadium	0.220	0.219	mg/L	1	0.25	<0.025	88	0	75 - 125	20
Total Zinc	0.190	0.188	mg/L	1	0.25	<0.025	76	1	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC18960

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00113	0.00116	mg/L	1	0.001	0.00027	86	3	84 - 127	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC18967

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	444	443	mg/L	1	100	347	97	1	75 - 125	20
Dissolved Magnesium	149	151	mg/L	1	100	40.5	108	1	75 - 125	20
Dissolved Potassium	132	132	mg/L	1	100	21.2	110	0	75 - 125	20
Dissolved Sodium	⁹ 511	583	mg/L	1	100	488	23	122	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC18836

⁹MS RECOVERY INVALID DUE TO MATRIX EFFECT/DILUTION FACTOR. USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.36	94	90 - 110	3/12/02
Chloride		mg/L	12.50	11.95	95	90 - 110	3/12/02
Fluoride		mg/L	2.50	2.33	93	90 - 110	3/12/02
Nitrate-N		mg/L	2.50	2.29	91	90 - 110	3/12/02
Sulfate		mg/L	12.50	11.92	95	90 - 110	3/12/02

ICV (1) QCBatch: QC18836

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.41	96	90 - 110	3/12/02
Chloride		mg/L	12.50	11.95	95	90 - 110	3/12/02
Fluoride		mg/L	2.50	2.33	93	90 - 110	3/12/02
Nitrate-N		mg/L	2.50	2.31	92	90 - 110	3/12/02
Sulfate		mg/L	12.50	12.02	96	90 - 110	3/12/02

CCV (1) QCBatch: QC18840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	1	1.03	103	90 - 110	3/14/02

ICV (1) QCBatch: QC18840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	1	1.00	100	90 - 110	3/14/02

CCV (1) QCBatch: QC18844

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	4.0	0	90 - 110	3/12/02
Carbonate Alkalinity		mg/L as CaCo3	0	240	0	90 - 110	3/12/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	3/12/02
Total Alkalinity		mg/L as CaCo3	250	244	97	90 - 110	3/12/02

ICV (1) QCBatch: QC18844

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	3/12/02
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	90 - 110	3/12/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	10	0	90 - 110	3/12/02
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	3/12/02

CCV (1) QCBatch: QC18960

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00095	95	80 - 120	3/19/02

ICV (1) QCBatch: QC18960

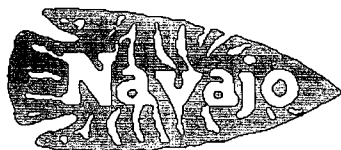
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00096	96	80 - 120	3/19/02

CCV (1) QCBatch: QC18967

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.5	102	90 - 110	3/18/02
Dissolved Magnesium		mg/L	25	25.3	101	90 - 110	3/18/02
Dissolved Potassium		mg/L	25	24.0	96	90 - 110	3/18/02
Dissolved Sodium		mg/L	25	24.8	99	90 - 110	3/18/02

ICV (1) QCBatch: QC18967

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.5	98	95 - 105	3/18/02
Dissolved Magnesium		mg/L	25	24.5	98	95 - 105	3/18/02
Dissolved Potassium		mg/L	25	23.8	95	95 - 105	3/18/02
Dissolved Sodium		mg/L	25	24.7	98	95 - 105	3/18/02



REFINING COMPANY

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(505) 746-5451 EXEC/MKTG
(505) 746-5421 ENGINEERING
(505) 746-5480 PIPELINE

January 15, 2003

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

**RE: 4th Quarter 2002 Report on RO Reject Water, Navajo Refining Co., Eddy
County, NM**

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the quarterly report and analysis for the fourth quarter and the annual sampling results of 2002.

For this quarter we discharged a total of 26,461,000 gallons to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 1,103,400,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 906,687,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.

cc: USEPA
New Mexico Environment Dept.- Water Quality

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: January 2, 2003
N/AOrder Number: A02121109
RO RejectPage Number: 1 of 3
Artesia, NM 88210

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: January 2, 2003

Order ID Number: A02121109

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215515	RO Annual	Water	12/10/02	14:50	12/11/02

0 This report consists of a total of 3 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 215515 - RO Annual

Param	Flag	Result	Units
PCB		<0.0005	mg/L
Aroclor 1016 (PCB-1016)		<0.0005	mg/L
Aroclor 1221 (PCB-1221)		<0.0005	mg/L
Aroclor 1232 (PCB-1232)		<0.0005	mg/L
Aroclor 1242 (PCB-1242)		<0.0005	mg/L
Aroclor 1248 (PCB-1248)		<0.0005	mg/L
Aroclor 1254 (PCB-1254)		<0.0005	mg/L
Aroclor 1260 (PCB-1260)		<0.0005	mg/L
alpha-BHC		<0.0005	mg/L
gamma-BHC (Lindane)		<0.0005	mg/L
beta-BHC		<0.0005	mg/L
delta-BHC		<0.0005	mg/L
Heptachlor		<0.0005	mg/L
Aldrin		<0.0005	mg/L
Heptachlor Epoxide		<0.0005	mg/L
gamma-Chlordane		<0.0005	mg/L
alpha-Chlordane		<0.0005	mg/L
Endosulfan I		<0.0005	mg/L
P,P-DDE		<0.0005	mg/L
Dieldrin		<0.0005	mg/L
Endrin		<0.0005	mg/L
P,P-DDD		<0.0005	mg/L
Endosulfan II		<0.0005	mg/L
p,p-DDT		<0.0005	mg/L
Endrin aldehyde		<0.0005	mg/L
Endosulfan sulfate		<0.0005	mg/L
Methoxychlor		<0.0005	mg/L
Endrin Ketone		<0.0005	mg/L
Toxaphene		<0.005	mg/L

Continued on next page ...

This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: January 2, 2003 Order Number: A02121109
N/A RO RejectPage Number: 2 of 3
Artesia, NM 88210*Sample 215515 continued ...*

Param	Flag	Result	Units
Technical Chlordane		<0.005	mg/L
Pyridine		<0.005	mg/L
n-Nitrosodimethylamine		<0.005	mg/L
2-Picoline		<0.005	mg/L
Methyl methanesulfonate		<0.005	mg/L
Ethyl methanesulfonate		<0.005	mg/L
Phenol		<0.005	mg/L
Aniline		<0.005	mg/L
bis (2-chloroethyl) ether		<0.005	mg/L
2-Chlorophenol		<0.005	mg/L
1,3-Dichlorobenzene (meta)		<0.005	mg/L
1,4-Dichlorobenzene		<0.005	mg/L
Benzyl alcohol		<0.005	mg/L
1,2-Dichlorobenzene		<0.005	mg/L
2-Methylphenol		<0.005	mg/L
bis (2-chloroisopropyl) ether		<0.005	mg/L
4-Methylphenol/3-Methylphenol		<0.005	mg/L
Acetophenone		<0.005	mg/L
n-Nitrosodi-n-propylamine		<0.005	mg/L
Hexachloroethane		<0.005	mg/L
Nitrobenzene		<0.005	mg/L
n-Nitrosopiperidine		<0.005	mg/L
Isophorone		<0.005	mg/L
2-Nitrophenol		<0.005	mg/L
2,4-Dimethylphenol		<0.005	mg/L
bis (2-chloroethoxy) methane		<0.005	mg/L
Benzoic acid		<0.005	mg/L
2,4-Dichlorophenol		<0.005	mg/L
1,2,4-Trichlorobenzene		<0.005	mg/L
a,a-Dimethylphenethylamine		<0.005	mg/L
Naphthalene		<0.005	mg/L
4-Chloroaniline		<0.005	mg/L
2,6-Dichlorophenol		<0.005	mg/L
Hexachlorobutadiene		<0.005	mg/L
n-Nitroso-di-n-butylamine		<0.005	mg/L
4-Chloro-3-methylphenol		<0.005	mg/L
1-Methylnaphthalene		<0.005	mg/L
2-Methylnaphthalene		<0.005	mg/L
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L
Hexachlorocyclopentadiene		<0.005	mg/L
2,4,6-Trichlorophenol		<0.005	mg/L
2,4,5-Trichlorophenol		<0.005	mg/L
2-Chloronaphthalene		<0.005	mg/L
1-Chloronaphthalene		<0.005	mg/L
2-Nitroaniline		<0.005	mg/L
Dimethylphthalate		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
2,6-Dinitrotoluene		<0.005	mg/L
3-Nitroaniline		<0.005	mg/L
Acenaphthene		<0.005	mg/L

*Continued on next page ...**This is only a summary. Please, refer to the complete report package for quality control data.*

Report Date: January 2, 2003 Order Number: A02121109

Page Number: 3 of 3

N/A

RO Reject

Artesia, NM 88210

Sample 215515 continued ...

Param	Flag	Result	Units
2,4-Dinitrophenol		<0.005	mg/L
Dibenzofuran		<0.005	mg/L
Pentachlorobenzene		<0.005	mg/L
4-Nitrophenol		<0.005	mg/L
1-Naphthylamine		<0.005	mg/L
2,4-Dinitrotoluene		<0.005	mg/L
2-Naphthylamine		<0.005	mg/L
2,3,4,6-Tetrachlorophenol		<0.005	mg/L
Fluorene		<0.005	mg/L
Diethylphthalate		<0.005	mg/L
4-Chlorophenyl-phenylether		<0.005	mg/L
4-Nitroaniline		<0.005	mg/L
4,6-Dinitro-2-methylphenol		<0.005	mg/L
Diphenylamine		<0.005	mg/L
Diphenylhydrazine		<0.005	mg/L
4-Bromophenyl-phenylether		<0.005	mg/L
Phenacetin		<0.005	mg/L
Hexachlorobenzene		<0.005	mg/L
4-Aminobiphenyl		<0.005	mg/L
Pentachlorophenol		<0.005	mg/L
Pentachloronitrobenzene		<0.005	mg/L
Pronamide		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Di-n-butylphthalate		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Benzidine		<0.005	mg/L
Pyrene		<0.005	mg/L
p-Dimethylaminoazobenzene		<0.005	mg/L
Butylbenzylphthalate		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
3,3-Dichlorobenzidine		<0.005	mg/L
Chrysene		<0.005	mg/L
Bis (2-ethylhexyl) phthalate		<0.005	mg/L
Di-n-octylphthalate		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
3-Methylcholanthrene		<0.005	mg/L
Dibenzo(a,j)acridine		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

This is only a summary. Please, refer to the complete report package for quality control data.

TRACE ANALYSIS, INC.

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Lubbock, Texas 79424
El Paso, Texas 79932

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Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: January 2, 2003

Order ID Number: A02121109

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215515	RO Annual	Water	12/10/02	14:50	12/11/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.



Dr. Blair Leftwich, Director

Report Date: January 2, 2003
N/A

Order Number: A02121109
RO Reject

Page Number: 2 of 12
Artesia, NM 88210

Analytical Report

Sample: 215515 - RO Annual

Analysis: PCB Analytical Method: E 608 QC Batch: QC25651 Date Analyzed: 12/17/02
Analyst: AG Preparation Method: N/A Prep Batch: PB23738 Date Prepared: 12/16/02

Param	Flag	Result	Units	Dilution	RDL
PCB		<0.0005	mg/L	0.005	0.0005
Aroclor 1016 (PCB-1016)		<0.0005	mg/L	0.005	0.0005
Aroclor 1221 (PCB-1221)		<0.0005	mg/L	0.005	0.0005
Aroclor 1232 (PCB-1232)		<0.0005	mg/L	0.005	0.0005
Aroclor 1242 (PCB-1242)		<0.0005	mg/L	0.005	0.0005
Aroclor 1248 (PCB-1248)		<0.0005	mg/L	0.005	0.0005
Aroclor 1254 (PCB-1254)		<0.0005	mg/L	0.005	0.0005
Aroclor 1260 (PCB-1260)		<0.0005	mg/L	0.005	0.0005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
deca chlorobiphenyl		0.0008	mg/L	0.005	0.001	80	0 - 115

Sample: 215515 - RO Annual

Analysis: Pesticides Analytical Method: E 608 QC Batch: QC25685 Date Analyzed: 12/18/02
Analyst: AG Preparation Method: N/A Prep Batch: PB23738 Date Prepared: 12/16/02

Param	Flag	Result	Units	Dilution	RDL
alpha-BHC		<0.0005	mg/L	0.005	0.0005
gamma-BHC (Lindane)		<0.0005	mg/L	0.005	0.0005
beta-BHC		<0.0005	mg/L	0.005	0.0005
delta-BHC		<0.0005	mg/L	0.005	0.0005
Heptachlor		<0.0005	mg/L	0.005	0.0005
Aldrin		<0.0005	mg/L	0.005	0.0005
Heptachlor Epoxide		<0.0005	mg/L	0.005	0.0005
gamma-Chlordane		<0.0005	mg/L	0.005	0.0005
alpha-Chlordane		<0.0005	mg/L	0.005	0.0005
Endosulfan I		<0.0005	mg/L	0.005	0.0005
P,P-DDE		<0.0005	mg/L	0.005	0.0005
Dieldrin		<0.0005	mg/L	0.005	0.0005
Endrin		<0.0005	mg/L	0.005	0.0005
P,P-DDD		<0.0005	mg/L	0.005	0.0005
Endosulfan II		<0.0005	mg/L	0.005	0.0005
p,p-DDT		<0.0005	mg/L	0.005	0.0005
Endrin aldehyde		<0.0005	mg/L	0.005	0.0005
Endosulfan sulfate		<0.0005	mg/L	0.005	0.0005
Methoxychlor		<0.0005	mg/L	0.005	0.0005
Endrin Ketone		<0.0005	mg/L	0.005	0.0005
Toxaphene		<0.005	mg/L	0.005	0.005
Technical Chlordane		<0.005	mg/L	0.005	0.0005

Report Date: January 2, 2003
N/A

Order Number: A02121109
RO Reject

Page Number: 3 of 12
Artesia, NM 88210

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene		0.00089	mg/L	0.005	0.001	89	0 - 221
deca chlorobiphenyl		0.0012	mg/L	0.005	0.001	120	0 - 221

Sample: 215515 - RO Annual

Analysis: Semivolatiles Analytical Method: E 625 QC Batch: QC25941 Date Analyzed: 12/16/02
Analyst: RC Preparation Method: N/A Prep Batch: PB23757 Date Prepared: 12/12/02

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.005	mg/L	1	0.005
n-Nitrosodimethylamine		<0.005	mg/L	1	0.005
2-Picoline		<0.005	mg/L	1	0.005
Methyl methanesulfonate		<0.005	mg/L	1	0.005
Ethyl methanesulfonate		<0.005	mg/L	1	0.005
Phenol		<0.005	mg/L	1	0.005
Aniline		<0.005	mg/L	1	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	1	0.005
2-Chlorophenol		<0.005	mg/L	1	0.005
1,3-Dichlorobenzene (meta)		<0.005	mg/L	1	0.005
1,4-Dichlorobenzene		<0.005	mg/L	1	0.005
Benzyl alcohol		<0.005	mg/L	1	0.005
1,2-Dichlorobenzene		<0.005	mg/L	1	0.005
2-Methylphenol		<0.005	mg/L	1	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	1	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	1	0.005
Acetophenone		<0.005	mg/L	1	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	1	0.005
Hexachloroethane		<0.005	mg/L	1	0.005
Nitrobenzene		<0.005	mg/L	1	0.005
n-Nitrosopiperidine		<0.005	mg/L	1	0.005
Isophorone		<0.005	mg/L	1	0.005
2-Nitrophenol		<0.005	mg/L	1	0.005
2,4-Dimethylphenol		<0.005	mg/L	1	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	1	0.005
Benzoic acid		<0.005	mg/L	1	0.005
2,4-Dichlorophenol		<0.005	mg/L	1	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	1	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	1	0.005
Naphthalene		<0.005	mg/L	1	0.005
4-Chloroaniline		<0.005	mg/L	1	0.005
2,6-Dichlorophenol		<0.005	mg/L	1	0.005
Hexachlorobutadiene		<0.005	mg/L	1	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	1	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	1	0.005
1-Methylnaphthalene		<0.005	mg/L	1	0.005
2-Methylnaphthalene		<0.005	mg/L	1	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	1	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	1	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	1	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	1	0.005
2-Chloronaphthalene		<0.005	mg/L	1	0.005
1-Chloronaphthalene		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 215515 Analysis: Semivolatiles

Param	Flag	Result	Units	Dilution	RDL
2-Nitroaniline		<0.005	mg/L	1	0.005
Dimethylphthalate		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
2,6-Dinitrotoluene		<0.005	mg/L	1	0.005
3-Nitroaniline		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
2,4-Dinitrophenol		<0.005	mg/L	1	0.005
Dibenzofuran		<0.005	mg/L	1	0.005
Pentachlorobenzene		<0.005	mg/L	1	0.005
4-Nitrophenol		<0.005	mg/L	1	0.005
1-Naphthylamine		<0.005	mg/L	1	0.005
2,4-Dinitrotoluene		<0.005	mg/L	1	0.005
2-Naphthylamine		<0.005	mg/L	1	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Diethylphthalate		<0.005	mg/L	1	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	1	0.005
4-Nitroaniline		<0.005	mg/L	1	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	1	0.005
Diphenylamine		<0.005	mg/L	1	0.005
Diphenylhydrazine		<0.005	mg/L	1	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	1	0.005
Phenacetin		<0.005	mg/L	1	0.005
Hexachlorobenzene		<0.005	mg/L	1	0.005
4-Aminobiphenyl		<0.005	mg/L	1	0.005
Pentachlorophenol		<0.005	mg/L	1	0.005
Pentachloronitrobenzene		<0.005	mg/L	1	0.005
Pronamide		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Di-n-butylphthalate		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Benzidine		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	1	0.005
Butylbenzylphthalate		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	1	0.005
Di-n-octylphthalate		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
3-Methylcholanthrene		<0.005	mg/L	1	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Report Date: January 2, 2003
N/A

Order Number: A02121109
RO Reject

Page Number: 5 of 12
Artesia, NM 88210

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		21.32	mg/L	1	80	26	0 - 66
Phenol-d5		14.32	mg/L	1	80	17	0 - 70
Nitrobenzene-d5		48.55	mg/L	1	80	60	23 - 99
2-Fluorobiphenyl		47.36	mg/L	1	80	59	27 - 95
2,4,6-Tribromophenol		41.16	mg/L	1	80	51	0 - 199
Terphenyl-d14		45.43	mg/L	1	80	56	20 - 96

Quality Control Report Method Blank

Method Blank QCBatch: QC25651

Param	Flag	Results	Units	Reporting Limit
PCB		<0.0005	mg/L	0.0005
Aroclor 1016 (PCB-1016)		<0.0005	mg/L	0.0005
Aroclor 1221 (PCB-1221)		<0.0005	mg/L	0.0005
Aroclor 1232 (PCB-1232)		<0.0005	mg/L	0.0005
Aroclor 1242 (PCB-1242)		<0.0005	mg/L	0.0005
Aroclor 1248 (PCB-1248)		<0.0005	mg/L	0.0005
Aroclor 1254 (PCB-1254)		<0.0005	mg/L	0.0005
Aroclor 1260 (PCB-1260)		<0.0005	mg/L	0.0005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
deca chlorobiphenyl		0.0007	mg/L	1	0.001	70	0 - 115

Method Blank QCBatch: QC25685

Param	Flag	Results	Units	Reporting Limit
alpha-BHC		<0.0005	mg/L	0.0005
gamma-BHC (Lindane)		<0.0005	mg/L	0.0005
beta-BHC		<0.0005	mg/L	0.0005
delta-BHC		<0.0005	mg/L	0.0005
Heptachlor		<0.0005	mg/L	0.0005
Aldrin		<0.0005	mg/L	0.0005
Heptachlor Epoxide		<0.0005	mg/L	0.0005
gamma-Chlordane		<0.0005	mg/L	0.0005
alpha-Chlordane		<0.0005	mg/L	0.0005
Endosulfan I		<0.0005	mg/L	0.0005
P,P-DDE		<0.0005	mg/L	0.0005
Dieldrin		<0.0005	mg/L	0.0005
Endrin		<0.0005	mg/L	0.0005
P,P-DDD		<0.0005	mg/L	0.0005
Endosulfan II		<0.0005	mg/L	0.0005
p,p-DDT		<0.0005	mg/L	0.0005
Endrin aldehyde		<0.0005	mg/L	0.0005
Endosulfan sulfate		<0.0005	mg/L	0.0005
Methoxychlor		<0.0005	mg/L	0.0005
Endrin Ketone		<0.0005	mg/L	0.0005
Toxaphene		<0.005	mg/L	0.005
Technical Chlordane		<0.005	mg/L	0.0005

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene		0.00075	mg/L	1	0.001	75	0 - 221
deca chlorobiphenyl		0.001	mg/L	1	0.001	100	0 - 221

Method Blank

QCBatch: QC25941

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.005	mg/L	0.005
n-Nitrosodimethylamine		<0.005	mg/L	0.005
2-Picoline		<0.005	mg/L	0.005
Methyl methanesulfonate		<0.005	mg/L	0.005
Ethyl methanesulfonate		<0.005	mg/L	0.005
Phenol		<0.005	mg/L	0.005
Aniline		<0.005	mg/L	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	0.005
2-Chlorophenol		<0.005	mg/L	0.005
1,3-Dichlorobenzene (meta)		<0.005	mg/L	0.005
1,4-Dichlorobenzene		<0.005	mg/L	0.005
Benzyl alcohol		<0.005	mg/L	0.005
1,2-Dichlorobenzene		<0.005	mg/L	0.005
2-Methylphenol		<0.005	mg/L	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	0.005
Acetophenone		<0.005	mg/L	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	0.005
Hexachloroethane		<0.005	mg/L	0.005
Nitrobenzene		<0.005	mg/L	0.005
n-Nitrosopiperidine		<0.005	mg/L	0.005
Isophorone		<0.005	mg/L	0.005
2-Nitrophenol		<0.005	mg/L	0.005
2,4-Dimethylphenol		<0.005	mg/L	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	0.005
Benzoic acid		<0.005	mg/L	0.005
2,4-Dichlorophenol		<0.005	mg/L	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	0.005
Naphthalene		<0.005	mg/L	0.005
4-Chloroaniline		<0.005	mg/L	0.005
2,6-Dichlorophenol		<0.005	mg/L	0.005
Hexachlorobutadiene		<0.005	mg/L	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	0.005
1-Methylnaphthalene		<0.005	mg/L	0.005
2-Methylnaphthalene		<0.005	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	0.005
2-Chloronaphthalene		<0.005	mg/L	0.005
1-Chloronaphthalene		<0.005	mg/L	0.005
2-Nitroaniline		<0.005	mg/L	0.005

Continued ...

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Param	Flag	Results	Units	Reporting Limit
Dimethylphthalate		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
2,6-Dinitrotoluene		<0.005	mg/L	0.005
3-Nitroaniline		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
2,4-Dinitrophenol		<0.005	mg/L	0.005
Dibenzofuran		<0.005	mg/L	0.005
Pentachlorobenzene		<0.005	mg/L	0.005
4-Nitrophenol		<0.005	mg/L	0.005
1-Naphthylamine		<0.005	mg/L	0.005
2,4-Dinitrotoluene		<0.005	mg/L	0.005
2-Naphthylamine		<0.005	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Diethylphthalate		<0.005	mg/L	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	0.005
4-Nitroaniline		<0.005	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	0.005
Diphenylamine		<0.005	mg/L	0.005
Diphenylhydrazine		<0.005	mg/L	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	0.005
Phenacetin		<0.005	mg/L	0.005
Hexachlorobenzene		<0.005	mg/L	0.005
4-Aminobiphenyl		<0.005	mg/L	0.005
Pentachlorophenol		<0.005	mg/L	0.005
Pentachloronitrobenzene		<0.005	mg/L	0.005
Pronamide		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Di-n-butylphthalate		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Benzidine		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	0.005
Butylbenzylphthalate		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	0.005
Di-n-octylphthalate		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	0.005
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
3-Methylcholanthrene		<0.005	mg/L	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		44.87	mg/L	1	80	56	0 - 66
Phenol-d5		43.42	mg/L	1	80	54	0 - 70
Nitrobenzene-d5		78.46	mg/L	1	80	98	23 - 99
2-Fluorobiphenyl		71.61	mg/L	1	80	89	27 - 95
2,4,6-Tribromophenol		53.86	mg/L	1	80	67	0 - 199
Terphenyl-d14		79.78	mg/L	1	80	99	20 - 96

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC25651

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
PCB	0.0020	0.0022	mg/L	1	0.002	<0.0005	100	9	0 - 200	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
deca chlorobiphenyl	0.0008	0.0010	mg/L	1	0.001	80	100	0 - 115

Laboratory Control Spikes

QCBatch: QC25685

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
alpha-BHC	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 165	20
gamma-BHC (Lindane)	0.0011	0.0010	mg/L	1	0.001	<0.0005	110	9	0 - 169	20
beta-BHC	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 184	20
delta-BHC	0.0012	0.0011	mg/L	1	0.001	<0.0005	120	8	0 - 189	20
Heptachlor	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 169	20
Aldrin	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 166	20
Heptachlor Epoxide	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 176	20
gamma-Chlordane	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 175	20
alpha-Chlordane	0.0012	0.0012	mg/L	1	0.001	<0.0005	120	0	0 - 176	20
Endosulfan I	0.0012	0.0011	mg/L	1	0.001	<0.0005	120	8	0 - 173	20
P,P-DDE	0.0011	0.0010	mg/L	1	0.001	<0.0005	110	9	0 - 174	20
Dieldrin	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 167	20
Endrin	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 205	20
P,P-DDD	0.0012	0.0011	mg/L	1	0.001	<0.0005	120	8	0 - 181	20
Endosulfan II	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 187	20
p,p-DDT	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 181	20
Endrin aldehyde	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 176	20
Endosulfan sulfate	0.00091	0.00093	mg/L	1	0.001	<0.0005	91	2	0 - 552	20
Methoxychlor	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 208	20
Endrin Ketone	0.0011	0.0011	mg/L	1	0.001	<0.0005	110	0	0 - 417	20
Toxaphene	0.0043	0.0042	mg/L	1	0.004	<0.005	107	2	0 - 163	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene	0.0012	0.0011	mg/L	1	0.001	120	110	0 - 221
deca chlorobiphenyl	0.0015	0.0014	mg/L	1	0.001	150	140	0 - 221

Laboratory Control Spikes

QCBatch: QC25941

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Phenol	26.07	26.38	mg/L	1	80	<0.005	32	1	0 - 81	20
2-Chlorophenol	54.17	54.37	mg/L	1	80	<0.005	67	0	12 - 83	20
1,4-Dichlorobenzene	55.34	55.94	mg/L	1	80	<0.005	69	1	13 - 88	20
n-Nitrosodi-n-propylamine	64.45	63.76	mg/L	1	80	<0.005	80	1	9 - 101	20
1,2,4-Trichlorobenzene	57.51	57.66	mg/L	1	80	<0.005	71	0	21 - 87	20
4-Chloro-3-methylphenol	61.52	57.96	mg/L	1	80	<0.005	76	5	14 - 92	20
Acenaphthene	59.82	60.39	mg/L	1	80	<0.005	74	0	26 - 86	20
4-Nitrophenol	27.77	29.00	mg/L	1	80	<0.005	34	4	0 - 104	20
2,4-Dinitrotoluene	75.52	76.08	mg/L	1	80	<0.005	94	0	29 - 94	20
Pentachlorophenol	46.25	47.91	mg/L	1	80	<0.005	57	3	1 - 97	20
Pyrene	62.21	61.37	mg/L	1	80	<0.005	77	1	25 - 90	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
2-Fluorophenol	44.68	44.6	mg/L	1	80	55	55	0 - 66
Phenol-d5	33.33	37.22	mg/L	1	80	41	46	0 - 70
Nitrobenzene-d5	66.47	66.99	mg/L	1	80	83	83	23 - 99
2-Fluorobiphenyl	60.84	65.5	mg/L	1	80	76	81	27 - 95
2,4,6-Tribromophenol	67.69	68.69	mg/L	1	80	84	85	0 - 199
Terphenyl-d14	70.81	68.74	mg/L	1	80	88	85	20 - 96

Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC25651

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.43	107	85 - 115	12/17/02

ICV (1)

QCBatch: QC25651

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.44	110	85 - 115	12/17/02

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N/A

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CCV (1) QCBatch: QC25685

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.10	0.1041	104	85 - 115	12/18/02
gamma-BHC (Lindane)		mg/L	0.10	0.1137	113	85 - 115	12/18/02
beta-BHC		mg/L	0.10	0.1110	111	85 - 115	12/18/02
delta-BHC		mg/L	0.10	0.1089	108	85 - 115	12/18/02
Heptachlor		mg/L	0.10	0.0991	99	85 - 115	12/18/02
Aldrin		mg/L	0.10	0.1122	112	85 - 115	12/18/02
Heptachlor Epoxide		mg/L	0.10	0.1116	111	85 - 115	12/18/02
gamma-Chlordane		mg/L	0.10	0.1053	105	85 - 115	12/18/02
alpha-Chlordane		mg/L	0.10	0.1033	103	85 - 115	12/18/02
Endosulfan I		mg/L	0.10	0.1040	104	85 - 115	12/18/02
P,P-DDE		mg/L	0.10	0.1043	104	85 - 115	12/18/02
Dieldrin		mg/L	0.10	0.1025	102	85 - 115	12/18/02
Endrin		mg/L	0.10	0.1078	107	85 - 115	12/18/02
P,P-DDD		mg/L	0.10	0.1044	104	85 - 115	12/18/02
Endosulfan II		mg/L	0.10	0.1060	106	85 - 115	12/18/02
p,p-DDT		mg/L	0.10	0.1008	100	85 - 115	12/18/02
Endrin aldehyde		mg/L	0.10	0.1019	101	85 - 115	12/18/02
Endosulfan sulfate		mg/L	0.10	0.1024	102	85 - 115	12/18/02
Methoxychlor		mg/L	0.10	0.1021	102	85 - 115	12/18/02
Endrin Ketone		mg/L	0.10	0.0995	99	85 - 115	12/18/02
Toxaphene		mg/L	0.80	0.7762	97	85 - 115	12/18/02
2,4,5,6-Tetrachloro-m-xylene		mg/L	0.10	0.1002	100	85 - 115	12/18/02
deca chlorobiphenyl		mg/L	0.10	0.1026	102	85 - 115	12/18/02

ICV (1) QCBatch: QC25685

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.10	0.1075	107	85 - 115	12/18/02
gamma-BHC (Lindane)		mg/L	0.10	0.1062	106	85 - 115	12/18/02
beta-BHC		mg/L	0.10	0.1136	113	85 - 115	12/18/02
delta-BHC		mg/L	0.10	0.1110	111	85 - 115	12/18/02
Heptachlor		mg/L	0.10	0.1012	101	85 - 115	12/18/02
Aldrin		mg/L	0.10	0.1143	114	85 - 115	12/18/02
Heptachlor Epoxide		mg/L	0.10	0.1130	113	85 - 115	12/18/02
gamma-Chlordane		mg/L	0.10	0.1036	103	85 - 115	12/18/02
alpha-Chlordane		mg/L	0.10	0.1039	103	85 - 115	12/18/02
Endosulfan I		mg/L	0.10	0.1032	103	85 - 115	12/18/02
P,P-DDE		mg/L	0.10	0.1126	112	85 - 115	12/18/02
Dieldrin		mg/L	0.10	0.1001	100	85 - 115	12/18/02
Endrin		mg/L	0.10	0.1015	101	85 - 115	12/18/02
P,P-DDD		mg/L	0.10	0.1005	100	85 - 115	12/18/02
Endosulfan II		mg/L	0.10	0.1003	100	85 - 115	12/18/02
p,p-DDT		mg/L	0.10	0.0997	99	85 - 115	12/18/02
Endrin aldehyde		mg/L	0.10	0.0969	96	85 - 115	12/18/02
Endosulfan sulfate		mg/L	0.10	0.0976	97	85 - 115	12/18/02
Methoxychlor		mg/L	0.10	0.0933	93	85 - 115	12/18/02

Continued ...

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N/A

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... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Endrin Ketone		mg/L	0.10	0.0959	95	85 - 115	12/18/02
Toxaphene		mg/L	0.80	0.8440	105	85 - 115	12/18/02
2,4,5,6-Tetrachloro-m-xylene		mg/L	0.10	0.1021	102	85 - 115	12/18/02
deca chlorobiphenyl		mg/L	0.10	0.0967	96	85 - 115	12/18/02

CCV (1)

QCBatch: QC25941

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60	63.89	106	80 - 120	12/16/02
1,4-Dichlorobenzene		mg/L	60	62.2	103	80 - 120	12/16/02
2-Nitrophenol		mg/L	60	66.21	110	80 - 120	12/16/02
2,4-Dichlorophenol		mg/L	60	67.75	112	80 - 120	12/16/02
Hexachlorobutadiene		mg/L	60	54.23	90	80 - 120	12/16/02
4-Chloro-3-methylphenol		mg/L	60	69.15	115	80 - 120	12/16/02
2,4,6-Trichlorophenol		mg/L	60	58.89	98	80 - 120	12/16/02
Acenaphthene		mg/L	60	60.52	100	80 - 120	12/16/02
Diphenylamine		mg/L	60	58.92	98	80 - 120	12/16/02
Pentachlorophenol		mg/L	60	58.79	97	80 - 120	12/16/02
Fluoranthene		mg/L	60	55.22	92	80 - 120	12/16/02
Di-n-octylphthalate		mg/L	60	59.71	99	80 - 120	12/16/02
Benzo(a)pyrene		mg/L	60	64.45	107	80 - 120	12/16/02
2-Fluorophenol		mg/L	60	63.66	106	80 - 120	12/16/02
Phenol-d5		mg/L	60	71.01	118	80 - 120	12/16/02
Nitrobenzene-d5		mg/L	60	60.76	101	80 - 120	12/16/02
2-Fluorobiphenyl		mg/L	60	57.7	96	80 - 120	12/16/02
2,4,6-Tribromophenol		mg/L	60	52.2	87	80 - 120	12/16/02
Terphenyl-d14		mg/L	60	49.65	82	80 - 120	12/16/02

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Company Name: Navajo

Address: (Street, City, Zip) 501 E. Main

Contact Person: Darrell Moore

Invoice to: (If different from above)

Project #: 20 Annual

Project Location: Artesia

Phone #: 505748-3311

Fax #: 505746-5421

LAB # (LAB USE ONLY) 26515

FIELD CODE 20 Annual

CONTAINERS 3

Volume/Amount 1 L

MATRIX WATER, AIR, SLUDGE

PRESERVATIVE METHOD HCl, HNO3, H2SO4, NaOH, ICE, NONE

SAMPLING DATE 12/10/02

TIME 1450

Relinquished by: [Signature]

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Date: 12/10/02

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Date: 12/10/02

Time: 1615

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Date: 12/10/02

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REFINING COMPANY

FAX

(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

August 22, 2002

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

RECEIVED
AUG 26 2002
Environmental Bureau
Oil Conservation Division

RE: 2nd Quarter 2002 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the quarterly report and analysis for the second quarter of 2002.

For this quarter we discharged a total of 28,017,000 gallons to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 1,048,188,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 851,475,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.

cc: USEPA
New Mexico Environment Dept.- Water Quality

Report Date: July 24, 2002 Order Number: A02071026
N/A Injection WellsPage Number: 1 of 5
N/A

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 24, 2002

Order ID Number: A02071026

Project Number: N/A
Project Name: Injection Wells
Project Location: N/A

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
201170	Inj Wells	Water	7/9/02	9:00	7/10/02

0 This report consists of a total of 5 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 201170 - Inj Wells

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		90	mg/L as CaCo3
Total Alkalinity		90	mg/L as CaCo3
Specific Conductance		5830	μMHOS/cm
Corrosivity	0.4970 non-corrosive		mm/yr
pH		7.57	s.u.
Flashpoint		>140	F
Total Mercury		<0.0002	mg/L
Chloride		1090	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		934	mg/L
Reactivity	Non-reactive		
Hydrogen Sulfide		<10	mg/L
Hydrogen Cyanide		<2.5	mg/L
Dissolved Calcium		170	mg/L
Dissolved Magnesium		31.7	mg/L
Dissolved Potassium		19.3	mg/L
Dissolved Sodium		691	mg/L
Pyridine		<0.017	mg/L
n-Nitrosodimethylamine		<0.017	mg/L
2-Picoline		<0.017	mg/L
Methyl methanesulfonate		<0.017	mg/L
Ethyl methanesulfonate		<0.017	mg/L
Phenol		<0.017	mg/L
Aniline		<0.017	mg/L
bis (2-chloroethyl) ether		<0.017	mg/L
2-Chlorophenol		<0.017	mg/L
1,3-Dichlorobenzene (meta)		<0.017	mg/L

Continued on next page ...

This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: July 24, 2002 Order Number: A02071026

Page Number: 2 of 5

N/A

Injection Wells

N/A

Sample 201170 continued ...

Param	Flag	Result	Units
1,4-Dichlorobenzene		<0.017	mg/L
Benzyl alcohol		<0.017	mg/L
1,2-Dichlorobenzene		<0.017	mg/L
2-Methylphenol		<0.017	mg/L
bis (2-chloroisopropyl) ether		<0.017	mg/L
4-Methylphenol/3-Methylphenol		<0.017	mg/L
Acetophenone		<0.017	mg/L
n-Nitrosodi-n-propylamine		<0.017	mg/L
Hexachloroethane		<0.017	mg/L
Nitrobenzene		<0.017	mg/L
n-Nitrosopiperidine		<0.017	mg/L
Isophorone		<0.017	mg/L
2-Nitrophenol		<0.017	mg/L
2,4-Dimethylphenol		<0.017	mg/L
bis (2-chloroethoxy) methane		<0.017	mg/L
Benzoic acid		<0.017	mg/L
2,4-Dichlorophenol		<0.017	mg/L
1,2,4-Trichlorobenzene		<0.017	mg/L
a,a-Dimethylphenethylamine		<0.017	mg/L
Naphthalene		<0.017	mg/L
4-Chloroaniline		<0.017	mg/L
2,6-Dichlorophenol		<0.017	mg/L
Hexachlorobutadiene		<0.017	mg/L
n-Nitroso-di-n-butylamine		<0.017	mg/L
4-Chloro-3-methylphenol		<0.017	mg/L
1-Methylnaphthalene		<0.017	mg/L
2-Methylnaphthalene		<0.017	mg/L
1,2,4,5-Tetrachlorobenzene		<0.017	mg/L
Hexachlorocyclopentadiene		<0.017	mg/L
2,4,6-Trichlorophenol		<0.017	mg/L
2,4,5-Trichlorophenol		<0.017	mg/L
2-Chloronaphthalene		<0.017	mg/L
1-Chloronaphthalene		<0.017	mg/L
2-Nitroaniline		<0.017	mg/L
Dimethylphthalate		<0.017	mg/L
Acenaphthylene		<0.017	mg/L
2,6-Dinitrotoluene		<0.017	mg/L
3-Nitroaniline		<0.017	mg/L
Acenaphthene		<0.017	mg/L
2,4-Dinitrophenol		<0.017	mg/L
Dibenzofuran		<0.017	mg/L
Pentachlorobenzene		<0.017	mg/L
4-Nitrophenol		<0.017	mg/L
1-Naphthylamine		<0.017	mg/L
2,4-Dinitrotoluene		<0.017	mg/L
2-Naphthylamine		<0.017	mg/L
2,3,4,6-Tetrachlorophenol		<0.017	mg/L
Fluorene		<0.017	mg/L
Diethylphthalate		<0.017	mg/L
4-Chlorophenyl-phenylether		<0.017	mg/L

Continued on next page ...

This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: July 24, 2002 Order Number: A02071026

- Page Number: 3 of 5

N/A

Injection Wells

N/A

Sample 201170 continued ...

Param	Flag	Result	Units
4-Nitroaniline		<0.017	mg/L
4,6-Dinitro-2-methylphenol		<0.017	mg/L
Diphenylamine		<0.017	mg/L
Diphenylhydrazine		<0.017	mg/L
4-Bromophenyl-phenylether		<0.017	mg/L
Phenacetin		<0.017	mg/L
Hexachlorobenzene		<0.017	mg/L
4-Aminobiphenyl		<0.017	mg/L
Pentachlorophenol		<0.017	mg/L
Pentachloronitrobenzene		<0.017	mg/L
Pronamide		<0.017	mg/L
Phenanthrene		<0.017	mg/L
Anthracene		<0.017	mg/L
Di-n-butylphthalate		<0.017	mg/L
Fluoranthene		<0.017	mg/L
Benzydine		<0.017	mg/L
Pyrene		<0.017	mg/L
p-Dimethylaminoazobenzene		<0.017	mg/L
Butylbenzylphthalate		<0.017	mg/L
Benzo(a)anthracene		<0.017	mg/L
3,3-Dichlorobenzidine		<0.017	mg/L
Chrysene		<0.017	mg/L
Bis (2-ethylhexyl) phthalate		<0.017	mg/L
Di-n-octylphthalate		<0.017	mg/L
Benzo(b)fluoranthene		<0.017	mg/L
7,12-Dimethylbenz(a)anthracene		<0.017	mg/L
Benzo(k)fluoranthene		<0.017	mg/L
Benzo(a)pyrene		<0.017	mg/L
3-Methylcholanthrene		<0.017	mg/L
Dibenzo(a,j)acridine		<0.017	mg/L
Indeno(1,2,3-cd)pyrene		<0.017	mg/L
Dibenzo(a,h)anthracene		<0.017	mg/L
Benzo(g,h,i)perylene		<0.017	mg/L
Total Dissolved Solids		2920	mg/L
Total Aluminum		0.347	mg/L
Total Arsenic		0.142	mg/L
Total Barium		<0.100	mg/L
Total Beryllium		<0.0025	mg/L
Total Boron		0.285	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		<0.010	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		4.08	mg/L
Total Lead		<0.010	mg/L
Total Manganese		0.124	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		0.422	mg/L
Total Silver		<0.0125	mg/L

*Continued on next page ...**This is only a summary. Please, refer to the complete report package for quality control data.*

Report Date: July 24, 2002 Order Number: A02071026

Page Number: 4 of 5

N/A

Injection Wells

N/A

Sample 201170 continued ...

Param	Flag	Result	Units
Total Uranium		<0.020	mg/L
Total Vanadium		<0.025	mg/L
Total Zinc		0.316	mg/L
Bromochloromethane		<5.00	µg/L
Dichlorodifluoromethane		<5.00	µg/L
Chloromethane (methyl chloride)		<5.00	µg/L
Vinyl Chloride		<5.00	µg/L
Bromomethane (methyl bromide)		<25.0	µg/L
Chloroethane		<5.00	µg/L
Trichlorofluoromethane		<5.00	µg/L
Acetone		<50.0	µg/L
Iodomethane (methyl iodide)		<25.0	µg/L
Carbon Disulfide		<5.00	µg/L
Acrylonitrile		<5.00	µg/L
2-Butanone (MEK)		<25.0	µg/L
4-methyl-2-pentanone (MIBK)		<25.0	µg/L
2-hexanone		<25.0	µg/L
trans 1,4-Dichloro-2-butene		<50.0	µg/L
1,1-Dichloroethene		<5.00	µg/L
Methylene chloride		<25.0	µg/L
MTBE		<5.00	µg/L
trans-1,2-Dichloroethene		<5.00	µg/L
1,1-Dichloroethane		<5.00	µg/L
cis-1,2-Dichloroethene		<5.00	µg/L
2,2-Dichloropropane		<5.00	µg/L
1,2-Dichloroethane (EDC)		<5.00	µg/L
Chloroform		<5.00	µg/L
1,1,1-Trichloroethane		<5.00	µg/L
1,1-Dichloropropene		<5.00	µg/L
Benzene		<5.00	µg/L
Carbon Tetrachloride		<5.00	µg/L
1,2-Dichloropropane		<5.00	µg/L
Trichloroethene (TCE)		<5.00	µg/L
Dibromomethane (methylene bromide)		<5.00	µg/L
Bromodichloromethane		<5.00	µg/L
2-Chloroethyl vinyl ether		<25.0	µg/L
cis-1,3-Dichloropropene		<5.00	µg/L
trans-1,3-Dichloropropene		<5.00	µg/L
Toluene		<5.00	µg/L
1,1,2-Trichloroethane		<5.00	µg/L
1,3-Dichloropropane		<5.00	µg/L
Dibromochloromethane		<5.00	µg/L
1,2-Dibromoethane (EDB)		<5.00	µg/L
Tetrachloroethene (PCE)		<5.00	µg/L
Chlorobenzene		<5.00	µg/L
1,1,1,2-Tetrachloroethane		<5.00	µg/L
Ethylbenzene		<5.00	µg/L
m,p-Xylene		<5.00	µg/L
Bromoform		<5.00	µg/L
Styrene		<5.00	µg/L

*Continued on next page ...**This is only a summary. Please, refer to the complete report package for quality control data.*

Report Date: July 24, 2002 Order Number: A02071026

Page Number: 5 of 5

N/A

Injection Wells

N/A

Sample 201170 continued ...

Param	Flag	Result	Units
o-Xylene		<5.00	µg/L
1,1,2,2-Tetrachloroethane		<5.00	µg/L
2-Chlorotoluene		<5.00	µg/L
1,2,3-Trichloropropane		<5.00	µg/L
Isopropylbenzene		<5.00	µg/L
Bromobenzene		<5.00	µg/L
n-Propylbenzene		<5.00	µg/L
1,3,5-Trimethylbenzene		<5.00	µg/L
tert-Butylbenzene		<5.00	µg/L
1,2,4-Trimethylbenzene		<5.00	µg/L
1,4-Dichlorobenzene (para)		<5.00	µg/L
sec-Butylbenzene		<5.00	µg/L
1,3-Dichlorobenzene (meta)		<5.00	µg/L
p-Isopropyltoluene		<5.00	µg/L
4-Chlorotoluene		<5.00	µg/L
1,2-Dichlorobenzene (ortho)		<5.00	µg/L
n-Butylbenzene		<5.00	µg/L
1,2-Dibromo-3-chloropropane		<25.0	µg/L
1,2,3-Trichlorobenzene		<25.0	µg/L
1,2,4-Trichlorobenzene		<25.0	µg/L
Naphthalene		<25.0	µg/L
Hexachlorobutadiene		<25.0	µg/L
Test Comments	1	note:	µg/L
pH		7.2	s.u.

¹elevated reporting limits due to matrix problems.

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 24, 2002

Order ID Number: A02071026

Project Number: N/A
Project Name: Injection Wells
Project Location: N/A

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
201170	Inj Wells	Water	7/9/02	9:00	7/10/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 20 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Report Date: July 24, 2002
N/A

Order Number: A02071026
Injection Wells

Page Number: 2 of 20
N/A

Analytical Report

Sample: 201170 - Inj Wells

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC21973 Date Analyzed: 7/16/02
Analyst: RS Preparation Method: N/A Prep Batch: PB20783 Date Prepared: 7/16/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		90	mg/L as CaCo3	1	1
Total Alkalinity		90	mg/L as CaCo3	1	1

Sample: 201170 - Inj Wells

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC21780 Date Analyzed: 7/11/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB20631 Date Prepared: 7/11/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		5830	μMHOS/cm	1	

Sample: 201170 - Inj Wells

Analysis: Corrosivity Analytical Method: S 1110 QC Batch: QC21915 Date Analyzed: 7/16/02
Analyst: BC Preparation Method: Prep Batch: PB20741 Date Prepared: 7/16/02

Param	Flag	Result	Units	Dilution	RDL
Corrosivity		0.4970 non-corrosive	mm/yr	1	
pH		7.57	s.u.	1	

Sample: 201170 - Inj Wells

Analysis: Flashpoint Analytical Method: E 1010 QC Batch: QC21917 Date Analyzed: 7/16/02
Analyst: BC Preparation Method: N/A Prep Batch: PB20743 Date Prepared: 7/16/02

Param	Flag	Result	Units	Dilution	RDL
Flashpoint		>140	F	1	

Sample: 201170 - Inj Wells

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC22023 Date Analyzed: 7/19/02
Analyst: BC Preparation Method: N/A Prep Batch: PB20842 Date Prepared: 7/19/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 201170 - Inj Wells

Analysis: Ignitability Analytical Method: SW-846 Ch. 7.1 QC Batch: QC21914 Date Analyzed: 7/16/02
Analyst: BC Preparation Method: Prep Batch: PB20740 Date Prepared: 7/16/02

Report Date: July 24, 2002
N/A

Order Number: A02071026
Injection Wells

Page Number: 3 of 20
N/A

Param	Flag	Result	Units	Dilution	RDL
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Sample: 201170 - Inj Wells

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC21805 Date Analyzed: 7/10/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB20648 Date Prepared: 7/10/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		1090	mg/L	100	1
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		934	mg/L	100	1

Sample: 201170 - Inj Wells

Analysis: Reactivity Analytical Method: ASTM D 5049-90/4978-95 QC Batch: QC21916 Date Analyzed: 7/16/02
Analyst: BC Preparation Method: Prep Batch: PB20742 Date Prepared: 7/16/02

Param	Flag	Result	Units	Dilution	RDL
Reactivity		Non-reactive		1	
Hydrogen Sulfide		<10	mg/L	1	
Hydrogen Cyanide		<2.5	mg/L	1	

Sample: 201170 - Inj Wells

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC22163 Date Analyzed: 7/22/02
Analyst: BC Preparation Method: S 3005A Prep Batch: PB20704 Date Prepared: 7/15/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		170	mg/L	1	0.50
Dissolved Magnesium		31.7	mg/L	1	0.50
Dissolved Potassium		19.3	mg/L	1	0.50
Dissolved Sodium		691	mg/L	1	0.50

Sample: 201170 - Inj Wells

Analysis: Semivolatiles Analytical Method: S 8270C QC Batch: QC22072 Date Analyzed: 7/16/02
Analyst: RC Preparation Method: E 3510C Prep Batch: PB20791 Date Prepared: 7/15/02

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.017	mg/L	3.33	0.005
n-Nitrosodimethylamine		<0.017	mg/L	3.33	0.005
2-Picoline		<0.017	mg/L	3.33	0.005
Methyl methanesulfonate		<0.017	mg/L	3.33	0.005
Ethyl methanesulfonate		<0.017	mg/L	3.33	0.005
Phenol		<0.017	mg/L	3.33	0.005
Aniline		<0.017	mg/L	3.33	0.005
bis (2-chloroethyl) ether		<0.017	mg/L	3.33	0.005
2-Chlorophenol		<0.017	mg/L	3.33	0.005
1,3-Dichlorobenzene (meta)		<0.017	mg/L	3.33	0.005
1,4-Dichlorobenzene		<0.017	mg/L	3.33	0.005
Benzyl alcohol		<0.017	mg/L	3.33	0.005

Continued ...

... Continued Sample: 201170 Analysis: Semivolatiles

Param	Flag	Result	Units	Dilution	RDL
1,2-Dichlorobenzene		<0.017	mg/L	3.33	0.005
2-Methylphenol		<0.017	mg/L	3.33	0.005
bis (2-chloroisopropyl) ether		<0.017	mg/L	3.33	0.005
4-Methylphenol/3-Methylphenol		<0.017	mg/L	3.33	0.005
Acetophenone		<0.017	mg/L	3.33	0.005
n-Nitrosodi-n-propylamine		<0.017	mg/L	3.33	0.005
Hexachloroethane		<0.017	mg/L	3.33	0.005
Nitrobenzene		<0.017	mg/L	3.33	0.005
n-Nitrosopiperidine		<0.017	mg/L	3.33	0.005
Isophorone		<0.017	mg/L	3.33	0.005
2-Nitrophenol		<0.017	mg/L	3.33	0.005
2,4-Dimethylphenol		<0.017	mg/L	3.33	0.005
bis (2-chloroethoxy) methane		<0.017	mg/L	3.33	0.005
Benzoic acid		<0.017	mg/L	3.33	0.005
2,4-Dichlorophenol		<0.017	mg/L	3.33	0.005
1,2,4-Trichlorobenzene		<0.017	mg/L	3.33	0.005
a,a-Dimethylphenethylamine		<0.017	mg/L	3.33	0.005
Naphthalene		<0.017	mg/L	3.33	0.005
4-Chloroaniline		<0.017	mg/L	3.33	0.005
2,6-Dichlorophenol		<0.017	mg/L	3.33	0.005
Hexachlorobutadiene		<0.017	mg/L	3.33	0.005
n-Nitroso-di-n-butylamine		<0.017	mg/L	3.33	0.005
4-Chloro-3-methylphenol		<0.017	mg/L	3.33	0.005
1-Methylnaphthalene		<0.017	mg/L	3.33	0.005
2-Methylnaphthalene		<0.017	mg/L	3.33	0.005
1,2,4,5-Tetrachlorobenzene		<0.017	mg/L	3.33	0.005
Hexachlorocyclopentadiene		<0.017	mg/L	3.33	0.005
2,4,6-Trichlorophenol		<0.017	mg/L	3.33	0.005
2,4,5-Trichlorophenol		<0.017	mg/L	3.33	0.005
2-Chloronaphthalene		<0.017	mg/L	3.33	0.005
1-Chloronaphthalene		<0.017	mg/L	3.33	0.005
2-Nitroaniline		<0.017	mg/L	3.33	0.005
Dimethylphthalate		<0.017	mg/L	3.33	0.005
Acenaphthylene		<0.017	mg/L	3.33	0.005
2,6-Dinitrotoluene		<0.017	mg/L	3.33	0.005
3-Nitroaniline		<0.017	mg/L	3.33	0.005
Acenaphthene		<0.017	mg/L	3.33	0.005
2,4-Dinitrophenol		<0.017	mg/L	3.33	0.005
Dibenzofuran		<0.017	mg/L	3.33	0.005
Pentachlorobenzene		<0.017	mg/L	3.33	0.005
4-Nitrophenol		<0.017	mg/L	3.33	0.005
1-Naphthylamine		<0.017	mg/L	3.33	0.005
2,4-Dinitrotoluene		<0.017	mg/L	3.33	0.005
2-Naphthylamine		<0.017	mg/L	3.33	0.005
2,3,4,6-Tetrachlorophenol		<0.017	mg/L	3.33	0.005
Fluorene		<0.017	mg/L	3.33	0.005
Diethylphthalate		<0.017	mg/L	3.33	0.005
4-Chlorophenyl-phenylether		<0.017	mg/L	3.33	0.005
4-Nitroaniline		<0.017	mg/L	3.33	0.005
4,6-Dinitro-2-methylphenol		<0.017	mg/L	3.33	0.005
Diphenylamine		<0.017	mg/L	3.33	0.005
Diphenylhydrazine		<0.017	mg/L	3.33	0.005
4-Bromophenyl-phenylether		<0.017	mg/L	3.33	0.005

Continued ...

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... Continued Sample: 201170 Analysis: Semivolatiles

Param	Flag	Result	Units	Dilution	RDL
Phenacetin		<0.017	mg/L	3.33	0.005
Hexachlorobenzene		<0.017	mg/L	3.33	0.005
4-Aminobiphenyl		<0.017	mg/L	3.33	0.005
Pentachlorophenol		<0.017	mg/L	3.33	0.005
Pentachloronitrobenzene		<0.017	mg/L	3.33	0.005
Pronamide		<0.017	mg/L	3.33	0.005
Phenanthrene		<0.017	mg/L	3.33	0.005
Anthracene		<0.017	mg/L	3.33	0.005
Di-n-butylphthalate		<0.017	mg/L	3.33	0.005
Fluoranthene		<0.017	mg/L	3.33	0.005
Benzidine		<0.017	mg/L	3.33	0.005
Pyrene		<0.017	mg/L	3.33	0.005
p-Dimethylaminoazobenzene		<0.017	mg/L	3.33	0.005
Butylbenzylphthalate		<0.017	mg/L	3.33	0.005
Benzo(a)anthracene		<0.017	mg/L	3.33	0.005
3,3-Dichlorobenzidine		<0.017	mg/L	3.33	0.005
Chrysene		<0.017	mg/L	3.33	0.005
Bis (2-ethylhexyl) phthalate		<0.017	mg/L	3.33	0.005
Di-n-octylphthalate		<0.017	mg/L	3.33	0.005
Benzo(b)fluoranthene		<0.017	mg/L	3.33	0.005
7,12-Dimethylbenz(a)anthracene		<0.017	mg/L	3.33	0.005
Benzo(k)fluoranthene		<0.017	mg/L	3.33	0.005
Benzo(a)pyrene		<0.017	mg/L	3.33	0.005
3-Methylcholanthrene		<0.017	mg/L	3.33	0.005
Dibenzo(a,j)acridine		<0.017	mg/L	3.33	0.005
Indeno(1,2,3-cd)pyrene		<0.017	mg/L	3.33	0.005
Dibenzo(a,h)anthracene		<0.017	mg/L	3.33	0.005
Benzo(g,h,i)perylene		<0.017	mg/L	3.33	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		26.51	mg/L	3.33	80	33	0 - 66
Phenol-d5		25.68	mg/L	3.33	80	32	0 - 70
Nitrobenzene-d5		63.42	mg/L	3.33	80	79	23 - 99
2-Fluorobiphenyl		52.98	mg/L	3.33	80	66	27 - 95
2,4,6-Tribromophenol		47.99	mg/L	3.33	80	59	0 - 199
Terphenyl-d14		57.69	mg/L	3.33	80	72	20 - 96

Sample: 201170 - Inj Wells

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC21968 Date Analyzed: 7/16/02
Analyst: RS Preparation Method: N/A Prep Batch: PB20788 Date Prepared: 7/15/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		2920	mg/L	5	10

Sample: 201170 - Inj Wells

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC21824 Date Analyzed: 7/12/02
Analyst: RR Preparation Method: S 3010A Prep Batch: PB20632 Date Prepared: 7/11/02

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Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		0.347	mg/L	1	0.10
Total Arsenic		0.142	mg/L	1	0.01
Total Barium		<0.100	mg/L	1	0.10
Total Beryllium		<0.0025	mg/L	1	0.0025
Total Boron		0.285	mg/L	10	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		<0.010	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		4.08	mg/L	10	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		0.124	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		0.422	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Uranium		<0.020	mg/L	1	0.02
Total Vanadium		<0.025	mg/L	1	0.02
Total Zinc		0.316	mg/L	1	0.02

Sample: 201170 - Inj Wells

Analysis: Volatiles Analytical Method: S 8260B QC Batch: QC22002 Date Analyzed: 7/17/02
Analyst: JG Preparation Method: E 5030B Prep Batch: PB20818 Date Prepared: 7/17/02

Param	Flag	Result	Units	Dilution	RDL
Bromochloromethane		<5.00	µg/L	5	1
Dichlorodifluoromethane		<5.00	µg/L	5	1
Chloromethane (methyl chloride)		<5.00	µg/L	5	1
Vinyl Chloride		<5.00	µg/L	5	1
Bromomethane (methyl bromide)		<25.0	µg/L	5	5
Chloroethane		<5.00	µg/L	5	1
Trichlorofluoromethane		<5.00	µg/L	5	1
Acetone		<50.0	µg/L	5	10
Iodomethane (methyl iodide)		<25.0	µg/L	5	5
Carbon Disulfide		<5.00	µg/L	5	1
Acrylonitrile		<5.00	µg/L	5	1
2-Butanone (MEK)		<25.0	µg/L	5	5
4-methyl-2-pentanone (MIBK)		<25.0	µg/L	5	5
2-hexanone		<25.0	µg/L	5	5
trans 1,4-Dichloro-2-butene		<50.0	µg/L	5	10
1,1-Dichloroethene		<5.00	µg/L	5	1
Methylene chloride		<25.0	µg/L	5	5
MTBE		<5.00	µg/L	5	1
trans-1,2-Dichloroethene		<5.00	µg/L	5	1
1,1-Dichloroethane		<5.00	µg/L	5	1
cis-1,2-Dichloroethene		<5.00	µg/L	5	1
2,2-Dichloropropane		<5.00	µg/L	5	1
1,2-Dichloroethane (EDC)		<5.00	µg/L	5	1
Chloroform		<5.00	µg/L	5	1
1,1,1-Trichloroethane		<5.00	µg/L	5	1
1,1-Dichloropropene		<5.00	µg/L	5	1
Benzene		<5.00	µg/L	5	1

Continued ...

... Continued Sample: 201170 Analysis: Volatiles

Param	Flag	Result	Units	Dilution	RDL
Carbon Tetrachloride		<5.00	µg/L	5	1
1,2-Dichloropropane		<5.00	µg/L	5	1
Trichloroethene (TCE)		<5.00	µg/L	5	1
Dibromomethane (methylene bromide)		<5.00	µg/L	5	1
Bromodichloromethane		<5.00	µg/L	5	1
2-Chloroethyl vinyl ether		<25.0	µg/L	5	5
cis-1,3-Dichloropropene		<5.00	µg/L	5	1
trans-1,3-Dichloropropene		<5.00	µg/L	5	1
Toluene		<5.00	µg/L	5	1
1,1,2-Trichloroethane		<5.00	µg/L	5	1
1,3-Dichloropropane		<5.00	µg/L	5	1
Dibromochloromethane		<5.00	µg/L	5	1
1,2-Dibromoethane (EDB)		<5.00	µg/L	5	1
Tetrachloroethene (PCE)		<5.00	µg/L	5	1
Chlorobenzene		<5.00	µg/L	5	1
1,1,1,2-Tetrachloroethane		<5.00	µg/L	5	1
Ethylbenzene		<5.00	µg/L	5	1
m,p-Xylene		<5.00	µg/L	5	1
Bromoform		<5.00	µg/L	5	1
Styrene		<5.00	µg/L	5	1
o-Xylene		<5.00	µg/L	5	1
1,1,2,2-Tetrachloroethane		<5.00	µg/L	5	1
2-Chlorotoluene		<5.00	µg/L	5	1
1,2,3-Trichloropropane		<5.00	µg/L	5	1
Isopropylbenzene		<5.00	µg/L	5	1
Bromobenzene		<5.00	µg/L	5	1
n-Propylbenzene		<5.00	µg/L	5	1
1,3,5-Trimethylbenzene		<5.00	µg/L	5	1
tert-Butylbenzene		<5.00	µg/L	5	1
1,2,4-Trimethylbenzene		<5.00	µg/L	5	1
1,4-Dichlorobenzene (para)		<5.00	µg/L	5	1
sec-Butylbenzene		<5.00	µg/L	5	1
1,3-Dichlorobenzene (meta)		<5.00	µg/L	5	1
p-Isopropyltoluene		<5.00	µg/L	5	1
4-Chlorotoluene		<5.00	µg/L	5	1
1,2-Dichlorobenzene (ortho)		<5.00	µg/L	5	1
n-Butylbenzene		<5.00	µg/L	5	1
1,2-Dibromo-3-chloropropane		<25.0	µg/L	5	5
1,2,3-Trichlorobenzene		<25.0	µg/L	5	5
1,2,4-Trichlorobenzene		<25.0	µg/L	5	5
Naphthalene		<25.0	µg/L	5	5
Hexachlorobutadiene		<25.0	µg/L	5	5
Test Comments	1	note:	µg/L	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.6	µg/L	5	50	103	77 - 122
Toluene-d8		54.9	µg/L	5	50	109	96 - 111
4-Bromofluorobenzene		45.9	µg/L	5	50	91	87 - 113

¹elevated reporting limits due to matrix problems.

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Sample: 201170 - Inj Wells

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC21883	Date Analyzed:	7/10/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB20720	Date Prepared:	7/10/02

Param	Flag	Result	Units	Dilution	RDL
pH		7.2	s.u.	1	1

Quality Control Report Method Blank

Method Blank QCBatch: QC21780

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		3.32	μMHOS/cm	

Method Blank QCBatch: QC21805

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank QCBatch: QC21824

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.100	mg/L	0.10
Total Arsenic		<0.050	mg/L	0.01
Total Barium		<0.100	mg/L	0.10
Total Beryllium		<0.0025	mg/L	0.0025
Total Boron		<0.005	mg/L	0.005
Total Cadmium		<0.005	mg/L	0.005
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Uranium		<0.020	mg/L	0.02
Total Vanadium		<0.025	mg/L	0.02
Total Zinc		<0.025	mg/L	0.02

Method Blank QCBatch: QC21968

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank QCBatch: QC21973

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank QCBatch: QC22002

Param	Flag	Results	Units	Reporting Limit
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<5.00	µg/L	5
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<5.00	µg/L	5
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5
4-methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-Dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1

Continued ...

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Param	Flag	Results	Units	Reporting Limit
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<5.00	µg/L	5
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.7	µg/L	1	50	101	77 - 122
Toluene-d8		54.7	µg/L	1	50	109	96 - 111
4-Bromofluorobenzene		43.4	µg/L	1	50	86	87 - 113

Method Blank QCBatch: QC22023

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank QCBatch: QC22072

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
n-Nitrosodimethylamine		<0.005	mg/L	0.005
2-Picoline		<0.005	mg/L	0.005
Methyl methanesulfonate		<0.005	mg/L	0.005
Ethyl methanesulfonate		<0.005	mg/L	0.005
Phenol		<0.005	mg/L	0.005
Aniline		<0.005	mg/L	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	0.005
2-Chlorophenol		<0.005	mg/L	0.005
1,3-Dichlorobenzene (meta)		<0.005	mg/L	0.005
1,4-Dichlorobenzene		<0.005	mg/L	0.005
Benzyl alcohol		<0.005	mg/L	0.005
1,2-Dichlorobenzene		<0.005	mg/L	0.005
2-Methylphenol		<0.005	mg/L	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	0.005
Acetophenone		<0.005	mg/L	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	0.005
Hexachloroethane		<0.005	mg/L	0.005
Nitrobenzene		<0.005	mg/L	0.005
n-Nitrosopiperidine		<0.005	mg/L	0.005
Isophorone		<0.005	mg/L	0.005
2-Nitrophenol		<0.005	mg/L	0.005
2,4-Dimethylphenol		<0.005	mg/L	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	0.005
Benzoic acid		<0.005	mg/L	0.005
2,4-Dichlorophenol		<0.005	mg/L	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	0.005
Naphthalene		<0.005	mg/L	0.005
4-Chloroaniline		<0.005	mg/L	0.005
2,6-Dichlorophenol		<0.005	mg/L	0.005
Hexachlorobutadiene		<0.005	mg/L	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	0.005
1-Methylnaphthalene		<0.005	mg/L	0.005
2-Methylnaphthalene		<0.005	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	0.005
2-Chloronaphthalene		<0.005	mg/L	0.005
1-Chloronaphthalene		<0.005	mg/L	0.005
2-Nitroaniline		<0.005	mg/L	0.005
Dimethylphthalate		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
2,6-Dinitrotoluene		<0.005	mg/L	0.005
3-Nitroaniline		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
2,4-Dinitrophenol		<0.005	mg/L	0.005
Dibenzofuran		<0.005	mg/L	0.005
Pentachlorobenzene		<0.005	mg/L	0.005
4-Nitrophenol		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
1-Naphthylamine		<0.005	mg/L	0.005
2,4-Dinitrotoluene		<0.005	mg/L	0.005
2-Naphthylamine		<0.005	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Diethylphthalate		<0.005	mg/L	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	0.005
4-Nitroaniline		<0.005	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	0.005
Diphenylamine		<0.005	mg/L	0.005
Diphenylhydrazine		<0.005	mg/L	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	0.005
Phenacetin		<0.005	mg/L	0.005
Hexachlorobenzene		<0.005	mg/L	0.005
4-Aminobiphenyl		<0.005	mg/L	0.005
Pentachlorophenol		<0.005	mg/L	0.005
Pentachloronitrobenzene		<0.005	mg/L	0.005
Pronamide		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Di-n-butylphthalate		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Benzidine		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	0.005
Butylbenzylphthalate		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	0.005
Di-n-octylphthalate		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	0.005
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
3-Methylcholanthrene		<0.005	mg/L	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		26.07	mg/L	1	80	32	0 - 66
Phenol-d5		25.47	mg/L	1	80	31	0 - 70
Nitrobenzene-d5		67.96	mg/L	1	80	84	23 - 99
2-Fluorobiphenyl		65.91	mg/L	1	80	82	27 - 95
2,4,6-Tribromophenol		38.44	mg/L	1	80	48	0 - 199
Terphenyl-d14		74.16	mg/L	1	80	92	20 - 96

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Method Blank QCBatch: QC22163

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report Duplicate Samples

Duplicate QCBatch: QC21780

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		5830	5830	μMHOS/cm	1	0	20

Duplicate QCBatch: QC21883

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		9.2	9.2	s.u.	1	0	0

Duplicate QCBatch: QC21915

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Corrosivity		0.7441 non-corrosive	0.4970 non-corrosive	mm/yr	1	39	20
pH		7.57	7.57	s.u.	1	0	0

Duplicate QCBatch: QC21916

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Reactivity		non-reactive	Non-reactive		1	0	20

Duplicate QCBatch: QC21917

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Flashpoint		>140	>140	F	1	0	20

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Duplicate QCBatch: QC21968

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		3230	2920	mg/L	1	10	9.7

Duplicate QCBatch: QC21973

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Bicarbonate Alkalinity		212	208	mg/L as CaCo3	1	1	9.2
Total Alkalinity		212	208	mg/L as CaCo3	1	1	9.2

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC21805

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.78	11.16	mg/L	1	12.50	<1.0	94	5	90 - 110	20
Nitrate-N	2.33	2.34	mg/L	1	2.50	<0.2	93	0	90 - 110	20
Sulfate	11.6	11.57	mg/L	1	12.50	<1.0	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC22002

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	110	111	µg/L	1	100	<1.00	110	0	84 - 124	20
Benzene	100	101	µg/L	1	100	<1.00	100	0	87 - 112	20
Trichloroethene (TCE)	91	92	µg/L	1	100	<1.00	91	1	81 - 105	20
Toluene	98	98	µg/L	1	100	<1.00	98	0	90 - 108	20
Chlorobenzene	98	97	µg/L	1	100	<1.00	98	1	84 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	50.4	50.0	µg/L	1	50	100	100	77 - 122
Toluene-d8	53.3	52.4	µg/L	1	50	106	104	96 - 111
4-Bromofluorobenzene	46.3	44.6	µg/L	1	50	92	89	87 - 113

Laboratory Control Spikes QCBatch: QC22023

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Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00116	0.00115	mg/L	1	0.001	<0.0002	116	0	87 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC22072

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Phenol	33.00	30.27	mg/L	1	80	<0.005	41	8	0 - 81	20
2-Chlorophenol	62.6	59.26	mg/L	1	80	<0.005	78	5	12 - 83	20
1,4-Dichlorobenzene	72.36	66.83	mg/L	1	80	<0.005	90	7	13 - 88	20
n-Nitrosodi-n-propylamine	76.72	72.71	mg/L	1	80	<0.005	95	5	9 - 101	20
1,2,4-Trichlorobenzene	69.72	67.82	mg/L	1	80	<0.005	87	2	21 - 87	20
4-Chloro-3-methylphenol	62.44	63.16	mg/L	1	80	<0.005	78	1	14 - 92	20
Acenaphthene	66.04	63.46	mg/L	1	80	<0.005	82	3	26 - 86	20
4-Nitrophenol	23.40	27.78	mg/L	1	80	<0.005	29	17	0 - 104	20
2,4-Dinitrotoluene	73.07	79.28	mg/L	1	80	<0.005	91	8	29 - 94	20
Pentachlorophenol	43.16	54.00	mg/L	1	80	<0.005	53	22	1 - 97	20
Pyrene	73.53	66.03	mg/L	1	80	<0.005	91	10	25 - 90	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
2-Fluorophenol	41.00	39.53	mg/L	1	80	51	49	0 - 66
Phenol-d5	27.97	26.74	mg/L	1	80	34	33	0 - 70
Nitrobenzene-d5	59.2	58.00	mg/L	1	80	74	72	23 - 99
2-Fluorobiphenyl	57.39	54.89	mg/L	1	80	71	68	27 - 95
2,4,6-Tribromophenol	53.32	58.67	mg/L	1	80	66	73	0 - 199
Terphenyl-d14	64.51	59.09	mg/L	1	80	80	73	20 - 96

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC21805

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	2210	2200	mg/L	1	1250		89	0	48 - 127	20
Chloride	2210	2200	mg/L	1	1250	1090	89	0	48 - 127	20
Nitrate-N	243	235	mg/L	1	250		97	3	87 - 100	20
Nitrate-N	243	235	mg/L	1	250	<0.2	97	3	87 - 100	20
Sulfate	2090	2090	mg/L	1	1250		92	0	59 - 121	20
Sulfate	2090	2090	mg/L	1	1250	934	92	0	59 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC22023

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Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00104	0.00105	mg/L	1	0.001	<0.0002	104	0	40 - 177	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC21780

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1412	1385	98	90 - 110	7/11/02

ICV (1) QCBatch: QC21780

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1409	1400	99	90 - 110	7/11/02

CCV (1) QCBatch: QC21805

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.74	93	90 - 110	7/10/02
Nitrate-N		mg/L	2.50	2.33	93	90 - 110	7/10/02
Sulfate		mg/L	12.50	11.49	91	90 - 110	7/10/02

ICV (1) QCBatch: QC21805

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.89	95	90 - 110	7/10/02
Nitrate-N		mg/L	2.50	2.34	93	90 - 110	7/10/02
Sulfate		mg/L	12.50	11.69	93	90 - 110	7/10/02

CCV (1) QCBatch: QC21824

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	0.25	0.246	98	90 - 110	7/12/02
Total Zinc		mg/L	0.50	0.498	99	90 - 110	7/12/02

ICV (1) QCBatch: QC21824

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	0.25	0.248	99	95 - 105	7/12/02
Total Zinc		mg/L	0.50	0.500	100	95 - 105	7/12/02

CCV (1) QCBatch: QC21883

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	7/10/02

ICV (1) QCBatch: QC21883

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	7/10/02

CCV (1) QCBatch: QC21968

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	965	96	90 - 110	7/16/02

ICV (1) QCBatch: QC21968

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1029	102	90 - 110	7/16/02

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CCV (1) QCBatch: QC21973

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	7/16/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	90 - 110	7/16/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	8	0	90 - 110	7/16/02
Total Alkalinity		mg/L as CaCo3	250	236	94	90 - 110	7/16/02

ICV (1) QCBatch: QC21973

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	7/16/02
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	90 - 110	7/16/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	6	0	90 - 110	7/16/02
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	7/16/02

CCV (1) QCBatch: QC22002

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50	51	102	80 - 120	7/17/02
1,1-Dichloroethene		µg/L	50	50	100	80 - 120	7/17/02
Chloroform		µg/L	50	50	100	80 - 120	7/17/02
1,2-Dichloropropane		µg/L	50	52	104	80 - 120	7/17/02
Toluene		µg/L	50	50	100	80 - 120	7/17/02
Chlorobenzene		µg/L	50	50	100	80 - 120	7/17/02
Ethylbenzene		µg/L	50	51	102	80 - 120	7/17/02
Dibromofluoromethane		µg/L	50	49.9	99	80 - 120	7/17/02
Toluene-d8		µg/L	50	52.0	104	80 - 120	7/17/02
4-Bromofluorobenzene		µg/L	50	50.9	101	80 - 120	7/17/02

CCV (1) QCBatch: QC22023

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00105	105	80 - 120	7/19/02

ICV (1) QCBatch: QC22023

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00095	95	80 - 120	7/19/02

CCV (1) QCBatch: QC22072

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60	58.5	97	80 - 120	7/16/02
1,4-Dichlorobenzene		mg/L	60	59.73	99	80 - 120	7/16/02
2-Nitrophenol		mg/L	60	62.14	103	80 - 120	7/16/02
2,4-Dichlorophenol		mg/L	60	61.05	101	80 - 120	7/16/02
Hexachlorobutadiene		mg/L	60	60.03	100	80 - 120	7/16/02
4-Chloro-3-methylphenol		mg/L	60	60.24	100	80 - 120	7/16/02
2,4,6-Trichlorophenol		mg/L	60	57.57	95	80 - 120	7/16/02
Acenaphthene		mg/L	60	59.24	98	80 - 120	7/16/02
Diphenylamine		mg/L	60	60.37	100	80 - 120	7/16/02
Pentachlorophenol		mg/L	60	51.44	85	80 - 120	7/16/02
Fluoranthene		mg/L	60	60.02	100	80 - 120	7/16/02
Di-n-octylphthalate		mg/L	60	60.12	100	80 - 120	7/16/02
Benzo(a)pyrene		mg/L	60	59.34	98	80 - 120	7/16/02
2-Fluorophenol		mg/L	60	58.33	97	80 - 120	7/16/02
Phenol-d5		mg/L	60	57.94	96	80 - 120	7/16/02
Nitrobenzene-d5		mg/L	60	60.01	100	80 - 120	7/16/02
2-Fluorobiphenyl		mg/L	60	59.77	99	80 - 120	7/16/02
2,4,6-Tribromophenol		mg/L	60	58.63	97	80 - 120	7/16/02
Terphenyl-d14		mg/L	60	58.81	98	80 - 120	7/16/02

CCV (1) QCBatch: QC22163

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	26.0	104	90 - 110	7/22/02
Dissolved Magnesium		mg/L	25	25.6	102	90 - 110	7/22/02
Dissolved Potassium		mg/L	25	24.0	96	90 - 110	7/22/02
Dissolved Sodium		mg/L	25	25.5	102	90 - 110	7/22/02

ICV (1) QCBatch: QC22163

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	26.0	104	95 - 105	7/22/02
Dissolved Magnesium		mg/L	25	25.7	102	95 - 105	7/22/02
Dissolved Potassium		mg/L	25	25.0	100	95 - 105	7/22/02
Dissolved Sodium		mg/L	25	26.2	104	95 - 105	7/22/02

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LAB Order ID # AD2011026

ANALYSIS REQUEST
(Circle or Specify Method No.)

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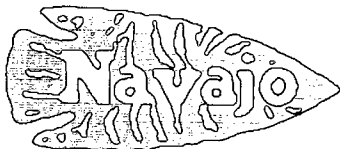
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REMARKS:

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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REFINING COMPANY

FAX

(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

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(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

November 1, 2001

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

RE: 3rd Quarter 2001 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the quarterly report and analysis.

For this quarter we discharged a total of 28,010,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 968,866,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 772,153,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.

cc: USEPA
New Mexico Environment Dept.- Water Quality

Report Date: October 17, 2001 Order Number: A01100213
N/A RO Reject

Page Number: 1 of 2
Artesia, NM 88210

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: October 17, 2001

Order ID Number: A01100213

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180865	RO Reject	Water	10/1/01	10:15	10/2/01

This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 180865 - RO Reject

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		670	mg/L as CaCo3
Total Alkalinity		670	mg/L as CaCo3
Specific Conductance		3270	μMHOS/cm
Total Mercury		<0.0002	mg/L
CL		61.2	mg/L
Fluoride	1	4.10	mg/L
Nitrate-N		2.84	mg/L
Sulfate		1670	mg/L
Dissolved Calcium		697	mg/L
Dissolved Magnesium		194	mg/L
Dissolved Potassium		5.62	mg/L
Dissolved Sodium		56.8	mg/L
Total Dissolved Solids		3250	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		<0.100	mg/L
Total Beryllium		<0.0025	mg/L
Total Boron		0.0811	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		<0.010	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		<0.050	mg/L
Total Lead		<0.010	mg/L
Total Manganese		<0.025	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silver		<0.0125	mg/L

Continued on next page ...

¹ Sample rerun on 10-5-01. lcv=94; ccv=93; lcs %EA=90; lcs rpd=1; matrix %EA=96; matrix rpd=3

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: October 17, 2001 Order Number: A01100213

Page Number: 2 of 2

N/A

RO Reject

Artesia, NM 88210

Sample 180865 continued ...

Param	Flag	Result	Units
Total Uranium		<0.050	mg/L
Total Vanadium		<0.025	mg/L
Total Zinc		<0.025	mg/L
pH	2	7.9	s.u.

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: October 17, 2001

Order ID Number: A01100213

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180865	RO Reject	Water	10/1/01	10:15	10/2/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of Trace Analysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 180865 - RO Reject

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC14762 Date Analyzed: 10/11/01
Analyst: RS Preparation Method: Prep Batch: PB12562 Date Prepared: 10/11/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		670	mg/L as CaCo3	1	1
Total Alkalinity		670	mg/L as CaCo3	1	1

Sample: 180865 - RO Reject

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC14759 Date Analyzed: 10/11/01
Analyst: RS Preparation Method: N/A Prep Batch: PB12566 Date Prepared: 10/11/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		3270	µMHOS/cm	1	

Sample: 180865 - RO Reject

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC14680 Date Analyzed: 10/9/01
Analyst: BC Preparation Method: N/A Prep Batch: PB12500 Date Prepared: 10/8/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 180865 - RO Reject

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC14649 Date Analyzed: 10/2/01
Analyst: RS Preparation Method: N/A Prep Batch: PB12470 Date Prepared: 10/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		61.2	mg/L	5	0.50
Fluoride	1	4.10	mg/L	5	0.20
Nitrate-N		2.84	mg/L	5	0.20
Sulfate		1670	mg/L	50	0.50

Sample: 180865 - RO Reject

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC14898 Date Analyzed: 10/16/01
Analyst: BC Preparation Method: Prep Batch: PB12534 Date Prepared: 10/11/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		697	mg/L	1	0.50
Dissolved Magnesium		194	mg/L	1	0.50
Dissolved Potassium		5.62	mg/L	1	0.50
Dissolved Sodium		56.8	mg/L	1	0.60

¹Sample rerun on 10-5-01. lcv=94; ccv=93; lcs %EA=90; lcs rpd=1; matrix %EA=96; matrix rpd=3

Report Date: October 17, 2001
N/A

Order Number: A01100213
RO Reject

Page Number: 3 of 12
Artesia, NM 88210

Sample: 180865 - RO Reject

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC14658 Date Analyzed: 10/8/01
Analyst: JS Preparation Method: N/A Prep Batch: PB12482 Date Prepared: 10/5/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		3250	mg/L	2	10

Sample: 180865 - RO Reject

Analysis: Total Metals Analytical Method: E 200.7 QC Batch: QC14624 Date Analyzed: 10/8/01
Analyst: RR Preparation Method: N/A Prep Batch: PB12420 Date Prepared: 10/5/01

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		<0.100	mg/L	1	0.10
Total Beryllium		<0.0025	mg/L	1	0.0025
Total Boron		0.0811	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		<0.010	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		<0.050	mg/L	1	0.05
Total Lead		<0.010	mg/L	1	0.05
Total Manganese		<0.025	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Uranium		<0.050	mg/L	1	0.05
Total Vanadium		<0.025	mg/L	1	0.02
Total Zinc		<0.025	mg/L	1	0.02

Sample: 180865 - RO Reject

Analysis: pH Analytical Method: E 150.1 QC Batch: QC14640 Date Analyzed: 10/2/01
Analyst: RS Preparation Method: N/A Prep Batch: PB12459 Date Prepared: 10/2/01

Param	Flag	Result	Units	Dilution	RDL
pH	2	7.9	s.u.	1	1

Quality Control Report Method Blank

Method Blank

QCBatch: QC14624

Param	Flag	Results	Units	Reporting Limit
Total Arsenic		<0.050	mg/L	0.05
Total Barium		<0.100	mg/L	0.10
Total Beryllium		<0.0025	mg/L	0.0025
Total Boron		<0.010	mg/L	0.01
Total Cadmium		<0.025	mg/L	0.02
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.05
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Uranium		<0.050	mg/L	0.05
Total Vanadium		<0.025	mg/L	0.02
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC14649

Param	Flag	Results	Units	Reporting Limit
CL		<2.0	mg/L	0.50
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank

QCBatch: QC14658

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC14680

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank

QCBatch: QC14759

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		2.58	μ MHOS/cm	

Method Blank QCBatch: QC14762

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank QCBatch: QC14898

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.60

Quality Control Report Duplicate Samples

Duplicate QCBatch: QC14640

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.2	7.2	s.u.	1	0	0.99

Duplicate QCBatch: QC14658

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		223500	234000	mg/L	1	4	8.9

Duplicate QCBatch: QC14759

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		956	954	μ MHOS/cm	1	0	5.9

Duplicate QCBatch: QC14762

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Bicarbonate Alkalinity		32	34	mg/L as CaCo3	1	6	7
Total Alkalinity		32	34	mg/L as CaCo3	1	6	7

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC14624

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	0.504	0.473	mg/L	1	0.50	<0.050	101	6	75 - 125	20
Total Barium	0.990	0.979	mg/L	1	1	<0.100	99	1	75 - 125	20
Total Beryllium	0.0241	0.0238	mg/L	1	0.02	<0.0025	96	1	75 - 125	20
Total Boron	0.0495	0.0486	mg/L	1	0.05	<0.010	99	2	75 - 125	20
Total Cadmium	0.249	0.247	mg/L	1	0.25	<0.025	100	1	75 - 125	20
Total Chromium	0.0969	0.0955	mg/L	1	0.10	<0.010	97	1	75 - 125	20
Total Cobalt	0.239	0.236	mg/L	1	0.25	<0.025	96	1	75 - 125	20
Total Copper	0.120	0.118	mg/L	1	0.12	<0.0125	96	2	75 - 125	20
Total Iron	0.494	0.492	mg/L	1	0.50	<0.050	99	0	75 - 125	20
Total Lead	0.489	0.481	mg/L	1	0.50	<0.010	98	2	75 - 125	20
Total Manganese	0.249	0.246	mg/L	1	0.25	<0.025	100	1	75 - 125	20
Total Molybdenum	0.510	0.504	mg/L	1	0.50	<0.050	102	1	75 - 125	20
Total Nickel	0.246	0.244	mg/L	1	0.25	<0.025	98	1	75 - 125	20
Total Selenium	0.450	0.438	mg/L	1	0.50	<0.050	90	3	75 - 125	20
Total Silver	0.126	0.125	mg/L	1	0.12	<0.0125	101	1	75 - 125	20
Total Uranium	0.497	0.501	mg/L	1	0.50	<0.050	99	1	75 - 125	20
Total Vanadium	0.244	0.242	mg/L	1	0.25	<0.025	98	1	75 - 125	20
Total Zinc	0.249	0.247	mg/L	1	0.25	<0.025	100	1	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC14649

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	12.39	12.32	mg/L	1	12.50	<2.0	99	0	90 - 110	20
Nitrate-N	2.46	2.44	mg/L	1	2.50	<0.2	98	0	90 - 110	20
Sulfate	12.19	12.18	mg/L	1	12.50	<2.0	97	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC14680

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00115	0.00116	mg/L	1	0.001	<0.0002	115	0	84 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC14898

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	109	105	mg/L	1	100	<0.5	109	3	75 - 125	20
Dissolved Magnesium	104	103	mg/L	1	100	<0.5	104	0	75 - 125	20
Dissolved Potassium	103	101	mg/L	1	100	<0.5	103	1	75 - 125	20
Dissolved Sodium	107	101	mg/L	1	100	<0.5	107	5	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC14624

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	0.461	0.482	mg/L	1	0.50		92	4	75 - 125	20
Total Arsenic	0.461	0.482	mg/L	1	0.50	<0.050	92	4	75 - 125	20
Total Barium	0.933	0.932	mg/L	1	1		93	0	75 - 125	20
Total Barium	0.933	0.932	mg/L	1	1	<0.100	93	0	75 - 125	20
Total Beryllium	0.0216	0.0216	mg/L	1	0.02		86	0	75 - 125	20
Total Beryllium	0.0216	0.0216	mg/L	1	0.02	<0.0025	86	0	75 - 125	20
Total Boron	0.130	0.130	mg/L	1	0.05		97	0	75 - 125	20
Total Boron	0.130	0.130	mg/L	1	0.05	0.0811	97	0	75 - 125	20
Total Cadmium	0.215	0.216	mg/L	1	0.25		86	0	75 - 125	20
Total Cadmium	0.215	0.216	mg/L	1	0.25	<0.025	86	0	75 - 125	20
Total Chromium	0.0884	0.0881	mg/L	1	0.10		88	0	75 - 125	20
Total Chromium	0.0884	0.0881	mg/L	1	0.10	<0.010	88	0	75 - 125	20
Total Cobalt	0.204	0.204	mg/L	1	0.25		82	0	75 - 125	20
Total Cobalt	0.204	0.204	mg/L	1	0.25	<0.025	82	0	75 - 125	20
Total Copper	0.117	0.117	mg/L	1	0.12		94	0	75 - 125	20
Total Copper	0.117	0.117	mg/L	1	0.12	<0.0125	94	0	75 - 125	20
Total Iron	0.451	0.449	mg/L	1	0.50		90	0	75 - 125	20
Total Iron	0.451	0.449	mg/L	1	0.50	<0.050	90	0	75 - 125	20
Total Lead	0.446	0.450	mg/L	1	0.50		89	1	75 - 125	20
Total Lead	0.446	0.450	mg/L	1	0.50	<0.010	89	1	75 - 125	20
Total Manganese	0.222	0.222	mg/L	1	0.25		89	0	75 - 125	20
Total Manganese	0.222	0.222	mg/L	1	0.25	<0.025	89	0	75 - 125	20
Total Molybdenum	0.482	0.480	mg/L	1	0.50		96	0	75 - 125	20
Total Molybdenum	0.482	0.480	mg/L	1	0.50	<0.050	96	0	75 - 125	20
Total Nickel	0.216	0.217	mg/L	1	0.25		86	0	75 - 125	20
Total Nickel	0.216	0.217	mg/L	1	0.25	<0.025	86	0	75 - 125	20
Total Selenium	0.450	0.454	mg/L	1	0.50		90	1	75 - 125	20
Total Selenium	0.450	0.454	mg/L	1	0.50	<0.050	90	1	75 - 125	20
Total Silver	0.118	0.119	mg/L	1	0.12		94	1	75 - 125	20
Total Silver	0.118	0.119	mg/L	1	0.12	<0.0125	94	1	75 - 125	20
Total Uranium	0.492	0.478	mg/L	1	0.50		98	3	75 - 125	20
Total Uranium	0.492	0.478	mg/L	1	0.50	<0.050	98	3	75 - 125	20
Total Vanadium	0.235	0.235	mg/L	1	0.25		94	0	75 - 125	20
Total Vanadium	0.235	0.235	mg/L	1	0.25	<0.025	94	0	75 - 125	20
Total Zinc	0.219	0.222	mg/L	1	0.25		88	1	75 - 125	20
Total Zinc	0.219	0.222	mg/L	1	0.25	<0.025	88	1	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC14649

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	³ 711.48	708.02	mg/L	1	625	61.2	104	0	52 - 131	20
Nitrate-N	⁴ 133.38	128.28	mg/L	1	125	2.84	104	3	84 - 105	20
Sulfate	2238.71	2231.09	mg/L	1	625	1670	90	1	79 - 104	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC14680

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00099	0.00097	mg/L	1	0.001	<0.0002	99	2	84 - 127	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC14898

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	⁵ 759	⁶ 768	mg/L	1	100	697	62	13	75 - 125	20
Dissolved Magnesium	297	305	mg/L	1	100	194	103	7	75 - 125	20
Dissolved Potassium	113	115	mg/L	1	100	5.62	107	1	75 - 125	20
Dissolved Sodium	163	162	mg/L	1	100	56.8	106	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC14624

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	0.996	100	90 - 110	10/8/01
Total Barium		mg/L	2	2.03	102	90 - 110	10/8/01
Total Beryllium		mg/L	0.05	0.0507	101	90 - 110	10/8/01

Continued ...

³I spiked *50 dilution and reported *5. Correct %ea is 96 and rpd is 0

⁴I spiked the *50 dilution and reported *5 dilution. Correct %ea is 97 and rpd is 4.

⁵MS RECOVERIES INVALID DUE TO MATRIX EFFECTS AND DILUTION FACTORS. USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

⁶MS RECOVERIES INVALID DUE TO MATRIX EFFECTS AND DILUTION FACTORS. USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Boron		mg/L	0.10	0.125	125	90 - 110	10/8/01
Total Cadmium		mg/L	0.50	0.514	103	90 - 110	10/8/01
Total Chromium		mg/L	0.20	0.204	102	90 - 110	10/8/01
Total Cobalt		mg/L	0.50	0.508	102	90 - 110	10/8/01
Total Copper		mg/L	0.25	0.245	98	90 - 110	10/8/01
Total Iron		mg/L	1	1.03	103	90 - 110	10/8/01
Total Lead		mg/L	1	1.01	101	90 - 110	10/8/01
Total Manganese		mg/L	0.50	0.505	101	90 - 110	10/8/01
Total Molybdenum		mg/L	1	1.01	101	90 - 110	10/8/01
Total Nickel		mg/L	0.50	0.504	101	90 - 110	10/8/01
Total Selenium		mg/L	1	1.01	101	90 - 110	10/8/01
Total Silver		mg/L	0.25	0.245	98	90 - 110	10/8/01
Total Uranium		mg/L	1	0.997	100	90 - 110	10/8/01
Total Vanadium		mg/L	0.50	0.496	99	90 - 110	10/8/01
Total Zinc		mg/L	0.50	0.523	105	90 - 110	10/8/01

ICV (1)

QCBatch: QC14624

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	0.991	99	90 - 110	10/8/01
Total Barium		mg/L	2	1.96	98	90 - 110	10/8/01
Total Beryllium		mg/L	0.05	0.0489	98	90 - 110	10/8/01
Total Boron		mg/L	0.10	0.103	103	90 - 110	10/8/01
Total Cadmium		mg/L	0.50	0.489	98	90 - 110	10/8/01
Total Chromium		mg/L	0.20	0.196	98	90 - 110	10/8/01
Total Cobalt		mg/L	0.50	0.490	98	90 - 110	10/8/01
Total Copper		mg/L	0.25	0.243	97	90 - 110	10/8/01
Total Iron		mg/L	1	0.980	98	90 - 110	10/8/01
Total Lead		mg/L	1	0.979	98	90 - 110	10/8/01
Total Manganese		mg/L	0.50	0.489	98	90 - 110	10/8/01
Total Molybdenum		mg/L	1	0.979	98	90 - 110	10/8/01
Total Nickel		mg/L	0.50	0.490	98	90 - 110	10/8/01
Total Selenium		mg/L	1	0.988	99	90 - 110	10/8/01
Total Silver		mg/L	0.25	0.243	97	90 - 110	10/8/01
Total Uranium		mg/L	1	0.960	96	90 - 110	10/8/01
Total Vanadium		mg/L	0.50	0.486	97	90 - 110	10/8/01
Total Zinc		mg/L	0.50	0.490	98	90 - 110	10/8/01

CCV (1)

QCBatch: QC14640

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	10/2/01

ICV (1) QCBatch: QC14640

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	10/2/01

CCV (1) QCBatch: QC14649

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.42	99	90 - 110	10/2/01
Nitrate-N		mg/L	2.50	2.41	96	90 - 110	10/2/01
Sulfate		mg/L	12.50	12.26	98	90 - 110	10/2/01

ICV (1) QCBatch: QC14649

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.16	97	90 - 110	10/2/01
Nitrate-N		mg/L	2.50	2.45	98	90 - 110	10/2/01
Sulfate		mg/L	12.50	12.21	97	90 - 110	10/2/01

CCV (1) QCBatch: QC14658

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	983	98	90 - 110	10/8/01

ICV (1) QCBatch: QC14658

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	998	99	90 - 110	10/8/01

CCV (1) QCBatch: QC14680

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00087	87	80 - 120	10/9/01

ICV (1) QCBatch: QC14680

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00107	107	80 - 120	10/9/01

CCV (1) QCBatch: QC14759

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μ MHOS/cm	1412	1398	99	90 - 110	10/11/01

ICV (1) QCBatch: QC14759

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μ MHOS/cm	1400	1403	100	90 - 110	10/11/01

CCV (1) QCBatch: QC14762

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	10/11/01
Carbonate Alkalinity		mg/L as CaCo3	0	240	0	90 - 110	10/11/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	4	0	90 - 110	10/11/01
Total Alkalinity		mg/L as CaCo3	250	244	97	90 - 110	10/11/01

ICV (1) QCBatch: QC14762

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	8	0	90 - 110	10/11/01
Carbonate Alkalinity		mg/L as CaCo3	0	240	0	90 - 110	10/11/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	10/11/01
Total Alkalinity		mg/L as CaCo3	250	248	99	90 - 110	10/11/01

CCV (1) QCBatch: QC14898

Report Date: October 17, 2001
N/A

Order Number: A01100213
RO Reject

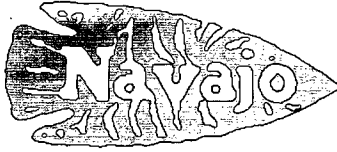
Page Number: 12 of 12
Artesia, NM 88210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	27.5	110	90 - 110	10/16/01
Dissolved Magnesium		mg/L	25	26.9	107	90 - 110	10/16/01
Dissolved Potassium		mg/L	25	25.3	101	90 - 110	10/16/01
Dissolved Sodium		mg/L	25	25.8	103	90 - 110	10/16/01

ICV (1)

QCBatch: QC14898

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	26.2	104	95 - 105	10/16/01
Dissolved Magnesium		mg/L	25	26.6	106	95 - 105	10/16/01
Dissolved Potassium		mg/L	25	25.9	103	95 - 105	10/16/01
Dissolved Sodium		mg/L	25	25.4	101	95 - 105	10/16/01



REFINING COMPANY

FAX

(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

March 20, 2002

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

RECEIVED
MAR 25 2002
Environmental Bureau
Oil Conservation Division

RE: 4th Quarter 2001 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the annual report and analysis.

For this quarter we discharged a total of 19,660,000 gallons with all of that total being sent to the farm for irrigation. This number is lower than our usual output due to the fact that the plant was shut down for turnaround for 5 weeks during this quarter. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 988,526,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 791,813,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.

cc: USEPA
New Mexico Environment Dept.- Water Quality

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: January 23, 2002

Order ID Number: A02010403

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
188363	RO Reject Annual	Water	1/3/01	9:45	1/4/02

This report consists of a total of 5 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 188363 - RO Reject Annual

Param	Flag	Result	Units
Bromochloromethane		<1.00	µg/L
Dichlorodifluoromethane		<1.00	µg/L
Chloromethane (methyl chloride)		<1.00	µg/L
Vinyl Chloride		<1.00	µg/L
Bromomethane (methyl bromide)		<5.00	µg/L
Chloroethane		<1.00	µg/L
Trichlorofluoromethane		<1.00	µg/L
Acetone		<10.0	µg/L
Iodomethane (methyl iodide)		<5.00	µg/L
Carbon Disulfide		<1.00	µg/L
Acrylonitrile		<1.00	µg/L
2-Butanone (MEK)		<5.00	µg/L
4-methyl-2-pentanone (MIBK)		<5.00	µg/L
2-hexanone		<5.00	µg/L
trans 1,4-Dichloro-2-butene		<10.0	µg/L
1,1-Dichloroethene		<1.00	µg/L
Methylene chloride		<5.00	µg/L
MTBE		<1.00	µg/L
trans-1,2-Dichloroethene		<1.00	µg/L
1,1-Dichloroethane		<1.00	µg/L
cis-1,2-Dichloroethene		<1.00	µg/L
2,2-Dichloropropane		<1.00	µg/L
1,2-Dichloroethane (EDC)		<1.00	µg/L
Chloroform		<1.00	µg/L
1,1,1-Trichloroethane		<1.00	µg/L
1,1-Dichloropropene		<1.00	µg/L
Benzene		<1.00	µg/L
Carbon Tetrachloride		<1.00	µg/L
1,2-Dichloropropane		<1.00	µg/L
Trichloroethene (TCE)		<1.00	µg/L
Dibromomethane (methylene bromide)		<1.00	µg/L
Bromodichloromethane		<1.00	µg/L

Continued on next page ...

This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: January 23, 2002 Order Number: A02010403

Page Number: 2 of 5

N/A

RO Reject

Artesia, NM 88210

Sample 188363 continued ...

Param	Flag	Result	Units
2-Chloroethyl vinyl ether		<5.00	µg/L
cis-1,3-Dichloropropene		<1.00	µg/L
trans-1,3-Dichloropropene		<1.00	µg/L
Toluene		<1.00	µg/L
1,1,2-Trichloroethane		<1.00	µg/L
1,3-Dichloropropane		<1.00	µg/L
Dibromochloromethane		<1.00	µg/L
1,2-Dibromoethane (EDB)		<1.00	µg/L
Tetrachloroethene (PCE)		<1.00	µg/L
Chlorobenzene		<1.00	µg/L
1,1,1,2-Tetrachloroethane		<1.00	µg/L
Ethylbenzene		<1.00	µg/L
m,p-Xylene		<1.00	µg/L
Bromoform		<1.00	µg/L
Styrene		<1.00	µg/L
o-Xylene		<1.00	µg/L
1,1,2,2-Tetrachloroethane		<1.00	µg/L
2-Chlorotoluene		<1.00	µg/L
1,2,3-Trichloropropane		<1.00	µg/L
Isopropylbenzene		<1.00	µg/L
Bromobenzene		<1.00	µg/L
n-Propylbenzene		<1.00	µg/L
1,3,5-Trimethylbenzene		<1.00	µg/L
tert-Butylbenzene		<1.00	µg/L
1,2,4-Trimethylbenzene		<1.00	µg/L
1,4-Dichlorobenzene (para)		<1.00	µg/L
sec-Butylbenzene		<1.00	µg/L
1,3-Dichlorobenzene		<1.00	µg/L
p-Isopropyltoluene		<1.00	µg/L
4-Chlorotoluene		<1.00	µg/L
1,2-Dichlorobenzene (ortho)		<1.00	µg/L
n-Butylbenzene		<1.00	µg/L
1,2-Dibromo-3-chloropropane		<5.00	µg/L
1,2,3-Trichlorobenzene		<5.00	µg/L
1,2,4-Trichlorobenzene		<5.00	µg/L
Naphthalene		<5.00	µg/L
Hexachlorobutadiene		<5.00	µg/L
Pyridine		<0.005	mg/L
n-Nitrosodimethylamine		<0.005	mg/L
2-Picoline		<0.005	mg/L
Methyl methanesulfonate		<0.005	mg/L
Ethyl methanesulfonate		<0.005	mg/L
Phenol		<0.005	mg/L
Aniline		<0.005	mg/L
bis (2-chloroethyl) ether		<0.005	mg/L
2-Chlorophenol		<0.005	mg/L
1,3-Dichlorobenzene		<0.005	mg/L
1,4-Dichlorobenzene		<0.005	mg/L
Benzyl alcohol		<0.005	mg/L
1,2-Dichlorobenzene		<0.005	mg/L
2-Methylphenol		<0.005	mg/L
bis (2-chloroisopropyl) ether		<0.005	mg/L
4-Methylphenol/3-Methylphenol		<0.005	mg/L

*Continued on next page ...**This is only a summary. Please, refer to the complete report package for quality control data.*

Report Date: January 23, 2002 Order Number: A02010403

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N/A

RO Reject

Artesia, NM 88210

Sample 188363 continued ...

Param	Flag	Result	Units
Acetophenone		<0.005	mg/L
n-Nitrosodi-n-propylamine		<0.005	mg/L
Hexachloroethane		<0.005	mg/L
Nitrobenzene		<0.005	mg/L
n-Nitrosopiperidine		<0.005	mg/L
Isophorone		<0.005	mg/L
2-Nitrophenol		<0.005	mg/L
2,4-Dimethylphenol		<0.005	mg/L
bis (2-chloroethoxy) methane		<0.005	mg/L
Benzoic acid		<0.005	mg/L
2,4-Dichlorophenol		<0.005	mg/L
1,2,4-Trichlorobenzene		<0.005	mg/L
a,a-Dimethylphenethylamine		<0.005	mg/L
Naphthalene		<0.005	mg/L
4-Chloroaniline		<0.005	mg/L
2,6-Dichlorophenol		<0.005	mg/L
Hexachlorobutadiene		<0.005	mg/L
n-Nitroso-di-n-butylamine		<0.005	mg/L
4-Chloro-3-methylphenol		<0.005	mg/L
1-Methylnaphthalene		<0.005	mg/L
2-Methylnaphthalene		<0.005	mg/L
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L
Hexachlorocyclopentadiene		<0.005	mg/L
2,4,6-Trichlorophenol		<0.005	mg/L
2,4,5-Trichlorophenol		<0.005	mg/L
2-Chloronaphthalene		<0.005	mg/L
1-Chloronaphthalene		<0.005	mg/L
2-Nitroaniline		<0.005	mg/L
Dimethylphthalate		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
2,6-Dinitrotoluene		<0.005	mg/L
3-Nitroaniline		<0.005	mg/L
Acenaphthene		<0.005	mg/L
2,4-Dinitrophenol		<0.005	mg/L
Dibenzofuran		<0.005	mg/L
Pentachlorobenzene		<0.005	mg/L
4-Nitrophenol		<0.005	mg/L
1-Naphthylamine		<0.005	mg/L
2,4-Dinitrotoluene		<0.005	mg/L
2-Naphthylamine		<0.005	mg/L
2,3,4,6-Tetrachlorophenol		<0.005	mg/L
Fluorene		<0.005	mg/L
Diethylphthalate		<0.005	mg/L
4-Chlorophenyl-phenylether		<0.005	mg/L
4-Nitroaniline		<0.005	mg/L
4,6-Dinitro-2-methylphenol		<0.005	mg/L
Diphenylamine		<0.005	mg/L
Diphenylhydrazine		<0.005	mg/L
4-Bromophenyl-phenylether		<0.005	mg/L
Phenacetin		<0.005	mg/L
Hexachlorobenzene		<0.005	mg/L
4-Aminobiphenyl		<0.005	mg/L
Pentachlorophenol		<0.005	mg/L

*Continued on next page ...**This is only a summary. Please, refer to the complete report package for quality control data.*

Report Date: January 23, 2002 Order Number: A02010403

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N/A

RO Reject

Artesia, NM 88210

Sample 188363 continued ...

Param	Flag	Result	Units
Pentachloronitrobenzene		<0.005	mg/L
Pronamide		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Di-n-butylphthalate		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Benidine		<0.005	mg/L
Pyrene		<0.005	mg/L
p-Dimethylaminoazobenzene		<0.005	mg/L
Butylbenzylphthalate		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
3,3-Dichlorobenzidine		<0.005	mg/L
Chrysene		<0.005	mg/L
Bis (2-ethylhexyl) phthalate		<0.005	mg/L
Di-n-octylphthalate		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
3-Methylcholanthrene		<0.005	mg/L
Dibenzo(a,j)acridine		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		666	mg/L as CaCo3
Total Alkalinity		666	mg/L as CaCo3
Biological Oxygen Demand		<7.50	mg/L
Chemical Oxygen Demand		23.0	mg/L
Chlorine	1	<0.04	mg/L
Specific Conductance		4490	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		337	mg/L
Fluoride		3.78	mg/L
Nitrate-N		2.40	mg/L
Sulfate		1820	mg/L
Ammonia-N		<2.0	mg/L
PCB		<0.0005	mg/L
Aroclor 1016 (PCB-1016)		<0.0005	mg/L
Aroclor 1221 (PCB-1221)		<0.0005	mg/L
Aroclor 1232 (PCB-1232)		<0.0005	mg/L
Aroclor 1242 (PCB-1242)		<0.0005	mg/L
Aroclor 1248 (PCB-1248)		<0.0005	mg/L
Aroclor 1254 (PCB-1254)		<0.0005	mg/L
Aroclor 1260 (PCB-1260)		<0.0005	mg/L
alpha-BHC		<0.0005	mg/L
gamma-BHC (Lindane)		<0.0005	mg/L
beta-BHC		<0.0005	mg/L
delta-BHC		<0.0005	mg/L
Heptachlor		<0.0005	mg/L
Aldrin		<0.0005	mg/L

*Continued on next page ...*¹ Sample received out of hold time.

Report Date: January 23, 2002 Order Number: A02010403

Page Number: 5 of 5

N/A

RO Reject

Artesia, NM 88210

Sample 188363 continued ...

Param	Flag	Result	Units
Heptachlor Epoxide		<0.0005	mg/L
gamma-Chlordane		<0.0005	mg/L
alpha-Chlordane		<0.0005	mg/L
Endosulfan I		<0.0005	mg/L
P,P-DDE		<0.0005	mg/L
Dieldrin		<0.0005	mg/L
Endrin		<0.0005	mg/L
P,P-DDD		<0.0005	mg/L
Endosulfan II		<0.0005	mg/L
p,p-DDT		<0.0005	mg/L
Endrin aldehyde		<0.0005	mg/L
Endosulfan sulfate		<0.0005	mg/L
Methoxychlor		<0.0005	mg/L
Endrin Ketone		<0.0005	mg/L
Toxaphene		<0.0005	mg/L
Test Comments		<0.0005	mg/L
Phenolics		<0.10	mg/L
Dissolved Calcium		720	mg/L
Dissolved Magnesium		240	mg/L
Dissolved Potassium		8.29	mg/L
Dissolved Sodium		225	mg/L
Total Dissolved Solids		4030	mg/L
Total Suspended Solids		<1.0	mg/L
Total Cyanide		<0.01	mg/L
Total Aluminum		<0.100	mg/L
Total Arsenic		<0.010	mg/L
Total Barium		<0.100	mg/L
Total Beryllium		<0.0025	mg/L
Total Boron		0.0722	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		<0.010	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		<0.050	mg/L
Total Lead		<0.010	mg/L
Total Manganese		<0.025	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silver		<0.0125	mg/L
Total Uranium		<0.050	mg/L
Total Vanadium		<0.025	mg/L
Total Zinc		<0.025	mg/L
pH	2	7.7	s.u.

²received out of holding time

A & L PLAINS AGRICULTURAL LABORATORIES, INC.

302 34th St. • P.O. Box 1590 • Lubbock, TX 79408 • (806) 763-4278

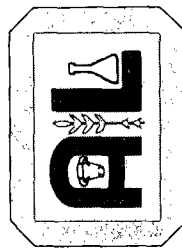
FAX (806) 763-2762 • www.al-labs-plains.com

02-004-301

REPORT NUMBER

January 7, 2002

Trace Analysis, Inc.
6701 Aberdeen Ave. Ste. 9
Lubbock, Tx 79424



Lab No:	Sample ID	Sample Matrix	Fecal Coliform CFU/100mL
------------	--------------	------------------	-----------------------------

50743	188363	Water	N.D.
-------	--------	-------	------

Total Coliform

N.D. = None Detected
TNTC=To Numerous to Count
Detection Limit: 1 CFU/100mL
Method of Detection: M-FC Broth

Respectfully submitted,

Carol Fox
A&L Plains Ag Labs, Inc.



1726 Wooddale Court • Baton Rouge, Louisiana 70806

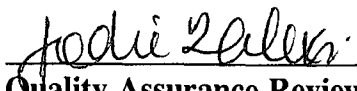
1 (800) 401-4277 • Fax (225) 927-6822

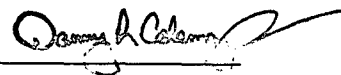
American Radiation Services, Inc.

Laboratory Analysis Report

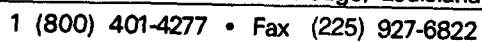
Prepared For:

**Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Suite 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298**


Quality Assurance Review


**Danny L. Coleman
Laboratory Manager**

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.



Date of Report 2/20/02



Notes:

Comments:

- 1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
- 2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
- 5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
- 8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

- 1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
- 3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
- 4.0) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) HASL 300

Definitions:

- | | | |
|-------|-----------------|--|
| 1.0) | BDL | Analyte not detected because the value was below the detection limit. |
| 2.0) | ND | Not detected above the detection limit. |
| 3.0) | Detection Limit | The minimum amount of the analyte that ARS can detect utilizing the specific analysis. |
| 4.0) | B | Method Blank |
| 5.0) | D | Method Duplicate |
| 6.0) | MS | Matrix Spike |
| 7.0) | S | Spike |
| 8.0) | RS | Reference Spike |
| 9.0) | *SC | Subcontracted out to another qualified laboratory |
| 10.0) | NR | Not Referenced |
| 11.0) | N/A | Not Applicable |

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.



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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: January 23, 2002

Order ID Number: A02010403

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
188363	RO Reject Annual	Water	1/3/01	9:45	1/4/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 30 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 188363 - RO Reject Annual

Analysis: 624 Analytical Method: E 624 QC Batch: QC17122 Date Analyzed: 1/4/02
Analyst: JG Preparation Method: N/A Prep Batch: PB16885 Date Prepared: 1/4/02

Param	Flag	Result	Units	Dilution	RDL
Bromochloromethane		<1.00	µg/L	1	1
Dichlorodifluoromethane		<1.00	µg/L	1	1
Chloromethane (methyl chloride)		<1.00	µg/L	1	1
Vinyl Chloride		<1.00	µg/L	1	1
Bromomethane (methyl bromide)		<5.00	µg/L	1	5
Chloroethane		<1.00	µg/L	1	1
Trichlorofluoromethane		<1.00	µg/L	1	1
Acetone		<10.0	µg/L	1	10
Iodomethane (methyl iodide)		<5.00	µg/L	1	5
Carbon Disulfide		<1.00	µg/L	1	1
Acrylonitrile		<1.00	µg/L	1	1
2-Butanone (MEK)		<5.00	µg/L	1	5
4-methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5
2-hexanone		<5.00	µg/L	1	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10
1,1-Dichloroethene		<1.00	µg/L	1	1
Methylene chloride		<5.00	µg/L	1	5
MTBE		<1.00	µg/L	1	1
trans-1,2-Dichloroethene		<1.00	µg/L	1	1
1,1-Dichloroethane		<1.00	µg/L	1	1
cis-1,2-Dichloroethene		<1.00	µg/L	1	1
2,2-Dichloropropane		<1.00	µg/L	1	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1
Chloroform		<1.00	µg/L	1	1
1,1,1-Trichloroethane		<1.00	µg/L	1	1
1,1-Dichloropropene		<1.00	µg/L	1	1
Benzene		<1.00	µg/L	1	1
Carbon Tetrachloride		<1.00	µg/L	1	1
1,2-Dichloropropane		<1.00	µg/L	1	1
Trichloroethene (TCE)		<1.00	µg/L	1	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1
Bromodichloromethane		<1.00	µg/L	1	1
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5
cis-1,3-Dichloropropene		<1.00	µg/L	1	1
trans-1,3-Dichloropropene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
1,1,2-Trichloroethane		<1.00	µg/L	1	1
1,3-Dichloropropane		<1.00	µg/L	1	1
Dibromochloromethane		<1.00	µg/L	1	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1
Tetrachloroethene (PCE)		<1.00	µg/L	1	1
Chlorobenzene		<1.00	µg/L	1	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
Bromoform		<1.00	µg/L	1	1
Styrene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Continued ...

... Continued Sample: 188363 Analysis: 624

Param	Flag	Result	Units	Dilution	RDL
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1
2-Chlorotoluene		<1.00	µg/L	1	1
1,2,3-Trichloropropane		<1.00	µg/L	1	1
Isopropylbenzene		<1.00	µg/L	1	1
Bromobenzene		<1.00	µg/L	1	1
n-Propylbenzene		<1.00	µg/L	1	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1
tert-Butylbenzene		<1.00	µg/L	1	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1
sec-Butylbenzene		<1.00	µg/L	1	1
1,3-Dichlorobenzene		<1.00	µg/L	1	1
p-Isopropyltoluene		<1.00	µg/L	1	1
4-Chlorotoluene		<1.00	µg/L	1	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1
n-Butylbenzene		<1.00	µg/L	1	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5
Naphthalene		<5.00	µg/L	1	1
Hexachlorobutadiene		<5.00	µg/L	1	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.1	µg/L	1	50	98	84 - 122
Toluene-d8		48.5	µg/L	1	50	97	95 - 105
4-Bromofluorobenzene		50.4	µg/L	1	50	101	91 - 108

Sample: 188363 - RO Reject Annual

Analysis: 625 Analytical Method: E 625 QC Batch: QC17451 Date Analyzed: 1/10/02
Analyst: RC Preparation Method: N/A Prep Batch: PB17142 Date Prepared: 1/7/02

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.005	mg/L	1	0.005
n-Nitrosodimethylamine		<0.005	mg/L	1	0.005
2-Picoline		<0.005	mg/L	1	0.005
Methyl methanesulfonate		<0.005	mg/L	1	0.005
Ethyl methanesulfonate		<0.005	mg/L	1	0.005
Phenol		<0.005	mg/L	1	0.005
Aniline		<0.005	mg/L	1	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	1	0.005
2-Chlorophenol		<0.005	mg/L	1	0.005
1,3-Dichlorobenzene		<0.005	mg/L	1	0.005
1,4-Dichlorobenzene		<0.005	mg/L	1	0.005
Benzyl alcohol		<0.005	mg/L	1	0.005
1,2-Dichlorobenzene		<0.005	mg/L	1	0.005
2-Methylphenol		<0.005	mg/L	1	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	1	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	1	0.005
Acetophenone		<0.005	mg/L	1	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 188363 Analysis: 625

Param	Flag	Result	Units	Dilution	RDL
Hexachloroethane		<0.005	mg/L	1	0.005
Nitrobenzene		<0.005	mg/L	1	0.005
n-Nitrosopiperidine		<0.005	mg/L	1	0.005
Isophorone		<0.005	mg/L	1	0.005
2-Nitrophenol		<0.005	mg/L	1	0.005
2,4-Dimethylphenol		<0.005	mg/L	1	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	1	0.005
Benzoic acid		<0.005	mg/L	1	0.005
2,4-Dichlorophenol		<0.005	mg/L	1	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	1	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	1	0.005
Naphthalene		<0.005	mg/L	1	0.005
4-Chloroaniline		<0.005	mg/L	1	0.005
2,6-Dichlorophenol		<0.005	mg/L	1	0.005
Hexachlorobutadiene		<0.005	mg/L	1	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	1	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	1	0.005
1-Methylnaphthalene		<0.005	mg/L	1	0.005
2-Methylnaphthalene		<0.005	mg/L	1	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	1	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	1	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	1	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	1	0.005
2-Chloronaphthalene		<0.005	mg/L	1	0.005
1-Chloronaphthalene		<0.005	mg/L	1	0.005
2-Nitroaniline		<0.005	mg/L	1	0.005
Dimethylphthalate		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
2,6-Dinitrotoluene		<0.005	mg/L	1	0.005
3-Nitroaniline		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
2,4-Dinitrophenol		<0.005	mg/L	1	0.005
Dibenzofuran		<0.005	mg/L	1	0.005
Pentachlorobenzene		<0.005	mg/L	1	0.005
4-Nitrophenol		<0.005	mg/L	1	0.005
1-Naphthylamine		<0.005	mg/L	1	0.005
2,4-Dinitrotoluene		<0.005	mg/L	1	0.005
2-Naphthylamine		<0.005	mg/L	1	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Diethylphthalate		<0.005	mg/L	1	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	1	0.005
4-Nitroaniline		<0.005	mg/L	1	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	1	0.005
Diphenylamine		<0.005	mg/L	1	0.005
Diphenylhydrazine		<0.005	mg/L	1	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	1	0.005
Phenacetin		<0.005	mg/L	1	0.005
Hexachlorobenzene		<0.005	mg/L	1	0.005
4-Aminobiphenyl		<0.005	mg/L	1	0.005
Pentachlorophenol		<0.005	mg/L	1	0.005
Pentachloronitrobenzene		<0.005	mg/L	1	0.005
Pronamide		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 188363 Analysis: 625

Param	Flag	Result	Units	Dilution	RDL
Anthracene		<0.005	mg/L	1	0.005
Di-n-butylphthalate		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Benzidine		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	1	0.005
Butylbenzylphthalate		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	1	0.005
Di-n-octylphthalate		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
3-Methylcholanthrene		<0.005	mg/L	1	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		32.2	mg/L	1	80	40	21 - 100
Phenol-d5		16.76	mg/L	1	80	20	11 - 94
Nitrobenzene-d5		68.82	mg/L	1	80	86	35 - 114
2-Fluorobiphenyl		65.67	mg/L	1	80	82	43 - 116
2,4,6-Tribromophenol		69.13	mg/L	1	80	86	10 - 123
Terphenyl-d14		70.28	mg/L	1	80	87	33 - 141

Sample: 188363 - RO Reject Annual

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC17283 Date Analyzed: 1/10/02
Analyst: RS Preparation Method: N/A Prep Batch: PB17018 Date Prepared: 1/10/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		666	mg/L as CaCo3	1	1
Total Alkalinity		666	mg/L as CaCo3	1	1

Sample: 188363 - RO Reject Annual

Analysis: BOD5 Analytical Method: SM 5210B QC Batch: QC17060 Date Analyzed: 1/9/02
Analyst: RS Preparation Method: N/A Prep Batch: PB16842 Date Prepared: 1/4/02

Param	Flag	Result	Units	Dilution	RDL
Biological Oxygen Demand		<7.50	mg/L	1	1

Sample: 188363 - RO Reject Annual

Analysis: COD Analytical Method: E 410.4 QC Batch: QC17203 Date Analyzed: 1/8/02
Analyst: JS Preparation Method: N/A Prep Batch: PB16957 Date Prepared: 1/8/02

Param	Flag	Result	Units	Dilution	RDL
Chemical Oxygen Demand		23.0	mg/L	1	20

Sample: 188363 - RO Reject Annual

Analysis: Chlorine Analytical Method: SM 4500-Cl F QC Batch: QC17083 Date Analyzed: 1/4/02
Analyst: JS Preparation Method: N/A Prep Batch: PB16850 Date Prepared: 1/4/02

Param	Flag	Result	Units	Dilution	RDL
Chlorine	¹	<0.04	mg/L	1	

Sample: 188363 - RO Reject Annual

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC17280 Date Analyzed: 1/9/02
Analyst: JS Preparation Method: N/A Prep Batch: PB17013 Date Prepared: 1/9/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		4490	µMHOS/cm	1	

Sample: 188363 - RO Reject Annual

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC17473 Date Analyzed: 1/17/02
Analyst: BC Preparation Method: N/A Prep Batch: PB17163 Date Prepared: 1/16/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 188363 - RO Reject Annual

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC17096 Date Analyzed: 1/4/02
Analyst: JS Preparation Method: N/A Prep Batch: PB16858 Date Prepared: 1/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		337	mg/L	50	0.50
Fluoride		3.78	mg/L	5	0.20
Nitrate-N		2.40	mg/L	5	0.20
Sulfate		1820	mg/L	50	0.50

Sample: 188363 - RO Reject Annual

Analysis: NH3 Analytical Method: SM 4500-NH3 B,E QC Batch: QC17110 Date Analyzed: 1/8/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB16875 Date Prepared: 1/7/02

Param	Flag	Result	Units	Dilution	RDL
Ammonia-N		<2.0	mg/L	1	2

¹Sample received out of hold time.

Sample: 188363 - RO Reject Annual

Analysis: PCB Analytical Method: E 608 QC Batch: QC17259 Date Analyzed: 1/11/02
Analyst: AG Preparation Method: N/A Prep Batch: PB17000 Date Prepared: 1/5/02

Param	Flag	Result	Units	Dilution	RDL
PCB		<0.0005	mg/L	0.50	0.001
Aroclor 1016 (PCB-1016)		<0.0005	mg/L	0.50	0.001
Aroclor 1221 (PCB-1221)		<0.0005	mg/L	0.50	0.001
Aroclor 1232 (PCB-1232)		<0.0005	mg/L	0.50	0.001
Aroclor 1242 (PCB-1242)		<0.0005	mg/L	0.50	0.001
Aroclor 1248 (PCB-1248)		<0.0005	mg/L	0.50	0.001
Aroclor 1254 (PCB-1254)		<0.0005	mg/L	0.50	0.001
Aroclor 1260 (PCB-1260)		<0.0005	mg/L	0.50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
deca chlorobiphenyl		0.0001	mg/L	0.005	0.0001	100	0 - 128

Sample: 188363 - RO Reject Annual

Analysis: Pesticides Analytical Method: E 608 QC Batch: QC17310 Date Analyzed: 1/12/02
Analyst: AG Preparation Method: N/A Prep Batch: PB17042 Date Prepared: 1/5/02

Param	Flag	Result	Units	Dilution	RDL
alpha-BHC		<0.0005	mg/L	0.005	0.0001
gamma-BHC (Lindane)		<0.0005	mg/L	0.005	0.0001
beta-BHC		<0.0005	mg/L	0.005	0.0001
delta-BHC		<0.0005	mg/L	0.005	0.0001
Heptachlor		<0.0005	mg/L	0.005	0.0001
Aldrin		<0.0005	mg/L	0.005	0.0001
Heptachlor Epoxide		<0.0005	mg/L	0.005	0.0001
gamma-Chlordane		<0.0005	mg/L	0.005	0.0001
alpha-Chlordane		<0.0005	mg/L	0.005	0.0001
Endosulfan I		<0.0005	mg/L	0.005	0.0001
P,P-DDE		<0.0005	mg/L	0.005	0.0001
Dieldrin		<0.0005	mg/L	0.005	0.0001
Endrin		<0.0005	mg/L	0.005	0.0001
P,P-DDD		<0.0005	mg/L	0.005	0.0001
Endosulfan II		<0.0005	mg/L	0.005	0.0001
p,p-DDT		<0.0005	mg/L	0.005	0.0001
Endrin aldehyde		<0.0005	mg/L	0.005	0.0001
Endosulfan sulfate		<0.0005	mg/L	0.005	0.0001
Methoxychlor		<0.0005	mg/L	0.005	0.0001
Endrin Ketone		<0.0005	mg/L	0.005	0.0001
Toxaphene		<0.005	mg/L	0.005	0.0025

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene		0.00014	mg/L	0.005	0.0001	140	34 - 154
deca chlorobiphenyl		0.0002	mg/L	0.005	0.0001	200	19 - 132

Report Date: January 23, 2002
N/A

Order Number: A02010403
RO Reject

Page Number: 8 of 30
Artesia, NM 88210

Sample: 188363 - RO Reject Annual

Analysis: Phenolics Analytical Method: SM 5530D QC Batch: QC17138 Date Analyzed: 1/8/02
Analyst: RS Preparation Method: N/A Prep Batch: PB16902 Date Prepared: 1/8/02

Param	Flag	Result	Units	Dilution	RDL
Phenolics		<0.10	mg/L	1	0.10

Sample: 188363 - RO Reject Annual

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC17367 Date Analyzed: 1/14/02
Analyst: BC Preparation Method: S 3005A Prep Batch: PB16960 Date Prepared: 1/10/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		720	mg/L	1	0.50
Dissolved Magnesium		240	mg/L	1	0.50
Dissolved Potassium		8.29	mg/L	1	0.50
Dissolved Sodium		225	mg/L	1	0.60

Sample: 188363 - RO Reject Annual

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC17251 Date Analyzed: 1/10/02
Analyst: JS Preparation Method: N/A Prep Batch: PB16995 Date Prepared: 1/9/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		4030	mg/L	5	10

Sample: 188363 - RO Reject Annual

Analysis: TSS Analytical Method: E 160.2 QC Batch: QC17136 Date Analyzed: 1/9/02
Analyst: RS Preparation Method: N/A Prep Batch: PB16904 Date Prepared: 1/8/02

Param	Flag	Result	Units	Dilution	RDL
Total Suspended Solids		<1.0	mg/L	1	1

Sample: 188363 - RO Reject Annual

Analysis: Total Cyanide Analytical Method: SM 4500-CN C,E QC Batch: QC17142 Date Analyzed: 1/8/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB16905 Date Prepared: 1/8/02

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.01	mg/L	1	0.01

Sample: 188363 - RO Reject Annual

Analysis: Total Metals Analytical Method: E 200.7 QC Batch: QC17263 Date Analyzed: 1/11/02
Analyst: RR Preparation Method: N/A Prep Batch: PB16864 Date Prepared: 1/8/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		<0.100	mg/L	1	0.10
Total Arsenic		<0.010	mg/L	1	0.01
Total Barium		<0.100	mg/L	1	0.10

Continued ...

... Continued Sample: 188363 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Beryllium		<0.0025	mg/L	1	0.0025
Total Boron		0.0722	mg/L	1	0.01
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		<0.010	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		<0.050	mg/L	1	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		<0.025	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Uranium		<0.050	mg/L	1	0.05
Total Vanadium		<0.025	mg/L	1	0.02
Total Zinc		<0.025	mg/L	1	0.02

Sample: 188363 - RO Reject Annual

Analysis: pH	Analytical Method: E 150.1	QC Batch: QC17139	Date Analyzed: 1/4/02
Analyst: RS	Preparation Method: N/A	Prep Batch: PB16901	Date Prepared: 1/4/02

Param	Flag	Result	Units	Dilution	RDL
pH	2	7.7	s.u.	1	1

²received out of holding time

Quality Control Report Method Blank

Method Blank QCBatch: QC17060

Param	Flag	Results	Units	Reporting Limit
Biological Oxygen Demand		< 1	mg/L	1

Method Blank QCBatch: QC17083

Param	Flag	Results	Units	Reporting Limit
Chlorine		<0.04	mg/L	

Method Blank QCBatch: QC17096

Param	Flag	Results	Units	Reporting Limit
Chloride		<2.0	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank QCBatch: QC17110

Param	Flag	Results	Units	Reporting Limit
Ammonia-N		<2.0	mg/L	2

Method Blank QCBatch: QC17122

Param	Flag	Results	Units	Reporting Limit
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<5.00	µg/L	5
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<5.00	µg/L	5
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5

Continued ...

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Param	Flag	Results	Units	Reporting Limit
4-methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-Dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5

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Param	Flag	Results	Units	Reporting Limit
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<5.00	µg/L	1
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.9	µg/L	1	50	102	84 - 122
Toluene-d8		49.2	µg/L	1	50	98	95 - 105
4-Bromofluorobenzene		47.5	µg/L	1	50	95	91 - 108

Method Blank QCBatch: QC17136

Param	Flag	Results	Units	Reporting Limit
Total Suspended Solids		<1.0	mg/L	1

Method Blank QCBatch: QC17138

Param	Flag	Results	Units	Reporting Limit
Phenolics		<0.10	mg/L	0.10

Method Blank QCBatch: QC17142

Param	Flag	Results	Units	Reporting Limit
Total Cyanide		<0.01	mg/L	0.01

Method Blank QCBatch: QC17203

Param	Flag	Results	Units	Reporting Limit
Chemical Oxygen Demand		<20	mg/L	20

Method Blank QCBatch: QC17251

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC17263

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.100	mg/L	0.10
Total Arsenic		0.0135	mg/L	0.01
Total Barium		<0.100	mg/L	0.10
Total Beryllium		<0.0025	mg/L	0.0025
Total Boron		<0.010	mg/L	0.01
Total Cadmium		<0.005	mg/L	0.005
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Uranium		<0.050	mg/L	0.05
Total Vanadium		<0.025	mg/L	0.02
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC17280

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		10.3	μMHOS/cm	

Method Blank

QCBatch: QC17283

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank

QCBatch: QC17310

Param	Flag	Results	Units	Reporting Limit
alpha-BHC		<0.0005	mg/L	0.0001
gamma-BHC (Lindane)		<0.0005	mg/L	0.0001
beta-BHC		<0.0005	mg/L	0.0001
delta-BHC		<0.0005	mg/L	0.0001
Heptachlor		<0.0005	mg/L	0.0001
Aldrin		<0.0005	mg/L	0.0001
Heptachlor Epoxide		<0.0005	mg/L	0.0001

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Param	Flag	Results	Units	Reporting Limit
gamma-Chlordane		<0.0005	mg/L	0.0001
alpha-Chlordane		<0.0005	mg/L	0.0001
Endosulfan I		<0.0005	mg/L	0.0001
P,P-DDE		<0.0005	mg/L	0.0001
Dieldrin		<0.0005	mg/L	0.0001
Endrin		<0.0005	mg/L	0.0001
P,P-DDD		<0.0005	mg/L	0.0001
Endosulfan II		<0.0005	mg/L	0.0001
p,p-DDT		<0.0005	mg/L	0.0001
Endrin aldehyde		<0.0005	mg/L	0.0001
Endosulfan sulfate		<0.0005	mg/L	0.0001
Methoxychlor		<0.0005	mg/L	0.0001
Endrin Ketone		<0.0005	mg/L	0.0001
Toxaphene		<0.005	mg/L	0.0025

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene		0.000064	mg/L	1	0.0001	64	34 - 154
deca chlorobiphenyl		0.00014	mg/L	1	0.0001	140	19 - 132

Method Blank

QCBatch: QC17367

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.60

Method Blank

QCBatch: QC17451

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.005	mg/L	0.005
n-Nitrosodimethylamine		<0.005	mg/L	0.005
2-Picoline		<0.005	mg/L	0.005
Methyl methanesulfonate		<0.005	mg/L	0.005
Ethyl methanesulfonate		<0.005	mg/L	0.005
Phenol		<0.005	mg/L	0.005
Aniline		<0.005	mg/L	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	0.005
2-Chlorophenol		<0.005	mg/L	0.005
1,3-Dichlorobenzene		<0.005	mg/L	0.005
1,4-Dichlorobenzene		<0.005	mg/L	0.005
Benzyl alcohol		<0.005	mg/L	0.005
1,2-Dichlorobenzene		<0.005	mg/L	0.005
2-Methylphenol		<0.005	mg/L	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
4-Methylphenol/3-Methylphenol		<0.005	mg/L	0.005
Acetophenone		<0.005	mg/L	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	0.005
Hexachloroethane		<0.005	mg/L	0.005
Nitrobenzene		<0.005	mg/L	0.005
n-Nitrosopiperidine		<0.005	mg/L	0.005
Isophorone		<0.005	mg/L	0.005
2-Nitrophenol		<0.005	mg/L	0.005
2,4-Dimethylphenol		<0.005	mg/L	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	0.005
Benzoic acid		<0.005	mg/L	0.005
2,4-Dichlorophenol		<0.005	mg/L	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	0.005
Naphthalene		<0.005	mg/L	0.005
4-Chloroaniline		<0.005	mg/L	0.005
2,6-Dichlorophenol		<0.005	mg/L	0.005
Hexachlorobutadiene		<0.005	mg/L	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	0.005
1-Methylnaphthalene		<0.005	mg/L	0.005
2-Methylnaphthalene		<0.005	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	0.005
2-Chloronaphthalene		<0.005	mg/L	0.005
1-Chloronaphthalene		<0.005	mg/L	0.005
2-Nitroaniline		<0.005	mg/L	0.005
Dimethylphthalate		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
2,6-Dinitrotoluene		<0.005	mg/L	0.005
3-Nitroaniline		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
2,4-Dinitrophenol		<0.005	mg/L	0.005
Dibenzofuran		<0.005	mg/L	0.005
Pentachlorobenzene		<0.005	mg/L	0.005
4-Nitrophenol		<0.005	mg/L	0.005
1-Naphthylamine		<0.005	mg/L	0.005
2,4-Dinitrotoluene		<0.005	mg/L	0.005
2-Naphthylamine		<0.005	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Diethylphthalate		<0.005	mg/L	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	0.005
4-Nitroaniline		<0.005	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	0.005
Diphenylamine		<0.005	mg/L	0.005
Diphenylhydrazine		<0.005	mg/L	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	0.005
Phenacetin		<0.005	mg/L	0.005
Hexachlorobenzene		<0.005	mg/L	0.005
4-Aminobiphenyl		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
Pentachlorophenol		<0.005	mg/L	0.005
Pentachloronitrobenzene		<0.005	mg/L	0.005
Pronamide		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Di-n-butylphthalate		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Benzidine		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	0.005
Butylbenzylphthalate		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	0.005
Di-n-octylphthalate		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	0.005
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
3-Methylcholanthrene		<0.005	mg/L	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		34.33	mg/L	1	80	42	21 - 100
Phenol-d5		15.74	mg/L	1	80	19	11 - 94
Nitrobenzene-d5		88.13	mg/L	1	80	110	35 - 114
2-Fluorobiphenyl		90.46	mg/L	1	80	113	43 - 116
2,4,6-Tribromophenol		50.64	mg/L	1	80	63	10 - 123
Terphenyl-d14		101.21	mg/L	1	80	126	33 - 141

Method Blank

QCBatch: QC17473

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

**Quality Control Report
Duplicate Samples**

Duplicate

QCBatch: QC17060

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Biological Oxygen Demand		22.0	22.5	mg/L	1	2	36

Duplicate QCBatch: QC17083

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Chlorine		<0.04	<0.04	mg/L	1	0	26

Duplicate QCBatch: QC17136

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Suspended Solids		79.0	79.0	mg/L	1	0	22

Duplicate QCBatch: QC17139

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.7	7.7	s.u.	1	0	0.99

Duplicate QCBatch: QC17251

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		2035	1990	mg/L	1	2	8.9

Duplicate QCBatch: QC17280

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		4494	4490	μMHOS/cm	1	0	5.9

Duplicate QCBatch: QC17283

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Bicarbonate Alkalinity		528	532	mg/L as CaCo3	1	0	7
Total Alkalinity		528	532	mg/L as CaCo3	1	0	7

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC17060

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Biological Oxygen Demand	206	218	mg/L	1	198	0.24	104	5	85 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC17096

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.56	11.56	mg/L	1	12.50	<2.0	92	0	90 - 110	20
Fluoride	2.36	2.36	mg/L	1	2.50	<0.2	94	0	90 - 110	20
Nitrate-N	2.42	2.43	mg/L	1	2.50	<0.2	96	0	90 - 110	20
Sulfate	11.69	11.86	mg/L	1	12.50	<2.0	93	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC17110

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Ammonia-N	4.26	4.48	mg/L	1	5	<2.0	85	5	85 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC17122

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	109	111	µg/L	1	100	<1.00	109	2	92 - 129	20
Benzene	102	104	µg/L	1	100	<1.00	102	2	94 - 112	20
Trichloroethene (TCE)	104	105	µg/L	1	100	<1.00	104	1	90 - 113	20
Toluene	99.7	102	µg/L	1	100	<1.00	100	2	89 - 109	20
Chlorobenzene	103	104	µg/L	1	100	<1.00	103	1	93 - 114	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	50.4	50.3	µg/L	1	50	101	101	84 - 122
Toluene-d8	48.6	49.6	µg/L	1	50	97	99	95 - 105
4-Bromofluorobenzene	48.9	48.3	µg/L	1	50	98	97	91 - 108

Laboratory Control Spikes

QCBatch: QC17138

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Phenolics	0.794	0.879	mg/L	1	0.80	<0.10	99	10	85 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC17142

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Cyanide	0.116	0.111	mg/L	1	0.12	<0.01	96	4	64 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC17203

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chemical Oxygen Demand	245	245	mg/L	1	250	<20	98	0	95 - 105	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC17263

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	0.873	0.872	mg/L	1	1	<0.100	87	0	75 - 125	20
Total Arsenic	0.463	0.451	mg/L	1	0.50	0.0135	90	3	75 - 125	20
Total Barium	0.950	0.950	mg/L	1	1	<0.100	95	0	75 - 125	20
Total Beryllium	0.0227	0.0227	mg/L	1	0.02	<0.0025	91	0	75 - 125	20
Total Boron	0.0516	0.0499	mg/L	1	0.05	<0.010	103	3	75 - 125	20
Total Cadmium	0.232	0.231	mg/L	1	0.25	<0.005	93	0	75 - 125	20
Total Chromium	0.0954	0.0942	mg/L	1	0.10	<0.010	95	1	75 - 125	20
Total Cobalt	0.238	0.236	mg/L	1	0.25	<0.025	95	1	75 - 125	20
Total Copper	0.117	0.116	mg/L	1	0.12	<0.0125	94	1	75 - 125	20
Total Iron	0.492	0.486	mg/L	1	0.50	<0.050	98	1	75 - 125	20
Total Lead	0.468	0.461	mg/L	1	0.50	<0.010	94	2	75 - 125	20
Total Manganese	0.237	0.236	mg/L	1	0.25	<0.025	95	0	75 - 125	20
Total Molybdenum	0.480	0.475	mg/L	1	0.50	<0.050	96	1	75 - 125	20
Total Nickel	0.236	0.233	mg/L	1	0.25	<0.025	94	1	75 - 125	20
Total Selenium	0.421	0.411	mg/L	1	0.50	<0.050	84	2	75 - 125	20
Total Silver	0.114	0.114	mg/L	1	0.12	<0.0125	91	0	75 - 125	20
Total Uranium	0.484	0.474	mg/L	1	0.50	<0.050	97	2	75 - 125	20
Total Vanadium	0.236	0.235	mg/L	1	0.25	<0.025	94	0	75 - 125	20
Total Zinc	0.232	0.231	mg/L	1	0.25	<0.025	93	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes QCBatch: QC17310

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
alpha-BHC	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	20	19	27 - 147	20
gamma-BHC (Lindane)	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	20	31	32 - 132	20
beta-BHC	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	15	18	23 - 140	20
delta-BHC	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	21	12	25 - 160	20
Heptachlor	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	8	34	24 - 146	20
Aldrin	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	8	34	15 - 137	20
Heptachlor Epoxide	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	10	35	31 - 140	20
gamma-Chlordane	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	13	26	15 - 150	20
alpha-Chlordane	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	13	20	12 - 141	20
Endosulfan I	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	14	19	1 - 146	20
P,P-DDE	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	11	31	12 - 144	20
Dieldrin	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	10	27	13 - 134	20
Endrin	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	16	20	20 - 164	20
P,P-DDD	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	15	17	18 - 147	20
Endosulfan II	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	15	22	11 - 152	20
p,p-DDT	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	13	21	29 - 159	20
Endrin aldehyde	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	8	42	11 - 165	20
Endosulfan sulfate	1.3E-04	< 0.0001	mg/L	1	0.0002	<0.0005	65	168	12 - 164	20
Methoxychlor	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	13	7	1 - 235	20
Endrin Ketone	< 0.0001	< 0.0001	mg/L	1	0.0002	<0.0005	36	12	16 - 135	20
Toxaphene	0.0131	0.0131	mg/L	1	0.02	<0.005	65	0	80 - 120	20
Test Comments	³ Note	⁴ Note	mg/L	1		<0.0005	0	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
2,4,5,6-Tetrachloro-m-xylene	1.5E-04	1.1E-04	mg/L	1	0.0001	150	110	34 - 154
deca chlorobiphenyl	2.1E-04	2.0E-04	mg/L	1	0.0001	210	200	19 - 132

Laboratory Control Spikes

QCBatch: QC17367

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	104	105	mg/L	1	100	<0.5	104	0	75 - 125	20
Dissolved Magnesium	104	103	mg/L	1	100	<0.5	104	0	75 - 125	20
Dissolved Potassium	99.8	99.7	mg/L	1	100	<0.5	99	0	75 - 125	20
Dissolved Sodium	104	103	mg/L	1	100	<0.5	104	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC17451

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Phenol	18.67	15.7	mg/L	1	80	<0.005	23	17	5 - 112	20
2-Chlorophenol	54.98	48.68	mg/L	1	80	<0.005	68	12	23 - 134	20
1,4-Dichlorobenzene	77.53	73.98	mg/L	1	80	<0.005	96	4	20 - 124	20
n-Nitrosodi-n-propylamine	69.29	53.43	mg/L	1	80	<0.005	86	25	0 - 230	20
1,2,4-Trichlorobenzene	88.58	87.4	mg/L	1	80	<0.005	110	1	44 - 142	20

Continued ...

³Low LCS/LCSD recovery due to prep. ICV/CCV shows method in control.

⁴Low LCS/LCSD recovery due to prep. ICV/CCV shows method in control.

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Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
4-Chloro-3-methylphenol	50.17	41.2	mg/L	1	80	<0.005	62	19	22 - 147	20
Acenaphthene	89.13	92.62	mg/L	1	80	<0.005	111	3	47 - 145	20
4-Nitrophenol	7.99	7.97	mg/L	1	80	<0.005	9	0	0 - 132	20
2,4-Dinitrotoluene	84.12	78.26	mg/L	1	80	<0.005	105	7	39 - 139	20
Pentachlorophenol	44.65	27.62	mg/L	1	80	<0.005	55	47	14 - 176	20
Pyrene	79.77	70.62	mg/L	1	80	<0.005	99	12	52 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
2-Fluorophenol	27.55	24.99	mg/L	1	80	34	31	21 - 100
Phenol-d5	14.57	11.59	mg/L	1	80	18	14	11 - 94
Nitrobenzene-d5	84.82	79.23	mg/L	1	80	106	99	35 - 114
2-Fluorobiphenyl	84.29	78.19	mg/L	1	80	105	97	43 - 116
2,4,6-Tribromophenol	70.76	62.61	mg/L	1	80	88	78	10 - 123
Terphenyl-d14	82.84	67.84	mg/L	1	80	103	84	33 - 141

Laboratory Control Spikes

QCBatch: QC17473

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00095	0.00104	mg/L	1	0.001	<0.0002	95	9	84 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC17096

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	30546.89	30462.85	mg/L	1	12500	19100	91	0	52 - 131	20
Fluoride	2280.12	2395.89	mg/L	1	2500		86	5	80 - 113	20
Nitrate-N	2536.00	2553.53	mg/L	1	2500		101	1	84 - 105	20
Sulfate	16401.97	16406.74	mg/L	1	12500		93	0	79 - 104	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC17110

Continued ...

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Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Ammonia-N	⁵ <2.0	<2.0	mg/L	1	5	<2.0	0	0	34 - 174	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17138

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Phenolics	0.815	0.914	mg/L	1	0.80	<0.10	101	11	86 - 126	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17142

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Cyanide	0.113	0.110	mg/L	1	0.12	<0.01	94	2	69 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17203

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chemical Oxygen Demand	278	276	mg/L	1	250	31.8	98	0	77 - 122	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17263

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	0.941	0.968	mg/L	1	1	<0.100	94	3	75 - 125	20
Total Arsenic	0.443	0.422	mg/L	1	0.50	<0.010	89	5	75 - 125	20
Total Barium	0.839	0.850	mg/L	1	1	<0.100	84	1	75 - 125	20
Total Beryllium	0.0197	0.020	mg/L	1	0.02	<0.0025	79	2	75 - 125	20
Total Boron	0.119	0.119	mg/L	1	0.05	0.0722	93	0	75 - 125	20
Total Cadmium	0.190	0.189	mg/L	1	0.25	<0.005	76	0	75 - 125	20

Continued ...

⁵matrix difficulties

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Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Chromium	0.0809	0.0814	mg/L	1	0.10	<0.010	81	1	75 - 125	20
Total Cobalt	0.190	0.190	mg/L	1	0.25	<0.025	76	0	75 - 125	20
Total Copper	0.107	0.110	mg/L	1	0.12	<0.0125	86	3	75 - 125	20
Total Iron	0.416	0.416	mg/L	1	0.50	<0.050	83	0	75 - 125	20
Total Lead	0.386	0.385	mg/L	1	0.50	<0.010	77	0	75 - 125	20
Total Manganese	0.199	0.202	mg/L	1	0.25	<0.025	80	1	75 - 125	20
Total Molybdenum	0.429	0.425	mg/L	1	0.50	<0.050	86	1	75 - 125	20
Total Nickel	0.189	0.188	mg/L	1	0.25	<0.025	76	0	75 - 125	20
Total Selenium	0.408	0.411	mg/L	1	0.50	<0.050	82	1	75 - 125	20
Total Silver	0.103	0.105	mg/L	1	0.12	<0.0125	82	2	75 - 125	20
Total Uranium	0.423	0.435	mg/L	1	0.50	<0.050	85	3	75 - 125	20
Total Vanadium	0.216	0.220	mg/L	1	0.25	<0.025	86	2	75 - 125	20
Total Zinc	0.198	0.191	mg/L	1	0.25	<0.025	79	4	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17367

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	173	176	mg/L	1	100	72.5	100	2	75 - 125	20
Dissolved Magnesium	218	225	mg/L	1	100	122	96	7	75 - 125	20
Dissolved Potassium	116	117	mg/L	1	100	11.8	104	0	75 - 125	20
Dissolved Sodium	304	325	mg/L	1	100	212	92	20	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC17473

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00108	0.00109	mg/L	1	0.001	<0.0002	108	0	84 - 127	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC17096

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.58	92	90 - 110	1/4/02
Fluoride		mg/L	2.50	2.41	96	90 - 110	1/4/02
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	1/4/02
Sulfate		mg/L	12.50	11.83	94	90 - 110	1/4/02

ICV (1) QCBatch: QC17096

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.71	93	90 - 110	1/4/02
Fluoride		mg/L	2.50	2.44	97	90 - 110	1/4/02
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	1/4/02
Sulfate		mg/L	12.50	11.89	95	90 - 110	1/4/02

CCV (1) QCBatch: QC17110

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5	4.7	94	85 - 115	1/8/02

ICV (1) QCBatch: QC17110

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5	4.48	89	85 - 115	1/8/02

CCV (1) QCBatch: QC17122

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	93.0	93	80 - 120	1/4/02
1,1-Dichloroethene		µg/L	100	103	103	80 - 120	1/4/02
Chloroform		µg/L	100	101	101	80 - 120	1/4/02
1,2-Dichloropropane		µg/L	100	100	100	80 - 120	1/4/02
Toluene		µg/L	100	99.0	99	80 - 120	1/4/02
Chlorobenzene		µg/L	100	101	101	80 - 120	1/4/02
Ethylbenzene		µg/L	100	101	101	80 - 120	1/4/02
Dibromofluoromethane		µg/L	50	50.9	102	80 - 120	1/4/02
Toluene-d8		µg/L	50	49.0	98	80 - 120	1/4/02
4-Bromofluorobenzene		µg/L	50	49.5	99	80 - 120	1/4/02

CCV (1) QCBatch: QC17138

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/L	0.80	0.753	94	85 - 115	1/8/02

ICV (1) QCBatch: QC17138

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/L	0.80	0.727	90	85 - 115	1/8/02

CCV (1) QCBatch: QC17139

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	1/4/02

ICV (1) QCBatch: QC17139

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	1/4/02

CCV (1) QCBatch: QC17142

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.12	0.124	103	85 - 115	1/8/02

ICV (1) QCBatch: QC17142

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.12	0.123	102	85 - 115	1/8/02

CCV (1) QCBatch: QC17203

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chemical Oxygen Demand		mg/L	250	247	98	95 - 105	1/8/02

ICV (1) QCBatch: QC17203

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chemical Oxygen Demand		mg/L	250	247	98	95 - 105	1/8/02

CCV (1) QCBatch: QC17251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1014	101	90 - 110	1/10/02

ICV (1) QCBatch: QC17251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	998	99	90 - 110	1/10/02

CCV (1) QCBatch: QC17259

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.41	102	85 - 115	1/11/02

ICV (1) QCBatch: QC17259

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.43	107	85 - 115	1/11/02

CCV (1) QCBatch: QC17263

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.99	100	90 - 110	1/11/02
Total Arsenic		mg/L	1	1.01	100	90 - 110	1/11/02
Total Barium		mg/L	2	2.02	101	90 - 110	1/11/02
Total Beryllium		mg/L	0.05	0.0501	100	90 - 110	1/11/02
Total Boron		mg/L	0.10	0.100	100	90 - 110	1/11/02
Total Cadmium		mg/L	0.50	0.507	101	90 - 110	1/11/02
Total Chromium		mg/L	0.20	0.202	101	90 - 110	1/11/02
Total Cobalt		mg/L	0.50	0.505	101	90 - 110	1/11/02

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	0.25	0.251	100	90 - 110	1/11/02
Total Iron		mg/L	1	1.02	102	90 - 110	1/11/02
Total Lead		mg/L	1	1.00	100	90 - 110	1/11/02
Total Manganese		mg/L	0.50	0.504	101	90 - 110	1/11/02
Total Molybdenum		mg/L	1	1.00	100	90 - 110	1/11/02
Total Nickel		mg/L	0.50	0.505	101	90 - 110	1/11/02
Total Selenium		mg/L	1	1.01	101	90 - 110	1/11/02
Total Silver		mg/L	0.25	0.250	100	90 - 110	1/11/02
Total Uranium		mg/L	1	1.01	101	90 - 110	1/11/02
Total Vanadium		mg/L	0.50	0.499	100	90 - 110	1/11/02
Total Zinc		mg/L	0.50	0.507	101	90 - 110	1/11/02

ICV (1)

QCBatch: QC17263

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.97	98	90 - 110	1/11/02
Total Arsenic		mg/L	1	1.02	101	90 - 110	1/11/02
Total Barium		mg/L	2	2.01	100	90 - 110	1/11/02
Total Beryllium		mg/L	0.05	0.050	100	90 - 110	1/11/02
Total Boron		mg/L	0.10	0.104	104	90 - 110	1/11/02
Total Cadmium		mg/L	0.50	0.504	101	90 - 110	1/11/02
Total Chromium		mg/L	0.20	0.202	101	90 - 110	1/11/02
Total Cobalt		mg/L	0.50	0.507	101	90 - 110	1/11/02
Total Copper		mg/L	0.25	0.250	100	90 - 110	1/11/02
Total Iron		mg/L	1	1.01	101	90 - 110	1/11/02
Total Lead		mg/L	1	1.01	101	90 - 110	1/11/02
Total Manganese		mg/L	0.50	0.503	101	90 - 110	1/11/02
Total Molybdenum		mg/L	1	1.01	101	90 - 110	1/11/02
Total Nickel		mg/L	0.50	0.504	101	90 - 110	1/11/02
Total Selenium		mg/L	1	1.01	101	90 - 110	1/11/02
Total Silver		mg/L	0.25	0.250	100	90 - 110	1/11/02
Total Uranium		mg/L	1	1.01	101	90 - 110	1/11/02
Total Vanadium		mg/L	0.50	0.500	100	90 - 110	1/11/02
Total Zinc		mg/L	0.50	0.502	100	90 - 110	1/11/02

CCV (1)

QCBatch: QC17280

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1412	1447	102	90 - 110	1/9/02

ICV (1)

QCBatch: QC17280

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μ MHOS/cm	1400	1449	103	90 - 110	1/9/02

CCV (1) QCBatch: QC17283

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	1/10/02
Carbonate Alkalinity		mg/L as CaCo3	0	224	0	90 - 110	1/10/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	12	0	90 - 110	1/10/02
Total Alkalinity		mg/L as CaCo3	250	236	94	90 - 110	1/10/02

ICV (1) QCBatch: QC17283

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	1/10/02
Carbonate Alkalinity		mg/L as CaCo3	0	236	0	90 - 110	1/10/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	6	0	90 - 110	1/10/02
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	1/10/02

CCV (1) QCBatch: QC17310

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.10	0.0877	87	85 - 115	1/12/02
gamma-BHC (Lindane)		mg/L	0.10	0.0891	89	85 - 115	1/12/02
beta-BHC		mg/L	0.10	0.0908	90	85 - 115	1/12/02
delta-BHC		mg/L	0.10	0.1006	100	85 - 115	1/12/02
Heptachlor		mg/L	0.10	0.0878	87	85 - 115	1/12/02
Aldrin		mg/L	0.10	0.0857	85	85 - 115	1/12/02
Heptachlor Epoxide		mg/L	0.10	0.0880	88	85 - 115	1/12/02
gamma-Chlordane		mg/L	0.10	0.0889	88	85 - 115	1/12/02
alpha-Chlordane		mg/L	0.10	0.0894	89	85 - 115	1/12/02
Endosulfan I		mg/L	0.10	0.0901	90	85 - 115	1/12/02
P,P-DDE		mg/L	0.10	0.0888	88	85 - 115	1/12/02
Dieldrin		mg/L	0.10	0.0869	86	85 - 115	1/12/02
Endrin		mg/L	0.10	0.1020	102	85 - 115	1/12/02
P,P-DDD		mg/L	0.10	0.0930	93	85 - 115	1/12/02
Endosulfan II		mg/L	0.10	0.0944	94	85 - 115	1/12/02
p,p-DDT		mg/L	0.10	0.0908	90	85 - 115	1/12/02
Endrin aldehyde		mg/L	0.10	0.0887	88	85 - 115	1/12/02
Endosulfan sulfate	⁶	mg/L	0.10	0.2630	263	85 - 115	1/12/02

Continued ...

⁶Out of limits. Average within limits.

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Methoxychlor		mg/L	0.10	0.1010	101	85 - 115	1/12/02
Endrin Ketone		mg/L	0.10	0.02172	21	85 - 115	1/12/02
Toxaphene		mg/L	0.80	0.8224	102	85 - 115	1/12/02
2,4,5,6-Tetrachloro-m-xylene		mg/L	0.10	0.0737	73	85 - 115	1/12/02
deca chlorobiphenyl		mg/L	0.10	0.0945	94	85 - 115	1/12/02

ICV (1)

QCBatch: QC17310

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.10	0.0900	90	85 - 115	1/12/02
gamma-BHC (Lindane)		mg/L	0.10	0.0917	91	85 - 115	1/12/02
beta-BHC		mg/L	0.10	0.0920	92	85 - 115	1/12/02
delta-BHC		mg/L	0.10	0.1043	104	85 - 115	1/12/02
Heptachlor		mg/L	0.10	0.0904	90	85 - 115	1/12/02
Aldrin		mg/L	0.10	0.0865	86	85 - 115	1/12/02
Heptachlor Epoxide		mg/L	0.10	0.0899	89	85 - 115	1/12/02
gamma-Chlordane		mg/L	0.10	0.0911	91	85 - 115	1/12/02
alpha-Chlordane		mg/L	0.10	0.0914	91	85 - 115	1/12/02
Endosulfan I		mg/L	0.10	0.0913	91	85 - 115	1/12/02
P,P-DDE		mg/L	0.10	0.0917	91	85 - 115	1/12/02
Dieldrin		mg/L	0.10	0.0898	89	85 - 115	1/12/02
Endrin		mg/L	0.10	0.1089	108	85 - 115	1/12/02
P,P-DDD		mg/L	0.10	0.0966	96	85 - 115	1/12/02
Endosulfan II		mg/L	0.10	0.0978	97	85 - 115	1/12/02
p,p-DDT		mg/L	0.10	0.0948	94	85 - 115	1/12/02
Endrin aldehyde		mg/L	0.10	0.0913	91	85 - 115	1/12/02
Endosulfan sulfate	7	mg/L	0.10	0.2790	279	85 - 115	1/12/02
Methoxychlor		mg/L	0.10	0.1059	105	85 - 115	1/12/02
Endrin Ketone	8	mg/L	0.10	0.2232	223	85 - 115	1/12/02
Toxaphene		mg/L	0.80	0.7816	97	85 - 115	1/12/02
2,4,5,6-Tetrachloro-m-xylene		mg/L	0.10	0.0749	74	85 - 115	1/12/02
deca chlorobiphenyl		mg/L	0.10	0.0948	94	85 - 115	1/12/02

CCV (1)

QCBatch: QC17367

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	27.2	108	90 - 110	1/14/02
Dissolved Magnesium		mg/L	25	27.5	110	90 - 110	1/14/02
Dissolved Potassium		mg/L	25	23.5	94	90 - 110	1/14/02
Dissolved Sodium		mg/L	25	26.1	104	90 - 110	1/14/02

⁷Out of limits. Average within limits.

⁸Out of limits. Average within limits.

ICV (1) QCBatch: QC17367

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.6	102	95 - 105	1/14/02
Dissolved Magnesium		mg/L	25	25.4	101	95 - 105	1/14/02
Dissolved Potassium		mg/L	25	25.7	102	95 - 105	1/14/02
Dissolved Sodium		mg/L	25	25.8	103	95 - 105	1/14/02

CCV (1) QCBatch: QC17451

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60	58.4	97	80 - 120	1/10/02
1,4-Dichlorobenzene		mg/L	60	61.28	102	80 - 120	1/10/02
2-Nitrophenol		mg/L	60	50.66	84	80 - 120	1/10/02
2,4-Dichlorophenol		mg/L	60	59.77	99	80 - 120	1/10/02
Hexachlorobutadiene		mg/L	60	67.23	112	80 - 120	1/10/02
4-Chloro-3-methylphenol		mg/L	60	57.54	95	80 - 120	1/10/02
2,4,6-Trichlorophenol		mg/L	60	63.18	105	80 - 120	1/10/02
Acenaphthene		mg/L	60	63.72	106	80 - 120	1/10/02
Diphenylamine		mg/L	60	60.31	100	80 - 120	1/10/02
Pentachlorophenol		mg/L	60	64.31	107	80 - 120	1/10/02
Fluoranthene		mg/L	60	63.95	106	80 - 120	1/10/02
Di-n-octylphthalate		mg/L	60	57.07	95	80 - 120	1/10/02
Benzo(a)pyrene		mg/L	60	53.49	89	80 - 120	1/10/02
2-Fluorophenol		mg/L	60	62.05	103	80 - 120	1/10/02
Phenol-d5		mg/L	60	59.75	99	80 - 120	1/10/02
Nitrobenzene-d5		mg/L	60	65.33	108	80 - 120	1/10/02
2-Fluorobiphenyl		mg/L	60	71.3	118	80 - 120	1/10/02
2,4,6-Tribromophenol		mg/L	60	66.34	110	80 - 120	1/10/02
Terphenyl-d14		mg/L	60	71.42	119	80 - 120	1/10/02

CCV (1) QCBatch: QC17473

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00091	91	80 - 120	1/17/02

ICV (1) QCBatch: QC17473

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00099	99	80 - 120	1/17/02

188363

Page of

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Trace Analysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AO2010403

Company Name:

NAVAJO

Phone #:

Address:

(Street, City, Zip)

Fax #:

Contact Person:

Darrell Moore

Invoice to:

(If different from above)

Project #:

Project Name:

Ro Project Annual

Project Location:

Sampler Signature:

[Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	DATE	TIME
188363	Ro Project Annual	2	40ml	X				X			X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45
	" "	3	500ml	X					X		X	X	1/3/02	9:45
	" "	2	1L	X					X		X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45
	" "	5	1L	X					X		X	X	1/3/02	9:45
	" "	1	500ml	X				X			X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45
	" "	1	1L	X					X		X	X	1/3/02	9:45

Relinquished by:

Date: 1/3/02Time: 1615

Received by:

Date:

Time:

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Relinquished by:

Date:

Time:

Received at Laboratory by:

Date:

Time:

LAB USE ONLY

Intact Y / NHeadspace Y / NTemp 1 °Log-in Review nm

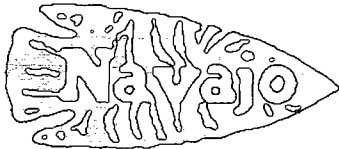
REMARKS:

1248☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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REFINING COMPANY

FAX

(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

01 JUL 16 PM 1:47

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

July 5, 2001

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472

RE: 2nd Quarter 2001 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the quarterly report and analysis.

For this quarter we discharged a total of 28,175,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 940,856,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 744,143,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality

Report Date: June 20, 2001 Order Number: A01060517

Page Number: 1 of 1

N/A

RO Reject

Artesia, NM 88210

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: June 20, 2001

Order ID Number: A01060517

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
172536	RO Reject	Water	6/4/01	8:00	6/5/01

This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 172536 - RO Reject

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		618	mg/L as CaCo3
Total Alkalinity		618	mg/L as CaCo3
Total Mercury		<0.0002	mg/L
CL		201	mg/L
Fluoride		4.03	mg/L
Nitrate-N		2.47	mg/L
Sulfate		1630	mg/L
Dissolved Calcium		756	mg/L
Dissolved Magnesium		218	mg/L
Dissolved Potassium		6.98	mg/L
Dissolved Sodium		134	mg/L

- CERTIFICATE OF ANALYSIS -

Client #: I2565

Report Date: 14-Jun-01

Trace Analysis

6701 Aberdeen Suite 9

Lubbock, TX 79424-

Phone: (806) 794-1296 **Ext:**

FAX: (806) 794-1298

Attn: Nell Green

Our Lab #: MAR01-12363

Your Sample ID: 172536

Date Logged-In: 6/7/01

Sample Source: Other/Undefined

Matrix: Water

Client Project #:

PO#:

Project #:

Date Submitted to Lab: 6/6/2001

- COLLECTION INFORMATION -

Date/Time/By: 6/4/01

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
AL-ICP	200.7/6010B	Aluminum, Al	ND (100)	UG/L	6/8/01	M/RJ	26065
AS-MS	200.8/6020	Arsenic, As	ND (3.0)	UG/L	6/8/01	RCM	26073
BE-MS	200.8/6020	Beryllium, Be	ND (0.5)	UG/L	6/8/01	RCM	26073
BA-ICP	200.7/6010B	Barium, Ba	63 (10)	UG/L	6/8/01	M/RJ	26065
B-MS	200.8/6020	Boron, B	87 (50)	UG/L	6/8/01	RCM	26073
CD-MS	200.8/6020	Cadmium, Cd	ND (0.5)	UG/L	6/8/01	RCM	26073
CR-ICP	200.7/6010B	Chromium, Cr	ND (20)	UG/L	6/8/01	M/RJ	26065
CO-ICP	200.7/6010B	Cobalt, Co	ND (10)	UG/L	6/8/01	M/RJ	26065
CU-ICP	200.7/6010B	Copper, Cu	ND (10)	UG/L	6/8/01	M/RJ	26065
FE-ICP	200.7/6010B	Iron, Fe	ND (40)	UG/L	6/8/01	M/RJ	26065
MN-ICP	200.7/6010B	Manganese, Mn	ND (10)	UG/L	6/8/01	M/RJ	26065
PB-MS	200.8/6020	Lead, Pb	ND (2.0)	UG/L	6/8/01	RCM	26073
NI-ICP	200.7/6010B	Nickel, Ni	ND (20)	UG/L	6/8/01	M/RJ	26065
SE-GFAA	3113B/7740	Selenium, Se	ND (30)	UG/L	6/12/01	KRG	26112
AG-ICP	200.7/6010B	Silver, Ag	ND (10)	UG/L	6/8/01	M/RJ	26065
V-ICP	200.7/6010B	Vanadium, V	ND (20)	UG/L	6/8/01	M/RJ	26065
ZN-ICP	200.7/6010B	Zinc, Zn	ND (10)	UG/L	6/8/01	M/RJ	26065
MO-MS	200.8	Molybdenum, Mo	ND (30)	UG/L	6/8/01	RCM	26073
U-MS	6020	Uranium, U	ND (20.0)	UG/L	6/8/01	RCM	26073

ATEL

Aqua Tech Environmental Laboratories, Inc.

Note: The Practical Quantitation Limit (PQL) for Selenium is elevated due to matrix interferences that required serial dilution of the sample.

Report Approved By: _____

Deborah K. Johnson

Deborah K. Johnson
End of Report

This report shall not be reproduced, except in its entirety, without the written approval of the laboratory. The results presented on this Certificate only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s).



TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: June 20, 2001

Order ID Number: A01060517

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
172536	RO Reject	Water	6/4/01	8:00	6/5/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 172536 - RO Reject

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC11752 Date Analyzed: 6/6/01
Analyst: RS Preparation Method: N/A Prep Batch: PB10054 Date Prepared: 6/6/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		618	mg/L as CaCo3	1	1
Total Alkalinity		618	mg/L as CaCo3	1	1

Sample: 172536 - RO Reject

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC11898 Date Analyzed: 6/12/01
Analyst: SSC Preparation Method: N/A Prep Batch: PB10177 Date Prepared: 6/12/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 172536 - RO Reject

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11767 Date Analyzed: 6/5/01
Analyst: JS Preparation Method: N/A Prep Batch: PB10065 Date Prepared: 6/5/01

Param	Flag	Result	Units	Dilution	RDL
CL		201	mg/L	10	0.50
Fluoride		4.03	mg/L	5	0.20
Nitrate-N		2.47	mg/L	5	0.20
Sulfate		1630	mg/L	50	0.50

Sample: 172536 - RO Reject

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC11952 Date Analyzed: 6/13/01
Analyst: LDB Preparation Method: E 3005 A Prep Batch: PB10066 Date Prepared: 6/7/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		756	mg/L	1	0.50
Dissolved Magnesium		218	mg/L	1	0.50
Dissolved Potassium		6.98	mg/L	1	0.50
Dissolved Sodium		134	mg/L	1	0.60

Quality Control Report Method Blank

Method Blank QCBatch: QC11752

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank QCBatch: QC11767

Param	Flag	Results	Units	Reporting Limit
CL		<2.0	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank QCBatch: QC11898

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank QCBatch: QC11952

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		0.5	mg/L	0.50
Dissolved Sodium		0.6	mg/L	0.60

Quality Control Report Duplicate Samples

Duplicate QCBatch: QC11752

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0		mg/L as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7

Continued ...

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Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Bicarbonate Alkalinity		30.0	32.0	mg/L as CaCo3	1	6	7
Total Alkalinity		30.0	32.0	mg/L as CaCo3	1	6	7

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC11767

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	11.72	11.64	mg/L	1	12.50	<2.0	93	0	90 - 110	20
Fluoride	2.40	2.44	mg/L	1	2.50	<0.2	96	1	90 - 110	20
Nitrate-N	2.43	2.40	mg/L	1	2.50	<0.2	97	1	90 - 110	20
Sulfate	11.90	11.76	mg/L	1	12.50	<2.0	95	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11898

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00108	0.00106	mg/L	1	0.001	<0.0002	108	1	84 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11952

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	107	99.5	mg/L	1	100	<0.5	107	7	75 - 125	20
Dissolved Magnesium	101	91.2	mg/L	1	100	<0.5	101	10	75 - 125	20
Dissolved Potassium	99	93	mg/L	1	100	0.5	99	6	75 - 125	20
Dissolved Sodium	94.8	95.4	mg/L	1	100	0.6	94	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC11767

Continued ...

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Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	¹ 765.62	² 765.71	mg/L	1	625	201	90	0	52 - 131	20
Fluoride	³ 125.20	⁴ 123.81	mg/L	1	125	4.03	96	1	80 - 113	20
Nitrate-N	⁵ 128.16	⁶ 129.78	mg/L	1	125	2.47	100	1	86 - 110	20
Sulfate	2151.38	2193.80	mg/L	1	625	1630	83	7	71 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC11898

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00119	0.00114	mg/L	1	0.001	<0.0002	119	4	84 - 127	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC11952

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	918	831	mg/L	1	100	756	162	73	75 - 125	20
Dissolved Magnesium	311	297	mg/L	1	100	218	93	16	75 - 125	20
Dissolved Potassium	114	109	mg/L	1	100	6.98	107	4	75 - 125	20
Dissolved Sodium	228	216	mg/L	1	100	134	94	13	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC11752

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Carbonate Alkalinity		mg/L as CaCo3	0	216	0	90 - 110	6/6/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	26.0	0	90 - 110	6/6/01
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	6/6/01

¹I spiked the *50 dilution for 172536, but reported the *10 dilution. The correct %EA = 89.

²I spiked the *50 dilution for 172536, but reported the *10 dilution.

³I spiked the *50 dilution for 172536, but reported the *5 dilution. The correct %EA = 91.

⁴I spiked the *50 dilution for 172536, but reported the *5 dilution.

⁵I spiked the *50 dilution for 172536, but reported the *5 dilution. The correct %EA = 95.

⁶I spiked the *50 dilution for 172536, but reported the *5 dilution.

ICV (1) QCBatch: QC11752

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Carbonate Alkalinity		mg/L as CaCo3	0	212	0	90 - 110	6/6/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	28.0	0	90 - 110	6/6/01
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	6/6/01

CCV (1) QCBatch: QC11767

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.45	98	90 - 110	6/5/01
CL		mg/L	12.50	11.62	92	90 - 110	6/5/01
Fluoride		mg/L	2.50	2.39	95	90 - 110	6/5/01
Nitrate-N		mg/L	2.50	2.39	95	90 - 110	6/5/01
Sulfate		mg/L	12.50	11.79	94	90 - 110	6/5/01

ICV (1) QCBatch: QC11767

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.55	102	90 - 110	6/5/01
CL		mg/L	12.50	11.80	94	90 - 110	6/5/01
Fluoride		mg/L	2.50	2.56	102	90 - 110	6/5/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	6/5/01
Sulfate		mg/L	12.50	12.14	97	90 - 110	6/5/01

CCV (1) QCBatch: QC11898

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00107	107	80 - 120	6/12/01

ICV (1) QCBatch: QC11898

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00102	102	80 - 120	6/12/01

CCV (1) QCBatch: QC11952

Report Date: June 20, 2001
N/A

Order Number: A01060517
RO Reject

Page Number: 7 of 7
Artesia, NM 88210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	27.2	108	90 - 110	6/13/01
Dissolved Magnesium		mg/L	25	26.7	106	90 - 110	6/13/01
Dissolved Potassium		mg/L	25	25.8	103	90 - 110	6/13/01
Dissolved Sodium		mg/L	25	25.3	101	90 - 110	6/13/01

ICV (1)

QCBatch: QC11952

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.2	100	95 - 105	6/13/01
Dissolved Magnesium		mg/L	25	24.3	97	95 - 105	6/13/01
Dissolved Potassium		mg/L	25	24.4	97	95 - 105	6/13/01
Dissolved Sodium		mg/L	25	24.8	99	95 - 105	6/13/01

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Fax (915) 585-4944
1 (888) 588-3443

Phone #:

Fax #:

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Date: Time:

Time:

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Date: _____ Time: _____

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REFINING COMPANY

FAX

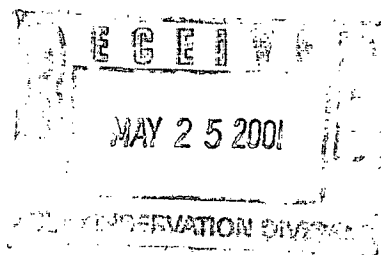
(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311
May 23, 2001

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 S. St. Francis
Santa Fe, NM 87505-5472



RE: 1st Quarter 2001 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the quarterly report and analysis.

For this quarter we discharged a total of 25,945,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 912,681,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 715,968,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: March 30, 2001

Order ID Number: A01030707

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
166167	RO Reject	Water	3/5/01	10:00	3/7/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 166167 - RO Reject

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC09784 Date Analyzed: 3/14/01
Analyst: JS Preparation Method: Prep Batch: PB08396 Date Prepared: 3/14/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		584	mg/L as CaCo3	1	1
Total Alkalinity		584	mg/L as CaCo3	1	1

Sample: 166167 - RO Reject

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC09712 Date Analyzed: 3/14/01
Analyst: SSC Preparation Method: N/A Prep Batch: PB08341 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 166167 - RO Reject

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09606 Date Analyzed: 3/7/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08252 Date Prepared: 3/7/01

Param	Flag	Result	Units	Dilution	RDL
CL		410	mg/L	50	0.50
Fluoride		3.8	mg/L	5	0.20
Nitrate-N	¹	2.2	mg/L	5	0.20
Sulfate		1900	mg/L	50	0.50

¹Sample out of hold time for NO3.

Quality Control Report Method Blank

Method Blank QCBatch: QC09606

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

Method Blank QCBatch: QC09712

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank QCBatch: QC09784

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Quality Control Report Duplicate Samples

Duplicate QCBatch: QC09784

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	20
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity		212	208	mg/L as CaCo3	1	1	20
Total Alkalinity		212	208	mg/L as CaCo3	1	1	20

Quality Control Report Lab Control Spikes and Duplicate Spikes

LCS QCBatch: QC09606

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
CL		11.79	mg/L	1	12.50	<0.5	94	90 - 110
Fluoride		2.38	mg/L	1	2.50	<0.2	95	90 - 110
Nitrate-N		2.43	mg/L	1	2.50	<0.2	97	90 - 110
Sulfate		11.86	mg/L	1	12.50	<0.5	94	90 - 110

LCSD QCBatch: QC09606

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
CL		11.74	mg/L	1	12.50	<0.5	0	20
Fluoride		2.47	mg/L	1	1.25	<0.2	3	20
Nitrate-N		2.46	mg/L	1	2.50	<0.2	1	20
Sulfate		11.89	mg/L	1	6.25	<0.5	0	20

Quality Control Report Matrix Spikes and Duplicate Spikes

MS QCBatch: QC09606

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
CL		507.73	mg/L	1	125	400	86	52 - 131
Fluoride		27.76	mg/L	1	25		92	80 - 113
Nitrate-N		25.21	mg/L	1	25		100	86 - 110
Sulfate		419.42	mg/L	1	125		87	71 - 121

MSD QCBatch: QC09606

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
CL		508.69	mg/L	1	6.25	400	0	20
Fluoride		27.96	mg/L	1	1.25		0	20
Nitrate-N		25.30	mg/L	1	2.50		0	20
Sulfate		419.19	mg/L	1	6.25		0	20

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC09606

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.19	87	90 - 110	3/7/01
CL		mg/L	12.50	11.61	92	90 - 110	3/7/01
Fluoride		mg/L	2.50	2.50	100	90 - 110	3/7/01
Nitrate-N		mg/L	2.50	2.46	98	90 - 110	3/7/01
Sulfate		mg/L	12.50	11.79	94	90 - 110	3/7/01

ICV (1) QCBatch: QC09606

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.39	95	90 - 110	3/7/01
CL		mg/L	12.50	11.45	91	90 - 110	3/7/01
Fluoride		mg/L	2.50	2.47	98	90 - 110	3/7/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	3/7/01
Sulfate		mg/L	12.50	11.75	94	90 - 110	3/7/01

CCV (1) QCBatch: QC09712

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00113	113	80 - 120	3/14/01

ICV (1) QCBatch: QC09712

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.0011	110	80 - 120	3/14/01

CCV (1) QCBatch: QC09784

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	85 - 115	3/14/01
Carbonate Alkalinity		mg/L as CaCo3	0	236	0	85 - 115	3/14/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	8	0	85 - 115	3/14/01
Total Alkalinity		mg/L as CaCo3	250	244	97	85 - 115	3/14/01

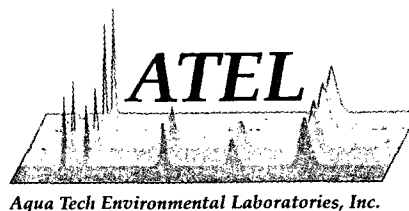
ICV (1) QCBatch: QC09784

Report Date: March 30, 2001
N/A

Order Number: A01030707
RO Reject

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Artesia, NM 88210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	85 - 115	3/14/01
Carbonate Alkalinity		mg/L as CaCo3	0	248	0	85 - 115	3/14/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	85 - 115	3/14/01
Total Alkalinity		mg/L as CaCo3	250	248	99	85 - 115	3/14/01



- CERTIFICATE OF ANALYSIS -

Client #: 12565
Trace Analysis
6701 Aberdeen Suite 9
Lubbock, TX 79424-

Report Date: 27-Mar-01

Attn: Nell Green

Phone: (806) 794-1296 Ext:

FAX: (806) 794-1298

Our Lab #: MAR01-05185

Your Sample ID: 166167

Date Logged-In: 3/11/01

Sample Source: NPDES/WWTP's

Matrix: WasteWater

Client Project #:

PO#: RO Reject

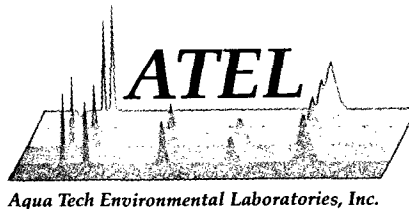
Project #: RO Reject

Date Submitted to Lab: 3/8/2001

- COLLECTION INFORMATION -

Date/Time/By: 3/5/01

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
NA-ICP-D	200.7/6010B	Sodium, Na, Dissolved	210 (0.4)	MG/L	3/13/01	BLD	24969
CA-ICP-D	200.7/6010B	Calcium, Ca, Dissolved	690 (1.0)	MG/L	3/13/01	BLD	24969
MG-ICP-D	200.7/6010B	Magnesium, Mg, Dissolved	200 (0.1)	MG/L	3/13/01	BLD	24969
K-ICP-D	200.7/6010B	Potassium, K, Dissolved	3.0 (2.0)	MG/L	3/13/01	BLD	24969
AL-ICP	200.7/6010B	Aluminum, Al	ND (100)	UG/L	3/13/01	BLD	24969
AS-MS	200.8/6020	Arsenic, As	ND (3.0)	UG/L	3/14/01	RH/SM	24987
BE-MS	200.8/6020	Beryllium, Be	ND (0.5)	UG/L	3/14/01	RH/SM	24987
BA-MS	200.8/6020	Barium, Ba	63 (10)	UG/L	3/14/01	RH/SM	24987
CD-MS	200.8/6020	Cadmium, Cd	ND (0.5)	UG/L	3/14/01	RH/SM	24987
CR-MS	200.8/6020	Chromium, Cr	11 (10)	UG/L	3/14/01	RH/SM	24987
CU-ICP	200.7/6010B	Copper, Cu	ND (10)	UG/L	3/13/01	BLD	24969
CO-ICP	200.7/6010B	Cobalt, Co	ND (10)	UG/L	3/13/01	BLD	24969
FE-ICP	200.7/6010B	Iron, Fe	ND (40)	UG/L	3/13/01	BLD	24969
MN-ICP	200.7/6010B	Manganese, Mn	23 (10)	UG/L	3/13/01	BLD	24969
PB-MS	200.8/6020	Lead, Pb	ND (2.0)	UG/L	3/14/01	RH/SM	24987
NI-MS	200.8/6020	Nickel, Ni	28 (10)	UG/L	3/14/01	RH/SM	24987
SE-MS	200.8/6020	Selenium, Se	7.7 (3.0)	UG/L	3/14/01	RH/SM	24987
AG-ICP	200.7/6010B	Silver, Ag	ND (10)	UG/L	3/13/01	BLD	24969
V-ICP	200.7/6010B	Vanadium, V	ND (20)	UG/L	3/13/01	BLD	24969
ZN-ICP	200.7/6010B	Zinc, Zn	ND (10)	UG/L	3/13/01	BLD	24969
U-MS	6020	Uranium, U	ND (20.0)	UG/L	3/14/01	RH/SM	24987
MO-MS	200.8	Molybdenum, Mo	ND (30)	UG/L	3/14/01	RH/SM	24987



- CERTIFICATE OF ANALYSIS -

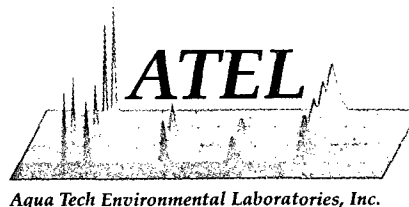
Lab Number MAR01-05185 -Continued from Previous Page

Test Group	EPA Method	Test	Result	Units	Analysis	Analyst	WS#
					Date		
B-MS	200.8/6020	Boron, B	87 (50)	UG/L	3/23/01	LD/SM	25125

Report Approved By:

Deborah K. Johnson *End of Report*
Deborah K. Johnson

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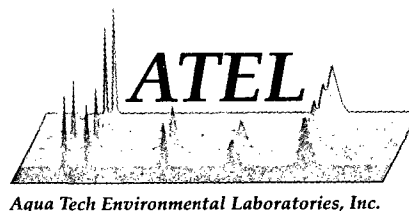
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24987	LCSA 2.22.5	AS	C	18.8813	UG/L	20	94 %R:		85	115
24987	LCSA 2.22.5	CD	C	9.7885	UG/L	10	98 %R:		85	115
24987	LCSA 2.22.5	CR	C	102.9391	UG/L	100	103 %R:		85	115
24987	LCSA 2.22.5	CU	C	103.4341	UG/L	100	103 %R:		85	115
24987	LCSA 2.22.5	NI	C	98.0885	UG/L	100	98 %R:		85	115
24987	LCSA 2.22.5	PB	C	10.4011	UG/L	10	104 %R:		85	115
24987	LCSA 3.12.5	AS	C	18.6664	UG/L	20	93 %R:		85	115
24987	LCSA 3.12.5	CD	C	9.4091	UG/L	10	94 %R:		85	115
24987	LCSA 3.12.5	CR	C	99.8011	UG/L	100	100 %R:		85	115
24987	LCSA 3.12.5	CU	C	93.677	UG/L	100	94 %R:		85	115
24987	LCSA 3.12.5	NI	C	96.2133	UG/L	100	96 %R:		85	115
24987	LCSA 3.12.5	PB	C	10.1681	UG/L	10	102 %R:		85	115
24987	LCSA 3.12.5	SE	C	19.6032	UG/L	20	98 %R:		85	115
24987	LCSA 3.13.5	AS	C	18.0096	UG/L	20	90 %R:		85	115
24987	LCSA 3.13.5	CD	C	9.5308	UG/L	10	95 %R:		85	115
24987	LCSA 3.13.5	MO	C	96.4849	UG/L	100	96 %R:		85	115
24987	LCSA 3.13.5	PB	C	10.1223	UG/L	10	101 %R:		85	115
24987	LCSA 3.13.5	SE	C	19.4697	UG/L	20	97 %R:		85	115
24987	LCSA 3.13.5	SR	C	1049.7376	UG/L	1000	105 %R:		85	115
24987	LCSA 3.13.5	TI	C	99.2852	UG/L	100	99 %R:		85	115
24987	LCSA 3.8.5	CD	C	9.5323	UG/L	10	95 %R:		85	115
24987	LCSA 3.8.5	SE	C	19.3749	UG/L	20	97 %R:		85	115
24987	LCSA 3.8.5	TL	C	9.0782	UG/L	10	91 %R:		85	115
24969	LCSA3.12.2	BA	C	1.87867	MG/L	2	94 %R:		80	120
24969	LCSA3.12.2	CR	C	.93772	MG/L	1	94 %R:		80	120
24969	LCSA3.12.2	MN	C	.93606	MG/L	1	94 %R:		80	120
24969	LCSA3.12.2	NI	C	.94695	MG/L	1	95 %R:		80	120
24969	LCSA3.12.2	PB	C	1.09036	MG/L	1.1	99 %R:		80	120
24969	LCSA3.13.1	AG	C	.11705	MG/L	0.1	117 %R:		80	120
24969	LCSA3.13.1	AL	C	2.03795	MG/L	2	102 %R:		80	120
24969	LCSA3.13.1	BA	C	2.102	MG/L	2	105 %R:		80	120
24969	LCSA3.13.1	CA	C	2.4475	MG/L	2.5	98 %R:		80	120
24969	LCSA3.13.1	CO	C	1.03136	MG/L	1	103 %R:		80	120
24969	LCSA3.13.1	CR	C	1.01535	MG/L	1	102 %R:		80	120
24969	LCSA3.13.1	CU	C	1.0316	MG/L	1	103 %R:		80	120
24969	LCSA3.13.1	FE	C	2.06762	MG/L	2	103 %R:		80	120
24969	LCSA3.13.1	K	C	10.59996	MG/L	10	106 %R:		80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



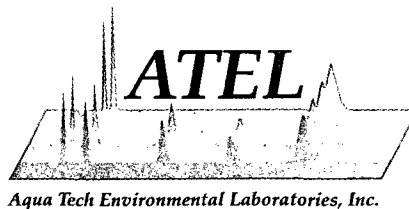
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	LCSA3.13.1	MG	C	2.62135	MG/L	2.5	105 %R:		80	120
24969	LCSA3.13.1	MN	C	1.01641	MG/L	1	102 %R:		80	120
24969	LCSA3.13.1	NI	C	1.05232	MG/L	1	105 %R:		80	120
24969	LCSA3.13.1	V	C	2.03247	MG/L	2	102 %R:		80	120
24969	LCSA3.13.1	ZN	C	1.02543	MG/L	1	103 %R:		80	120
25125	LCSA3.20.5	BA	C	190.3817	UG/L	200	95 %R:		85	115
25125	LCSA3.20.5	CD	C	10.2983	UG/L	10	103 %R:		85	115
25125	LCSA3.20.5	CR	C	97.5426	UG/L	100	98 %R:		85	115
25125	LCSA3.20.5	PB	C	10.0968	UG/L	100	10 %R: *		85	115
25125	LCSA3.20.5	SI	C	4.5966	MG/L	5	92 %R:		85	115
24969	LCSA3.9.2	CR	C	.89851	MG/L	1	90 %R:		80	120
24969	LCSA3.9.2	FE	C	1.82209	MG/L	2	91 %R:		80	120
24969	LCSA3.9.2	NI	C	.90997	MG/L	1	91 %R:		80	120
24969	LCSA3.9.2	PB	C	1.08026	MG/L	1.1	98 %R:		80	120
24969	LCSA3.9.2	ZN	C	.87813	MG/L	1	88 %R:		80	120
24969	LCSA3.9.2 RP	CR	C	.92151	MG/L	1	92 %R:		80	120
24969	LCSA3.9.2 RP	FE	C	1.89315	MG/L	2	95 %R:		80	120
24969	LCSA3.9.2 RP	NI	C	.9321	MG/L	1	93 %R:		80	120
24969	LCSA3.9.2 RP	PB	C	1.09175	MG/L	1.1	99 %R:		80	120
24969	LCSA3.9.2 RP	ZN	C	.90047	MG/L	1	90 %R:		80	120
24987	LCSS 3.12.4C	AS	C	87.7973092	MG/KG	95	92 %R:		70	125
24987	LCSS 3.12.4C	MO	C	125.959437	MG/KG	135.7	93 %R:		70	125
24987	LCSS 3.8.4C	CD	C	106.500661	MG/KG	123	87 %R:		70	125
24987	LCSS 3.8.4C	PB	C	116.190625	MG/KG	131	89 %R:		70	125
24987	LCSS SAMI 3.	B	C	5810.79631	MG/KG	6578	88 %R:		70	125
25125	LCSS3.21.4C	MO	C	154.404124	MG/KG	135	114 %R:		50	150
24969	LCSS3.9.4A	AG	C	27.6653992	MG/KG	33.7	82 %R:		70	120
24969	LCSS3.9.4A	CD	C	108.950570	MG/KG	123	89 %R:		70	120
24969	LCSS3.9.4A	CR	C	141.524714	MG/KG	195.7	72 %R:		70	120
24969	LCSS3.9.4A	PB	C	113.836501	MG/KG	131	87 %R:		70	120
24969	LFB	AL	C	9.58331	MG/L	10	96 %R:		80	120
24987	LFB	AS	C	19.097	UG/L	20	95 %R:		85	115
25125	LFB	AS	C	21.2848	UG/L	20	106 %R:		85	115
25125	LFB	B	C	106.4582	UG/L	100	106 %R:		85	115
24987	LFB	BA	C	191.1383	UG/L	200	96 %R:		85	115
25125	LFB	BA	C	214.2198	UG/L	200	107 %R:		85	115
24969	LFB	BA	C	9.39854	MG/L	10	94 %R:		80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		



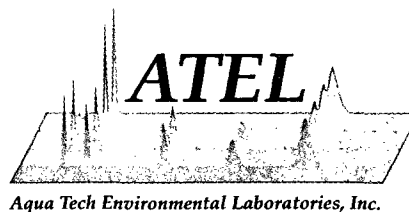
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations --		QC1	QC2	Lower Limit	Upper Limit
24987	LFB	BE	C	9.0796	UG/L	10	91	%R:			85	115
25125	LFB	BE	C	9.9621	UG/L	10	100	%R:			85	115
24969	LFB	CA	C	23.83985	MG/L	25	95	%R:			80	120
24969	LFB	CD	C	1.28595	MG/L	1.25	103	%R:			80	120
25125	LFB	CD	C	10.4538	UG/L	10	105	%R:			85	115
24987	LFB	CD	C	9.2849	UG/L	10	93	%R:			85	115
24969	LFB	CO	C	2.38056	MG/L	2.5	95	%R:			80	120
24969	LFB	CR	C	.95164	MG/L	1	95	%R:			80	120
25125	LFB	CR	C	109.2924	UG/L	100	109	%R:			85	115
24987	LFB	CR	C	99.4063	UG/L	100	99	%R:			85	115
24969	LFB	CU	C	1.18093	MG/L	1.25	94	%R:			80	120
24987	LFB	CU	C	95.6714	UG/L	100	96	%R:			85	115
24969	LFB	FE	C	4.70924	MG/L	5	94	%R:			80	120
24969	LFB	K	C	24.54562	MG/L	25	98	%R:			80	120
24969	LFB	MG	C	24.42208	MG/L	25	98	%R:			80	120
24969	LFB	MN	C	2.37558	MG/L	2.5	95	%R:			80	120
24969	LFB	NA	C	23.97567	MG/L	25	96	%R:			80	120
25125	LFB	NI	C	106.8454	UG/L	100	107	%R:			85	115
24969	LFB	NI	C	2.39293	MG/L	2.5	96	%R:			80	120
24987	LFB	NI	C	94.9172	UG/L	100	95	%R:			85	115
24969	LFB	PB	C	2.45803	MG/L	2.5	98	%R:			80	120
24987	LFB	PB	C	9.4917	UG/L	10	95	%R:			85	115
24987	LFB	SB	C	19.6697	UG/L	20	98	%R:			85	115
25125	LFB	SB	C	21.6022	UG/L	20	108	%R:			85	115
24987	LFB	SE	C	18.704	UG/L	20	94	%R:			85	115
25125	LFB	SE	C	20.8013	UG/L	20	104	%R:			85	115
25125	LFB	SI	C	.1077	MG/L	0.1	108	%R:			85	115
25125	LFB	TL	C	10.6568	UG/L	10	107	%R:			85	115
24987	LFB	TL	C	9.486	UG/L	10	95	%R:			85	115
24969	LFB	V	C	2.35459	MG/L	2.5	94	%R:			80	120
24969	LFB	ZN	C	2.50351	MG/L	2.5	100	%R:			80	120
24987	MAR01-05053D	CU	D	9.1277	UG/L		1	%D	(<5 x MDL)			20
24987	MAR01-05053D	PB	D	.9358	UG/L		4	%D	(<5 x MDL)			20
24987	MAR01-05054M	CU	M	100.8944	UG/L	100	92	%R:		2 %RPD	70	130
24987	MAR01-05054M	PB	M	10.0974	UG/L	10	92	%R:		2 %RPD	70	130
24987	MAR01-05054S	CU	S	103.4468	UG/L	100	94	%R:			70	130
24987	MAR01-05054S	PB	S	10.3378	UG/L	10	95	%R:			70	130

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



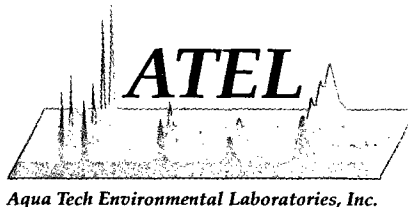
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24987	MAR01-05146D	AS	D	1.29485148	MG/KG		41 %D * (<5 x MDL)			20
24987	MAR01-05146D	MO	D	22.7516336	MG/KG		4 %D (<5 x MDL)			20
24987	MAR01-05147M	CD	M	4.5935	UG/L	10	46 %R: *	1 %RPD	70	130
24987	MAR01-05147M	SE	M	9.579	UG/L	20	47 %R: *	1 %RPD	70	130
24987	MAR01-05147M	TL	M	4.6046	UG/L	10	40 %R: *	2 %RPD	70	130
24987	MAR01-05147S	CD	S	4.6357	UG/L	10	46 %R: *		70	130
24987	MAR01-05147S	SE	S	9.6997	UG/L	20	47 %R: *		70	130
24987	MAR01-05147S	TL	S	4.7167	UG/L	10	41 %R: *		70	130
24969	MAR01-05177D	CU	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05186S	CU	S	1152.81	UG/L	1250	92 %R:		75	125
24969	MAR01-05186S	ZN	S	2366.43	UG/L	2500	94 %R:		75	125
24969	MAR01-05193D	AG	D	.013728720	MG/KG		173 %D * (<5 x MDL)			20
24969	MAR01-05193D	CR	D	3.58923668	MG/KG		11 %D (<5 x MDL)			20
24969	MAR01-05193D	PB	D	1.48160351	MG/KG		40 %D * (<5 x MDL)			20
24969	MAR01-05207D	PB	D	27.8504273	MG/KG		9 %D			20
24969	MAR01-05214M	PB	M	158.606255	MG/KG	120	85 %R:	10 %RPD	75	125
24969	MAR01-05214S	PB	S	142.911532	MG/KG	118	73 %R: *		75	125
24987	MAR01-05225D	CD	D	-.0034	UG/L		62 %D * (<5 x MDL)			20
24987	MAR01-05225D	CR	D	-.0297	UG/L		572 %D * (<5 x MDL)			20
24987	MAR01-05225D	PB	D	.0002	UG/L		189 %D * (<5 x MDL)			20
24987	MAR01-05238M	BA	M	243.8801	UG/L	200	96 %R:	0 %RPD	70	130
24987	MAR01-05238M	CD	M	9.8503	UG/L	10	98 %R:	1 %RPD	70	130
24987	MAR01-05238M	CR	M	101.4193	UG/L	100	99 %R:	1 %RPD	70	130
24987	MAR01-05238M	CU	M	93.6346	UG/L	100	90 %R:	2 %RPD	70	130
24987	MAR01-05238S	BA	S	244.4027	UG/L	200	96 %R:		70	130
24987	MAR01-05238S	CD	S	9.9222	UG/L	10	99 %R:		70	130
24987	MAR01-05238S	CR	S	101.9627	UG/L	100	100 %R:		70	130
24987	MAR01-05238S	CU	S	95.5978	UG/L	100	92 %R:		70	130
24987	MAR01-05248D	BA	D	113.2666	UG/L		4 %D			20
24987	MAR01-05248D	CD	D	.2022	UG/L		6 %D (<5 x MDL)			20
24987	MAR01-05248D	CR	D	1.1431	UG/L		13 %D (<5 x MDL)			20
24987	MAR01-05248D	CU	D	11.134	UG/L		7 %D (<5 x MDL)			20
24969	MAR01-05253D	BA	D	55.99	UG/L		1 %D			20
24969	MAR01-05253D	CR	D	4.16	UG/L		61 %D * (<5 x MDL)			20
24969	MAR01-05253D	MN	D	22.39	UG/L		54 %D * (<5 x MDL)			20
24969	MAR01-05253D	NI	D	6.62	UG/L		119 %D * (<5 x MDL)			20
24969	MAR01-05253D	PB	D	77.46	UG/L		163 %D * (<5 x MDL)			20

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



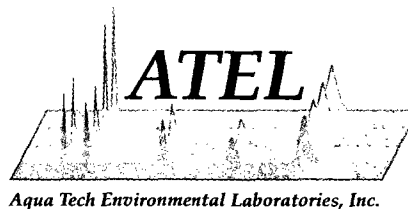
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	MAR01-05256	MBA	M	1365	UG/L	2000	58 %R: *	1 %RPD	80	120
24969	MAR01-05256	MCU	M	618.6	UG/L	1000	62 %R: *	0 %RPD	80	120
24969	MAR01-05256	MFE	M	1232.69	UG/L	2000	61 %R: *	1 %RPD	80	120
24969	MAR01-05256	MMN	M	613.63	UG/L	1000	60 %R: *	0 %RPD	80	120
24969	MAR01-05256	MNI	M	616.91	UG/L	1000	60 %R: *	2 %RPD	80	120
24969	MAR01-05256	MPB	M	726.61	UG/L	1000	72 %R: *	2 %RPD	80	120
24969	MAR01-05256	MZN	M	626.4	UG/L	1000	63 %R: *	0 %RPD	80	120
24969	MAR01-05256	S BA	S	1353.14	UG/L	2000	58 %R: *		80	120
24969	MAR01-05256	S CU	S	618.6	UG/L	1000	62 %R: *		80	120
24969	MAR01-05256	S FE	S	1222.43	UG/L	2000	61 %R: *		80	120
24969	MAR01-05256	S MN	S	614.16	UG/L	1000	60 %R: *		80	120
24969	MAR01-05256	S NI	S	627.1	UG/L	1000	61 %R: *		80	120
24969	MAR01-05256	S PB	S	710.46	UG/L	1000	70 %R: *		80	120
24969	MAR01-05256	S ZN	S	626.06	UG/L	1000	62 %R: *		80	120
24987	MAR01-05265	D CU	D	1271.8855	UG/L		0 %D			20
24987	MAR01-05310	MPB	M	11.3578	UG/L	10	101 %R:	7 %RPD	70	130
24987	MAR01-05310	S PB	S	10.5937	UG/L	10	93 %R:		70	130
24969	MAR01-05435	D AG	D	0	UG/L	200	%D * (<5 x MDL)			20
24969	MAR01-05435	D AG	D	7.4	UG/L	582	%D * (<5 x MDL)			20
24969	MAR01-05435	D AL	D	11.85	UG/L	185	%D * (<5 x MDL)			20
24969	MAR01-05435	D AL	D	598.25	UG/L	18	%D (<5 x MDL)			20
24969	MAR01-05435	D BA	D	20.8	UG/L	53	%D * (<5 x MDL)			20
24969	MAR01-05435	D BA	D	4.35	UG/L	110	%D * (<5 x MDL)			20
24969	MAR01-05435	D CA	D	461.64825	MG/L	1	%D			20
24969	MAR01-05435	D CA	D	489.608	MG/L	9	%D			20
24969	MAR01-05435	D CO	D	0	UG/L	0	%D (<5 x MDL)			20
24969	MAR01-05435	D CO	D	7.1	UG/L	200	%D * (<5 x MDL)			20
24969	MAR01-05435	D CR	D	15.55	UG/L	121	%D * (<5 x MDL)			20
24969	MAR01-05435	D CR	D	0	UG/L	200	%D * (<5 x MDL)			20
24969	MAR01-05435	D CU	D	0	UG/L	0	%D (<5 x MDL)			20
24969	MAR01-05435	D CU	D	0	UG/L	0	%D (<5 x MDL)			20
24969	MAR01-05435	D FE	D	20.95	UG/L	68	%D * (<5 x MDL)			20
24969	MAR01-05435	D FE	D	417.8	UG/L	0	%D (<5 x MDL)			20
24969	MAR01-05435	D MG	D	1937.9977	UG/L	0	%D			20
24969	MAR01-05435	D MG	D	2021.69735	UG/L	12	%D			20
24969	MAR01-05435	D MN	D	82.6	UG/L	3	%D (<5 x MDL)			20
24969	MAR01-05435	D MN	D	97.95	UG/L	0	%D (<5 x MDL)			20

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



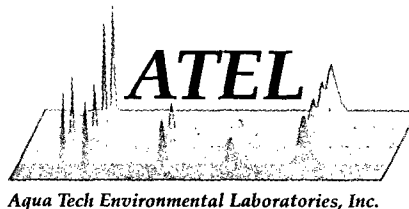
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	MAR01-05435D	NI	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05435D	NI	D	102.25	UG/L		209 %D * (<5 x MDL)			20
24969	MAR01-05435D	V	D	.25	UG/L		204 %D * (<5 x MDL)			20
24969	MAR01-05435D	V	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05435D	ZN	D	10.2	UG/L		51 %D * (<5 x MDL)			20
24969	MAR01-05435D	ZN	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05443D	AG	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05443D	AL	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05443D	BA	D	43.77	UG/L		1 %D (<5 x MDL)			20
24969	MAR01-05443D	CA	D	18.67419	MG/L		2 %D			20
24969	MAR01-05443D	CO	D	.89	UG/L		78 %D * (<5 x MDL)			20
24969	MAR01-05443D	CR	D	.49	UG/L		141 %D * (<5 x MDL)			20
24969	MAR01-05443D	CU	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05443D	FE	D	42.88	UG/L		7 %D (<5 x MDL)			20
24969	MAR01-05443D	K	D	50.40487	MG/L		2 %D			20
24969	MAR01-05443D	MG	D	2.68746	MG/L		3 %D			20
24969	MAR01-05443D	MN	D	4.06	UG/L		14 %D (<5 x MDL)			20
24969	MAR01-05443D	NI	D	14.18	UG/L		+03 %D * (<5 x MDL)			20
24969	MAR01-05443D	V	D	25.1	UG/L		29 %D * (<5 x MDL)			20
24969	MAR01-05443D	ZN	D	8.94	UG/L		19 %D (<5 x MDL)			20
24969	MAR01-05446S	AG	S	1032.12	UG/L	1000	103 %R:		75	125
24969	MAR01-05446S	AL	S	9491.27	UG/L	10000	95 %R:		75	125
24969	MAR01-05446S	CO	S	2244.1	UG/L	2500	90 %R:		75	125
24969	MAR01-05446S	CR	S	911.09	UG/L	1000	90 %R:		75	125
24969	MAR01-05446S	CU	S	1135.23	UG/L	1250	91 %R:		75	125
24969	MAR01-05446S	FE	S	4505.89	UG/L	5000	90 %R:		75	125
24969	MAR01-05446S	K	S	35.54278	MG/L	25	98 %R:		75	125
24969	MAR01-05446S	MN	S	2272.4	UG/L	2500	90 %R:		75	125
24969	MAR01-05446S	NI	S	2260.11	UG/L	2500	89 %R:		75	125
24969	MAR01-05446S	V	S	2338.91	UG/L	2500	93 %R:		75	125
24969	MAR01-05446S	ZN	S	2520.9	UG/L	2500	94 %R:		75	125
24969	MAR01-05451D	AG	D	3.7	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05451D	AL	D	15.78	UG/L		51 %D * (<5 x MDL)			20
24969	MAR01-05451D	BA	D	4.6	UG/L		97 %D * (<5 x MDL)			20
24969	MAR01-05451D	CA	D	489.32537	MG/L		5 %D			20
24969	MAR01-05451D	CO	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05451D	CR	D	2.85	UG/L		32 %D * (<5 x MDL)			20

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



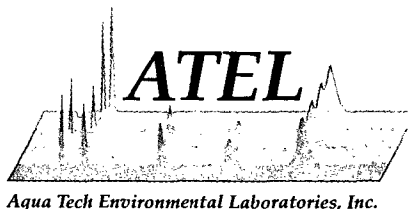
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	MAR01-05451D	CU	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05451D	FE	D	4.58	UG/L		64 %D * (<5 x MDL)			20
24969	MAR01-05451D	K	D	22.07525	MG/L		20 %D			20
24969	MAR01-05451D	MG	D	275.43902	MG/L		7 %D			20
24969	MAR01-05451D	MN	D	217.81	UG/L		5 %D			20
24969	MAR01-05451D	NA	D	254.14617	MG/L		19 %D			20
24969	MAR01-05451D	NI	D	15.82	UG/L		43 %D * (<5 x MDL)			20
24969	MAR01-05451D	V	D	11.82	UG/L		31 %D * (<5 x MDL)			20
24969	MAR01-05451D	ZN	D	36.56	UG/L		19 %D (<5 x MDL)			20
24969	MAR01-05453D	AG	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05453D	AL	D	29.48	UG/L		6 %D (<5 x MDL)			20
24969	MAR01-05453D	BA	D	4.29	UG/L		38 %D * (<5 x MDL)			20
24969	MAR01-05453D	CO	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05453D	CR	D	.75	UG/L		122 %D * (<5 x MDL)			20
24969	MAR01-05453D	CU	D	0	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05453D	FE	D	2.99	UG/L		30 %D * (<5 x MDL)			20
24969	MAR01-05453D	K	D	19.68457	MG/L		19 %D			20
24969	MAR01-05453D	MG	D	251.76512	MG/L		15 %D			20
24969	MAR01-05453D	MN	D	202.77	UG/L		11 %D			20
24969	MAR01-05453D	NI	D	20.23	UG/L		19 %D (<5 x MDL)			20
24969	MAR01-05453D	V	D	31.39	UG/L		7 %D (<5 x MDL)			20
24969	MAR01-05453D	ZN	D	28.73	UG/L		14 %D (<5 x MDL)			20
24969	MAR01-05454S	AG	S	970.22	UG/L	1000	97 %R:		75	125
24969	MAR01-05454S	AL	S	8346.63	UG/L	10000	83 %R:		75	125
24969	MAR01-05454S	CO	S	2026.75	UG/L	2500	81 %R:		75	125
24969	MAR01-05454S	CR	S	815.97	UG/L	1000	81 %R:		75	125
24969	MAR01-05454S	CU	S	1013.97	UG/L	1000	101 %R:		75	125
24969	MAR01-05454S	FE	S	4047.51	UG/L	5000	81 %R:		75	125
24969	MAR01-05454S	K	S	36.73812	MG/L	25	85 %R:		75	125
24969	MAR01-05454S	MN	S	2043.43	UG/L	2500	81 %R:		75	125
24969	MAR01-05454S	NI	S	2064.35	UG/L	2500	82 %R:		75	125
24969	MAR01-05454S	V	S	2069.85	UG/L	2500	82 %R:		75	125
24969	MAR01-05454S	ZN	S	2120.58	UG/L	2500	85 %R:		75	125
24969	MAR01-05482D	AG	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05482D	CA	D	28.2	MG/L		0 %D			20
24969	MAR01-05482D	CO	D	0	UG/L		200 %D * (<5 x MDL)			20
24969	MAR01-05482D	CR	D	0	UG/L		200 %D * (<5 x MDL)			20

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	MAR01-05482D	MN	D	15.49	UG/L		0 %D (<5 x MDL)			20
24969	MAR01-05482D	NI	D	1.66	UG/L		125 %D * (<5 x MDL)			20
24969	MAR01-05482D	ZN	D	1.82	UG/L		85 %D * (<5 x MDL)			20
24969	MAR01-05483S	AG	S	1033.57	UG/L	1000	103 %R:		75	125
24969	MAR01-05483S	CA	S	51.23775	MG/L	25	92 %R:		75	125
24969	MAR01-05483S	CO	S	2420.43	UG/L	2500	97 %R:		75	125
24969	MAR01-05483S	CR	S	944.36	UG/L	1000	94 %R:		75	125
24969	MAR01-05483S	MN	S	2319.82	UG/L	2500	92 %R:		75	125
24969	MAR01-05483S	NI	S	2462.37	UG/L	2500	98 %R:		75	125
24969	MAR01-05483S	ZN	S	2594.65	UG/L	2500	104 %R:		75	125
25125	MAR01-06081D	PB	D	5.0917	UG/L		1 %D (<5 x MDL)			20
25125	MAR01-06082MPB		M	23.1256	UG/L	20	104 %R:	1 %RPD	70	130
25125	MAR01-06082S	PB	S	22.8078	UG/L	20	102 %R:		70	130
25125	MAR01-06174D	BA	D	67.6756	UG/L		2 %D			20
25125	MAR01-06174D	CD	D	0	UG/L		0 %D (<5 x MDL)			20
25125	MAR01-06174D	CR	D	2.8751	UG/L		17 %D (<5 x MDL)			20
25125	MAR01-06175MBA		M	470.722	UG/L	400	100 %R:	1 %RPD	70	130
25125	MAR01-06175MCD		M	22.5558	UG/L	20	113 %R:	1 %RPD	70	130
25125	MAR01-06175MCR		M	206.9568	UG/L	200	101 %R:	0 %RPD	70	130
25125	MAR01-06175S	BA	S	477.0377	UG/L	400	102 %R:		70	130
25125	MAR01-06175S	CD	S	22.8607	UG/L	20	114 %R:		70	130
25125	MAR01-06175S	CR	S	207.0982	UG/L	200	101 %R:		70	130
25125	MAR01-06186D	BA	D	73.8884	UG/L		5 %D			20
25125	MAR01-06186D	CD	D	0	UG/L		0 %D (<5 x MDL)			20
25125	MAR01-06186D	CR	D	2.9468	UG/L		48 %D * (<5 x MDL)			20
25125	MAR01-06188MBA		M	372.9381	UG/L	200	87 %R:	1 %RPD	70	130
25125	MAR01-06188MCD		M	9.911	UG/L	10	101 %R:	2 %RPD	70	130
25125	MAR01-06188MCR		M	95.5074	UG/L	100	93 %R:	1 %RPD	70	130
25125	MAR01-06188S	BA	S	377.2721	UG/L	200	89 %R:		70	130
25125	MAR01-06188S	CD	S	10.0668	UG/L	10	101 %R:		70	130
25125	MAR01-06188S	CR	S	96.1647	UG/L	100	94 %R:		70	130
24987	PBS 3.12.4C	AS	C	-.3891	UG/L					
24987	PBS 3.12.4C	B	C	2.7597	UG/L					
24987	PBS 3.12.4C	MO	C	2.5478	UG/L		0			
24987	PBS 3.8 4C	CD	C	.049	UG/L					
24987	PBS 3.8 4C	PB	C	.4685	UG/L					
25125	PBS3.21.4C	MO	C	27.2172	MG/KG					

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	



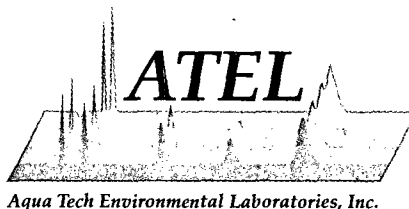
- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	PBS3.9.4A	AG	C	.00223	MG/L		0			
24969	PBS3.9.4A	CD	C	.00086	MG/L					
24969	PBS3.9.4A	CR	C	.00102	MG/L					
24969	PBS3.9.4A	PB	C	0	MG/L		0			
24987	PBW 2.22.5	AS	C	-.2274	UG/L					
24987	PBW 2.22.5	CD	C	.0811	UG/L					
24987	PBW 2.22.5	CR	C	.4774	UG/L		0			
24987	PBW 2.22.5	CU	C	.2042	UG/L					
24987	PBW 2.22.5	NI	C	.2201	UG/L					
24987	PBW 2.22.5	PB	C	.0943	UG/L					
24987	PBW 3.12.5	AS	C	.1014	UG/L					
24987	PBW 3.12.5	CD	C	-.0006	UG/L					
24987	PBW 3.12.5	CR	C	.0686	UG/L					
24987	PBW 3.12.5	CU	C	.022	UG/L		0			
24987	PBW 3.12.5	NI	C	.0115	UG/L					
24987	PBW 3.12.5	PB	C	.0296	UG/L					
24987	PBW 3.12.5	SE	C	.0766	UG/L					
24987	PBW 3.13.5	AS	C	-.7257	UG/L		0			
24987	PBW 3.13.5	CD	C	.0174	UG/L					
24987	PBW 3.13.5	MO	C	.1317	UG/L					
24987	PBW 3.13.5	PB	C	.0145	UG/L					
24987	PBW 3.13.5	SE	C	.033	UG/L					
24987	PBW 3.13.5	SR	C	.0336	UG/L					
24987	PBW 3.13.5	TI	C	.114	UG/L					
24987	PBW 3.8.5	CD	C	.0543	UG/L					
24987	PBW 3.8.5	SE	C	-.0078	UG/L		0			
24987	PBW 3.8.5	TL	C	.0856	UG/L					
24969	PBW3.12.2	BA	C	.00226	MG/L					
24969	PBW3.12.2	CR	C	.00024	MG/L					
24969	PBW3.12.2	MN	C	.00147	MG/L		0			
24969	PBW3.12.2	NI	C	0	MG/L		0			
24969	PBW3.12.2	PB	C	.0064	MG/L		0			
24969	PBW3.13.1	AG	C	0	MG/L		0			
24969	PBW3.13.1	AL	C	0	MG/L		0			
24969	PBW3.13.1	BA	C	.00139	MG/L		0			
24969	PBW3.13.1	CA	C	0	MG/L		0			
24969	PBW3.13.1	CO	C	.00243	MG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
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- QUALITY CONTROL REPORT -

Printed: 3/27/2001

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
24969	PBW3.13.1	CR	C	0	MG/L		0			
24969	PBW3.13.1	CU	C	0	MG/L		0			
24969	PBW3.13.1	FE	C	.00182	MG/L		0			
24969	PBW3.13.1	K	C	.79815	MG/L		0			
24969	PBW3.13.1	MG	C	.00635	MG/L		0			
24969	PBW3.13.1	MN	C	.00096	MG/L		0			
24969	PBW3.13.1	NA	C	.25381	MG/L		0			
24969	PBW3.13.1	NI	C	.00663	MG/L		0			
24969	PBW3.13.1	V	C	0	MG/L		0			
24969	PBW3.13.1	ZN	C	0	MG/L		0			
25125	PBW3.20.5	BA	C	.5666	UG/L					
25125	PBW3.20.5	CD	C	0	UG/L		0			
25125	PBW3.20.5	CR	C	2.6814	UG/L		0			
25125	PBW3.20.5	PB	C	.279	UG/L					
25125	PBW3.20.5	SI	C	.0322	MG/L					
24969	PBW3.9.2	CR	C	.00023	MG/L		0			
24969	PBW3.9.2	FE	C	.00932	MG/L		0			
24969	PBW3.9.2	NI	C	.00517	MG/L		0			
24969	PBW3.9.2	PB	C	.00001	MG/L		0			
24969	PBW3.9.2	ZN	C	0	MG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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REFINING COMPANY

FAX

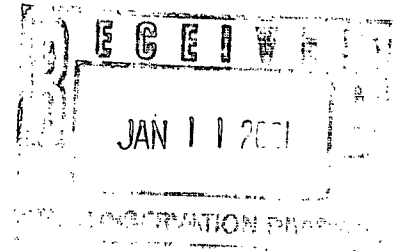
(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

January 4, 2001

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L



Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505-5472

RE: 4th Quarter 2000 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually. This is the annual report and analysis.

For this quarter we discharged a total of 30,816,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 886,736,000 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 690,023,000 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
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Lubbock, Texas 79424
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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: December 14, 2000

Order ID Number: A00120110

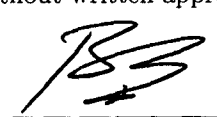
Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
159874	RO Reject Annual	Water	11/30/00	14:30	12/1/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 32 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 159874 - RO Reject Annual

Analysis: 624 Analytical Method: E 624 QC Batch: QC07185 Date Analyzed: 12/5/00
Analyst: JG Preparation Method: N/A Prep Batch: PB06291 Date Prepared: 12/5/00

Param	Flag	Result	Units	Dilution	RDL
Bromochloromethane		<1.00	µg/L	1	1
Dichlorodifluoromethane		<1.00	µg/L	1	1
Chloromethane (methyl chloride)		<1.00	µg/L	1	1
Vinyl Chloride		<1.00	µg/L	1	1
Bromomethane (methyl bromide)		<1.00	µg/L	1	1
Chloroethane		<1.00	µg/L	1	1
Trichlorofluoromethane		<1.00	µg/L	1	1
Acetone		<10.0	µg/L	1	10
Iodomethane (methyl iodide)		<1.00	µg/L	1	1
Carbon Disulfide		<1.00	µg/L	1	1
Acrylonitrile		<1.00	µg/L	1	1
2-Butanone (MEK)		<5.00	µg/L	1	5
4-methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5
2-hexanone		<5.00	µg/L	1	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10
1,1-Dichloroethene		<1.00	µg/L	1	1
Methylene chloride		<5.00	µg/L	1	5
MTBE		<1.00	µg/L	1	1
trans-1,2-Dichloroethene		<1.00	µg/L	1	1
1,1-Dichloroethane		<1.00	µg/L	1	1
cis-1,2-dichloroethene		<1.00	µg/L	1	1
2,2-Dichloropropane		<1.00	µg/L	1	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1
Chloroform		<1.00	µg/L	1	1
1,1,1-Trichloroethane		<1.00	µg/L	1	1
1,1-Dichloropropene		<1.00	µg/L	1	1
Benzene		<1.00	µg/L	1	1
Carbon Tetrachloride		<1.00	µg/L	1	1
1,2-Dichloropropane		<1.00	µg/L	1	1
Trichloroethene (TCE)		<1.00	µg/L	1	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1
Bromodichloromethane		<1.00	µg/L	1	1
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5
cis-1,3-Dichloropropene		<1.00	µg/L	1	1
trans-1,3-Dichloropropene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
1,1,2-Trichloroethane		<1.00	µg/L	1	1
1,3-Dichloropropane		<1.00	µg/L	1	1
Dibromochloromethane		<1.00	µg/L	1	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1
Tetrachloroethene (PCE)		<1.00	µg/L	1	1
Chlorobenzene		<1.00	µg/L	1	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
Bromoform		<1.00	µg/L	1	1
Styrene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Continued ...

... Continued Sample: 159874 Analysis: 624

Param	Flag	Result	Units	Dilution	RDL
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1
2-Chlorotoluene		<1.00	µg/L	1	1
1,2,3-Trichloropropane		<1.00	µg/L	1	1
Isopropylbenzene		<1.00	µg/L	1	1
Bromobenzene		<1.00	µg/L	1	1
n-Propylbenzene		<1.00	µg/L	1	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1
tert-Butylbenzene		<1.00	µg/L	1	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1
sec-Butylbenzene		<1.00	µg/L	1	1
1,3-Dichlorobenzene		<1.00	µg/L	1	1
p-Isopropyltoluene		<1.00	µg/L	1	1
4-Chlorotoluene		<1.00	µg/L	1	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1
n-Butylbenzene		<1.00	µg/L	1	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5
Naphthalene		<1.00	µg/L	1	1
Hexachlorobutadiene		<5.00	µg/L	1	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.00	µg/L	1	50	96	84 - 116
Toluene-d8		50.81	µg/L	1	50	101	92 - 108
4-Bromofluorobenzene		44.14	µg/L	1	50	88	80 - 110

Sample: 159874 - RO Reject Annual

Analysis: 625 Analytical Method: E 625
Analyst: MA Preparation Method: N/A

QC Batch: QC07129
Prep Batch: PB06247

Date Analyzed: 12/5/00
Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.005	mg/L	1	0.005
n-Nitrosodimethylamine		<0.005	mg/L	1	0.005
2-Picoline		<0.005	mg/L	1	0.005
Methyl methanesulfonate		<0.005	mg/L	1	0.005
Ethyl methanesulfonate		<0.005	mg/L	1	0.005
Phenol		<0.005	mg/L	1	0.005
Aniline		<0.005	mg/L	1	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	1	0.005
2-Chlorophenol		<0.005	mg/L	1	0.005
1,3-Dichlorobenzene		<0.005	mg/L	1	0.005
1,4-Dichlorobenzene		<0.005	mg/L	1	0.005
Benzyl alcohol		<0.005	mg/L	1	0.005
1,2-Dichlorobenzene		<0.005	mg/L	1	0.005
2-Methylphenol		<0.005	mg/L	1	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	1	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	1	0.005
Acetophenone		<0.005	mg/L	1	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 159874 Analysis: 625

Param	Flag	Result	Units	Dilution	RDL
Hexachloroethane		<0.005	mg/L	1	0.005
Nitrobenzene		<0.005	mg/L	1	0.005
n-Nitrosopiperidine		<0.005	mg/L	1	0.005
Isophorone		<0.005	mg/L	1	0.005
2-Nitrophenol		<0.005	mg/L	1	0.005
2,4-Dimethylphenol		<0.005	mg/L	1	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	1	0.005
Benzoic acid		<0.005	mg/L	1	0.005
2,4-Dichlorophenol		<0.005	mg/L	1	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	1	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	1	0.005
Naphthalene		<0.005	mg/L	1	0.005
4-Chloroaniline		<0.005	mg/L	1	0.005
2,6-Dichlorophenol		<0.005	mg/L	1	0.005
Hexachlorobutadiene		<0.005	mg/L	1	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	1	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	1	0.005
1-Methylnaphthalene		<0.005	mg/L	1	0.005
2-Methylnaphthalene		<0.005	mg/L	1	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	1	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	1	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	1	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	1	0.005
2-Chloronaphthalene		<0.005	mg/L	1	0.005
1-Chloronaphthalene		<0.005	mg/L	1	0.005
2-Nitroaniline		<0.005	mg/L	1	0.005
Dimethylphthalate		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
2,6-Dinitrotoluene		<0.005	mg/L	1	0.005
3-Nitroaniline		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
2,4-Dinitrophenol		<0.005	mg/L	1	0.005
Dibenzofuran		<0.005	mg/L	1	0.005
Pentachlorobenzene		<0.005	mg/L	1	0.005
4-Nitrophenol		<0.005	mg/L	1	0.005
1-Naphthylamine		<0.005	mg/L	1	0.005
2,4-Dinitrotoluene		<0.005	mg/L	1	0.005
2-Naphthylamine		<0.005	mg/L	1	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Diethylphthalate		<0.005	mg/L	1	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	1	0.005
4-Nitroaniline		<0.005	mg/L	1	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	1	0.005
Diphenylamine		<0.005	mg/L	1	0.005
Diphenylhydrazine		<0.005	mg/L	1	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	1	0.005
Phenacetin		<0.005	mg/L	1	0.005
Hexachlorobenzene		<0.005	mg/L	1	0.005
4-Aminobiphenyl		<0.005	mg/L	1	0.005
Pentachlorophenol		<0.005	mg/L	1	0.005
Pentachloronitrobenzene		<0.005	mg/L	1	0.005
Pronamide		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 159874 Analysis: 625

Param	Flag	Result	Units	Dilution	RDL
Anthracene		<0.005	mg/L	1	0.005
Di-n-butylphthalate		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Benzidine		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	1	0.005
Butylbenzylphthalate		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	1	0.005
Di-n-octylphthalate		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
3-Methylcholanthrene		<0.005	mg/L	1	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		23.11	mg/L	1	80	28	8 - 73
Phenol-d5		17.01	mg/L	1	80	21	8 - 62
Nitrobenzene-d5		53.14	mg/L	1	80	66	44 - 109
2-Fluorobiphenyl		52.13	mg/L	1	80	65	45 - 109
2,4,6-Tribromophenol		63.72	mg/L	1	80	79	39 - 132
Terphenyl-d14		55.32	mg/L	1	80	69	46 - 121

Sample: 159874 - RO Reject Annual

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07123 Date Analyzed: 12/5/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06239 Date Prepared: 12/5/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		522	mg/L as CaCo3	1	1
Total Alkalinity		522	mg/L as CaCo3	1	1

Sample: 159874 - RO Reject Annual

Analysis: BOD5 Analytical Method: SM 5210B QC Batch: QC07122 Date Analyzed: 12/6/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06240 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
Biological Oxygen Demand		<7.5	mg/L	1	1

Sample: 159874 - RO Reject Annual

Analysis: COD Analytical Method: E 410.4 QC Batch: QC07063 Date Analyzed: 12/1/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06188 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
Chemical Oxygen Demand		<20	mg/L	1	20

Sample: 159874 - RO Reject Annual

Analysis: Chlorine Analytical Method: SM 4500-Cl F QC Batch: QC07073 Date Analyzed: 12/1/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06198 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
Chlorine	1	0.04	mg/L	1	

Sample: 159874 - RO Reject Annual

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC07062 Date Analyzed: 12/1/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06187 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		3800	µMHOS/cm	1	

Sample: 159874 - RO Reject Annual

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC07192 Date Analyzed: 12/6/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06172 Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		618	mg/L	1	0.50
Dissolved Magnesium		194	mg/L	1	0.50
Dissolved Potassium		6.63	mg/L	1	0.50
Dissolved Sodium		156	mg/L	1	0.50

Sample: 159874 - RO Reject Annual

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC07302 Date Analyzed: 12/11/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06362 Date Prepared: 12/11/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 159874 - RO Reject Annual

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07064 Date Analyzed: 12/1/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06189 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
CL		280	mg/L	1	0.50
Fluoride		3.7	mg/L	1	0.20

Continued ...

¹ Sample was run out of holding time, but was tested the day it was received. It should be run in the field.

... Continued Sample: 159874 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Nitrate-N		2.1	mg/L	1	0.20
Sulfate		1700	mg/L	1	0.50

Sample: 159874 - RO Reject Annual

Analysis: NH3 Analytical Method: SM 4500-NH3 B,E QC Batch: QC07113 Date Analyzed: 12/5/00
Analyst: LD Preparation Method: N/A Prep Batch: PB06233 Date Prepared: 12/5/00

Param	Flag	Result	Units	Dilution	RDL
Ammonia-N		<2.0	mg/L	1	2

Sample: 159874 - RO Reject Annual

Analysis: PCB Analytical Method: E 608 QC Batch: QC07056 Date Analyzed: 12/3/00
Analyst: SH Preparation Method: N/A Prep Batch: PB06177 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
PCB		<0.0005	mg/L	1	0.001

Sample: 159874 - RO Reject Annual

Analysis: Pesticides Analytical Method: E 608 QC Batch: QC07058 Date Analyzed: 12/3/00
Analyst: SH Preparation Method: N/A Prep Batch: PB06177 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
alpha-BHC		<0.0001	mg/L	1	0.02
beta-BHC		<0.0001	mg/L	1	0.02
gamma-BHC (Lindane)		<0.0001	mg/L	1	0.02
delta-BHC		<0.0001	mg/L	1	0.02
Heptachlor		<0.0001	mg/L	1	0.04
Aldrin		<0.0001	mg/L	1	0.02
Heptachlor Epoxide		<0.0001	mg/L	1	0.04
gamma-Chlordane		<0.0001	mg/L	1	0.02
Endosulfan I		<0.0001	mg/L	1	0.02
alpha-Chlordane		<0.0001	mg/L	1	0.02
Dieldrin		<0.0001	mg/L	1	0.02
P,P-DDE		<0.0001	mg/L	1	0.02
Endrin		<0.0001	mg/L	1	0.10
Endosulfan II		<0.0001	mg/L	1	0.02
Endrin aldehyde		<0.0001	mg/L	1	0.10
P,P-DDD		<0.0001	mg/L	1	0.04
Endosulfan sulfate		<0.0001	mg/L	1	0.10
p,p-DDT		<0.0001	mg/L	1	0.10
Endrin Ketone		<0.0001	mg/L	1	0.20
Methoxychlor		<0.0001	mg/L	1	0.10
Toxaphene		<0.0025	mg/L	1	0.50

Sample: 159874 - RO Reject Annual

Analysis: Phenolics Analytical Method: SM 5530D QC Batch: QC07077 Date Analyzed: 12/4/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06194 Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics		<0.07	mg/L	1	0.07

Sample: 159874 - RO Reject Annual

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC07152 Date Analyzed: 12/5/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06268 Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		3400	mg/L	1	10

Sample: 159874 - RO Reject Annual

Analysis: TSS Analytical Method: E 160.2 QC Batch: QC07121 Date Analyzed: 12/6/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06241 Date Prepared: 12/5/00

Param	Flag	Result	Units	Dilution	RDL
Total Suspended Solids		1.0	mg/L	1	1

Sample: 159874 - RO Reject Annual

Analysis: Total Cyanide Analytical Method: SM 4500-CN C,E QC Batch: QC07159 Date Analyzed: 12/6/00
Analyst: LD Preparation Method: N/A Prep Batch: PB06274 Date Prepared: 12/6/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.01	mg/L	1	0.01

Sample: 159874 - RO Reject Annual

Analysis: Total Metals Analytical Method: E 200.7 QC Batch: QC07155 Date Analyzed: 12/6/00
Analyst: RR Preparation Method: N/A Prep Batch: PB06176 Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		<0.5	mg/L	1	0.50
Total Antimony		<0.01	mg/L	1	0.05
Total Arsenic		<0.01	mg/L	1	0.01
Total Barium		0.04	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.56	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		<0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		<0.02	mg/L	1	0.02
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		0.003	mg/L	1	0.001
Total Molybdenum		< 0.01	mg/L	1	0.01
Total Nickel		0.01	mg/L	1	0.01
Total Selenium		<0.01	mg/L	1	0.01
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.02	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 159874 - RO Reject Annual

Analysis: pH Analytical Method: E 150.1 QC Batch: QC07119 Date Analyzed: 12/1/00
Analyst: RS Preparation Method: N/A Prep Batch: PB06243 Date Prepared: 12/1/00

Param	Flag	Result	Units	Dilution	RDL
pH	2	7.7	s.u.	1	1

**Quality Control Report
Method Blank**

Sample: Method Blank QCBatch: QC07056

Param	Flag	Results	Units	Reporting Limit
PCB		<0.0005	mg/L	0.001

Sample: Method Blank QCBatch: QC07058

Param	Flag	Results	Units	Reporting Limit
alpha-BHC		<0.0001	mg/L	0.02
beta-BHC		<0.0001	mg/L	0.02
gamma-BHC (Lindane)		<0.0001	mg/L	0.02
delta-BHC		<0.0001	mg/L	0.02
Heptachlor		<0.0001	mg/L	0.04
Aldrin		<0.0001	mg/L	0.02
Heptachlor Epoxide		<0.0001	mg/L	0.04
gamma-Chlordane		<0.0001	mg/L	0.02
Endosulfan I		<0.0001	mg/L	0.02
alpha-Chlordane		<0.0001	mg/L	0.02
Dieldrin		<0.0001	mg/L	0.02
P,P-DDE		<0.0001	mg/L	0.02
Endrin		<0.0001	mg/L	0.10
Endosulfan II		<0.0001	mg/L	0.02
Endrin aldehyde		<0.0001	mg/L	0.10
P,P-DDD		<0.0001	mg/L	0.04
Endosulfan sulfate		<0.0001	mg/L	0.10
p,p-DDT		<0.0001	mg/L	0.10
Endrin Ketone		<0.0001	mg/L	0.20
Methoxychlor		<0.0001	mg/L	0.10
Toxaphene		<0.0025	mg/L	0.50

Sample: Method Blank QCBatch: QC07062

²Sample was run out of holding time, but was tested the day it was received.

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		15	μ MHOS/cm	

Sample: Method Blank QCBatch: QC07063

Param	Flag	Results	Units	Reporting Limit
Chemical Oxygen Demand		<20	mg/L	20

Sample: Method Blank QCBatch: QC07064

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

Sample: Method Blank QCBatch: QC07073

Param	Flag	Results	Units	Reporting Limit
Chlorine		<0.04	mg/L	

Sample: Method Blank QCBatch: QC07077

Param	Flag	Results	Units	Reporting Limit
Phenolics		<0.07	mg/L	0.07

Sample: Method Blank QCBatch: QC07113

Param	Flag	Results	Units	Reporting Limit
Ammonia-N		<2.0	mg/L	2

Sample: Method Blank QCBatch: QC07121

Param	Flag	Results	Units	Reporting Limit
Total Suspended Solids		<1.0	mg/L	1

Sample: Method Blank QCBatch: QC07122

Param	Flag	Results	Units	Reporting Limit
Biological Oxygen Demand		< 1	mg/L	1

Sample: Method Blank QCBatch: QC07123

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Sample: Method Blank QCBatch: QC07129

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.005	mg/L	0.005
n-Nitrosodimethylamine		<0.005	mg/L	0.005
2-Picoline		<0.005	mg/L	0.005
Methyl methanesulfonate		<0.005	mg/L	0.005
Ethyl methanesulfonate		<0.005	mg/L	0.005
Phenol		<0.005	mg/L	0.005
Aniline		<0.005	mg/L	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	0.005
2-Chlorophenol		<0.005	mg/L	0.005
1,3-Dichlorobenzene		<0.005	mg/L	0.005
1,4-Dichlorobenzene		<0.005	mg/L	0.005
Benzyl alcohol		<0.005	mg/L	0.005
1,2-Dichlorobenzene		<0.005	mg/L	0.005
2-Methylphenol		<0.005	mg/L	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	0.005
Acetophenone		<0.005	mg/L	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	0.005
Hexachloroethane		<0.005	mg/L	0.005
Nitrobenzene		<0.005	mg/L	0.005
n-Nitrosopiperidine		<0.005	mg/L	0.005
Isophorone		<0.005	mg/L	0.005
2-Nitrophenol		<0.005	mg/L	0.005
2,4-Dimethylphenol		<0.005	mg/L	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	0.005
Benzoic acid		<0.005	mg/L	0.005
2,4-Dichlorophenol		<0.005	mg/L	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	0.005
Naphthalene		<0.005	mg/L	0.005
4-Chloroaniline		<0.005	mg/L	0.005
2,6-Dichlorophenol		<0.005	mg/L	0.005
Hexachlorobutadiene		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
n-Nitroso-di-n-butylamine		<0.005	mg/L	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	0.005
1-Methylnaphthalene		<0.005	mg/L	0.005
2-Methylnaphthalene		<0.005	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	0.005
2-Chloronaphthalene		<0.005	mg/L	0.005
1-Chloronaphthalene		<0.005	mg/L	0.005
2-Nitroaniline		<0.005	mg/L	0.005
Dimethylphthalate		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
2,6-Dinitrotoluene		<0.005	mg/L	0.005
3-Nitroaniline		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
2,4-Dinitrophenol		<0.005	mg/L	0.005
Dibenzofuran		<0.005	mg/L	0.005
Pentachlorobenzene		<0.005	mg/L	0.005
4-Nitrophenol		<0.005	mg/L	0.005
1-Naphthylamine		<0.005	mg/L	0.005
2,4-Dinitrotoluene		<0.005	mg/L	0.005
2-Naphthylamine		<0.005	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Diethylphthalate		<0.005	mg/L	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	0.005
4-Nitroaniline		<0.005	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	0.005
Diphenylamine		<0.005	mg/L	0.005
Diphenylhydrazine		<0.005	mg/L	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	0.005
Phenacetin		<0.005	mg/L	0.005
Hexachlorobenzene		<0.005	mg/L	0.005
4-Aminobiphenyl		<0.005	mg/L	0.005
Pentachlorophenol		<0.005	mg/L	0.005
Pentachloronitrobenzene		<0.005	mg/L	0.005
Pronamide		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Di-n-butylphthalate		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Benzidine		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	0.005
Butylbenzylphthalate		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	0.005
Di-n-octylphthalate		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
3-Methylcholanthrene		<0.005	mg/L	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		24.81	mg/L	80	31	8 - 73
Phenol-d5		15.77	mg/L	80	19	8 - 62
Nitrobenzene-d5		58.74	mg/L	80	73	44 - 109
2-Fluorobiphenyl		55.99	mg/L	80	69	45 - 109
2,4,6-Tribromophenol		66.45	mg/L	80	83	39 - 132
Terphenyl-d14		55.32	mg/L	80	69	46 - 121

Sample: Method Blank

QCBatch: QC07152

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids	3	31	mg/L	10

Sample: Method Blank

QCBatch: QC07155

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.5	mg/L	0.50
Total Antimony		0.054	mg/L	0.05
Total Arsenic		<0.01	mg/L	0.01
Total Barium		<0.01	mg/L	0.01
Total Beryllium		<0.01	mg/L	0.01
Total Boron		<0.5	mg/L	0.50
Total Cadmium		<0.002	mg/L	0.002
Total Chromium		<0.005	mg/L	0.005
Total Cobalt		<0.01	mg/L	0.01
Total Copper		<0.01	mg/L	0.01
Total Iron		<0.02	mg/L	0.02
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.001	mg/L	0.001
Total Molybdenum		0.0111	mg/L	0.01
Total Nickel		<0.01	mg/L	0.01
Total Selenium		<0.01	mg/L	0.01
Total Silver		<0.01	mg/L	0.01
Total Uranium		<0.5	mg/L	0.50
Total Vanadium		<0.01	mg/L	0.01
Total Zinc		<0.1	mg/L	0.10

³Blank was high due to rust from the oven getting into the crucible.

Sample: Method Blank QCBatch: QC07159

Param	Flag	Results	Units	Reporting Limit
Total Cyanide		<0.01	mg/L	0.01

Sample: Method Blank QCBatch: QC07185

Param	Flag	Results	Units	Reporting Limit
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<1.00	µg/L	1
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<1.00	µg/L	1
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5
4-methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1

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Param	Flag	Results	Units	Reporting Limit
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<1.00	µg/L	1
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		46.89	µg/L	50	93	84 - 116
Toluene-d8		51.07	µg/L	50	102	92 - 108
4-Bromofluorobenzene		44.10	µg/L	50	88	80 - 110

Sample: Method Blank

QCBatch: QC07192

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.50	mg/L	0.50
Dissolved Magnesium		<0.50	mg/L	0.50
Dissolved Potassium		<0.50	mg/L	0.50
Dissolved Sodium		<0.50	mg/L	0.50

Sample: Method Blank

QCBatch: QC07302

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS

QC Batch: QC07056

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
PCB		0.0021	mg/L	1	0.0025	<0.0005	84		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
deca chlorobiphenyl		0.0001	mg/L	1	0.10	0	70 - 130

Sample: LCSD

QC Batch: QC07056

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
PCB		0.0013	mg/L	1	0.0025	<0.0005	52	47	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
deca chlorobiphenyl		0.0001	mg/L	1	0.10	0	70 - 130

Sample: LCS

QC Batch: QC07058

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
alpha-BHC		< 0.02	mg/L	1	0.0005	<0.0001	64		70 - 130	20
beta-BHC		< 0.02	mg/L	1	0.0005	<0.0001	52		70 - 130	20
gamma-BHC (Lindane)		< 0.02	mg/L	1	0.0005	<0.0001	68		70 - 130	20
delta-BHC		< 0.02	mg/L	1	0.0005	<0.0001	68		70 - 130	20
Heptachlor		< 0.04	mg/L	1	0.0005	<0.0001	64		70 - 130	20
Aldrin		< 0.02	mg/L	1	0.0005	<0.0001	50		70 - 130	20
Heptachlor Epoxide		< 0.04	mg/L	1	0.0005	<0.0001	66		70 - 130	20
gamma-Chlordane		< 0.02	mg/L	1	0.0005	<0.0001	58		70 - 130	20
Endosulfan I		< 0.02	mg/L	1	0.0005	<0.0001	42		70 - 130	20
alpha-Chlordane		< 0.02	mg/L	1	0.0005	<0.0001	48		70 - 130	20
Dieldrin		< 0.02	mg/L	1	0.0005	<0.0001	42		70 - 130	20
P,P-DDE		< 0.02	mg/L	1	0.0005	<0.0001	42		70 - 130	20
Endrin		< 0.1	mg/L	1	0.0005	<0.0001	52		70 - 130	20
Endosulfan II		< 0.02	mg/L	1	0.0005	<0.0001	50		70 - 130	20
Endrin aldehyde		< 0.1	mg/L	1	0.0005	<0.0001	44		70 - 130	20
P,P-DDD		< 0.04	mg/L	1	0.0005	<0.0001	50		70 - 130	20
Endosulfan sulfate		< 0.1	mg/L	1	0.0005	<0.0001	60		70 - 130	20
p,p-DDT		< 0.1	mg/L	1	0.0005	<0.0001	52		70 - 130	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Endrin Ketone		< 0.2	mg/L	1	0.0005	<0.0001	44		70 - 130	20
Methoxychlor		< 0.1	mg/L	1	0.0005	<0.0001	54		70 - 130	20
Toxaphene		< 0.5	mg/L	1	0.01	<0.0025	7		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2,4,5,6-Tetrachloro-m-xylene		0.00023	mg/L	1	0.0005	46	70 - 130
deca chlorobiphenyl		0.00011	mg/L	1	0.0005	22	70 - 130

Sample: LCSD

QC Batch: QC07058

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
alpha-BHC		< 0.02	mg/L	1	0.0005	<0.0001	72	12	70 - 130	20
beta-BHC		< 0.02	mg/L	1	0.0005	<0.0001	56	7	70 - 130	20
gamma-BHC (Lindane)		< 0.02	mg/L	1	0.0005	<0.0001	72	6	70 - 130	20
delta-BHC		< 0.02	mg/L	1	0.0005	<0.0001	74	8	70 - 130	20
Heptachlor		< 0.04	mg/L	1	0.0005	<0.0001	68	6	70 - 130	20
Aldrin		< 0.02	mg/L	1	0.0005	<0.0001	56	11	70 - 130	20
Heptachlor Epoxide		< 0.04	mg/L	1	0.0005	<0.0001	60	10	70 - 130	20
gamma-Chlordane		< 0.02	mg/L	1	0.0005	<0.0001	62	7	70 - 130	20
Endosulfan I		< 0.02	mg/L	1	0.0005	<0.0001	52	21	70 - 130	20
alpha-Chlordane		< 0.02	mg/L	1	0.0005	<0.0001	68	34	70 - 130	20
Dieldrin		< 0.02	mg/L	1	0.0005	<0.0001	54	25	70 - 130	20
P,P-DDE		< 0.02	mg/L	1	0.0005	<0.0001	66	44	70 - 130	20
Endrin		< 0.1	mg/L	1	0.0005	<0.0001	80	42	70 - 130	20
Endosulfan II		< 0.02	mg/L	1	0.0005	<0.0001	84	51	70 - 130	20
Endrin aldehyde		< 0.1	mg/L	1	0.0005	<0.0001	72	48	70 - 130	20
P,P-DDD		< 0.04	mg/L	1	0.0005	<0.0001	96	63	70 - 130	20
Endosulfan sulfate		< 0.1	mg/L	1	0.0005	<0.0001	84	33	70 - 130	20
p,p-DDT		< 0.1	mg/L	1	0.0005	<0.0001	70	30	70 - 130	20
Endrin Ketone		< 0.2	mg/L	1	0.0005	<0.0001	48	9	70 - 130	20
Methoxychlor		< 0.1	mg/L	1	0.0005	<0.0001	62	14	70 - 130	20
Toxaphene		< 0.5	mg/L	1	0.01	<0.0025	86	169	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2,4,5,6-Tetrachloro-m-xylene		0.00026	mg/L	1	0.0005	52	70 - 130
deca chlorobiphenyl		0.00014	mg/L	1	0.0005	28	70 - 130

Sample: LCS

QC Batch: QC07064

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		11.64	mg/L	1	12.50	<0.5	93		80 - 120	25
Fluoride		2.40	mg/L	1	2.50	<0.2	96		80 - 120	20
Nitrate-N		2.40	mg/L	1	2.50	<0.2	96		80 - 120	20
Sulfate		11.80	mg/L	1	12.50	<0.5	94		80 - 120	20

Sample: LCSD QC Batch: QC07064

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		11.66	mg/L	1	12.50	<0.5	93	0	80 - 120	25
Fluoride		2.45	mg/L	1	2.50	<0.2	98	2	80 - 120	20
Nitrate-N		2.42	mg/L	1	2.50	<0.2	96	1	80 - 120	20
Sulfate		11.92	mg/L	1	12.50	<0.5	95	1	80 - 120	20

Sample: LCS QC Batch: QC07113

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Ammonia-N		4.54	mg/L	1	5	<2.0	90		80 - 120	20

Sample: LCSD QC Batch: QC07113

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Ammonia-N		4.65	mg/L	1	5	<2.0	93	2	80 - 120	20

Sample: LCS QC Batch: QC07122

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Biological Oxygen Demand		199	mg/L	1	198	0.18	100		78.5 - 128	29

Sample: LCSD QC Batch: QC07122

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Biological Oxygen Demand		201	mg/L	1	198	0.18	101	1	-	29

Sample: LCS

QC Batch: QC07129

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenol		18.460	mg/L	1	80	<0.005	23		5 - 57	20
2-Chlorophenol		47.174	mg/L	1	80	<0.005	58		29 - 110	20
1,4-Dichlorobenzene		57.377	mg/L	1	80	<0.005	71		25 - 94	20
n-Nitrosodi-n-propylamine		61.514	mg/L	1	80	<0.005	76		36 - 119	20
1,2,4-Trichlorobenzene		62.998	mg/L	1	80	<0.005	78		28 - 110	20
4-Chloro-3-methylphenol		55.129	mg/L	1	80	<0.005	68		40 - 126	20
Acenaphthene		65.033	mg/L	1	80	<0.005	81		47 - 118	20
4-Nitrophenol		29.687	mg/L	1	80	<0.005	37		0 - 69	20
2,4-Dinitrotoluene		71.112	mg/L	1	80	<0.005	88		46 - 133	20
Pentachlorophenol		68.577	mg/L	1	80	<0.005	85		21 - 131	20
Pyrene		54.133	mg/L	1	80	<0.005	67		44 - 125	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		24.81	mg/L	1	80	31	8 - 73
Phenol-d5		16.12	mg/L	1	80	20	8 - 62
Nitrobenzene-d5		58.37	mg/L	1	80	72	44 - 109
2-Fluorobiphenyl		57.54	mg/L	1	80	71	45 - 109
2,4,6-Tribromophenol		77.62	mg/L	1	80	97	39 - 132
Terphenyl-d14		48.50	mg/L	1	80	60	46 - 121

Sample: LCSD

QC Batch: QC07129

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenol		18.743	mg/L	1	80	<0.005	23	2	5 - 57	20
2-Chlorophenol		46.826	mg/L	1	80	<0.005	58	1	29 - 110	20
1,4-Dichlorobenzene		55.977	mg/L	1	80	<0.005	69	2	25 - 94	20
n-Nitrosodi-n-propylamine		64.109	mg/L	1	80	<0.005	80	4	36 - 119	20
1,2,4-Trichlorobenzene		61.518	mg/L	1	80	<0.005	76	2	28 - 110	20
4-Chloro-3-methylphenol		54.781	mg/L	1	80	<0.005	68	1	40 - 126	20
Acenaphthene		64.726	mg/L	1	80	<0.005	80	0	47 - 118	20
4-Nitrophenol		27.708	mg/L	1	80	<0.005	34	7	0 - 69	20
2,4-Dinitrotoluene		68.558	mg/L	1	80	<0.005	85	4	46 - 133	20
Pentachlorophenol		68.813	mg/L	1	80	<0.005	86	0	21 - 131	20
Pyrene		54.869	mg/L	1	80	<0.005	68	1	44 - 125	20

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Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		24.32	mg/L	1	80	30	8 - 73
Phenol-d5		16.75	mg/L	1	80	20	8 - 62
Nitrobenzene-d5		58.94	mg/L	1	80	73	44 - 109
2-Fluorobiphenyl		56.27	mg/L	1	80	70	45 - 109
2,4,6-Tribromophenol		73.82	mg/L	1	80	92	39 - 132
Terphenyl-d14		48.78	mg/L	1	80	60	46 - 121

Sample: LCS QC Batch: QC07159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Cyanide		.106	mg/L	1	0.12	<0.01	88		73 - 109	20

Sample: LCSD QC Batch: QC07159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Cyanide		.102	mg/L	1	0.12	<0.01	85	4	73 - 109	20

Sample: LCS QC Batch: QC07185

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		119	µg/L	1	100	<1.00	119		73 - 154	20
Benzene		109	µg/L	1	100	<1.00	109		84 - 126	20
Trichloroethene (TCE)		108	µg/L	1	100	<1.00	108		82 - 123	20
Toluene		102	µg/L	1	100	<1.00	102		81 - 122	20
Chlorobenzene		105	µg/L	1	100	<1.00	105		86 - 121	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		46.94	µg/L	1	50	93	84 - 116
Toluene-d8		50.84	µg/L	1	50	101	92 - 108
4-Bromofluorobenzene		45.65	µg/L	1	50	91	80 - 110

Sample: LCSD QC Batch: QC07185

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		119	µg/L	1	100	<1.00	119	0	73 - 154	20
Benzene		104	µg/L	1	100	<1.00	104	5	84 - 126	20
Trichloroethene (TCE)		103	µg/L	1	100	<1.00	103	5	82 - 123	20
Toluene		97	µg/L	1	100	<1.00	97	5	81 - 122	20
Chlorobenzene		101	µg/L	1	100	<1.00	101	4	86 - 121	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		46.86	µg/L	1	50	93	84 - 116
Toluene-d8		51.05	µg/L	1	50	102	92 - 108
4-Bromofluorobenzene		44.91	µg/L	1	50	89	80 - 110

Sample: LCS

QC Batch: QC07192

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1020	mg/L	1	1000	<0.50	102		75 - 125	20
Dissolved Magnesium		972	mg/L	1	1000	<0.50	97		75 - 125	20
Dissolved Potassium		936	mg/L	1	1000	<0.50	94		75 - 125	20
Dissolved Sodium		965	mg/L	1	1000	<0.50	98		75 - 125	20

Sample: LCSD

QC Batch: QC07192

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1020	mg/L	1	1000	<0.50	102	0	75 - 125	20
Dissolved Magnesium		988	mg/L	1	1000	<0.50	99	2	75 - 125	20
Dissolved Potassium		941	mg/L	1	1000	<0.50	94	0	75 - 125	20
Dissolved Sodium		979	mg/L	1	1000	<0.50	98	1	75 - 125	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC07063

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Chemical Oxygen Demand		283	mg/L	1	250	<20	96		67 - 113	50
Chemical Oxygen Demand		283	mg/L	1	250	42	96		67 - 113	50

Sample: MSD

QC Batch: QC07063

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Chemical Oxygen Demand		287	mg/L	1	250	<20	98	2	67 - 113	50
Chemical Oxygen Demand		287	mg/L	1	250	42	98	2	67 - 113	50

Sample: MS

QC Batch: QC07064

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		121.36	mg/L	1	62.50	63	93		82 - 100	25
Fluoride		13.55	mg/L	1	12.50		94		81 - 109	20
Nitrate-N		13.81	mg/L	1	12.50		95		74 - 111	20
Sulfate		113.28	mg/L	1	62.50		94		81 - 106	20

Sample: MSD

QC Batch: QC07064

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		121.34	mg/L	1	62.50	63	93	0	82 - 100	25
Fluoride		13.60	mg/L	1	12.50		94	0	81 - 109	20
Nitrate-N		13.90	mg/L	1	12.50		96	1	74 - 111	20
Sulfate		112.49	mg/L	1	62.50		93	1	81 - 106	20

Sample: MS

QC Batch: QC07077

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenolics		0.721	mg/L	1	0.80	<0.07	90		80 - 142	20

Sample: MSD

QC Batch: QC07077

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenolics		0.743	mg/L	1	0.80	<0.07	92	3	80 - 142	20

Sample: MS

QC Batch: QC07113

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Ammonia-N		4.82	mg/L	1	5	<2.0	96		87 - 118	20

Sample: MSD

QC Batch: QC07113

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Ammonia-N		4.65	mg/L	1	5	<2.0	93	4	87 - 118	20

Sample: MS

QC Batch: QC07159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Cyanide		.180	mg/L	1	0.12	0.059	100		73 - 109	20

Sample: MSD

QC Batch: QC07159

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Cyanide		.174	mg/L	1	0.12	0.059	95	5	73 - 109	20

Sample: MS

QC Batch: QC07192

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1570	mg/L	1	1000	525	104		75 - 125	20
Dissolved Magnesium		1010	mg/L	1	1000	46.9	96		75 - 125	20
Dissolved Potassium		978	mg/L	1	1000	9.07	97		75 - 125	20
Dissolved Sodium		1160	mg/L	1	1000	194	97		75 - 125	20

Sample: MSD

QC Batch: QC07192

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1560	mg/L	1	1000	525	104	1	75 - 125	20
Dissolved Magnesium		1020	mg/L	1	1000	46.9	97	1	75 - 125	20
Dissolved Potassium		974	mg/L	1	1000	9.07	96	0	75 - 125	20
Dissolved Sodium		1160	mg/L	1	1000	194	97	0	75 - 125	20

Quality Control Report Duplicate Samples

Sample: Duplicate

QC Batch: QC07062

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		4282	4300	μMHOS/cm	1	0	20

Sample: Duplicate

QC Batch: QC07073

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Chlorine		0.04	0.04	mg/L	1	0	20

Sample: Duplicate

QC Batch: QC07119

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		8.6	8.6	s.u.	1	0	1.2

Sample: Duplicate

QC Batch: QC07121

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Suspended Solids		<1.0	<1.0	mg/L	1	0	27

Sample: Duplicate

QC Batch: QC07122

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Biological Oxygen Demand		91	96	mg/L	1	5	29

Sample: Duplicate

QC Batch: QC07123

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	11
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	11
Bicarbonate Alkalinity		104	108	mg/L as CaCo3	1	4	11
Total Alkalinity		104	108	mg/L as CaCo3	1	4	11

Sample: Duplicate

QC Batch: QC07152

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		3735	3700	mg/L	1	1	11

Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC07056

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.32	80	70 - 130	12/3/00

Sample: ICV (1)

QC Batch: QC07056

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PCB		mg/L	0.40	0.33	82	70 - 130	12/3/00

Sample: CCV (1)

QC Batch: QC07058

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.05	0.0518	103	70 - 130	12/3/00
beta-BHC		mg/L	0.05	0.0401	80	70 - 130	12/3/00
gamma-BHC (Lindane)		mg/L	0.05	0.0498	99	70 - 130	12/3/00
delta-BHC		mg/L	0.05	0.052	104	70 - 130	12/3/00
Heptachlor		mg/L	0.05	0.0462	92	70 - 130	12/3/00
Aldrin		mg/L	0.05	0.0488	97	70 - 130	12/3/00
Heptachlor Epoxide		mg/L	0.05	0.0436	87	70 - 130	12/3/00
gamma-Chlordane		mg/L	0.05	0.045	90	70 - 130	12/3/00
Endosulfan I		mg/L	0.05	0.0441	88	70 - 130	12/3/00
alpha-Chlordane		mg/L	0.05	0.0489	97	70 - 130	12/3/00
Dieldrin		mg/L	0.05	0.0415	83	70 - 130	12/3/00
P,P-DDE		mg/L	0.05	0.0412	82	70 - 130	12/3/00
Endrin		mg/L	0.05	0.0406	81	70 - 130	12/3/00
Endosulfan II		mg/L	0.05	0.0404	80	70 - 130	12/3/00
Endrin aldehyde		mg/L	0.05	0.0385	77	70 - 130	12/3/00
P,P-DDD		mg/L	0.05	0.045	90	70 - 130	12/3/00
Endosulfan sulfate		mg/L	0.05	0.0403	80	70 - 130	12/3/00
p,p-DDT		mg/L	0.05	0.0428	85	70 - 130	12/3/00
Endrin Ketone		mg/L	0.05	0.0462	92	70 - 130	12/3/00
Methoxychlor		mg/L	0.05	0.0389	77	70 - 130	12/3/00
Toxaphene		mg/L	0.50	0.5287	105	70 - 130	12/3/00

Sample: ICV (1)

QC Batch: QC07058

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
alpha-BHC		mg/L	0.05	0.0662	132	70 - 130	12/3/00
beta-BHC		mg/L	0.05	0.0449	89	70 - 130	12/3/00
gamma-BHC (Lindane)		mg/L	0.05	0.0635	127	70 - 130	12/3/00
delta-BHC		mg/L	0.05	0.0672	134	70 - 130	12/3/00
Heptachlor		mg/L	0.05	0.0579	115	70 - 130	12/3/00
Aldrin		mg/L	0.05	0.0569	113	70 - 130	12/3/00
Heptachlor Epoxide		mg/L	0.05	0.0545	109	70 - 130	12/3/00
gamma-Chlordane		mg/L	0.05	0.0566	113	70 - 130	12/3/00
Endosulfan I		mg/L	0.05	0.0538	107	70 - 130	12/3/00
alpha-Chlordane		mg/L	0.05	0.0552	110	70 - 130	12/3/00
Dieldrin		mg/L	0.05	0.0527	105	70 - 130	12/3/00
P,P-DDE		mg/L	0.05	0.0522	104	70 - 130	12/3/00
Endrin		mg/L	0.05	0.0527	105	70 - 130	12/3/00
Endosulfan II		mg/L	0.05	0.0515	103	70 - 130	12/3/00
Endrin aldehyde		mg/L	0.05	0.0503	100	70 - 130	12/3/00
P,P-DDD		mg/L	0.05	0.0564	112	70 - 130	12/3/00
Endosulfan sulfate		mg/L	0.05	0.0511	102	70 - 130	12/3/00
p,p-DDT		mg/L	0.05	0.0529	105	70 - 130	12/3/00
Endrin Ketone		mg/L	0.05	0.0591	118	70 - 130	12/3/00
Methoxychlor		mg/L	0.05	0.0508	101	70 - 130	12/3/00
Toxaphene		mg/L	0.50	0.6415	128	70 - 130	12/3/00

Sample: CCV (1)

QC Batch: QC07062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μ MHOS/cm	1413	1388	98	80 - 120	12/1/00

Sample: ICV (1)

QC Batch: QC07062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μ MHOS/cm	1413	1398	98	80 - 120	12/1/00

Sample: CCV (1)

QC Batch: QC07063

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chemical Oxygen Demand		mg/L	250	251	100	66 - 134	12/1/00

Sample: ICV (1)

QC Batch: QC07063

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chemical Oxygen Demand		mg/L	250	251	100	66 - 134	12/1/00

Sample: CCV (1)

QC Batch: QC07064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.53	101	80 - 120	12/1/00
CL		mg/L	12.50	11.57	92	80 - 120	12/1/00
Fluoride		mg/L	2.50	2.41	96	80 - 120	12/1/00
Nitrate-N		mg/L	2.50	2.40	96	80 - 120	12/1/00
Sulfate		mg/L	12.50	11.92	95	80 - 120	12/1/00

Sample: ICV (1)

QC Batch: QC07064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.54	101	80 - 120	12/1/00
CL		mg/L	12.50	11.72	93	80 - 120	12/1/00
Fluoride		mg/L	2.50	2.41	96	80 - 120	12/1/00
Nitrate-N		mg/L	2.50	2.45	98	80 - 120	12/1/00
Sulfate		mg/L	12.50	11.97	95	80 - 120	12/1/00

Sample: CCV (1)

QC Batch: QC07077

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/L	0.80	0.818	102	80 - 120	12/4/00

Sample: ICV (1)

QC Batch: QC07077

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/L	0.80	0.783	97	80 - 120	12/4/00

Sample: CCV (1)

QC Batch: QC07113

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5	4.54	90	80 - 120	12/5/00

Sample: ICV (1)

QC Batch: QC07113

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5	5.26	105	80 - 120	12/5/00

Sample: CCV (1)

QC Batch: QC07119

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	12/1/00

Sample: ICV (1)

QC Batch: QC07119

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	12/1/00

Sample: CCV (1)

QC Batch: QC07123

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	12/5/00
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	80 - 120	12/5/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	6.0	0	80 - 120	12/5/00
Total Alkalinity		mg/L as CaCo3	250	238	95	80 - 120	12/5/00

Sample: ICV (1)

QC Batch: QC07123

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	12/5/00
Carbonate Alkalinity		mg/L as CaCo3	0	244	0	80 - 120	12/5/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	2.0	0	80 - 120	12/5/00
Total Alkalinity		mg/L as CaCo3	250	246	98	80 - 120	12/5/00

Sample: CCV (1)

QC Batch: QC07129

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60	64.49	107	5 - 57	12/5/00
1,4-Dichlorobenzene		mg/L	60	60.93	101	25 - 94	12/5/00
2-Nitrophenol		mg/L	60	58.75	97	80 - 120	12/5/00
2,4-Dichlorophenol		mg/L	60	61.54	102	80 - 120	12/5/00
Hexachlorobutadiene		mg/L	60	58.55	97	80 - 120	12/5/00
4-Chloro-3-methylphenol		mg/L	60	60.90	101	40 - 126	12/5/00
2,4,6-Trichlorophenol		mg/L	60	59.12	98	80 - 120	12/5/00
Acenaphthene		mg/L	60	60.29	100	47 - 118	12/5/00
Diphenylamine		mg/L	60	66.19	110	80 - 120	12/5/00
Pentachlorophenol		mg/L	60	49.00	81	21 - 131	12/5/00
Fluoranthene		mg/L	60	50.03	83	80 - 120	12/5/00
Di-n-octylphthalate		mg/L	60	66.16	110	80 - 120	12/5/00
Benzo(a)pyrene		mg/L	60	58.15	96	80 - 120	12/5/00
2-Fluorophenol		mg/L	60	62.26	103	8 - 73	12/5/00
Phenol-d5		mg/L	60	64.29	107	8 - 62	12/5/00
Nitrobenzene-d5		mg/L	60	57.70	96	44 - 109	12/5/00
2-Fluorobiphenyl		mg/L	60	59.82	99	45 - 109	12/5/00
2,4,6-Tribromophenol		mg/L	60	49.05	81	39 - 132	12/5/00
Terphenyl-d14		mg/L	60	63.00	105	46 - 121	12/5/00

Sample: CCV (1)

QC Batch: QC07152

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1007	100	80 - 120	12/5/00

Sample: ICV (1)

QC Batch: QC07152

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	995	99	80 - 120	12/5/00

Sample: CCV (1)

QC Batch: QC07155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.69	93	75 - 125	12/6/00
Total Antimony		mg/L	2.50	2.42	96	75 - 125	12/6/00
Total Arsenic		mg/L	2.50	2.44	97	75 - 125	12/6/00
Total Barium		mg/L	5	4.95	99	75 - 125	12/6/00
Total Beryllium		mg/L	0.50	0.492	98	75 - 125	12/6/00
Total Boron		mg/L	2.50	2.35	94	75 - 125	12/6/00
Total Cadmium		mg/L	0.50	0.486	97	75 - 125	12/6/00
Total Chromium		mg/L	1	0.965	96	75 - 125	12/6/00
Total Cobalt		mg/L	2.50	2.44	97	75 - 125	12/6/00
Total Copper		mg/L	1	0.97	97	75 - 125	12/6/00
Total Iron		mg/L	5	4.94	98	75 - 125	12/6/00
Total Lead		mg/L	2.50	2.42	96	75 - 125	12/6/00
Total Manganese		mg/L	0.50	0.489	97	75 - 125	12/6/00
Total Molybdenum		mg/L	2.50	2.43	97	75 - 125	12/6/00
Total Nickel		mg/L	2.50	2.44	97	75 - 125	12/6/00
Total Selenium		mg/L	2.50	2.45	98	75 - 125	12/6/00
Total Silver		mg/L	0.50	0.488	97	75 - 125	12/6/00
Total Uranium		mg/L	1	4.84	484	75 - 125	12/6/00
Total Vanadium		mg/L	2.50	2.45	98	75 - 125	12/6/00
Total Zinc		mg/L	0.50	0.486	97	75 - 125	12/6/00

Sample: ICV (1)

QC Batch: QC07155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.88	97	75 - 125	12/6/00
Total Antimony		mg/L	2.50	2.46	98	75 - 125	12/6/00
Total Arsenic		mg/L	2.50	2.45	98	75 - 125	12/6/00
Total Barium		mg/L	5	5.09	101	75 - 125	12/6/00
Total Beryllium		mg/L	0.50	0.5	100	75 - 125	12/6/00
Total Boron		mg/L	2.50	2.63	105	75 - 125	12/6/00
Total Cadmium		mg/L	0.50	0.495	99	75 - 125	12/6/00
Total Chromium		mg/L	1	0.986	98	75 - 125	12/6/00
Total Cobalt		mg/L	2.50	2.51	100	75 - 125	12/6/00
Total Copper		mg/L	1	1.01	101	75 - 125	12/6/00
Total Iron		mg/L	5	5.07	101	75 - 125	12/6/00

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	2.50	2.47	98	75 - 125	12/6/00
Total Manganese		mg/L	0.50	0.502	100	75 - 125	12/6/00
Total Molybdenum		mg/L	2.50	2.52	100	75 - 125	12/6/00
Total Nickel		mg/L	2.50	2.52	100	75 - 125	12/6/00
Total Selenium		mg/L	2.50	2.48	99	75 - 125	12/6/00
Total Silver		mg/L	0.50	0.504	100	75 - 125	12/6/00
Total Uranium		mg/L	1	5.06	506	75 - 125	12/6/00
Total Vanadium		mg/L	2.50	2.5	100	75 - 125	12/6/00
Total Zinc		mg/L	0.50	0.495	99	75 - 125	12/6/00

Sample: CCV (1)

QC Batch: QC07159

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.12	.120	100	73 - 109	12/6/00

Sample: ICV (1)

QC Batch: QC07159

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.12	.122	101	73 - 109	12/6/00

Sample: CCV (1)

QC Batch: QC07185

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	91	91	80 - 120	12/5/00
1,1-Dichloroethene		µg/L	100	100	100	73 - 154	12/5/00
Chloroform		µg/L	100	86	86	80 - 120	12/5/00
1,2-Dichloropropane		µg/L	100	96	96	80 - 120	12/5/00
Toluene		µg/L	100	87	87	81 - 122	12/5/00
Chlorobenzene		µg/L	100	88	88	86 - 121	12/5/00
Ethylbenzene		µg/L	100	87	87	80 - 120	12/5/00
Dibromofluoromethane		µg/L	50	47.48	94	80 - 120	12/5/00
Toluene-d8		µg/L	50	49.91	99	80 - 120	12/5/00
4-Bromofluorobenzene		µg/L	50	47.86	95	80 - 120	12/5/00

Sample: CCV (1)

QC Batch: QC07192

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.8	100	75 - 125	12/6/00
Dissolved Magnesium		mg/L	25	25.6	100	75 - 125	12/6/00
Dissolved Potassium		mg/L	25	24.2	96	75 - 125	12/6/00
Dissolved Sodium		mg/L	25	23.8	96	75 - 125	12/6/00

Sample: ICV (1)

QC Batch: QC07192

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.9	100	75 - 125	12/6/00
Dissolved Magnesium		mg/L	25	25.6	100	75 - 125	12/6/00
Dissolved Potassium		mg/L	25	23.9	96	75 - 125	12/6/00
Dissolved Sodium		mg/L	25	24.7	96	75 - 125	12/6/00

Sample: CCV (1)

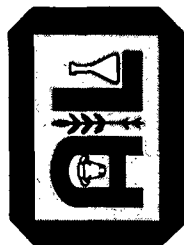
QC Batch: QC07302

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00104	104	80 - 120	12/11/00

Sample: ICV (1)

QC Batch: QC07302

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00106	106	80 - 120	12/11/00



A & L PLAINS AGRICULTURAL LABORATORIES, INC.

302 34th St. • P.O. Box 1590 • Lubbock, TX 79408 • (806) 763-4278
FAX (806) 763-2762 • www.al-labs-plains.com

REPORT NUMBER

00-336-300

December 04, 2000

Trace Analysis, Inc.
6701 Aberdeen
Lubbock, TX 79424

Lab No: 59081
Sample ID: 159874

ANALYSIS

Fecal Coliform: (CFU/100ml) ND

ND=None Detected
TNTC=To Numerous to Count

Respectfully submitted,
E.A. Coleman
E.A. Coleman



1726 Wooddale Court • Baton Rouge, Louisiana 70806

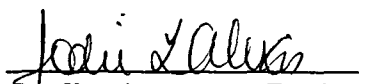
1 (800) 401-4277 • Fax (225) 927-6822

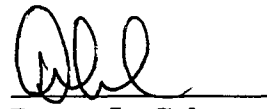
American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

**Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Suite 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298**


Quality Assurance Review


**Danny L. Coleman
Laboratory Manager**

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.



Notes:

Comments:

- 1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
- 2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
- 5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
- 8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

- 1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
- 3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
- 4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) HASL 300

Definitions:

- | | | |
|-------|-----------------|--|
| 1.0) | BDL | Analyte not detected because the value was below the detection limit. |
| 2.0) | ND | Not detected above the detection limit. |
| 3.0) | Detection Limit | The minimum amount of the analyte that ARS can detect utilizing the specific analysis. |
| 4.0) | B | Method Blank |
| 5.0) | D | Method Duplicate |
| 6.0) | MS | Matrix Spike |
| 7.0) | S | Spike |
| 8.0) | RS | Reference Spike |
| 9.0) | *SC | Subcontracted out to another qualified laboratory |
| 10.0) | NR | Not Referenced |
| 11.0) | N/A | Not Applicable |

159874

Page of

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

A00120110

Company Name:

NAVAJO

Phone #:

5057483311

Address:

(Street, City, Zip)

501 E. MAIN

Fax #:

5057465421

Contact Person:

Darrall Moore or Charlie Dymale

Invoice to:

(If different from above)

Project #:

Project Name:

RORESECT ANNUAL

Project Location:

ARTESIA

Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
159874	RORESECT ANNUAL	1	1L	X						X		11/30/00	14:30
	" " " "	4	1L	X						X		11/30/00	14:30
	" " " "	8	500ml	X				X		X		11/30/00	14:30
	" " " "	2	500ml	X				X		X		11/30/00	14:30
	" " " "	1	100ml	X				X		X		11/30/00	14:30
	" " " "	2	40ml	X				X		X		11/30/00	14:30

Relinquished by:

Date: 11/30/00 Time: 16:15

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received at Laboratory by:

Date: Time:

Jill C. Dymale 11-00 10:00

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	
GC-MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Turn Around Time if different from standard	

See List

REMARKS:

LAB USE ONLY

Intact

Y/N

Headspace

Y/N

Temp

-3°

Log-In Review

YES

12/14/00

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Carrier #

JedEx 309 8854-904

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410

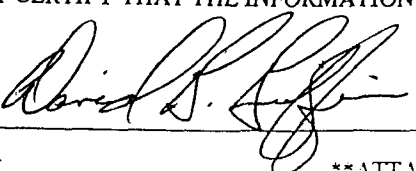
State of New Mexico CONSERVATION DIVISION
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

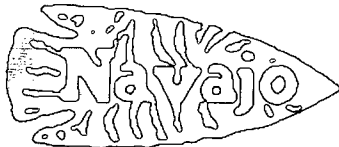
SUBMIT 2 COPIES TO
APPROPRIATE DISTRICT
OFFICE IN ACCORDANCE
WITH RULE 116 PRINTED
ON BACK SIDE OF FORM

NOTIFICATION OF FIRE, BREAKS, SPILLS, LEAKS, AND BLOWOUTS

OPERATOR NAVAJO REFINING CO.				ADDRESS 501 E. MAIN ST.		TELEPHONE # (505) 748-3311	
REPORT OF	FIRE	BREAK	SPILL X	LEAK	BLOWOUT	OTHER*	
TYPE OF FACILITY	DRLG WELL	PROD WELL	TANK BTRY	PIPE LINE	GASO PLNT	OIL RFY X	OTHER*
FACILITY NAME: NAVAJO ARTESIA REFINERY							
LOCATION OF FACILITY Qtr/Qtr Sec. or Footage 501 E. MAIN ST. ARTESIA				SEC. 9	TWP. 175	RGE. 26E	COUNTY EDDY
DISTANCE AND DIRECTION FROM NEAREST TOWN OR PROMINENT LANDMARK TANK 57							
DATE AND HOUR OF OCCURRENCE 9:15 p.m. 4/11/95				DATE AND HOUR OF DISCOVERY 9:15 p.m. 4/11/95			
WAS IMMEDIATE NOTICE GIVEN?		YES	NO	NOT REQUIRED X	IF YES, TO WHOM BILL OLSEN		
BY WHOM DAVID GRIFFIN				DATE AND HOUR 9:45 a.m. 4/12/95			
TYPE OF FLUID LOST NAPHTHA				QUANTITY OF LOSS 500 BBLs		VOLUME RECOVERED 350 BBLs	
DID ANY FLUIDS REACH A WATERCOURSE?		YES	NO X	QUANTITY			
IF YES, DESCRIBE FULLY**							
RECEIVED APR 18 1995							
DESCRIBE CAUSE OF PROBLEM AND REMEDIAL ACTION TAKEN** TANK 57 WAS RECEIVING A PIPELINE SHIPMENT OF NAPHTHA FROM OUR LOVINGTON REFINERY WHICH OVERFILLED THE TANK. APPARENTLY, A MISCALCULATION WAS MADE ON THE AVAILABLE CAPACITY OF THE TANK.							
DESCRIBE AREA AFFECTED AND CLEANUP ACTION TAKEN** 4000 FT ² AREA IMMEDIATELY ADJACENT TO THE TANK - ALL CONTAINED BY THE SECONDARY CONTAINMENT DIKE AROUND THE TANK. TWO VACUUM TRUCKS AND ONE SEMI-TRANSPORT PICKED UP ALL THE FREE LIQUID BY 12:30 a.m. NAVAJO WILL INVESTIGATE THE EXTENT OF CONTAMINATION TO THE SOIL AND FOLLOW UP WITH REPORT.							
DESCRIPTION OF AREA	FARMING	GRAZING	URBAN	OTHER* HEAVY INDUSTRIAL			
SURFACE CONDITIONS	SANDY	SANDY LOAM	CLAY X	ROCKY	WET	DRY X	SNOW
DESCRIBE GENERAL CONDITIONS PREVAILING (TEMPERATURE, PRECIPITATION, ETC.)** LIGHT BREEZE OUT OF THE WEST APPROX. 5 MPH. TEMPERATURE AROUND 60°F.							
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF							
SIGNED				PRINTED NAME DAVID G. GRIFFIN		AND TITLE MGR. OF ENVIRONMENTAL AFFAIRS	
						DATE 4/12/95	

*SPECIFY

**ATTACH ADDITIONAL SHEETS IF NECESSARY



REFINING COMPANY

FAX

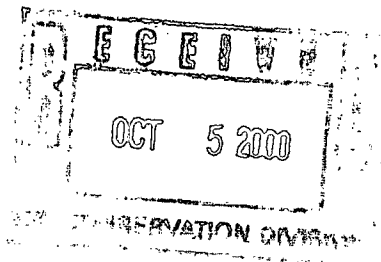
(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

October 3, 2000



Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505-5472

RE: 3rd Quarter 2000 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually.

For this quarter we discharged a total of 33,914,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 855,920,426 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 659,206,928 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: September 14, 2000

Order ID Number: A00083021

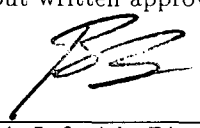
Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
152564	RO Reject	Water	8/29/00	9:15	8/30/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 152564 - RO Reject

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC04609 Date Analyzed: 9/1/00
Analyst: RS Preparation Method: N/A Prep Batch: PB04012 Date Prepared: 9/1/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		548	mg/L as CaCo3	1	1
Total Alkalinity		548	mg/L as CaCo3	1	1

Sample: 152564 - RO Reject

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC04700 Date Analyzed: 9/1/00
Analyst: RR Preparation Method: E 3005A Prep Batch: PB04000 Date Prepared: 8/31/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		577	mg/L	1	0.50
Dissolved Magnesium		180	mg/L	1	0.50
Dissolved Potassium		7.4	mg/L	1	0.50
Dissolved Sodium		151	mg/L	1	0.50

Sample: 152564 - RO Reject

Analysis: Hg, Total Analytical Method: E 245.2 QC Batch: QC04690 Date Analyzed: 8/31/00
Analyst: MS Preparation Method: N/A Prep Batch: PB04081 Date Prepared: 8/31/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 152564 - RO Reject

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC04679 Date Analyzed: 9/1/00
Analyst: JS Preparation Method: N/A Prep Batch: PB04071 Date Prepared: 9/1/00

Param	Flag	Result	Units	Dilution	RDL
CL		280	mg/L	1	0.50
Fluoride		3.6	mg/L	1	0.20
Sulfate		1400	mg/L	1	0.50

Sample: 152564 - RO Reject

Analysis: NO3 Analytical Method: SM 4500-NO3 E QC Batch: QC04829 Date Analyzed: 9/11/00
Analyst: JS Preparation Method: N/A Prep Batch: PB04195 Date Prepared: 9/11/00

Param	Flag	Result	Units	Dilution	RDL
NO3-NO2-N		1.6	mg/L	1	0.10

Report Date: September 14, 2000
N/A

Order Number: A00083021
RO Reject

Page Number: 3 of 11
Artesia,NM 88210

Sample: 152564 - RO Reject

Analysis: Total Metals Analytical Method: E 200.7 QC Batch: QC04745 Date Analyzed: 9/6/00
Analyst: RR Preparation Method: N/A Prep Batch: PB03999 Date Prepared: 8/31/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		0.24	mg/L	1	0.10
Total Arsenic		<0.01	mg/L	1	0.01
Total Barium		0.04	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.13	mg/L	1	0.05
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		<0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		<0.05	mg/L	1	0.05
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		<0.01	mg/L	1	0.01
Total Molybdenum		0.02	mg/L	1	0.01
Total Nickel		<0.01	mg/L	1	0.01
Total Selenium		<0.01	mg/L	1	0.01
Total Silver		<0.005	mg/L	1	0.005
Total Uranium		<0.10	mg/L	1	0.10
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.01	mg/L	1	0.01

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04609

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Sample: Method Blank QCBatch: QC04679

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

Report Date: September 14, 2000
N/A

Order Number: A00083021
RO Reject

Page Number: 4 of 11
Artesia,NM 88210

Sample: Method Blank QCBatch: QC04690

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Sample: Method Blank QCBatch: QC04700

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.50	mg/L	0.50
Dissolved Magnesium		<0.50	mg/L	0.50
Dissolved Potassium		<0.50	mg/L	0.50
Dissolved Sodium		<0.50	mg/L	0.50

Sample: Method Blank QCBatch: QC04745

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.05	mg/L	0.05
Total Aluminum		<0.05	mg/L	0.10
Total Arsenic		<0.01	mg/L	0.01
Total Barium		<0.01	mg/L	0.01
Total Beryllium		<0.01	mg/L	0.01
Total Boron		<0.05	mg/L	0.05
Total Cadmium		<0.002	mg/L	0.002
Total Chromium		<0.005	mg/L	0.005
Total Cobalt		<0.01	mg/L	0.01
Total Copper		<0.01	mg/L	0.01
Total Iron		<0.05	mg/L	0.05
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.01	mg/L	0.01
Total Molybdenum		<0.01	mg/L	0.01
Total Nickel		<0.01	mg/L	0.01
Total Selenium		<0.01	mg/L	0.01
Total Silver		<0.005	mg/L	0.005
Total Uranium		<0.10	mg/L	0.10
Total Vanadium		0.01	mg/L	0.01
Total Zinc		<0.01	mg/L	0.01

Sample: Method Blank QCBatch: QC04829

Param	Flag	Results	Units	Reporting Limit
NO3-NO2-N		<0.10	mg/L	0.10

Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS

QC Batch: QC04690

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00099	mg/L	1	0.001	<0.0002	99		80 - 120	20

Sample: LCSD

QC Batch: QC04690

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00094	mg/L	1	0.001	<0.0002	94	5	80 - 120	20

Sample: LCS

QC Batch: QC04700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1060	mg/L	1	1000	<0.50	106		75 - 125	20
Dissolved Magnesium		1060	mg/L	1	1000	<0.50	106		75 - 125	20
Dissolved Potassium		1000	mg/L	1	1000	<0.50	100		75 - 125	20
Dissolved Sodium		990	mg/L	1	1000	<0.50	99		75 - 125	20

Sample: LCSD

QC Batch: QC04700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1040	mg/L	1	1000	<0.50	104	2	75 - 125	20
Dissolved Magnesium		1040	mg/L	1	1000	<0.50	104	2	75 - 125	20
Dissolved Potassium		980	mg/L	1	1000	<0.50	98	2	75 - 125	20
Dissolved Sodium		970	mg/L	1	1000	<0.50	97	2	75 - 125	20

Sample: LCS

QC Batch: QC04745

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Arsenic		1.02	mg/L	1	1	<0.01	102		75 - 125	20

Continued ...

... Continued

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Barium		2.13	mg/L	1	2	<0.01	106		75 - 125	20
Total Cadmium		0.21	mg/L	1	0.20	<0.002	105		75 - 125	20
Total Chromium		0.42	mg/L	1	0.40	<0.005	105		75 - 125	20
Total Lead		1.03	mg/L	1	1	<0.01	103		75 - 125	20
Total Selenium		0.95	mg/L	1	1	<0.01	95		75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.005	100		75 - 125	20

Sample: LCSD

QC Batch: QC04745

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Arsenic		1.02	mg/L	1	1	<0.01	102	0	75 - 125	20
Total Barium		2.13	mg/L	1	2	<0.01	106	0	75 - 125	20
Total Cadmium		0.21	mg/L	1	0.20	<0.002	105	0	75 - 125	20
Total Chromium		0.42	mg/L	1	0.40	<0.005	105	0	75 - 125	20
Total Lead		1.03	mg/L	1	1	<0.01	103	0	75 - 125	20
Total Selenium		0.94	mg/L	1	1	<0.01	94	1	75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.005	100	0	75 - 125	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC04679

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		873.78	mg/L	1	625	280	95		80 - 120	20
Fluoride		125.13	mg/L	1	125	3.6	97		80 - 120	20
Sulfate		2036.91	mg/L	1	625	1400	101		80 - 120	20

Sample: MSD

QC Batch: QC04679

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		870.14	mg/L	1	625	280	94	1	80 - 120	20
Fluoride		123.94	mg/L	1	125	3.6	96	1	80 - 120	20
Sulfate		2039.14	mg/L	1	625	1400	102	0	80 - 120	20

Sample: MS QC Batch: QC04690

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00097	mg/L	1	0.001	<0.0002	97		80 - 120	20

Sample: MSD QC Batch: QC04690

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00097	mg/L	1	0.001	<0.0002	97	0	80 - 120	20

Sample: MS QC Batch: QC04700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1215	mg/L	1	1000	152	106		75 - 125	20
Dissolved Magnesium		1087	mg/L	1	1000	29	105		75 - 125	20
Dissolved Potassium		1038	mg/L	1	1000	11	102		75 - 125	20
Dissolved Sodium		1178	mg/L	1	1000	156	102		75 - 125	20

Sample: MSD QC Batch: QC04700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1202	mg/L	1	1000	152	105	1	75 - 125	20
Dissolved Magnesium		1072	mg/L	1	1000	29	104	1	75 - 125	20
Dissolved Potassium		1014	mg/L	1	1000	11	100	2	75 - 125	20
Dissolved Sodium		1167	mg/L	1	1000	156	101	1	75 - 125	20

Sample: MS QC Batch: QC04745

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Arsenic		1.06	mg/L	1	1	<0.01	106		75 - 125	20
Total Barium		2.02	mg/L	1	2	0.04	98		75 - 125	20
Total Cadmium		0.19	mg/L	1	0.20	<0.002	95		75 - 125	20
Total Chromium		0.40	mg/L	1	0.40	<0.005	100		75 - 125	20
Total Lead		0.97	mg/L	1	1	<0.01	97		75 - 125	20
Total Selenium		1.03	mg/L	1	1	<0.01	103		75 - 125	20
Total Silver		0.21	mg/L	1	0.20	<0.005	105		75 - 125	20

Sample: CCV (1)

QC Batch: QC04609

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	9/1/00
Carbonate Alkalinity		mg/L as CaCo3	0	220	0	80 - 120	9/1/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	12	0	80 - 120	9/1/00
Total Alkalinity		mg/L as CaCo3	240	232	96	80 - 120	9/1/00

Sample: ICV (1)

QC Batch: QC04609

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	9/1/00
Carbonate Alkalinity		mg/L as CaCo3	0	224	0	80 - 120	9/1/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	6	0	80 - 120	9/1/00
Total Alkalinity		mg/L as CaCo3	240	230	95	80 - 120	9/1/00

Sample: CCV (1)

QC Batch: QC04679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.12	96	80 - 120	9/1/00
Fluoride		mg/L	2.50	2.43	97	80 - 120	9/1/00
Sulfate		mg/L	12.50	12.36	98	80 - 120	9/1/00

Sample: ICV (1)

QC Batch: QC04679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.14	97	80 - 120	9/1/00
Fluoride		mg/L	2.50	2.40	96	80 - 120	9/1/00
Sulfate		mg/L	12.50	12.35	98	80 - 120	9/1/00

Sample: CCV (1)

QC Batch: QC04690

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00098	98	80 - 120	8/31/00

Report Date: September 14, 2000
N/A

Order Number: A00083021
RO Reject

Page Number: 10 of 11
Artesia,NM 88210

Sample: ICV (1) QC Batch: QC04690

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00092	92	80 - 120	8/31/00

Sample: CCV (1) QC Batch: QC04700

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	9.85	98	75 - 125	9/1/00
Dissolved Magnesium		mg/L	10	9.94	99	75 - 125	9/1/00
Dissolved Potassium		mg/L	10	9.32	93	75 - 125	9/1/00
Dissolved Sodium		mg/L	10	9.40	94	75 - 125	9/1/00

Sample: ICV (1) QC Batch: QC04700

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	9.90	99	75 - 125	9/1/00
Dissolved Magnesium		mg/L	10	9.94	99	75 - 125	9/1/00
Dissolved Potassium		mg/L	10	9.34	93	75 - 125	9/1/00
Dissolved Sodium		mg/L	10	9.43	94	75 - 125	9/1/00

Sample: CCV (1) QC Batch: QC04745

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	2.50	2.60	104	75 - 125	9/6/00
Total Barium		mg/L	5	5.07	101	75 - 125	9/6/00
Total Boron		mg/L	2.50	2.61	104	75 - 125	9/6/00
Total Cadmium		mg/L	0.50	0.51	102	75 - 125	9/6/00
Total Chromium		mg/L	1	1.00	100	75 - 125	9/6/00
Total Lead		mg/L	2.50	2.53	101	75 - 125	9/6/00
Total Selenium		mg/L	2.50	2.68	107	75 - 125	9/6/00
Total Silver		mg/L	0.50	0.50	100	75 - 125	9/6/00

Sample: ICV (1) QC Batch: QC04745

Report Date: September 14, 2000
N/A

Order Number: A00083021
RO Reject

Page Number: 11 of 11
Artesia,NM 88210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	2.50	2.59	103	75 - 125	9/6/00
Total Barium		mg/L	5	5.14	102	75 - 125	9/6/00
Total Boron		mg/L	2.50	2.60	104	75 - 125	9/6/00
Total Cadmium		mg/L	0.50	0.52	104	75 - 125	9/6/00
Total Chromium		mg/L	1	1.02	102	75 - 125	9/6/00
Total Lead		mg/L	2.50	2.56	102	75 - 125	9/6/00
Total Selenium		mg/L	2.50	2.66	106	75 - 125	9/6/00
Total Silver		mg/L	0.50	0.51	102	75 - 125	9/6/00

Sample: CCV (1)

QC Batch: QC04829

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
NO3-NO2-N		mg/L	0.16	0.168	105	80 - 120	9/11/00

Sample: ICV (1)

QC Batch: QC04829

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
NO3-NO2-N		mg/L	0.16	0.182	113	80 - 120	9/11/00

TELEPHONE
(505) 748-3311

EASYLINK
62905278

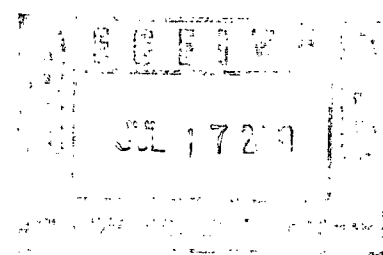


REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

July 13, 2000

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L



Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505-5472

RE: 2nd Quarter 2000 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually.

For this quarter we discharged a total of 24,989,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 822,006,426 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 625,292,928 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 6/12/00

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia, NM 88210

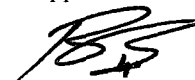
Order ID Number: A00060116

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
147103	RO Reject Qtrly	Water	5/31/00	9:15	6/1/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Report Date: 6/12/00

Order ID Number: A00060116

Page Number: 2 of 10

N/A

RO Reject

Artesia,NM 88210

Analytical Results Report

Sample Number: 147103

Description: RO Reject Qtrly

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	6/6/00	6/7/00	MA	PB02628	QC03062	1
Carbonate Alkalinity	<1.0	1	E 310.1	6/6/00	6/7/00	MA	PB02628	QC03062	1
Bicarbonate Alkalinity	682	1	E 310.1	6/6/00	6/7/00	MA	PB02628	QC03062	1
Total Alkalinity	682	1	E 310.1	6/6/00	6/7/00	MA	PB02628	QC03062	1
Dissolved Metals (mg/L)									
Dissolved Calcium	739	1	E 200.7	6/5/00	6/9/00	RR	PB02556	QC03115	0.5
Dissolved Magnesium	227	1	E 200.7	6/5/00	6/9/00	RR	PB02556	QC03115	0.5
Dissolved Potassium	5.2	1	E 200.7	6/5/00	6/9/00	RR	PB02556	QC03115	0.5
Dissolved Sodium	85	1	E 200.7	6/5/00	6/9/00	RR	PB02556	QC03115	0.5
Hg, Total (mg/L)									
Total Mercury	<0.0002	1	S 7470A	6/5/00	6/6/00	JM	PB02641	QC03076	0.0002
Ion Chromatography (IC) (mg/L)									
CL	98	1	E 300.0	6/1/00	6/1/00	JS	PB02538	QC02964	0.5
Fluoride	4.2	1	E 300.0	6/1/00	6/1/00	JS	PB02538	QC02964	0.2
Nitrate-N	3.6	1	E 300.0	6/1/00	6/1/00	JS	PB02538	QC02964	0.2
Sulfate	1700	1	E 300.0	6/1/00	6/1/00	JS	PB02538	QC02964	0.5
Total Metals (mg/L)									
Total Aluminum	<0.10	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.1
Total Arsenic	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Barium	0.06	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Beryllium	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Boron	0.12	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.05
Total Cadmium	<0.002	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.002
Total Chromium	<0.005	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.005
Total Cobalt	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Copper	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Iron	0.02	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Lead	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Manganese	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Molybdenum	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Nickel	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Selenium	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Silver	<0.005	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.005
Total Uranium	<0.10	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.1
Total Vanadium	<0.01	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.01
Total Zinc	<0.10	1	S 6010B	6/2/00	6/5/00	RR	PB02531	QC03080	0.1

Quality Control Report Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCO ₃)		<1.0	1	6/7/00	PB02628	QC03062
Carbonate Alkalinity (mg/L as CaCO ₃)		<1.0	1	6/7/00	PB02628	QC03062
Bicarbonate Alkalinity (mg/L as CaCO ₃)		<2.0	1	6/7/00	PB02628	QC03062
Total Alkalinity (mg/L as CaCO ₃)		<2.0	1	6/7/00	PB02628	QC03062

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Dissolved Calcium (mg/L)		<0.50	0.5	6/9/00	PB02556	QC03115
Dissolved Magnesium (mg/L)		<0.50	0.5	6/9/00	PB02556	QC03115
Dissolved Potassium (mg/L)		<0.50	0.5	6/9/00	PB02556	QC03115
Dissolved Sodium (mg/L)		<0.50	0.5	6/9/00	PB02556	QC03115

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	6/6/00	PB02641	QC03076

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	6/1/00	PB02538	QC02964
Fluoride (mg/L)		<0.2	0.2	6/1/00	PB02538	QC02964
Nitrate-N (mg/L)		<0.2	0.2	6/1/00	PB02538	QC02964
Sulfate (mg/L)		<0.5	0.5	6/1/00	PB02538	QC02964

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<0.10	0.1	6/5/00	PB02531	QC03080
Total Arsenic (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Barium (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Beryllium (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Boron (mg/L)		<0.05	0.05	6/5/00	PB02531	QC03080
Total Cadmium (mg/L)		<0.002	0.002	6/5/00	PB02531	QC03080
Total Chromium (mg/L)		<0.005	0.005	6/5/00	PB02531	QC03080
Total Cobalt (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Copper (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Iron (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Lead (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Manganese (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Molybdenum (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Nickel (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Selenium (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080
Total Silver (mg/L)		<0.005	0.005	6/5/00	PB02531	QC03080
Total Uranium (mg/L)		<0.10	0.1	6/5/00	PB02531	QC03080
Total Vanadium (mg/L)		<0.01	0.01	6/5/00	PB02531	QC03080

Report Date: 6/12/00

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N/A

RO Reject

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Total Zinc (mg/L)

<0.10

0.1

6/5/00

PB02531

QC03080

Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	160	1	125	280.01	96		80 - 120	-	QC02964
MS	Fluoride (mg/L)	6.7	1	25	29.01	89		80 - 120	-	QC02964
MS	Nitrate-N (mg/L)	6.6	1	50	50.17	87		80 - 120	-	QC02964
MS	Sulfate (mg/L)	212	1	125	327.15	92		80 - 120	-	QC02964
MSD	CL (mg/L)	160	1	125	279.37	95	1	-	0 - 20	QC02964
MSD	Fluoride (mg/L)	6.7	1	25	29.57	91	2	-	0 - 20	QC02964
MSD	Nitrate-N (mg/L)	6.6	1	50	50.47	88	1	-	0 - 20	QC02964
MSD	Sulfate (mg/L)	212	1	125	324.58	90	2	-	0 - 20	QC02964

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00094	94		80 - 120	-	QC03076
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00101	101	7	-	0 - 20	QC03076

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Aluminum (mg/L)	<0.10	1	2	1.96	98		75 - 125	-	QC03080
MS	Total Arsenic (mg/L)	<0.01	1	2	1.84	92		75 - 125	-	QC03080
MS	Total Barium (mg/L)	0.06	1	2	1.94	94		75 - 125	-	QC03080
MS	Total Beryllium (mg/L)	<0.01	1	2	1.77	89		75 - 125	-	QC03080
MS	Total Boron (mg/L)	0.12	1	2	1.98	93		75 - 125	-	QC03080
MS	Total Cadmium (mg/L)	<0.002	1	2	1.64	82		75 - 125	-	QC03080
MS	Total Chromium (mg/L)	<0.005	1	2	1.72	86		75 - 125	-	QC03080
MS	Total Cobalt (mg/L)	<0.01	1	2	1.72	86		75 - 125	-	QC03080
MS	Total Copper (mg/L)	<0.01	1	2	1.95	98		75 - 125	-	QC03080
MS	Total Iron (mg/L)	0.02	1	2	1.83	91		75 - 125	-	QC03080
MS	Total Lead (mg/L)	<0.01	1	2	1.64	82		75 - 125	-	QC03080
MS	Total Manganese (mg/L)	<0.01	1	2	1.79	90		75 - 125	-	QC03080
MS	Total Molybdenum (mg/L)	<0.01	1	2	1.85	93		75 - 125	-	QC03080
MS	Total Nickel (mg/L)	<0.01	1	2	1.86	93		75 - 125	-	QC03080
MS	Total Selenium (mg/L)	<0.01	1	2	1.92	96		75 - 125	-	QC03080
MS	Total Silver (mg/L)	<0.005	1	0.4	0.32	80		75 - 125	-	QC03080
MS	Total Uranium (mg/L)	<0.10	1	2	1.72	86		75 - 125	-	QC03080
MS	Total Vanadium (mg/L)	<0.01	1	2	1.60	80		75 - 125	-	QC03080
MS	Total Zinc (mg/L)	<0.10	1	2	1.77	89		75 - 125	-	QC03080
MSD	Total Aluminum (mg/L)	<0.10	1	2	1.97	99	1	-	0 - 20	QC03080
MSD	Total Arsenic (mg/L)	<0.01	1	2	1.85	93	1	-	0 - 20	QC03080

N/A

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MSD	Total Barium (mg/L)	0.06	1	2	1.95	95	1	-	0 - 20	QC03080
MSD	Total Beryllium (mg/L)	<0.01	1	2	1.78	89	1	-	0 - 20	QC03080
MSD	Total Boron (mg/L)	0.12	1	2	1.99	94	1	-	0 - 20	QC03080
MSD	Total Cadmium (mg/L)	<0.002	1	2	1.65	83	1	-	0 - 20	QC03080
MSD	Total Chromium (mg/L)	<0.005	1	2	1.73	87	1	-	0 - 20	QC03080
MSD	Total Cobalt (mg/L)	<0.01	1	2	1.73	87	1	-	0 - 20	QC03080
MSD	Total Copper (mg/L)	<0.01	1	2	1.97	99	1	-	0 - 20	QC03080
MSD	Total Iron (mg/L)	0.02	1	2	1.83	91	0	-	0 - 20	QC03080
MSD	Total Lead (mg/L)	<0.01	1	2	1.64	82	0	-	0 - 20	QC03080
MSD	Total Manganese (mg/L)	<0.01	1	2	1.77	89	1	-	0 - 20	QC03080
MSD	Total Molybdenum (mg/L)	<0.01	1	2	1.86	93	1	-	0 - 20	QC03080
MSD	Total Nickel (mg/L)	<0.01	1	2	1.87	94	1	-	0 - 20	QC03080
MSD	Total Selenium (mg/L)	<0.01	1	2	1.93	97	1	-	0 - 20	QC03080
MSD	Total Silver (mg/L)	<0.005	1	0.4	0.34	85	6	-	0 - 20	QC03080
MSD	Total Uranium (mg/L)	<0.10	1	2	1.73	87	1	-	0 - 20	QC03080
MSD	Total Vanadium (mg/L)	<0.01	1	2	1.61	81	1	-	0 - 20	QC03080
MSD	Total Zinc (mg/L)	<0.10	1	2	1.76	88	1	-	0 - 20	QC03080

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Dissolved Calcium (mg/L)	739	1	1000	1763	102		75 - 125	-	QC03115
MS	Dissolved Magnesium (mg/L)	227	1	1000	1205	98		75 - 125	-	QC03115
MS	Dissolved Potassium (mg/L)	5.2	1	1000	1043	104		75 - 125	-	QC03115
MS	Dissolved Sodium (mg/L)	85	1	1000	1065	98		75 - 125	-	QC03115
MSD	Dissolved Calcium (mg/L)	739	1	1000	1801	106	4	-	0 - 20	QC03115
MSD	Dissolved Magnesium (mg/L)	227	1	1000	1243	102	4	-	0 - 20	QC03115
MSD	Dissolved Potassium (mg/L)	5.2	1	1000	1037	103	1	-	0 - 20	QC03115
MSD	Dissolved Sodium (mg/L)	85	1	1000	1062	98	0	-	0 - 20	QC03115

Quality Control Report Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC03062
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC03062
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		663	682	1	3	0 - 20	QC03062
Duplicate	Total Alkalinity (mg/L as CaCo3)		663	682	1	3	0 - 20	QC03062

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Dissolved Calcium (mg/L)	<0.50	1	1000	1040	104		75 - 125	-	QC03115
LCS Dissolved Magnesium (mg/L)	<0.50	1	1000	980	98		75 - 125	-	QC03115
LCS Dissolved Potassium (mg/L)	<0.50	1	1000	1020	102		75 - 125	-	QC03115
LCS Dissolved Sodium (mg/L)	<0.50	1	1000	980	98		75 - 125	-	QC03115
LCSD Dissolved Calcium (mg/L)	<0.50	1	1000	1040	104	0	-	0 - 20	QC03115
LCSD Dissolved Magnesium (mg/L)	<0.50	1	1000	980	98	0	-	0 - 20	QC03115
LCSD Dissolved Potassium (mg/L)	<0.50	1	1000	1000	100	2	-	0 - 20	QC03115
LCSD Dissolved Sodium (mg/L)	<0.50	1	1000	960	96	2	-	0 - 20	QC03115

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00093	93		80 - 120	-	QC03076
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00100	100	7	-	0 - 20	QC03076

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Aluminum (mg/L)	<0.10	1	2	1.99	100		75 - 125	-	QC03080
LCS Total Arsenic (mg/L)	<0.01	1	2	1.94	97		75 - 125	-	QC03080
LCS Total Barium (mg/L)	<0.01	1	2	2.2	110		75 - 125	-	QC03080
LCS Total Beryllium (mg/L)	<0.01	1	2	2.09	105		75 - 125	-	QC03080
LCS Total Boron (mg/L)	<0.05	1	2	2.01	100		75 - 125	-	QC03080
LCS Total Cadmium (mg/L)	<0.002	1	2	2.05	102		75 - 125	-	QC03080
LCS Total Chromium (mg/L)	<0.005	1	2	2.1	105		75 - 125	-	QC03080
LCS Total Cobalt (mg/L)	<0.01	1	2	2.22	111		75 - 125	-	QC03080
LCS Total Copper (mg/L)	<0.01	1	2	2.24	112		75 - 125	-	QC03080
LCS Total Iron (mg/L)	<0.01	1	2	2.23	112		75 - 125	-	QC03080
LCS Total Lead (mg/L)	<0.01	1	2	2.17	109		75 - 125	-	QC03080
LCS Total Manganese (mg/L)	<0.01	1	2	2.2	110		75 - 125	-	QC03080
LCS Total Molybdenum (mg/L)	<0.01	1	2	2.2	110		75 - 125	-	QC03080
LCS Total Nickel (mg/L)	<0.01	1	2	2.16	108		75 - 125	-	QC03080
LCS Total Selenium (mg/L)	<0.01	1	2	1.96	98		75 - 125	-	QC03080
LCS Total Silver (mg/L)	<0.005	1	0.4	0.37	93		75 - 125	-	QC03080
LCS Total Uranium (mg/L)	<0.10	1	2	2.1	105		75 - 125	-	QC03080
LCS Total Vanadium (mg/L)	<0.01	1	2	1.87	94		75 - 125	-	QC03080
LCS Total Zinc (mg/L)	<0.10	1	2	2.22	111		75 - 125	-	QC03080
LCSD Total Aluminum (mg/L)	<0.10	1	2	1.99	100	0	-	0 - 20	QC03080
LCSD Total Arsenic (mg/L)	<0.01	1	2	1.94	97	0	-	0 - 20	QC03080

N/A

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LCSD Total Barium (mg/L)	<0.01	1	2	2.32	116	5	-	0 - 20	QC03080
LCSD Total Beryllium (mg/L)	<0.01	1	2	2.09	105	0	-	0 - 20	QC03080
LCSD Total Boron (mg/L)	<0.05	1	2	2.02	101	0	-	0 - 20	QC03080
LCSD Total Cadmium (mg/L)	<0.002	1	2	2.04	102	0	-	0 - 20	QC03080
LCSD Total Chromium (mg/L)	<0.005	1	2	2.1	105	0	-	0 - 20	QC03080
LCSD Total Cobalt (mg/L)	<0.01	1	2	2.21	111	0	-	0 - 20	QC03080
LCSD Total Copper (mg/L)	<0.01	1	2	2.25	113	0	-	0 - 20	QC03080
LCSD Total Iron (mg/L)	<0.01	1	2	2.22	111	0	-	0 - 20	QC03080
LCSD Total Lead (mg/L)	<0.01	1	2	2.12	106	2	-	0 - 20	QC03080
LCSD Total Manganese (mg/L)	<0.01	1	2	2.17	109	1	-	0 - 20	QC03080
LCSD Total Molybdenum (mg/L)	<0.01	1	2	2.2	110	0	-	0 - 20	QC03080
LCSD Total Nickel (mg/L)	<0.01	1	2	2.16	108	0	-	0 - 20	QC03080
LCSD Total Selenium (mg/L)	<0.01	1	2	1.96	98	0	-	0 - 20	QC03080
LCSD Total Silver (mg/L)	<0.005	1	0.4	0.37	93	0	-	0 - 20	QC03080
LCSD Total Uranium (mg/L)	<0.10	1	2	2.11	106	0	-	0 - 20	QC03080
LCSD Total Vanadium (mg/L)	<0.01	1	2	1.87	94	0	-	0 - 20	QC03080
LCSD Total Zinc (mg/L)	<0.10	1	2	2.21	111	0	-	0 - 20	QC03080

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	6/7/00	QC03062
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	210	0	80 - 120	6/7/00	QC03062
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	35	0	80 - 120	6/7/00	QC03062
ICV	Total Alkalinity (mg/L as CaCo3)		250	245	98	80 - 120	6/7/00	QC03062
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	6/7/00	QC03062
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	200	0	80 - 120	6/7/00	QC03062
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	40	0	80 - 120	6/7/00	QC03062
CCV 1	Total Alkalinity (mg/L as CaCo3)		250	240	96	80 - 120	6/7/00	QC03062

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Calcium (mg/L)		20	20	100	75 - 125	6/9/00	QC03115
ICV	Dissolved Magnesium (mg/L)		20	20	100	75 - 125	6/9/00	QC03115
ICV	Dissolved Potassium (mg/L)		20	21	105	75 - 125	6/9/00	QC03115
ICV	Dissolved Sodium (mg/L)		20	21	105	75 - 125	6/9/00	QC03115
CCV 1	Dissolved Calcium (mg/L)		20	20	100	75 - 125	6/9/00	QC03115
CCV 1	Dissolved Magnesium (mg/L)		20	20	100	75 - 125	6/9/00	QC03115
CCV 1	Dissolved Potassium (mg/L)		20	21	105	75 - 125	6/9/00	QC03115
CCV 1	Dissolved Sodium (mg/L)		20	21	105	75 - 125	6/9/00	QC03115

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00099	99	80 - 120	6/6/00	QC03076
CCV 1	Total Mercury (mg/L)		0.001	0.00103	103	80 - 120	6/6/00	QC03076

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.28	90	80 - 120	6/1/00	QC02964
ICV	Fluoride (mg/L)		2.5	2.43	97	80 - 120	6/1/00	QC02964
ICV	Nitrate-N (mg/L)		5	4.59	92	80 - 120	6/1/00	QC02964
ICV	Sulfate (mg/L)		12.5	11.32	91	80 - 120	6/1/00	QC02964
CCV 1	CL (mg/L)		12.5	11.91	95	80 - 120	6/1/00	QC02964
CCV 1	Fluoride (mg/L)		2.5	2.31	92	80 - 120	6/1/00	QC02964
CCV 1	Nitrate-N (mg/L)		5	4.59	92	80 - 120	6/1/00	QC02964
CCV 1	Sulfate (mg/L)		12.5	11.61	93	80 - 120	6/1/00	QC02964

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		20	20.2	101	75 - 125	6/5/00	QC03080
ICV	Total Arsenic (mg/L)		1	1.01	101	75 - 125	6/5/00	QC03080
ICV	Total Barium (mg/L)		20	21.2	106	75 - 125	6/5/00	QC03080
ICV	Total Beryllium (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
ICV	Total Boron (mg/L)		2.5	2.57	103	75 - 125	6/5/00	QC03080
ICV	Total Cadmium (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
ICV	Total Chromium (mg/L)		1	1.01	101	75 - 125	6/5/00	QC03080
ICV	Total Cobalt (mg/L)		5	5.10	102	75 - 125	6/5/00	QC03080
ICV	Total Copper (mg/L)		2.5	2.53	101	75 - 125	6/5/00	QC03080
ICV	Total Iron (mg/L)		10	10.4	104	75 - 125	6/5/00	QC03080
ICV	Total Lead (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
ICV	Total Manganese (mg/L)		1.5	1.53	102	75 - 125	6/5/00	QC03080
ICV	Total Molybdenum (mg/L)		2.5	2.54	102	75 - 125	6/5/00	QC03080
ICV	Total Nickel (mg/L)		4	4.09	102	75 - 125	6/5/00	QC03080
ICV	Total Selenium (mg/L)		0.5	0.49	98	75 - 125	6/5/00	QC03080
ICV	Total Silver (mg/L)		1	1.02	102	75 - 125	6/5/00	QC03080
ICV	Total Uranium (mg/L)		1	1.06	106	75 - 125	6/5/00	QC03080
ICV	Total Vanadium (mg/L)		5	5.08	102	75 - 125	6/5/00	QC03080
ICV	Total Zinc (mg/L)		2	2.03	101	75 - 125	6/5/00	QC03080
CCV 1	Total Aluminum (mg/L)		20	20.1	101	75 - 125	6/5/00	QC03080
CCV 1	Total Arsenic (mg/L)		1	1.01	101	75 - 125	6/5/00	QC03080
CCV 1	Total Barium (mg/L)		20	21.0	105	75 - 125	6/5/00	QC03080
CCV 1	Total Beryllium (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
CCV 1	Total Boron (mg/L)		2.5	2.55	102	75 - 125	6/5/00	QC03080
CCV 1	Total Cadmium (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
CCV 1	Total Chromium (mg/L)		1	1.01	101	75 - 125	6/5/00	QC03080
CCV 1	Total Cobalt (mg/L)		5	5.06	101	75 - 125	6/5/00	QC03080
CCV 1	Total Copper (mg/L)		2.5	2.55	102	75 - 125	6/5/00	QC03080
CCV 1	Total Iron (mg/L)		10	10.3	103	75 - 125	6/5/00	QC03080
CCV 1	Total Lead (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
CCV 1	Total Manganese (mg/L)		1.5	1.52	101	75 - 125	6/5/00	QC03080
CCV 1	Total Molybdenum (mg/L)		2.5	2.52	101	75 - 125	6/5/00	QC03080
CCV 1	Total Nickel (mg/L)		4	4.08	102	75 - 125	6/5/00	QC03080
CCV 1	Total Selenium (mg/L)		0.5	0.50	100	75 - 125	6/5/00	QC03080
CCV 1	Total Silver (mg/L)		1	1.02	102	75 - 125	6/5/00	QC03080
CCV 1	Total Uranium (mg/L)		1	1.06	106	75 - 125	6/5/00	QC03080
CCV 1	Total Vanadium (mg/L)		5	5.05	101	75 - 125	6/5/00	QC03080
CCV 1	Total Zinc (mg/L)		2	2.02	101	75 - 125	6/5/00	QC03080

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

Phone #:

(Street, City, Zip)

Parcell Moore on Charlie Pymble

Invoice to:
(If different from above)

Project Name:

Artesia

Sampler Signature:

Signature: *Charles F. Smith*

[illegible]

Received by:

Date: _____ Time: _____

Time:

Received by:

Date: _____ Time: _____

Time:

Received at Laboratory/by:

Date: _____ Time: _____

Time:

LAB USE ONLY

Intact

②

Headspace	Y / N
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100	1

Y / N

Temp.

10

Log-in Review

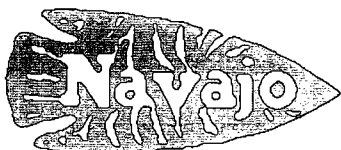
review

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

TELEPHONE
(505) 748-3311

EASYLINK
62905278



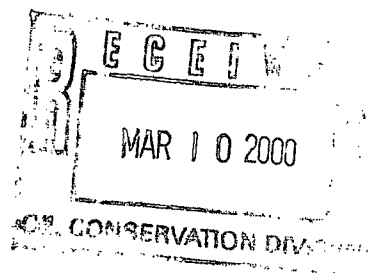
REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

March 8, 2000

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505-5472



RE: 4th Quarter 1999 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually.

For this quarter we discharged a total of 22,132,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 797,017,426 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 600,303,928 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



6701 Aberteen Avenue, Suite 9
4725 Ripley Avenue, Suite A

Lubbock, Texas 79424
El Paso, Texas 79922

800-378-1296
888-588-3443

806-794-1296
915-585-3443

FAX 806-794-1298
FAX 915-585-4944

E-Mail: lab@traceanalysis.com

February 03, 2000

Receiving Date: 01/14/2000

Sample Type: Water

Project No: NA

Project Location: Artesia, NM

ANALYTICAL RESULTS FOR

NAVAJO

Attention: Charlie Plymale or Darrell Moore

501 E. Main

Artesia, NM 88210

Prep Date: 01/21/2000

Analysis Date: 01/21/2000

Sampling Date: 01/13/2000

Sample Condition: Intact & Cool

Sample Received by: VW

Project Name: RO Annual

TA#	Field Code	DISSOLVED Na (mg/L)	DISSOLVED K (mg/L)	DISSOLVED Mg (mg/L)	DISSOLVED Ca (mg/L)
T138724	RO Reject	63	5.5	192	577
ICV		19	20	19	19
CCV		20	20	20	20
Reporting Limit		0.50	0.50	0.50	0.50
METHOD BLANK		<0.50	<0.50	<0.50	<0.50
RPD		1	2	1	1
% Extraction Accuracy		105	108	99	103
% Instrument Accuracy		99	101	101	99

METHODS: EPA 200.7.

CHEMIST: RR/JM

SPIKE: 1,000 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.

CV: 20 mg/L MAGNESIUM, CALCIUM, POTASSIUM, SODIUM.

RR

Director, Dr. Blair Leftwich

Date

2-3-00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888-588-3443 915-585-3443 FAX 915-585-4944

February 03, 2000
Receiving Date: 01/14/2000
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

ANALYTICAL RESULTS FOR
NAVAJO
Attention: Charlie Plymale or Darrell Moore
501 E. Main
Artesia, NM 88210

Sampling Date: 01/13/2000
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: RO Annual

TOTAL METALS

TA #	FIELD CODE	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cu (mg/L)
T138724	RO Reject	0.01	<0.05	<0.10	<0.10	<0.10	<0.01	<0.01	<0.05	<0.05	<0.10
ICV		0.202	0.98	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CCV		0.205	0.97	1.0	1.0	0.98	1.0	1.0	1.0	1.0	1.0
METHOD BLANK		<0.005	<0.05	<0.10	<0.10	<0.10	<0.01	<0.01	<0.05	<0.05	<0.10
REPORTING LIMIT		0.005	0.05	0.10	0.10	0.10	0.01	0.01	0.05	0.05	0.10
RPD		0	1	2	1	2	1	1	0	1	1
% Extraction Accuracy		90	102	90	99	94	93	83	82	85	92
% Instrument Accuracy		101	97	103	104	100	103	103	102	101	100
PREP DATE		01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00
ANALYSIS DATE		01/25/00	01/25/00	01/25/00	01/25/00	01/25/00	01/25/00	01/25/00	01/25/00	01/25/00	01/25/00

Fe (mg/L)	Mn (mg/L)	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Se (mg/L)	Hg (mg/L)	U (mg/L)	V (mg/L)	Zn (mg/L)
T138724	RO Reject	<0.10	<0.10	<0.10	<0.05	<0.0002	<1.0	<0.10	<0.10
ICV		1.0	1.0	1.0	0.99	0.00101	1.0	1.0	1.0
CCV		0.99	1.0	1.0	1.0	0.00108	1.0	1.0	1.0
METHOD BLANK		<0.10	<0.10	<0.10	<0.05	<0.0002	<1.0	<0.10	<0.10
REPORTING LIMIT		0.10	0.10	0.10	0.05	0.0002	1.0	0.10	0.10
RPD		6	2	3	1	1	2	0	3
% Extraction Accuracy		90	86	87	81	95	92	90	81
% Instrument Accuracy		100	100	101	103	104	104	101	103
PREP DATE		01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00	01/19/00
ANALYSIS DATE		01/25/00	01/25/00	01/25/00	01/25/00	01/19/00	01/25/00	01/25/00	01/25/00

METHODS: EPA 200.7, 245.1.
CHEMIST: Ag, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Se, U, V, Zn: RR
TOTAL METALS SPIKE: 0.40 mg/L Ag; 2.0 mg/L Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Se, U, V, Zn; 0.0010 mg/L Hg.
TOTAL METALS CV: 0.20 mg/L Ag; 1.0 mg/L Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Se, U, V, Zn; 0.0010 mg/L Hg.

Director, Dr. Blair Leftwich
DATE
2-3-00

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I2565

Report Date: 21-Jan-00

Trace Analysis

6701 Aberdeen

Suite 9

Lubbock, TX 79424-

Attn: Nell Green

Phone: (806) 794-1296 Ext:

FAX: (806) 794-1298

Our Lab#: MEL00-00695

Your Sample ID: 138724

Date Logged In: 1/18/00

Sample Source: NPDES/WWTP's

Sample Type: Water

Client Project #:

Project #:

Date Submitted to Lab: 1/18/2000

PO#: Artesia, NM

- COLLECTION INFORMATION -

Date/Time/By: 1/14/00

EPA Method	Analyst	Prep Date	Analysis Date		
608	SH	1/19/00	1/20/00		
CAS Number	Parameter	Result	Typical Report Limit		
12674-11-2	Aroclor 1016	< 0.10 ug/l	0.1		
309-00-2	Aldrin	< 0.02 ug/l	0.02		
11104-28-2	Aroclor 1221	< 0.10 ug/l	0.1		
11141-16-5	Aroclor 1232	< 0.10 ug/l	0.1		
53469-21-9	Aroclor 1242	< 0.10 ug/l	0.1		
12672-29-6	Aroclor 1248	< 0.10 ug/l	0.1		
11097-69-1	Aroclor 1254	< 0.10 ug/l	0.1		
11096-82-5	Aroclor 1260	< 0.10 ug/l	0.1		
319-84-6	alpha-BHC	< 0.02 ug/l	0.02		
319-85-7	beta-BHC	< 0.02 ug/l	0.02		
319-86-8	delta-BHC	< 0.02 ug/l	0.02		
58-89-9	gamma-BHC (Lindane)	< 0.02 ug/l	0.02		
57-74-9	Chlordane(Total)	< 0.10 ug/l	0.1		
72-54-8	4,4'-DDD	< 0.03 ug/l	0.03		
72-55-9	4,4'-DDE	< 0.02 ug/l	0.02		
50-29-3	4,4'-DDT	< 0.03 ug/l	0.03		
60-57-1	Dieldrin	< 0.02 ug/l	0.02		
959-98-8	Endosulfan I	< 0.03 ug/l	0.03		
33213-65-9	Endosulfan II	< 0.03 ug/l	0.03		
1031-07-8	Endosulfan sulfate	< 0.03 ug/l	0.03		

Your Sample ID: 138724

Lab Number MEL00-00695

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

CAS Number	Parameter	Result	Typical Report Limit
72-20-8	Endrin	< 0.05 ug/l	0.05
7421-93-4	Endrin aldehyde	< 0.05 ug/l	0.05
76-44-8	Heptachlor	< 0.03 ug/l	0.03
1024-57-3	Heptachlor epoxide	< 0.03 ug/l	0.03
72-43-5	Methoxychlor	< 0.03 ug/l	0.03
8001-35-2	Toxaphene	< 0.10 ug/l	0.1

--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
MEL00-00695	608	Decachlorobiphenyl (Surr)	57 %R	20	150
MEL00-00695	608	Tetrachloro-m-xylene (Surr)	92 %R	40	130

End of Report

Report Approved By: 

Wade E. Bayer

This report shall not be reproduced, except in its entirety, without the written approval of the laboratory.

Your Sample ID: 138724

Lab Number MEL00-00695

6878 S. STATE ROUTE 100 • P.O. BOX 76 • MELMORE, OH 44845-9999
PHONE 419-397-2659 • 1-800-858-8869 • FAX 419-397-2229

A & L PLAINS AGRICULTURAL LABORATORIES, INC.

302 34th St. • P.O. Box 1590 • Lubbock, TX 79408 • (806) 763-4278

FAX (806) 763-2762 • www.al-labs-plains.com



REPORT NUMBER

00-014-302

January 17, 2000

Page 1

Mail to:

TraceAnalysis, Inc.
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424

Lab No:

Sample ID

57388

Water

138724

Fecal Coliform:

CFU/100 ml

17

ND= None Detected

TNTC= Too Numerous To Count

**Non-specific growth detected

Respectfully submitted,

E.A. Coleman

E.A. Coleman



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
 4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
 E-Mail: lab@traceanalysis.com

**ANALYTICAL RESULTS FOR
 NAVAJO REFINING CO.**

Attention: Charlie Plymale

501 E. Main
 Artesia, NM 88210

February 4, 2000
 Receiving Date: 01/14/00
 Sample Type: Water
 Project No: N/A
 Project Loc: Artesia, NM

Extraction Date: 01/17/00
 Analysis Date: 01/18/00
 Sampling Date: 01/13/00
 Sample Condition: I & C
 Sample Received by: VW
 Project Name: RO Annual

FIELD CODE: RO Reject

TA #: T138724

Reporting

Limits Concentration

EPA 625	(mg/L)	(mg/L)	QC	RPD	%EA	%IA
Pyridine	0.005	ND				
N-Nitrosodimethylamine	0.005	ND				
2-Picoline	0.005	ND				
Methyl methanesulfonate	0.005	ND				
Ethyl methanesulfonate	0.005	ND				
Phenol	0.005	ND	60	30*	24	99
Aniline	0.005	ND				
bis(2-Chloroethyl)ether	0.005	ND				
2-Chlorophenol	0.005	ND		30*	61	
1,3-Dichlorobenzene	0.005	ND				
1,4-Dichlorobenzene	0.005	ND	59	26*	56	99
Benzyl alcohol	0.005	ND				
1,2-Dichlorobenzene	0.005	ND				
2-Methylphenol	0.005	ND				
bis(2-chloroisopropyl)ether	0.005	ND				
4-Methylphenol/3-Methylphenol	0.005	ND				
Acetophenone	0.005	ND				
n-Nitrosodi-n-propylamine	0.005	ND		31*	72	
Hexachloroethane	0.005	ND				
Nitrobenzene	0.005	ND				
N-Nitrosopiperidine	0.005	ND				
Isophorone	0.005	ND				
2-Nitrophenol	0.005	ND	59			99
2,4-Dimethylphenol	0.005	ND				
bis(2-Chloroethoxy)methane	0.005	ND				
Benzoic acid	0.005	ND				
2,4-Dichlorophenol	0.005	ND	57			95
1,2,4-Trichlorobenzene	0.005	ND		24*	67	
a,a-Dimethylphenethylamine	0.005	ND				
Naphthalene	0.005	ND				

FIELD CODE: RO Reject

TA #: T138724

	Reporting		QC	RPD	%EA	%IA
	Limits	Concentration				
EPA 625	(mg/L)	(mg/L)				
4-Chloroaniline	0.005	ND				
2,6-Dichlorophenol	0.005	ND				
Hexachlorobutadiene	0.005	ND	61			102
N-Nitroso-di-n-butylamine	0.005	ND				
4-Chloro-3-methylphenol	0.005	ND	50	13	56	84
2-Methylnaphthalene/1-Methylnaphthalene	0.005	ND				
1,2,4,5-Tetrachlorobenzene	0.005	ND				
Hexachlorocyclopentadiene	0.005	ND				
2,4,6-Trichlorophenol	0.005	ND	59			98
2,4,5-Trichlorophenol	0.005	ND				
2-Chloronaphthalene	0.005	ND				
1-Chloronaphthalene	0.005	ND				
2-Nitroaniline	0.005	ND				
Dimethylphthalate	0.005	ND				
Acenaphthylene	0.005	ND				
2,6-Dinitrotoluene	0.005	ND				
3-Nitroaniline	0.005	ND				
Acenaphthene	0.005	ND	58	17	74	97
2,4-Dinitrophenol	0.005	ND				
Dibenzofuran	0.005	ND				
Pentachlorobenzene	0.005	ND				
4-Nitrophenol	0.005	ND		46*	16	
1-Naphthylamine	0.005	ND				
2,4-Dinitrotoluene	0.005	ND		7	67	
2-Naphthylamine	0.005	ND				
2,3,4,6-Tetrachlorophenol	0.005	ND				
Fluorene	0.005	ND				
Diethylphthalate	0.005	ND				
4-Chlorophenyl-phenylether	0.005	ND				
4-Nitroaniline	0.005	ND				
4,6-Dinitro-2-methylphenol	0.005	ND				
n-Nitrosodiphenylamine & Diphenylamine	0.005	ND	56			94
Diphenylhydrazine	0.005	ND				

FIELD CODE: RO Reject

TA #: T138724

EPA 625	Reporting		QC	RPD	%EA	%IA
	Limits	Concentration				
	(mg/L)	(mg/L)				
4-Bromophenyl-phenylether	0.005	ND				
Phenacetin	0.005	ND				
Hexachlorobenzene	0.005	ND				
4-Aminobiphenyl	0.005	ND				
Pentachlorophenol	0.005	ND	59	62*	45	98
Pentachloronitrobenzene	0.005	ND				
Pronamide	0.005	ND				
Phenanthrene	0.005	ND				
Anthracene	0.005	ND				
Di-n-butylphthalate	0.005	ND				
Fluoranthene	0.005	ND	71			119
Benzidine	0.005	ND				
Pyrene	0.005	ND		4	80	
p-Dimethylaminoazobenzene	0.005	ND				
Butylbenzylphthalate	0.005	ND				
Benzo[a]anthracene	0.005	ND				
3,3-Dichlorobenzidine	0.005	ND				
Chrysene	0.005	ND				
bis(2-Ethylhexyl)phthalate	0.005	ND				
Di-n-octylphthalate	0.005	ND	68			114
Benzo[b]fluoranthene	0.005	ND				
7,12-Dimethylbenz(a)anthracene	0.005	ND				
Benzo[k]fluoranthene	0.005	ND				
Benzo[a]pyrene	0.005	ND	60			100
3-Methylcholanthrene	0.005	ND				
Dibenzo(a,i)acridine	0.005	ND				
Indeno[1,2,3-cd]pyrene	0.005	ND				
Dibenz[a,h]anthracene	0.005	ND				
Benzo[g,h,i]perylene	0.005	ND				

NAVAJO REFINING CO.
Attention: Charlie Plymale
501 E. Main
Artesia, NM 88210

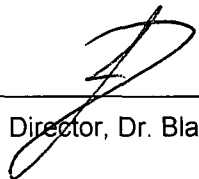
Page 4 of 4

FIELD CODE: RO Reject
TA #: T138724

*RPDs of several spiking compounds are outside limits due to prep error.

SURROGATES	% RECOVERY
2-Fluorophenol SURR	39
Phenol-d6 SURR	25
Nitrobenzene-d5 SURR	74
2-Fluorobiphenyl SURR	80
2,4,6-Tribromophenol SURR	70
Terphenyl-d14 SURR	89

METHODS: EPA 625
CHEMIST: LK



Director, Dr. Blair Leftwich

02/04/00
Date



6701 Aberdeen Avenue, Suite 9
4725 Ripley Avenue, Suite A

Lubbock, Texas 79424 800•378•1296
El Paso, Texas 79922 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

ANALYTICAL RESULTS FOR
NAVAJO REFINING CO.
Attention: Charlie Plymale
501 E. Main
Artesia, NM 88210

February 4, 2000
Receiving Date: 01/14/00
Sample Type: Water
Project No: N/A
Project Loc: Artesia, NM

Prep Date: 01/17/00
Analysis Date: 01/17/00
Sampling Date: 01/13/00
Sample Condition: I & C
Sample Received by: VW
Project Name: RO Annual

FIELD CODE: RO Reject
TA #: T138724

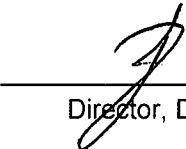
624 Compounds	Reporting Limit (ug/L)	Concentration (ug/L)	QC	RPD	EA	IA
Chloromethane	2	ND				
Vinyl chloride	2	ND	102			102
Bromomethane	5	ND				
Chloroethane	2	ND				
1,1-Dichloroethene	2	ND	100	1	100	100
Methylene chloride	5	ND				
1,1-Dichloroethane	2	ND				
1,2-Dichloroethane	2	ND				
1,1,1-Trichloroethane	2	ND				
Benzene	2	ND		0	106	
Carbon Tetrachloride	2	ND				
1,2-Dichloropropane	2	ND	104			104
Trichloroethene	2	ND		0	90	
Bromodichloromethane	2	ND				
cis-1,3-Dichloropropene	2	ND				
trans-1,3-Dichloropropene	2	ND				
Toluene	2	ND	100	0	103	100
1,1,2-Trichloroethane	2	ND				
2-chloroethyl vinyl ether	2	ND				
Acrylonitrile	10	ND				
Acrolein	20	ND				

FIELD CODE: RO Reject
TA #: T138724

624 Compounds	Reporting Limit (ug/L)	Concentration (ug/L)	QC	RPD	EA	IA
Dibromochloromethane	2	ND				
1,2-Dibromoethane	2	ND				
Tetrachloroethene	2	ND				
Chlorobenzene	2	ND	103	1	106	103
Ethylbenzene	2	ND	101			101
Bromoform	2	ND				
1,1,2,2-Tetrachloroethane	2	ND				
1,4-Dichlorobenzene	2	ND				
1,3-Dichlorobenzene	2	ND				
1,2-Dichlorobenzene	2	ND				

	% Recovery
Dibromofluoromethane	100
Toluene-d8	100
4-Bromofluorobenzene	90

ND = Not Detected
Methods: EPA 624
CHEMIST: JG



Director, Dr. Blair Leftwich

02/04/00

Date



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Charlie Plymale
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 2/4/00

Project Number: Annual RO Reject Water
Project Name: N/A
Project Location: Artesia, NM 88210

Order ID Number: A00011407

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
138724	RO Reject	Water	1/13/00	14:30	1/14/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Report Date: 2/4/00
Annual RO Reject Water

Order ID Number: A00011407
N/A

Page Number: 2 of 9
Artesia, NM 88210

Analytical Results Report

Sample Number: 138724
Description: RO Reject

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCO ₃)									
Hydroxide Alkalinity	<1.0	1	E 310.1	1/20/00	1/20/00	JS	PB00358	QC00469	1
Carbonate Alkalinity	<1.0	1	E 310.1	1/20/00	1/20/00	JS	PB00358	QC00469	1
Bicarbonate Alkalinity	516	1	E 310.1	1/20/00	1/20/00	JS	PB00358	QC00469	1
Total Alkalinity	516	1	E 310.1	1/20/00	1/20/00	JS	PB00358	QC00469	1
BOD5 (mg/L)									
Biological Oxygen Demand	<7.5	1	SM 5210B	1/14/00	1/19/00	RS	PB00314	QC00418	
Chlorine (mg/L)									
Chlorine	<0.04	1	SM 4500-Cl	1/14/00	1/14/00	JS	PB00291	QC00380	
COD (mg/L)									
Chemical Oxygen Demand	<20	1	E 410.4	1/21/00	1/21/00	JS	PB00366	QC00483	20
Conductivity (uMHOS/cm)									
Specific Conductance	3300	1	SM 2510B	1/20/00	1/20/00	JS	PB00359	QC00470	
Ion Chromatography (IC) (mg/L)									
CL	84	1	E 300.0	1/14/00	1/14/00	JS	PB00297	QC00388	0.5
Fluoride	3.8	1	E 300.0	1/14/00	1/14/00	JS	PB00297	QC00388	0.1
Nitrate-N	3.2	1	E 300.0	1/14/00	1/14/00	JS	PB00297	QC00388	0.2
Sulfate	1900	1	E 300.0	1/14/00	1/14/00	JS	PB00297	QC00388	0.5
NH ₃ (mg/L)									
Ammonia-N	<2.0	1	4500-NH ₃	1/20/00	1/20/00	MD	PB00344	QC00451	2
pH (s.u.)									
pH	7.2	1	E 150.1	1/14/00	1/14/00	RS	PB00316	QC00417	1
Phenolics (mg/L)									
Phenolics	<0.070	1	SM 5530D	1/14/00	1/14/00	MD	PB00294	QC00385	0.07
TDS (mg/L)									
Total Dissolved Solids	3000	1	E 160.1	1/18/00	1/19/00	JS	PB00328	QC00434	10
Total Cyanide (mg/L)									
Total Cyanide	<0.01	1	14500-CN C	1/18/00	1/20/00	MD	PB00346	QC00453	0.01
TSS (mg/L)									
Total Suspended Solids	<1.0	1	E 160.2	1/18/00	1/18/00	RS	PB00313	QC00419	1

Quality Control Report Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	1/20/00	PB00358	QC00469
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	1/20/00	PB00358	QC00469
Bicarbonate Alkalinity (mg/L as CaCo3)		<4.0	1	1/20/00	PB00358	QC00469
Total Alkalinity (mg/L as CaCo3)		<4.0	1	1/20/00	PB00358	QC00469

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Biological Oxygen Demand (mg/L)		0.13		1/19/00	PB00314	QC00418

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Chlorine (mg/L)		<0.04		1/14/00	PB00291	QC00380

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Chemical Oxygen Demand (mg/L)		<20	20	1/21/00	PB00366	QC00483

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Specific Conductance (uMHOS/cm)		5.9		1/20/00	PB00359	QC00470

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	1/14/00	PB00297	QC00388
Fluoride (mg/L)		<0.1	0.1	1/14/00	PB00297	QC00388
Nitrate-N (mg/L)		<0.2	0.2	1/14/00	PB00297	QC00388
Sulfate (mg/L)		<0.5	0.5	1/14/00	PB00297	QC00388

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Ammonia-N (mg/L)		<2.0	2	1/20/00	PB00344	QC00451

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Phenolics (mg/L)		<0.070	0.07	1/14/00	PB00294	QC00385

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		10	10	1/19/00	PB00328	QC00434

Report Date: 2/4/00
Annual RO Reject Water

Order ID Number: A00011407
N/A

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Artesia, NM 88210

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Cyanide (mg/L)		<0.01	0.01	1/20/00	PB00346	QC00453

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Suspended Solids (mg/L)		<1.0	1	1/18/00	PB00313	QC00419

Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Phenolics (mg/L)	<0.070	1	0.8	0.934	117		80 - 120	0 - 20	QC00385
MSD	Phenolics (mg/L)	<0.070	1	0.8	0.928	116	1	80 - 120	0 - 20	QC00385

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	740	1	625	1365.08	100		80 - 120	0 - 20	QC00388
MS	Fluoride (mg/L)	7.9	1	125	123.14	92		80 - 120	0 - 20	QC00388
MS	Nitrate-N (mg/L)	<1.0	1	250	242.26	97		80 - 120	0 - 20	QC00388
MS	Sulfate (mg/L)	172.3	1	625	782.96	98		80 - 120	0 - 20	QC00388
MSD	CL (mg/L)	740	1	625	1362.12	100	0	80 - 120	0 - 20	QC00388
MSD	Fluoride (mg/L)	7.9	1	125	130.59	98	6	80 - 120	0 - 20	QC00388
MSD	Nitrate-N (mg/L)	<1.0	1	250	242.41	97	0	80 - 120	0 - 20	QC00388
MSD	Sulfate (mg/L)	172.3	1	625	786.38	99	1	80 - 120	0 - 20	QC00388

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Ammonia-N (mg/L)	<2.0	1	5	5.49	110		80 - 120	0 - 20	QC00451
MSD	Ammonia-N (mg/L)	<2.0	1	5	5.26	105	4	80 - 120	0 - 20	QC00451

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Cyanide (mg/L)	0.023	1	0.12	0.138	96		80 - 120	0 - 20	QC00453
MSD	Total Cyanide (mg/L)	0.023	1	0.12	0.133	92	4	80 - 120	0 - 20	QC00453

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Chemical Oxygen Demand (mg/L)	<20	1	250	252	101		80 - 120	0 - 20	QC00483
MSD	Chemical Oxygen Demand (mg/L)	<20	1	250	261	104	4	80 - 120	0 - 20	QC00483

Quality Control Report Duplicates

Report Date: 2/4/00
Annual RO Reject Water

Order ID Number: A00011407
N/A

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Artesia, NM 88210

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00469
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00469
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		454	434	1	5	0 - 20	QC00469
Duplicate	Total Alkalinity (mg/L as CaCo3)		454	434	1	5	0 - 20	QC00469

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Biological Oxygen Demand (mg/L)		250	260	1	4	0 - 20	QC00418

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Chlorine (mg/L)		<0.04	<0.04	1	0	0 - 20	QC00380

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Specific Conductance (uMHOS/cm)		1116	1100	1	1	0 - 20	QC00470

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		7.1	7.1	1	0	0 - 20	QC00417

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		1936	1800	1	7	0 - 20	QC00434

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Suspended Solids (mg/L)		52	58	1	11	0 - 20	QC00419

Report Date: 2/4/00
Annual RO Reject Water

Order ID Number: A00011407
N/A

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Quality Control Report Lab Control Spikes and Duplicate Spike

Param		Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Biological Oxygen Demand (mg/L)	0.13	1	198	220	111		80 - 120	0 - 20	QC00418
LCSD	Biological Oxygen Demand (mg/L)	0.13	1	198	225	114	2	80 - 120	0 - 20	QC00418

Quality Control Report Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/20/00	QC00469
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2120	0	80 - 120	1/20/00	QC00469
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	140	0	80 - 120	1/20/00	QC00469
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2260	94	80 - 120	1/20/00	QC00469
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/20/00	QC00469
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	2320	0	80 - 120	1/20/00	QC00469
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/20/00	QC00469
CCV 1	Total Alkalinity (mg/L as CaCo3)		2400	2320	97	80 - 120	1/20/00	QC00469

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Chemical Oxygen Demand (mg/L)		250	270	108	80 - 120	1/21/00	QC00483
CCV 1	Chemical Oxygen Demand (mg/L)		250	250	100	80 - 120	1/21/00	QC00483

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Specific Conductance (uMHOS/cm)		1413	1336	95	80 - 120	1/20/00	QC00470
CCV 1	Specific Conductance (uMHOS/cm)		1413	1356	96	80 - 120	1/20/00	QC00470

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	12.51	100	80 - 120	1/14/00	QC00388
ICV	Fluoride (mg/L)		2.5	2.46	98	80 - 120	1/14/00	QC00388
ICV	Nitrate-N (mg/L)		5	4.65	93	80 - 120	1/14/00	QC00388
ICV	Sulfate (mg/L)		12.5	12.57	101	80 - 120	1/14/00	QC00388
CCV 1	CL (mg/L)		12.5	11.56	92	80 - 120	1/14/00	QC00388
CCV 1	Fluoride (mg/L)		2.5	2.48	99	80 - 120	1/14/00	QC00388
CCV 1	Nitrate-N (mg/L)		5	4.66	93	80 - 120	1/14/00	QC00388
CCV 1	Sulfate (mg/L)		12.5	11.85	95	80 - 120	1/14/00	QC00388

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Ammonia-N (mg/L)		5	4.76	95	80 - 120	1/20/00	QC00451
CCV 1	Ammonia-N (mg/L)		5	4.48	90	80 - 120	1/20/00	QC00451

Report Date: 2/4/00
Annual RO Reject Water

Order ID Number: A00011407
N/A

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Artesia, NM 88210

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	1/14/00	QC00417
CCV 1	pH (s.u.)		7	7.0	100	80 - 120	1/14/00	QC00417

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Phenolics (mg/L)		0.8	0.799	100	80 - 120	1/14/00	QC00385
CCV 1	Phenolics (mg/L)		0.8	0.790	99	80 - 120	1/14/00	QC00385

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	1023	102	80 - 120	1/19/00	QC00434
CCV 1	Total Dissolved Solids (mg/L)		1000	997	100	80 - 120	1/19/00	QC00434

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Cyanide (mg/L)		0.12	0.125	104	80 - 120	1/20/00	QC00453
CCV 1	Total Cyanide (mg/L)		0.12	0.121	101	80 - 120	1/20/00	QC00453



1726 Wooddale Court • Baton Rouge, Louisiana 70806

1 (800) 401-4277 • Fax (225) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.

Nell Green

6701 Aberdeen Ave, Ste. 9

Lubbock, TX 79424

Phone: 806-794-1296

Fax: 806-794-1298

A handwritten signature in black ink, appearing to be 'RRL', is written over a horizontal line.

Quality Assurance Review

A handwritten signature in black ink, appearing to be 'DLC', is written over a horizontal line.

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.



Notes:

Comments:

- 1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
- 2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
- 5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only).
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
- 8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

- 1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurements of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992.
- 3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995).
- 4.0) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) HASL 300

Definitions:

- | | | |
|-------|-----------------|--|
| 1.0) | BDL | Analyte not detected because the value was below the detection limit. |
| 2.0) | ND | Not detected above the detection limit. |
| 3.0) | Detection Limit | The minimum amount of the analyte that ARS can detect utilizing the specific analysis. |
| 4.0) | B | Method Blank |
| 5.0) | D | Method Duplicate |
| 6.0) | MS | Matrix Spike |
| 7.0) | S | Spike |
| 8.0) | RS | Reference Spike |
| 9.0) | *SC | Subcontracted out to another qualified laboratory |
| 10.0) | NR | Not Referenced |
| 11.0) | N/A | Not Applicable |

138724

Page of

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TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A00011407

Company Name: NAVAJO Phone #: 505 748 3311
Address: PO BOX 159 (Street, City, Zip)
Contact Person: Charlie Plymale or Darrell Moore
Invoice to: (If different from above)
Project #:

Project Name: BO Annual
Sampler Signature: Charlie Plymale

Project Location: Artesia NM

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD			SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HNO3	ICE	NONE	DATE	TIME
138724	RO Reject #1	2	40ml	X				X	X		4/13/00	1430
		1	1L	X				X	X		4/13/00	1430
		2	1L	X				X	X		4/13/00	1430
		1	1L	X				X	X		4/13/00	1430
		7	500ml	X				X	X		4/13/00	1430
		1	1L	X				X	X		4/13/00	1430
		1	500ml	X				X	X		4/13/00	1430
		1	1L	X				X	X		4/13/00	1430
		1	100ml	X				X	X		4/13/00	1430

Relinquished by: [Signature] Date: 4/13/00 Time: 16:15
Relinquished by: [Signature] Date: 4/13/00 Time: 16:15
Relinquished by: [Signature] Date: 4/13/00 Time: 16:15

Received by: [Signature] Date: 4/13/00 Time: 16:15
Received by: [Signature] Date: 4/13/00 Time: 16:15
Received by: [Signature] Date: 4/13/00 Time: 16:15

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, PH	
Hold	

Turn Around Time if different from standard

See Attachment

REMARKS:

LAB USE ONLY

Intact Y N
Headspace Y N
Temp -20 °
Log-in Review [Signature]

Carrier # Felley TRK 272-7110-635

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TraceAnalysis, Inc.

4725 Ripley Dr. Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

Company Name:

WAVH50

Phone #:

505 748 3311

Address:

(Street, City, Zip)
PO Box 159

Fax #:

505 748 9077

Contact Person:

Charice Rhymale or Darrell Moore

Invoice to:
(if different from above)

Project #:

Project Name:

Artesia NM

Sample Signature:

[Signature]

LAB #
(LAB USE ONLY)

FIELD CODE

CONTAINERS
Volume/Amount

WATER
SOIL
AIR
SLUDGE

HCL
HNO3
ICE
NONE

DATE
TIME

RO Reject Annual

1 1L X

XX

1/14/00 15:00
1/14/00 15:00

MTBE 8021B/602
BTEX 8021B/602
TPH 418.1/TX1005
PAH 8270C
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7
TCLP Metals Ag As Ba Cd Cr Pb Se Hg
TCLP Volatiles
TCLP Semi Volatiles
TCLP Pesticides
RCI
GC-MS Vol. 8260B/624
GC/MS Semi. Vol. 8270C/625
PCB's 8082/608
Pesticides 8081A/608
BOD, TSS, pH

Turn Around Time if different from standard

Hold

See list on well

Relinquished by:

Date: 1/14/00 Time: 16:15

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received at Laboratory by:

Date: 1/15/00 Time: 9:15

LAB USE ONLY

Intact *[initials]* Y/N

Headspace *[initials]* Y/N

Temp *[initials]* °

Log-in Review

REMARKS:

FED EX

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

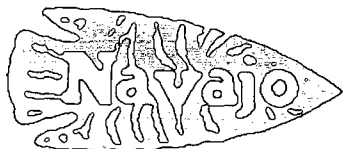
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

ANALYSIS REQUEST
(Circle or Specify Method No.)

TELEPHONE
(505) 748-3311

EASYLINK
62905278

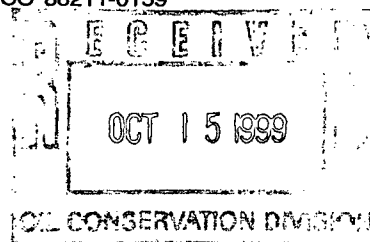


REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

October 13, 1999



Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505-5472

RE: 3rd Quarter 1999 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger:

This letter is sent in regard to Navajo Refining's permit modification of our discharge plan GW-28 which allows us to put our Reverse Osmosis (RO) reject water on our farm or into Eagle Draw. This permit is administered by OCD and the parameters we sample for were set up by OCD. We are sending these results for your files. We are required by OCD to sample this stream every quarter and once annually.

For this quarter we discharged a total of 25,234,000 gallons with all of that total being sent to the farm for irrigation. We no longer discharge to Eagle Draw. Since we started discharging the RO reject water, we have discharged a total of 774,885,426 gallons. This is broken down as follows: 196,713,498 gallons have been put into Eagle Draw and 578,171,928 gallons have been put on our farms.

The RO unit was in full operation for the entire quarter. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,
NAVAJO REFINING COMPANY

Darrell Moore
Environmental Mgr. for Water and Waste
encl.
cc:USEPA, New Mexico Environment Dept.- Water Quality



TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
4725 Ripley Avenue, Suite A

Lubbock, Texas 79424
El Paso, Texas 79922

800•378•1296
888•588•3443

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 10/5/99

Project Number: Artesia
Project Name: N/A
Project Location: Artesia, NM

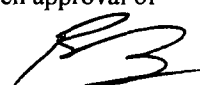
Order ID Number: 99091606

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
131870	TK 836 Influent	Water	9/16/99	8:00	9/16/99
131871	RO Reject Qtrly	Water	9/16/99	9:00	9/16/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 131871

Description: RO Reject Qtrly

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	9/23/99	9/23/99	MD	PB02437	QC03068	1
Bicarbonate Alkalinity (mg/L as CaCo3)		620	1	E 310.1	9/23/99	9/23/99	MD	PB02437	QC03068	1
Total Mercury (mg/L)		<0.0002	1	S 7470A	9/17/99	9/17/99	BP	PB02430	QC03058	0.0002
CL (mg/L)		200	1	E 300.0	9/17/99	9/17/99	JS	PB02365	QC02974	0.5
Fluoride (mg/L)		4.7	1	E 300.0	9/17/99	9/17/99	JS	PB02365	QC02974	0.1
Sulfate (mg/L)		2300	1	E 300.0	9/17/99	9/17/99	JS	PB02365	QC02974	0.5
Total Aluminum (mg/L)		0.11	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.05
Total Arsenic (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Barium (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Beryllium (mg/L)		<0.01	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.01
Total Boron (mg/L)		<0.75	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.75
Total Cadmium (mg/L)		<0.01	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.02
Total Calcium (mg/L)	*	733	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.5
Total Chromium (mg/L)		<0.05	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.05
Total Cobalt (mg/L)		<0.05	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.05
Total Copper (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Iron (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Lead (mg/L)		<.005	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Magnesium (mg/L)	*	206	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.5
Total Manganese (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Molybdenum (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Nickel (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Potassium (mg/L)	*	5.8	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.5
Total Selenium (mg/L)		0.02	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.01
Total Silver (mg/L)		<0.001	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.05
Total Sodium (mg/L)	*	110	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.5
Total Uranium (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Vanadium (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1
Total Zinc (mg/L)		<0.10	1	E 200.7	9/22/99	9/27/99	RR	PB02451	QC03095	0.1

Report Date: 10/5/99

Order ID Number: 99091606

Page Number: 3 of 11

Artesia

N/A

Artesia, NM

* Total Calcium - Analysis on this metal was 09/28/99.

* Total Magnesium - Analysis on this metal was 09/28/99.

* Total Potassium - Analysis on this metal was 09/28/99.

* Total Sodium - Analysis on this metal was 09/28/99.

Quality Control Report Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Biological Oxygen Demand (mg/L)		0.33		9/22/99	PB02418	QC03043
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Chemical Oxygen Demand (mg/L)		<20	20	9/17/99	PB02362	QC02970
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	9/17/99	PB02430	QC03058
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Phenolics (mg/L)		<0.070	0.07	9/20/99	PB02381	QC02998
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Kjeldahl Nitrogen (mg/L)		<8.3	8.3	9/30/99	PB02517	QC03172
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<0.05	0.05	9/27/99	PB02451	QC03095
Total Arsenic (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Barium (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Beryllium (mg/L)		<0.01	0.01	9/27/99	PB02451	QC03095
Total Boron (mg/L)		<0.75	0.75	9/27/99	PB02451	QC03095
Total Cadmium (mg/L)		<0.01	0.02	9/27/99	PB02451	QC03095
Total Calcium (mg/L)		<0.50	0.5	9/27/99	PB02451	QC03095
Total Chromium (mg/L)		<0.05	0.05	9/27/99	PB02451	QC03095
Total Cobalt (mg/L)		<0.05	0.05	9/27/99	PB02451	QC03095
Total Copper (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Iron (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Lead (mg/L)		<0.005	0.1	9/27/99	PB02451	QC03095
Total Magnesium (mg/L)		<0.50	0.5	9/27/99	PB02451	QC03095
Total Manganese (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Molybdenum (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Nickel (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Potassium (mg/L)		<0.50	0.5	9/27/99	PB02451	QC03095
Total Selenium (mg/L)		<0.01	0.01	9/27/99	PB02451	QC03095
Total Silver (mg/L)		<0.001	0.05	9/27/99	PB02451	QC03095
Total Sodium (mg/L)		<0.50	0.5	9/27/99	PB02451	QC03095
Total Uranium (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Vanadium (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095
Total Zinc (mg/L)		<0.10	0.1	9/27/99	PB02451	QC03095

Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Chemical Oxygen Demand (mg/L)	100	1	250	275	70		80 - 120	0 - 20	QC02970
MSD	Chemical Oxygen Demand (mg/L)	100	1	250	286	74	6	80 - 120	0 - 20	QC02970

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)		1	12.5	14.36	94		80 - 120	0 - 20	QC02974
MS	Fluoride (mg/L)		1	2.5	2.60	98		80 - 120	0 - 20	QC02974
MS	Sulfate (mg/L)		1	12.5	16.64	100		80 - 120	0 - 20	QC02974
MSD	CL (mg/L)		1	12.5	13.83	90	5	80 - 120	0 - 20	QC02974
MSD	Fluoride (mg/L)		1	2.5	2.54	96	2	80 - 120	0 - 20	QC02974
MSD	Sulfate (mg/L)		1	12.5	16.37	98	2	80 - 120	0 - 20	QC02974

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Phenolics (mg/L)	<0.07	1	0.8	0.782	98		80 - 120	0 - 20	QC02998
MSD	Phenolics (mg/L)	<0.07	1	0.8	0.832	104	6	80 - 120	0 - 20	QC02998

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00108	108		80 - 120	0 - 20	QC03058
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00107	107	1	80 - 120	0 - 20	QC03058

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Aluminum (mg/L)	0.11	1	2	1.98	94		75 - 125	0 - 20	QC03095
MS	Total Arsenic (mg/L)	<0.10	1	2	1.98	99		75 - 125	0 - 20	QC03095
MS	Total Barium (mg/L)	<0.10	1	2	1.91	96		75 - 125	0 - 20	QC03095
MS	Total Beryllium (mg/L)	<0.01	1	2	1.88	94		75 - 125	0 - 20	QC03095
MS	Total Boron (mg/L)	<0.75	1	2	1.91	96		75 - 125	0 - 20	QC03095
MS	Total Cadmium (mg/L)	<0.01	1	2	1.77	89		75 - 125	0 - 20	QC03095
MS	Total Calcium (mg/L)	733	1	1000	1863	113		75 - 125	0 - 20	QC03095
MS	Total Chromium (mg/L)	<0.05	1	2	1.87	94		75 - 125	0 - 20	QC03095
MS	Total Cobalt (mg/L)	<0.05	1	2	1.79	90		75 - 125	0 - 20	QC03095
MS	Total Copper (mg/L)	<0.10	1	2	1.96	98		75 - 125	0 - 20	QC03095

Artesia

N/A

Artesia,NM

MS	Total Iron (mg/L)	<0.10	1	2	1.98	99	75 - 125	0 - 20	QC03095
MS	Total Lead (mg/L)	<.005	1	2	1.76	88	75 - 125	0 - 20	QC03095
MS	Total Magnesium (mg/L)	206	1	1000	1213	101	75 - 125	0 - 20	QC03095
MS	Total Manganese (mg/L)	<0.10	1	2	1.89	95	75 - 125	0 - 20	QC03095
MS	Total Molybdenum (mg/L)	<0.10	1	2	1.88	94	75 - 125	0 - 20	QC03095
MS	Total Nickel (mg/L)	<0.10	1	2	1.89	95	75 - 125	0 - 20	QC03095
MS	Total Potassium (mg/L)	5.8	1	1000	1077	107	75 - 125	0 - 20	QC03095
MS	Total Selenium (mg/L)	0.02	1	2	1.95	97	75 - 125	0 - 20	QC03095
MS	Total Silver (mg/L)	<0.001	1	0.5	0.55	110	75 - 125	0 - 20	QC03095
MS	Total Sodium (mg/L)	110	1	1000	1124	101	75 - 125	0 - 20	QC03095
MS	Total Uranium (mg/L)	<0.10	1	2.5	2.76	110	75 - 125	0 - 20	QC03095
MS	Total Vanadium (mg/L)	<0.10	1	2	1.86	93	75 - 125	0 - 20	QC03095
MS	Total Zinc (mg/L)	<0.10	1	2	1.83	92	75 - 125	0 - 20	QC03095
MSD	Total Aluminum (mg/L)	0.11	1	2	1.98	94	0 75 - 125	0 - 20	QC03095
MSD	Total Arsenic (mg/L)	<0.10	1	2	1.98	99	0 75 - 125	0 - 20	QC03095
MSD	Total Barium (mg/L)	<0.10	1	2	1.91	96	0 75 - 125	0 - 20	QC03095
MSD	Total Beryllium (mg/L)	<0.01	1	2	1.82	91	3 75 - 125	0 - 20	QC03095
MSD	Total Boron (mg/L)	<0.75	1	2	1.88	94	2 75 - 125	0 - 20	QC03095
MSD	Total Cadmium (mg/L)	<0.01	1	2	1.76	88	1 75 - 125	0 - 20	QC03095
MSD	Total Calcium (mg/L)	733	1	1000	1804	107	5 75 - 125	0 - 20	QC03095
MSD	Total Chromium (mg/L)	<0.05	1	2	1.86	93	1 75 - 125	0 - 20	QC03095
MSD	Total Cobalt (mg/L)	<0.05	1	2	1.81	91	1 75 - 125	0 - 20	QC03095
MSD	Total Copper (mg/L)	<0.10	1	2	1.93	97	2 75 - 125	0 - 20	QC03095
MSD	Total Iron (mg/L)	<0.10	1	2	1.88	94	5 75 - 125	0 - 20	QC03095
MSD	Total Lead (mg/L)	<.005	1	2	1.77	89	1 75 - 125	0 - 20	QC03095
MSD	Total Magnesium (mg/L)	206	1	1000	1191	99	2 75 - 125	0 - 20	QC03095
MSD	Total Manganese (mg/L)	<0.10	1	2	1.88	94	1 75 - 125	0 - 20	QC03095
MSD	Total Molybdenum (mg/L)	<0.10	1	2	1.86	93	1 75 - 125	0 - 20	QC03095
MSD	Total Nickel (mg/L)	<0.10	1	100	1.89	95	0 75 - 125	0 - 20	QC03095
MSD	Total Potassium (mg/L)	5.8	1	1000	1079	107	164 75 - 125	0 - 20	QC03095
MSD	Total Selenium (mg/L)	0.02	1	2	1.68	83	15 75 - 125	0 - 20	QC03095
MSD	Total Silver (mg/L)	<0.001	1	0.5	0.54	108	2 75 - 125	0 - 20	QC03095
MSD	Total Sodium (mg/L)	110	1	1000	1110	100	1 75 - 125	0 - 20	QC03095
MSD	Total Uranium (mg/L)	<0.10	1	2.5	2.71	108	2 75 - 125	0 - 20	QC03095
MSD	Total Vanadium (mg/L)	<0.10	1	2	1.84	92	1 75 - 125	0 - 20	QC03095
MSD	Total Zinc (mg/L)	<0.10	1	2	1.82	91	1 75 - 125	0 - 20	QC03095

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Kjeldahl Nitrogen (mg/L)	<8.3	1	25	21.8	87		80 - 120	0 - 20	QC03172
MSD	Total Kjeldahl Nitrogen (mg/L)	<8.3	1	25	21.8	87	0	80 - 120	0 - 20	QC03172

Quality Control Report Duplicates

Report Date: 10/5/99
Artesia

Order ID Number: 99091606
N/A

Page Number: 7 of 11
Artesia, NM

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Biological Oxygen Demand (mg/L)	*	64	44	1	37	0 - 20	QC03043

* Biological Oxygen Demand - RPD was high. There may have been some contamination in the duplicate sample bottle.

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Biological Oxygen Demand (mg/L)	0.33	1	198	219	111		80 - 120	0 - 20	QC03043
LCSD Biological Oxygen Demand (mg/L)	0.33	1	198	222	112	1	80 - 120	0 - 20	QC03043

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00115	115		80 - 120	0 - 20	QC03058
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00119	119	3	80 - 120	0 - 20	QC03058

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Aluminum (mg/L)	<0.05	1	2	1.54	77		75 - 125	0 - 20	QC03095
LCS Total Arsenic (mg/L)	<0.10	1	2	1.65	83		75 - 125	0 - 20	QC03095
LCS Total Barium (mg/L)	<0.10	1	2	1.79	90		75 - 125	0 - 20	QC03095
LCS Total Beryllium (mg/L)	<0.01	1	2	1.74	87		75 - 125	0 - 20	QC03095
LCS Total Boron (mg/L)	<0.75	1	2	1.53	77		75 - 125	0 - 20	QC03095
LCS Total Cadmium (mg/L)	<0.01	1	2	1.82	91		75 - 125	0 - 20	QC03095
LCS Total Calcium (mg/L)	<0.50	1	100	103	103		75 - 125	0 - 20	QC03095
LCS Total Chromium (mg/L)	<0.05	1	2	1.77	89		75 - 125	0 - 20	QC03095
LCS Total Cobalt (mg/L)	<0.05	1	2	1.85	93		75 - 125	0 - 20	QC03095
LCS Total Copper (mg/L)	<0.10	1	2	1.75	88		75 - 125	0 - 20	QC03095
LCS Total Iron (mg/L)	<0.10	1	2	1.79	90		75 - 125	0 - 20	QC03095
LCS Total Lead (mg/L)	<0.005	1	2	1.81	91		75 - 125	0 - 20	QC03095
LCS Total Magnesium (mg/L)	<0.50	1	100	101	101		75 - 125	0 - 20	QC03095
LCS Total Manganese (mg/L)	<0.10	1	2	1.80	90		75 - 125	0 - 20	QC03095
LCS Total Molybdenum (mg/L)	<0.10	1	2	1.72	86		75 - 125	0 - 20	QC03095
LCS Total Nickel (mg/L)	<0.10	1	2	1.76	88		75 - 125	0 - 20	QC03095
LCS Total Potassium (mg/L)	<0.50	1	100	105	105		75 - 125	0 - 20	QC03095
LCS Total Selenium (mg/L)	<0.01	1	2	1.68	84		75 - 125	0 - 20	QC03095
LCS Total Silver (mg/L)	<0.001	1	0.5	0.53	106		75 - 125	0 - 20	QC03095
LCS Total Sodium (mg/L)	<0.50	1	100	102	102		75 - 125	0 - 20	QC03095
LCS Total Uranium (mg/L)	<0.10	1	2.5	2.50	100		75 - 125	0 - 20	QC03095
LCS Total Vanadium (mg/L)	<0.10	1	2	1.67	84		75 - 125	0 - 20	QC03095
LCS Total Zinc (mg/L)	<0.10	1	2	1.74	87		75 - 125	0 - 20	QC03095
LCSD Total Aluminum (mg/L)	<0.05	1	2	1.54	77	0	75 - 125	0 - 20	QC03095
LCSD Total Arsenic (mg/L)	<0.10	1	2	1.65	83	0	75 - 125	0 - 20	QC03095
LCSD Total Barium (mg/L)	<0.10	1	2	1.78	89	1	75 - 125	0 - 20	QC03095
LCSD Total Beryllium (mg/L)	<0.01	1	2	1.75	88	1	75 - 125	0 - 20	QC03095

Artesia

N/A

Artesia,NM

LCSD Total Boron (mg/L)	<0.75	1	2	1.54	77	1	75 - 125	0 - 20	QC03095
LCSD Total Cadmium (mg/L)	<0.01	1	2	1.81	91	1	75 - 125	0 - 20	QC03095
LCSD Total Calcium (mg/L)	<0.50	1	100	103	103	0	75 - 125	0 - 20	QC03095
LCSD Total Chromium (mg/L)	<0.05	1	2	1.77	89	0	75 - 125	0 - 20	QC03095
LCSD Total Cobalt (mg/L)	<0.05	1	2	1.84	92	1	75 - 125	0 - 20	QC03095
LCSD Total Copper (mg/L)	<0.10	1	2	1.74	87	1	75 - 125	0 - 20	QC03095
LCSD Total Iron (mg/L)	<0.10	1	2	1.78	89	1	75 - 125	0 - 20	QC03095
LCSD Total Lead (mg/L)	<0.005	1	2	1.80	90	1	75 - 125	0 - 20	QC03095
LCSD Total Magnesium (mg/L)	<0.50	1	100	100	100	1	75 - 125	0 - 20	QC03095
LCSD Total Manganese (mg/L)	<0.10	1	2	1.80	90	0	75 - 125	0 - 20	QC03095
LCSD Total Molybdenum (mg/L)	<0.10	1	2	1.71	86	1	75 - 125	0 - 20	QC03095
LCSD Total Nickel (mg/L)	<0.10	1	2	1.75	88	1	75 - 125	0 - 20	QC03095
LCSD Total Potassium (mg/L)	<0.50	1	100	107	107	2	75 - 125	0 - 20	QC03095
LCSD Total Selenium (mg/L)	<0.01	1	2	1.68	84	0	75 - 125	0 - 20	QC03095
LCSD Total Silver (mg/L)	<0.001	1	0.5	0.53	106	0	75 - 125	0 - 20	QC03095
LCSD Total Sodium (mg/L)	<0.50	1	100	104	104	2	75 - 125	0 - 20	QC03095
LCSD Total Uranium (mg/L)	<0.10	1	2.5	2.50	100	0	75 - 125	0 - 20	QC03095
LCSD Total Vanadium (mg/L)	<0.10	1	2	1.66	83	1	75 - 125	0 - 20	QC03095
LCSD Total Zinc (mg/L)	<0.10	1	2	1.73	87	1	75 - 125	0 - 20	QC03095

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		2400	160	7	80 - 120	9/23/99	QC03068

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Chemical Oxygen Demand (mg/L)		250	259	104	80 - 120	9/17/99	QC02970
CCV (1	Chemical Oxygen Demand (mg/L)		250	241	96	80 - 120	9/17/99	QC02970

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		2400	160	7	80 - 120	9/23/99	QC03068

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00108	108	80 - 120	9/17/99	QC03058
CCV (1	Total Mercury (mg/L)		0.001	0.00118	118	80 - 120	9/17/99	QC03058

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Phenolics (mg/L)		0.8	0.794	99	80 - 120	9/20/99	QC02998
CCV (1	Phenolics (mg/L)		0.8	0.784	98	80 - 120	9/20/99	QC02998

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Kjeldahl Nitrogen (mg/L)		5	4.82	96	80 - 120	9/30/99	QC03172
CCV (1	Total Kjeldahl Nitrogen (mg/L)		5	4.70	94	80 - 120	9/30/99	QC03172

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095
ICV	Total Arsenic (mg/L)		1	1.06	106	75 - 125	9/27/99	QC03095
ICV	Total Barium (mg/L)		1	1.09	109	75 - 125	9/27/99	QC03095
ICV	Total Beryllium (mg/L)		1	1.08	108	75 - 125	9/27/99	QC03095
ICV	Total Boron (mg/L)		1	1.07	107	75 - 125	9/27/99	QC03095
ICV	Total Cadmium (mg/L)		1	1.10	110	75 - 125	9/27/99	QC03095
ICV	Total Calcium (mg/L)		20	19.3	97	75 - 125	9/27/99	QC03095
ICV	Total Chromium (mg/L)		1	1.09	109	75 - 125	9/27/99	QC03095
ICV	Total Cobalt (mg/L)		1	1.08	108	75 - 125	9/27/99	QC03095

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Copper (mg/L)		1	1.07	107	75 - 125	9/27/99	QC03095
ICV	Total Iron (mg/L)		1	1.09	109	75 - 125	9/27/99	QC03095
ICV	Total Lead (mg/L)		1	1.08	108	75 - 125	9/27/99	QC03095
ICV	Total Magnesium (mg/L)		20	19.0	95	75 - 125	9/27/99	QC03095
ICV	Total Manganese (mg/L)		1	1.09	109	75 - 125	9/27/99	QC03095
ICV	Total Molybdenum (mg/L)		1	1.08	108	75 - 125	9/27/99	QC03095
ICV	Total Nickel (mg/L)		1	1.07	107	75 - 125	9/27/99	QC03095
ICV	Total Potassium (mg/L)		20	20.6	103	75 - 125	9/27/99	QC03095
ICV	Total Selenium (mg/L)		1	1.07	107	75 - 125	9/27/99	QC03095
ICV	Total Silver (mg/L)		0.2	0.214	107	75 - 125	9/27/99	QC03095
ICV	Total Sodium (mg/L)		20	19.3	97	75 - 125	9/27/99	QC03095
ICV	Total Uranium (mg/L)		1	0.181	18	75 - 125	9/27/99	QC03095
ICV	Total Vanadium (mg/L)		1	1.08	108	75 - 125	9/27/99	QC03095
ICV	Total Zinc (mg/L)		1	1.09	109	75 - 125	9/27/99	QC03095
CCV (1	Total Aluminum (mg/L)		1	0.98	98	75 - 125	9/27/99	QC03095
CCV (1	Total Arsenic (mg/L)		1	1.00	100	75 - 125	9/27/99	QC03095
CCV (1	Total Barium (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095
CCV (1	Total Beryllium (mg/L)		1	1.02	102	75 - 125	9/27/99	QC03095
CCV (1	Total Boron (mg/L)		1	0.97	97	75 - 125	9/27/99	QC03095
CCV (1	Total Cadmium (mg/L)		1	1.04	104	75 - 125	9/27/99	QC03095
CCV (1	Total Calcium (mg/L)		20	20.4	102	75 - 125	9/27/99	QC03095
CCV (1	Total Chromium (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095
CCV (1	Total Cobalt (mg/L)		1	1.04	104	75 - 125	9/27/99	QC03095
CCV (1	Total Copper (mg/L)		1	1.00	100	75 - 125	9/27/99	QC03095
CCV (1	Total Iron (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095
CCV (1	Total Lead (mg/L)		1	1.04	104	75 - 125	9/27/99	QC03095
CCV (1	Total Magnesium (mg/L)		20	20.2	101	75 - 125	9/27/99	QC03095
CCV (1	Total Manganese (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095
CCV (1	Total Molybdenum (mg/L)		1	1.02	102	75 - 125	9/27/99	QC03095
CCV (1	Total Nickel (mg/L)		1	1.02	102	75 - 125	9/27/99	QC03095
CCV (1	Total Potassium (mg/L)		20	21.2	106	75 - 125	9/27/99	QC03095
CCV (1	Total Selenium (mg/L)		1	1.02	102	75 - 125	9/27/99	QC03095
CCV (1	Total Silver (mg/L)		0.2	0.20	100	75 - 125	9/27/99	QC03095
CCV (1	Total Sodium (mg/L)		20	20.1	101	75 - 125	9/27/99	QC03095
CCV (1	Total Uranium (mg/L)		1	0.181	18	75 - 125	9/27/99	QC03095
CCV (1	Total Vanadium (mg/L)		1	1.01	101	75 - 125	9/27/99	QC03095
CCV (1	Total Zinc (mg/L)		1	1.03	103	75 - 125	9/27/99	QC03095

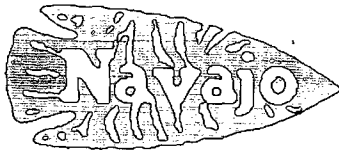
4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

Hold

(Circle or Specify Method No.)

10/5

5m 5530 A-D



REFINING COMPANY

FAX

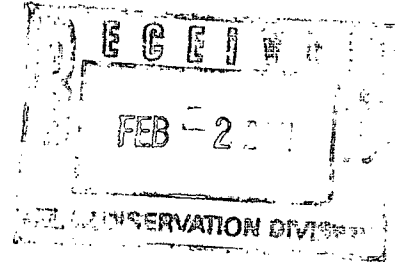
(505) 746-5283 DIV. ORDERS
(505) 746-5481 TRUCKING
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (505) 748-3311

FAX

(505) 746-5419 ACCOUNTING
(505) 746-5451 EXECUTIVE
(505) 746-5421 ENGINEERING
(505) 746-5480 P / L

January 31, 2001



Mr. Roger Anderson
NM Oil Conservation Division
Environmental Bureau
1220 S. St. Francis
Santa Fe, NM 87505

RE: FALL 2000 REPORT GROUND WATER SAMPLING AROUND EVAPORATION PONDS

Dear Roger:

Enclosed are results from our Fall 2000 sampling of the monitor wells around the evaporation ponds. This is on a staggered schedule per your letter of October 21, 1991. MW-1 was run over by pipeline digging equipment and is no longer useful. We can discuss if and/or when it will need to be replaced. The following is a summary of field observations:

<u>Well #</u>	<u>Ground water ft amsl</u>	<u>pH</u>	<u>EC umhos</u>	<u>Deg. C</u>	<u>Description</u>
MW-2A	3300.10	7.61	12100	17.9	Odor
MW-3	3299.10	7.05	12500	18.6	Moderate odor
MW-4	3298.99	7.84	11100	18.3	Mod. Odor
MW-5A	3298.28	7.83	12100	19.6	Odor, Silty
OCD-2A	3299.46	7.59	13100	19	Odor
OCD-4A	3298.78	7.64	13000	19.6	Odor
OCD-6A	3298.02	7.68	12000	20.	Mild odor
OCD-8A	3298.18	7.63	11100	19.3	Odor

If you have any questions, please contact me at 748-3311, extension 281.

Respectfully yours,
NAVAJO REFINING CO.

Darrell Moore

Darrell Moore
Environmental Mgr. for Water and Waste

Encl.
cc: USEPA

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: January 12, 2001

Order ID Number: A00122215

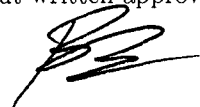
Project Number: N/A
Project Name: Evaporation Ponds
Project Location: Artesia

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
161401	OCD4	Water	12/20/00	10:40	12/22/00
161402	MW-2A	Water	12/20/00	10:00	12/22/00
161403	OCD-2	Water	12/20/00	10:30	12/22/00
161404	MW-3	Water	12/20/00	11:05	12/22/00
161405	MW-4	Water	12/20/00	9:15	12/22/00
161406	MW5A	Water	12/20/00	9:45	12/22/00
161407	OCD-8	Water	12/20/00	10:50	12/22/00
161408	OCD-6	Water	12/20/00	11:15	12/22/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 34 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 161401 - OCD4

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		208	mg/L as CaCo3	1	1
Total Alkalinity		208	mg/L as CaCo3	1	1

Sample: 161401 - OCD4

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.442	mg/L	5	0.10	88	72 - 128
4-BFB		0.484	mg/L	5	0.10	96	72 - 128

Sample: 161401 - OCD4

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		800	mg/L	1	0.50
Dissolved Magnesium		264	mg/L	1	0.50
Dissolved Potassium		78.7	mg/L	1	0.50
Dissolved Sodium		2500	mg/L	1	0.50

Sample: 161401 - OCD4

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07688 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06727 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161401 - OCD4

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07633 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	1	4700	mg/L	1	0.50
Fluoride		1.8	mg/L	1	0.20
Nitrate-N	2	<1.0	mg/L	1	0.20
Sulfate	3	3000	mg/L	1	0.50

Sample: 161401 - OCD4

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		<0.5	mg/L	1	0.50
Total Arsenic		0.01	mg/L	1	0.01
Total Barium		0.02	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		1.12	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		3.43	mg/L	1	0.02
Total Lead		0.01	mg/L	1	0.01
Total Manganese		0.19	mg/L	1	0.02
Total Molybdenum		0.01	mg/L	1	0.01
Total Nickel		0.01	mg/L	1	0.01
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161402 - MW-2A

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		600	mg/L as CaCo3	1	1
Total Alkalinity		600	mg/L as CaCo3	1	1

¹Chloride re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 1; matrix spikes %EA = 91.

²Sample out of hold time for NO3.

³Sulfate re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 95; CCV %IA = 95; matrix spikes RPD = 0; matrix spikes %EA = 91.

Sample: 161402 - MW-2A

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.915	mg/L	5	0.10	91	72 - 128
4-BFB		1.28	mg/L	5	0.10	128	72 - 128

Sample: 161402 - MW-2A

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		654	mg/L	1	0.50
Dissolved Magnesium		133	mg/L	1	0.50
Dissolved Potassium		14.0	mg/L	1	0.50
Dissolved Sodium		1900	mg/L	1	0.50

Sample: 161402 - MW-2A

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07688 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06727 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161402 - MW-2A

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07633 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	⁴	2300	mg/L	1	0.50
Fluoride		10	mg/L	1	0.20
Nitrate-N	⁵	1.0	mg/L	1	0.20
Sulfate	⁶	3600	mg/L	1	0.50

⁴Chloride re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 1; matrix spikes %EA = 91.

⁵Sample out of hold time for NO3.

⁶Sulfate re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 95; CCV %IA = 95; matrix spikes RPD = 0; matrix spikes %EA = 91.

Sample: 161402 - MW-2A

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		1.53	mg/L	1	0.50
Total Arsenic		0.26	mg/L	1	0.01
Total Barium		0.02	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		<0.5	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.14	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		11.2	mg/L	1	0.02
Total Lead		0.01	mg/L	1	0.01
Total Manganese		2.43	mg/L	1	0.02
Total Molybdenum		0.01	mg/L	1	0.01
Total Nickel		0.05	mg/L	1	0.01
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.02	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161403 - OCD-2

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		536	mg/L as CaCo3	1	1
Total Alkalinity		536	mg/L as CaCo3	1	1

Sample: 161403 - OCD-2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.888	mg/L	5	0.10	88	72 - 128
4-BFB		1.03	mg/L	5	0.10	103	72 - 128

Sample: 161403 - OCD-2

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		675	mg/L	1	0.50
Dissolved Magnesium		416	mg/L	1	0.50
Dissolved Potassium		14.0	mg/L	1	0.50
Dissolved Sodium		2760	mg/L	1	0.50

Sample: 161403 - OCD-2

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07688 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06727 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161403 - OCD-2

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07633 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	7	4500	mg/L	1	0.50
Fluoride		2.0	mg/L	1	0.20
Nitrate-N	8	<1.0	mg/L	1	0.20
Sulfate	9	4200	mg/L	1	0.50

Sample: 161403 - OCD-2

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		2.11	mg/L	1	0.50
Total Arsenic		0.05	mg/L	1	0.01
Total Barium		0.03	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.51	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		<0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		8.8	mg/L	1	0.02
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		1.76	mg/L	1	0.02
Total Molybdenum		0.01	mg/L	1	0.01
Total Nickel		0.02	mg/L	1	0.01

Continued ...

⁷Chloride re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 1; matrix spikes %EA = 91.

⁸Sample out of hold time for NO3.

⁹Sulfate re-ran on IC122600-1.sch (PB06725; QC07683). ICV %IA = 95; CCV %IA = 95; matrix spikes RPD = 0; matrix spikes %EA = 91.

... Continued Sample: 161403 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161404 - MW-3

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		293	mg/L as CaCo3	1	1
Total Alkalinity		293	mg/L as CaCo3	1	1

Sample: 161404 - MW-3

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		0.023	mg/L	5	0.001
Total BTEX		0.023	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.849	mg/L	5	0.10	84	72 - 128
4-BFB	¹⁰	1.52	mg/L	5	0.10	1520	72 - 128

Sample: 161404 - MW-3

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		546	mg/L	1	0.50
Dissolved Magnesium		211	mg/L	1	0.50
Dissolved Potassium		10.9	mg/L	1	0.50
Dissolved Sodium		848	mg/L	1	0.50

Sample: 161404 - MW-3

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07689 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06728 Date Prepared: 12/27/00

¹⁰Surrogate out of limits due to matrix effect.

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161404 - MW-3

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07633 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	11	1200	mg/L	1	0.50
Fluoride		2.6	mg/L	1	0.20
Nitrate-N	12	<1.0	mg/L	1	0.20
Sulfate	13	2700	mg/L	1	0.50

Sample: 161404 - MW-3

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		10.5	mg/L	1	0.50
Total Arsenic		0.12	mg/L	1	0.01
Total Barium		0.22	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.81	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.03	mg/L	1	0.005
Total Cobalt		0.02	mg/L	1	0.01
Total Copper		0.02	mg/L	1	0.01
Total Iron		9.82	mg/L	1	0.02
Total Lead		0.02	mg/L	1	0.01
Total Manganese		3.09	mg/L	1	0.02
Total Molybdenum		0.03	mg/L	1	0.01
Total Nickel		0.04	mg/L	1	0.01
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.03	mg/L	1	0.01
Total Zinc		0.5	mg/L	1	0.10

Sample: 161405 - MW-4

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC07893 Date Analyzed: 1/4/01
Analyst: MA Preparation Method: E 3510C Prep Batch: PB06905 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.005	mg/L	1	0.005
n-Nitrosodimethylamine		<0.005	mg/L	1	0.005
2-Picoline		<0.005	mg/L	1	0.005

Continued ...

¹¹ Chloride re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 94.

¹² Sample out of hold time for NO3.

¹³ Sulfate re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 95; CCV %IA = 96; matrix spikes RPD = 3; matrix spikes %EA = 96.

... Continued Sample: 161405 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Methyl methanesulfonate		<0.005	mg/L	1	0.005
Ethyl methanesulfonate		<0.005	mg/L	1	0.005
Phenol		<0.005	mg/L	1	0.005
Aniline		<0.005	mg/L	1	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	1	0.005
2-Chlorophenol		<0.005	mg/L	1	0.005
1,3-Dichlorobenzene		<0.005	mg/L	1	0.005
1,4-Dichlorobenzene		<0.005	mg/L	1	0.005
Benzyl alcohol		<0.005	mg/L	1	0.005
1,2-Dichlorobenzene		<0.005	mg/L	1	0.005
2-Methylphenol		<0.005	mg/L	1	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	1	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	1	0.005
Acetophenone		<0.005	mg/L	1	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	1	0.005
Hexachloroethane		<0.005	mg/L	1	0.005
Nitrobenzene		<0.005	mg/L	1	0.005
n-Nitrosopiperidine		<0.005	mg/L	1	0.005
Isophorone		<0.005	mg/L	1	0.005
2-Nitrophenol		<0.005	mg/L	1	0.005
2,4-Dimethylphenol		<0.005	mg/L	1	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	1	0.005
Benzoic acid		<0.005	mg/L	1	0.005
2,4-Dichlorophenol		<0.005	mg/L	1	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	1	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	1	0.005
Naphthalene		<0.005	mg/L	1	0.005
4-Chloroaniline		<0.005	mg/L	1	0.005
2,6-Dichlorophenol		<0.005	mg/L	1	0.005
Hexachlorobutadiene		<0.005	mg/L	1	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	1	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	1	0.005
1-Methylnaphthalene		<0.005	mg/L	1	0.005
2-Methylnaphthalene		<0.005	mg/L	1	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	1	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	1	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	1	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	1	0.005
2-Chloronaphthalene		<0.005	mg/L	1	0.005
1-Chloronaphthalene		<0.005	mg/L	1	0.005
2-Nitroaniline		<0.005	mg/L	1	0.005
Dimethylphthalate		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
2,6-Dinitrotoluene		<0.005	mg/L	1	0.005
3-Nitroaniline		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
2,4-Dinitrophenol		<0.005	mg/L	1	0.005
Dibenzofuran		<0.005	mg/L	1	0.005
Pentachlorobenzene		<0.005	mg/L	1	0.005
4-Nitrophenol		<0.005	mg/L	1	0.005
1-Naphthylamine		<0.005	mg/L	1	0.005
2,4-Dinitrotoluene		<0.005	mg/L	1	0.005
2-Naphthylamine		<0.005	mg/L	1	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	1	0.005

Continued ...

... Continued Sample: 161405 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Fluorene		<0.005	mg/L	1	0.005
Diethylphthalate		<0.005	mg/L	1	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	1	0.005
4-Nitroaniline		<0.005	mg/L	1	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	1	0.005
Diphenylamine		<0.005	mg/L	1	0.005
Diphenylhydrazine		<0.005	mg/L	1	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	1	0.005
Phenacetin		<0.005	mg/L	1	0.005
Hexachlorobenzene		<0.005	mg/L	1	0.005
4-Aminobiphenyl		<0.005	mg/L	1	0.005
Pentachlorophenol		<0.005	mg/L	1	0.005
Pentachloronitrobenzene		<0.005	mg/L	1	0.005
Pronamide		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Di-n-butylphthalate		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Benzidine		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	1	0.005
Butylbenzylphthalate		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	1	0.005
Di-n-octylphthalate		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
3-Methylcholanthrene		<0.005	mg/L	1	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		16.68	mg/L	1	80	20	8 - 73
Phenol-d5		12.99	mg/L	1	80	16	8 - 62
Nitrobenzene-d5		57.72	mg/L	1	80	72	44 - 109
2-Fluorobiphenyl		56.16	mg/L	1	80	70	45 - 109
2,4,6-Tribromophenol		56.42	mg/L	1	80	70	39 - 132
Terphenyl-d14		65.78	mg/L	1	80	82	46 - 121

Sample: 161405 - MW-4

Analysis: Alkalinity	Analytical Method: E 310.1	QC Batch: QC07727	Date Analyzed: 12/28/00
Analyst: JS	Preparation Method: N/A	Prep Batch: PB06758	Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1

Continued ...

... Continued Sample: 161405 Analysis: Alkalinity

Param	Flag	Result	Units	Dilution	RDL
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		213	mg/L as CaCo3	1	1
Total Alkalinity		213	mg/L as CaCo3	1	1

Sample: 161405 - MW-4

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		0.021	mg/L	5	0.001
M,P,O-Xylene		0.073	mg/L	5	0.001
Total BTEX		0.094	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.852	mg/L	5	0.10	85	72 - 128
4-BFB		1.04	mg/L	5	0.10	104	72 - 128

Sample: 161405 - MW-4

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		354	mg/L	1	0.50
Dissolved Magnesium		137	mg/L	1	0.50
Dissolved Potassium		6.07	mg/L	1	0.50
Dissolved Sodium		769	mg/L	1	0.50

Sample: 161405 - MW-4

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07689 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06728 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161405 - MW-4

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07633 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	¹⁴	1200	mg/L	1	0.50

Continued ...

¹⁴Chloride re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 94.

... Continued Sample: 161405 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Fluoride		2.5	mg/L	1	0.20
Nitrate-N	15	<1.0	mg/L	1	0.20
Sulfate	16	1700	mg/L	1	0.50

Sample: 161405 - MW-4

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		<0.5	mg/L	1	0.50
Total Arsenic		0.11	mg/L	1	0.01
Total Barium		<0.01	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		<0.5	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		2.22	mg/L	1	0.02
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		1.74	mg/L	1	0.02
Total Molybdenum		<0.01	mg/L	1	0.01
Total Nickel		0.01	mg/L	1	0.01
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161406 - MW5A

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		377	mg/L as CaCo3	1	1
Total Alkalinity		377	mg/L as CaCo3	1	1

Sample: 161406 - MW5A

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001

Continued ...

¹⁵Sample out of hold time for NO3.

¹⁶Sulfate re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 95; CCV %IA = 96; matrix spikes RPD = 3; matrix spikes %EA = 96.

... Continued Sample: 161406 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		0.058	mg/L	5	0.001
Total BTEX		0.058	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.449	mg/L	5	0.10	89	72 - 128
4-BFB	17	1.82	mg/L	5	0.10	1820	72 - 128

Sample: 161406 - MW5A

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		496	mg/L	1	0.50
Dissolved Magnesium		899	mg/L	1	0.50
Dissolved Potassium		16.6	mg/L	1	0.50
Dissolved Sodium		3950	mg/L	1	0.50

Sample: 161406 - MW5A

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07689 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06728 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161406 - MW5A

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07634 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	18	4100	mg/L	1	0.50
Fluoride		5.2	mg/L	1	0.20
Nitrate-N	19	<1.0	mg/L	1	0.20
Sulfate	20	8000	mg/L	1	0.50

Sample: 161406 - MW5A

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

¹⁷Surrogate out of limits due to matrix effect.

¹⁸Chloride re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 94.

¹⁹Sample out of hold time for NO3.

²⁰Sulfate re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 95; CCV %IA = 96; matrix spikes RPD = 3; matrix spikes %EA = 96.

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		0.89	mg/L	1	0.50
Total Arsenic		0.07	mg/L	1	0.01
Total Barium		<0.01	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		1.54	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.006	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		4.27	mg/L	1	0.02
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		1.43	mg/L	1	0.02
Total Molybdenum		0.07	mg/L	1	0.01
Total Nickel		0.02	mg/L	1	0.01
Total Selenium		<0.01	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161407 - OCD-8

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		398	mg/L as CaCo3	1	1
Total Alkalinity		398	mg/L as CaCo3	1	1

Sample: 161407 - OCD-8

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		0.014	mg/L	5	0.001
Total BTEX		0.014	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.879	mg/L	5	0.10	87	72 - 128
4-BFB	21	1.31	mg/L	5	0.10	1310	72 - 128

²¹Surrogate out of limits due to matrix effect.

Sample: 161407 - OCD-8

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		608	mg/L	1	0.50
Dissolved Magnesium		312	mg/L	1	0.50
Dissolved Potassium		13.4	mg/L	1	0.50
Dissolved Sodium		1660	mg/L	1	0.50

Sample: 161407 - OCD-8

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07689 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06728 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161407 - OCD-8

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07634 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	²²	2600	mg/L	1	0.50
Fluoride		3.4	mg/L	1	0.20
Nitrate-N	²³	<1.0	mg/L	1	0.20
Sulfate	²⁴	3500	mg/L	1	0.50

Sample: 161407 - OCD-8

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		3.36	mg/L	1	0.50
Total Arsenic		0.08	mg/L	1	0.01
Total Barium		0.03	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.68	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		0.007	mg/L	1	0.005
Total Cobalt		0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		4.1	mg/L	1	0.02
Total Lead		0.01	mg/L	1	0.01
Total Manganese		3.14	mg/L	1	0.02
Total Molybdenum		0.02	mg/L	1	0.01
Total Nickel		0.04	mg/L	1	0.01

Continued ...

²²Chloride re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 94.

²³Sample out of hold time for NO3.

²⁴Sulfate re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 95; CCV %IA = 96; matrix spikes RPD = 3; matrix spikes %EA = 96.

... Continued Sample: 161407 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Selenium		< 0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 161408 - OCD-6

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC07727 Date Analyzed: 12/28/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06758 Date Prepared: 12/28/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		621	mg/L as CaCo3	1	1
Total Alkalinity		621	mg/L as CaCo3	1	1

Sample: 161408 - OCD-6

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC07891 Date Analyzed: 1/3/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB06900 Date Prepared: 1/3/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		0.014	mg/L	5	0.001
Total BTEX		0.014	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.828	mg/L	5	0.10	82	72 - 128
4-BFB		1.08	mg/L	5	0.10	108	72 - 128

Sample: 161408 - OCD-6

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC08027 Date Analyzed: 1/3/01
Analyst: SSC Preparation Method: E 3005A Prep Batch: PB06785 Date Prepared: 12/29/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		571	mg/L	1	0.50
Dissolved Magnesium		197	mg/L	1	0.50
Dissolved Potassium		53.4	mg/L	1	0.50
Dissolved Sodium		2420	mg/L	1	0.50

Sample: 161408 - OCD-6

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC07689 Date Analyzed: 12/27/00
Analyst: SSC Preparation Method: N/A Prep Batch: PB06728 Date Prepared: 12/27/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 161408 - OCD-6

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC07634 Date Analyzed: 12/22/00
Analyst: JS Preparation Method: N/A Prep Batch: PB06677 Date Prepared: 12/22/00

Param	Flag	Result	Units	Dilution	RDL
CL	25	2600	mg/L	1	0.50
Fluoride		5.5	mg/L	1	0.20
Nitrate-N	26	<1.0	mg/L	1	0.20
Sulfate	27	3900	mg/L	1	0.50

Sample: 161408 - OCD-6

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC07700 Date Analyzed: 12/28/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB06674 Date Prepared: 12/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		1.08	mg/L	1	0.50
Total Arsenic		0.21	mg/L	1	0.01
Total Barium		0.02	mg/L	1	0.01
Total Beryllium		<0.01	mg/L	1	0.01
Total Boron		0.52	mg/L	1	0.50
Total Cadmium		<0.002	mg/L	1	0.002
Total Chromium		<0.005	mg/L	1	0.005
Total Cobalt		<0.01	mg/L	1	0.01
Total Copper		<0.01	mg/L	1	0.01
Total Iron		11.2	mg/L	1	0.02
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		1.97	mg/L	1	0.02
Total Molybdenum		0.01	mg/L	1	0.01
Total Nickel		0.02	mg/L	1	0.01
Total Selenium		<0.01	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Uranium		<0.5	mg/L	1	0.50
Total Vanadium		0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Quality Control Report Method Blank

Sample: Method Blank

QC Batch: QC07633

²⁵Chloride re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 94; CCV %IA = 94; matrix spikes RPD = 0; matrix spikes %EA = 94.

²⁶Sample out of hold time for NO3.

²⁷Sulfate re-ran on IC122600-3.sch (PB06725; QC07685). ICV %IA = 95; CCV %IA = 96; matrix spikes RPD = 3; matrix spikes %EA = 96.

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

Sample: Method Blank QCBatch: QC07634

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

Sample: Method Blank QCBatch: QC07688

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Sample: Method Blank QCBatch: QC07689

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Sample: Method Blank QCBatch: QC07700

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.5	mg/L	0.50
Total Arsenic		<0.01	mg/L	0.01
Total Barium		<0.01	mg/L	0.01
Total Beryllium		<0.01	mg/L	0.01
Total Boron		<0.5	mg/L	0.50
Total Cadmium		<0.002	mg/L	0.002
Total Chromium		<0.005	mg/L	0.005
Total Cobalt		<0.01	mg/L	0.01
Total Copper		<0.01	mg/L	0.01
Total Iron		<0.02	mg/L	0.02
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.02	mg/L	0.02
Total Molybdenum		<0.01	mg/L	0.01
Total Nickel		<0.01	mg/L	0.01
Total Selenium		<0.05	mg/L	0.05
Total Silver		<0.01	mg/L	0.01

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Param	Flag	Results	Units	Reporting Limit
Total Uranium		<0.5	mg/L	0.50
Total Vanadium		<0.01	mg/L	0.01
Total Zinc		<0.1	mg/L	0.10

Sample: Method Blank

QCBatch: QC07727

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Sample: Method Blank

QCBatch: QC07891

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		<0.001	mg/L	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		0.092	mg/L	0.10	92	72 - 128
4-BFB		0.127	mg/L	0.10	127	72 - 128

Sample: Method Blank

QCBatch: QC07893

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.005	mg/L	0.005
n-Nitrosodimethylamine		<0.005	mg/L	0.005
2-Picoline		<0.005	mg/L	0.005
Methyl methanesulfonate		<0.005	mg/L	0.005
Ethyl methanesulfonate		<0.005	mg/L	0.005
Phenol		<0.005	mg/L	0.005
Aniline		<0.005	mg/L	0.005
bis (2-chloroethyl) ether		<0.005	mg/L	0.005
2-Chlorophenol		<0.005	mg/L	0.005
1,3-Dichlorobenzene		<0.005	mg/L	0.005
1,4-Dichlorobenzene		<0.005	mg/L	0.005
Benzyl alcohol		<0.005	mg/L	0.005
1,2-Dichlorobenzene		<0.005	mg/L	0.005
2-Methylphenol		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005
4-Methylphenol/3-Methylphenol		<0.005	mg/L	0.005
Acetophenone		<0.005	mg/L	0.005
n-Nitrosodi-n-propylamine		<0.005	mg/L	0.005
Hexachloroethane		<0.005	mg/L	0.005
Nitrobenzene		<0.005	mg/L	0.005
n-Nitrosopiperidine		<0.005	mg/L	0.005
Isophorone		<0.005	mg/L	0.005
2-Nitrophenol		<0.005	mg/L	0.005
2,4-Dimethylphenol		<0.005	mg/L	0.005
bis (2-chloroethoxy) methane		<0.005	mg/L	0.005
Benzoic acid		<0.005	mg/L	0.005
2,4-Dichlorophenol		<0.005	mg/L	0.005
1,2,4-Trichlorobenzene		<0.005	mg/L	0.005
a,a-Dimethylphenethylamine		<0.005	mg/L	0.005
Naphthalene		<0.005	mg/L	0.005
4-Chloroaniline		<0.005	mg/L	0.005
2,6-Dichlorophenol		<0.005	mg/L	0.005
Hexachlorobutadiene		<0.005	mg/L	0.005
n-Nitroso-di-n-butylamine		<0.005	mg/L	0.005
4-Chloro-3-methylphenol		<0.005	mg/L	0.005
1-Methylnaphthalene		<0.005	mg/L	0.005
2-Methylnaphthalene		<0.005	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.005	mg/L	0.005
Hexachlorocyclopentadiene		<0.005	mg/L	0.005
2,4,6-Trichlorophenol		<0.005	mg/L	0.005
2,4,5-Trichlorophenol		<0.005	mg/L	0.005
2-Chloronaphthalene		<0.005	mg/L	0.005
1-Chloronaphthalene		<0.005	mg/L	0.005
2-Nitroaniline		<0.005	mg/L	0.005
Dimethylphthalate		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
2,6-Dinitrotoluene		<0.005	mg/L	0.005
3-Nitroaniline		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
2,4-Dinitrophenol		<0.005	mg/L	0.005
Dibenzofuran		<0.005	mg/L	0.005
Pentachlorobenzene		<0.005	mg/L	0.005
4-Nitrophenol		<0.005	mg/L	0.005
1-Naphthylamine		<0.005	mg/L	0.005
2,4-Dinitrotoluene		<0.005	mg/L	0.005
2-Naphthylamine		<0.005	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Diethylphthalate		<0.005	mg/L	0.005
4-Chlorophenyl-phenylether		<0.005	mg/L	0.005
4-Nitroaniline		<0.005	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.005	mg/L	0.005
Diphenylamine		<0.005	mg/L	0.005
Diphenylhydrazine		<0.005	mg/L	0.005
4-Bromophenyl-phenylether		<0.005	mg/L	0.005
Phenacetin		<0.005	mg/L	0.005
Hexachlorobenzene		<0.005	mg/L	0.005

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Param	Flag	Results	Units	Reporting Limit
4-Aminobiphenyl		<0.005	mg/L	0.005
Pentachlorophenol		<0.005	mg/L	0.005
Pentachloronitrobenzene		<0.005	mg/L	0.005
Pronamide		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Di-n-butylphthalate		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Benzidine		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
p-Dimethylaminoazobenzene		<0.005	mg/L	0.005
Butylbenzylphthalate		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
3,3-Dichlorobenzidine		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Bis (2-ethylhexyl) phthalate		<0.005	mg/L	0.005
Di-n-octylphthalate		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.005	mg/L	0.005
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
3-Methylcholanthrene		<0.005	mg/L	0.005
Dibenzo(a,j)acridine		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		22.95	mg/L	80	28	8 - 73
Phenol-d5		19.13	mg/L	80	23	8 - 62
Nitrobenzene-d5		57.53	mg/L	80	71	44 - 109
2-Fluorobiphenyl		54.66	mg/L	80	68	45 - 109
2,4,6-Tribromophenol		52.24	mg/L	80	65	39 - 132
Terphenyl-d14		65.67	mg/L	80	82	46 - 121

Sample: Method Blank

QCBatch: QC08027

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.05	mg/L	0.50
Dissolved Magnesium		<0.05	mg/L	0.50
Dissolved Potassium		<0.05	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC07633

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		11.78	mg/L	1	12.50	<0.5	94		80 - 120	25
Fluoride		2.44	mg/L	1	2.50	<0.2	97		80 - 120	20
Nitrate-N		2.39	mg/L	1	2.50	<0.2	95		80 - 120	20
Sulfate		12.02	mg/L	1	12.50	<0.5	96		80 - 120	20

Sample: LCSD QC Batch: QC07633

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		11.76	mg/L	1	12.50	<0.5	94	0	80 - 120	25
Fluoride		2.45	mg/L	1	2.50	<0.2	98	0	80 - 120	20
Nitrate-N		2.39	mg/L	1	2.50	<0.2	95	0	80 - 120	20
Sulfate		12.02	mg/L	1	12.50	<0.5	96	0	80 - 120	20

Sample: LCS QC Batch: QC07634

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Fluoride		2.44	mg/L	1	2.50	<0.2	97		80 - 120	20
Nitrate-N		2.41	mg/L	1	2.50	<0.2	96		80 - 120	20

Sample: LCSD QC Batch: QC07634

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Fluoride		2.46	mg/L	1	2.50	<0.2	98	1	80 - 120	20
Nitrate-N		2.40	mg/L	1	2.50	<0.2	96	0	80 - 120	20

Sample: LCS QC Batch: QC07688

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00106	mg/L	1	0.001	<0.0002	106		80 - 120	20

Sample: LCSD QC Batch: QC07688

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00098	mg/L	1	0.001	<0.0002	98	8	80 - 120	20

Sample: LCS

QC Batch: QC07689

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00106	mg/L	1	0.001	<0.0002	106		80 - 120	20

Sample: LCSD

QC Batch: QC07689

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00107	mg/L	1	0.001	<0.0002	107	1	80 - 120	20

Sample: LCS

QC Batch: QC07700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		1.94	mg/L	1	2	<0.5	97		75 - 125	20
Total Arsenic		0.971	mg/L	1	1	<0.01	97		75 - 125	20
Total Barium		2.05	mg/L	1	2	<0.01	102		75 - 125	20
Total Beryllium		0.195	mg/L	1	0.20	<0.01	97		75 - 125	20
Total Boron		0.908	mg/L	1	1	<0.5	90		75 - 125	20
Total Cadmium		0.2	mg/L	1	0.20	<0.002	98		75 - 125	20
Total Chromium		0.421	mg/L	1	0.40	<0.005	103		75 - 125	20
Total Cobalt		1.01	mg/L	1	1	<0.01	101		75 - 125	20
Total Copper		0.397	mg/L	1	0.40	<0.01	99		75 - 125	20
Total Iron		2.09	mg/L	1	2	<0.02	104		75 - 125	20
Total Lead		1	mg/L	1	1	<0.01	100		75 - 125	20
Total Manganese		0.204	mg/L	1	0.20	<0.02	101		75 - 125	20
Total Molybdenum		1.02	mg/L	1	1	<0.01	101		75 - 125	20
Total Nickel		0.986	mg/L	1	1	<0.01	98		75 - 125	20
Total Selenium		0.881	mg/L	1	1	<0.05	86		75 - 125	20
Total Silver		0.196	mg/L	1	0.20	<0.01	98		75 - 125	20
Total Uranium		2.09	mg/L	1	2	<0.5	104		75 - 125	20
Total Vanadium		1.01	mg/L	1	1	<0.01	101		75 - 125	20
Total Zinc		0.214	mg/L	1	0.20	<0.1	107		75 - 125	20

Sample: LCSD

QC Batch: QC07700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2	mg/L	1	2	<0.5	100	3	75 - 125	20
Total Arsenic		0.999	mg/L	1	1	<0.01	99	3	75 - 125	20
Total Barium		2.11	mg/L	1	2	<0.01	105	3	75 - 125	20
Total Beryllium		0.2	mg/L	1	0.20	<0.01	100	2	75 - 125	20
Total Boron		0.987	mg/L	1	1	<0.5	98	8	75 - 125	20
Total Cadmium		0.204	mg/L	1	0.20	<0.002	100	2	75 - 125	20
Total Chromium		0.431	mg/L	1	0.40	<0.005	105	2	75 - 125	20
Total Cobalt		1.03	mg/L	1	1	<0.01	103	2	75 - 125	20
Total Copper		0.399	mg/L	1	0.40	<0.01	99	0	75 - 125	20
Total Iron		2.15	mg/L	1	2	<0.02	107	3	75 - 125	20
Total Lead		1.04	mg/L	1	1	<0.01	104	4	75 - 125	20
Total Manganese		0.21	mg/L	1	0.20	<0.02	104	3	75 - 125	20
Total Molybdenum		1.04	mg/L	1	1	<0.01	103	2	75 - 125	20
Total Nickel		1.02	mg/L	1	1	<0.01	102	3	75 - 125	20
Total Selenium		0.914	mg/L	1	1	<0.05	89	4	75 - 125	20
Total Silver		0.203	mg/L	1	0.20	<0.01	101	4	75 - 125	20
Total Uranium		2.14	mg/L	1	2	<0.5	107	2	75 - 125	20
Total Vanadium		1.04	mg/L	1	1	<0.01	104	3	75 - 125	20
Total Zinc		0.216	mg/L	1	0.20	<0.1	108	1	75 - 125	20

Sample: LCS

QC Batch: QC07891

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.106	mg/L	1	0.10	<0.001	106		80 - 120	20
Benzene		0.104	mg/L	1	0.10	<0.001	104		80 - 120	20
Toluene		0.101	mg/L	1	0.10	<0.001	101		80 - 120	20
Ethylbenzene		0.104	mg/L	1	0.10	<0.001	104		80 - 120	20
M,P,O-Xylene		0.309	mg/L	1	0.30	<0.001	103		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.1	mg/L	1	0.10	100	72 - 128
4-BFB		0.114	mg/L	1	0.10	114	72 - 128

Sample: LCSD

QC Batch: QC07891

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.109	mg/L	1	0.10	<0.001	109	3	80 - 120	20
Benzene		0.104	mg/L	1	0.10	<0.001	104	0	80 - 120	20
Toluene		0.101	mg/L	1	0.10	<0.001	101	0	80 - 120	20
Ethylbenzene		0.107	mg/L	1	0.10	<0.001	107	3	80 - 120	20
M,P,O-Xylene		0.326	mg/L	1	0.30	<0.001	108	5	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.099	mg/L	1	0.10	99	72 - 128
4-BFB		0.119	mg/L	1	0.10	119	72 - 128

Sample: LCS

QC Batch: QC07893

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenol		19.706	mg/L	1	80	<0.005	24		5 - 57	20
2-Chlorophenol		52.970	mg/L	1	80	<0.005	66		29 - 110	20
1,4-Dichlorobenzene		54.666	mg/L	1	80	<0.005	68		25 - 94	20
n-Nitrosodi-n-propylamine		64.809	mg/L	1	80	<0.005	81		36 - 119	20
1,2,4-Trichlorobenzene		58.895	mg/L	1	80	<0.005	73		28 - 110	20
4-Chloro-3-methylphenol		56.814	mg/L	1	80	<0.005	71		40 - 126	20
Acenaphthene		62.884	mg/L	1	80	<0.005	78		47 - 118	20
4-Nitrophenol		20.059	mg/L	1	80	<0.005	25		0 - 69	20
2,4-Dinitrotoluene		64.582	mg/L	1	80	<0.005	80		46 - 133	20
Pentachlorophenol		62.424	mg/L	1	80	<0.005	78		21 - 131	20
Pyrene		74.951	mg/L	1	80	<0.005	93		44 - 125	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		31.00	mg/L	1	80	38	8 - 73
Phenol-d5		20.08	mg/L	1	80	25	8 - 62
Nitrobenzene-d5		61.54	mg/L	1	80	76	44 - 109
2-Fluorobiphenyl		59.18	mg/L	1	80	73	45 - 109
2,4,6-Tribromophenol		67.36	mg/L	1	80	84	39 - 132
Terphenyl-d14		74.61	mg/L	1	80	93	46 - 121

Sample: LCSD

QC Batch: QC07893

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Phenol		19.869	mg/L	1	80	<0.005	24	1	5 - 57	20
2-Chlorophenol		52.923	mg/L	1	80	<0.005	66	0	29 - 110	20
1,4-Dichlorobenzene		54.436	mg/L	1	80	<0.005	68	0	25 - 94	20
n-Nitrosodi-n-propylamine		68.087	mg/L	1	80	<0.005	85	5	36 - 119	20
1,2,4-Trichlorobenzene		58.258	mg/L	1	80	<0.005	72	1	28 - 110	20
4-Chloro-3-methylphenol		57.812	mg/L	1	80	<0.005	72	2	40 - 126	20
Acenaphthene		63.689	mg/L	1	80	<0.005	79	1	47 - 118	20
4-Nitrophenol		19.679	mg/L	1	80	<0.005	24	2	0 - 69	20
2,4-Dinitrotoluene		65.578	mg/L	1	80	<0.005	81	2	46 - 133	20
Pentachlorophenol		62.744	mg/L	1	80	<0.005	78	0	21 - 131	20
Pyrene		76.496	mg/L	1	80	<0.005	95	2	44 - 125	20

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Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		30.12	mg/L	1	80	37	8 - 73
Phenol-d5		19.96	mg/L	1	80	24	8 - 62
Nitrobenzene-d5		61.59	mg/L	1	80	76	44 - 109
2-Fluorobiphenyl		59.37	mg/L	1	80	74	45 - 109
2,4,6-Tribromophenol		65.96	mg/L	1	80	82	39 - 132
Terphenyl-d14		75.43	mg/L	1	80	94	46 - 121

Sample: LCS

QC Batch: QC08027

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1010	mg/L	1	1000	<0.05	101		75 - 125	20
Dissolved Magnesium		1010	mg/L	1	1000	<0.05	101		75 - 125	20
Dissolved Potassium		1050	mg/L	1	1000	<0.05	105		75 - 125	20
Dissolved Sodium		1070	mg/L	1	1000	<0.5	107		75 - 125	20

Sample: LCSD

QC Batch: QC08027

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1020	mg/L	1	1000	<0.05	102	1	75 - 125	20
Dissolved Magnesium		1010	mg/L	1	1000	<0.05	101	0	75 - 125	20
Dissolved Potassium		1050	mg/L	1	1000	<0.05	105	0	75 - 125	20
Dissolved Sodium		1050	mg/L	1	1000	<0.5	105	2	75 - 125	20

Quality Control Report
Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC07633

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		266.93	mg/L	1	125	150	93		82 - 100	25
Fluoride		25.12	mg/L	1	25		100		81 - 109	20
Fluoride		25.12	mg/L	1	25	<1.0	100		81 - 109	20
Nitrate-N		24.74	mg/L	1	25		98		74 - 111	20
Nitrate-N		24.74	mg/L	1	25	<1.0	98		74 - 111	20
Sulfate		331.21	mg/L	1	125		88		81 - 106	20
Sulfate		331.21	mg/L	1	125	220	88		81 - 106	20

Sample: MSD

QC Batch: QC07633

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		267.17	mg/L	1	125	150	93	0	82 - 100	25
Fluoride		24.50	mg/L	1	25		98	2	81 - 109	20
Fluoride		24.50	mg/L	1	25	<1.0	98	2	81 - 109	20
Nitrate-N		24.42	mg/L	1	25		97	1	74 - 111	20
Nitrate-N		24.42	mg/L	1	25	<1.0	97	1	74 - 111	20
Sulfate		334.98	mg/L	1	125		91	3	81 - 106	20
Sulfate		334.98	mg/L	1	125	220	91	3	81 - 106	20

Sample: MS

QC Batch: QC07634

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Fluoride		17.83	mg/L	1	12.50	5.5	98		81 - 109	20
Nitrate-N		12.10	mg/L	1	12.50	<1.0	96		74 - 111	20

Sample: MSD

QC Batch: QC07634

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Fluoride		17.79	mg/L	1	12.50	5.5	98	0	81 - 109	20
Nitrate-N		12.13	mg/L	1	12.50	<1.0	97	0	74 - 111	20

Sample: MS

QC Batch: QC07688

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00103	mg/L	1	0.001	<0.0002	103		80 - 120	20

Sample: MSD

QC Batch: QC07688

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00103	mg/L	1	0.001	<0.0002	103	0	80 - 120	20

Sample: MS

QC Batch: QC07689

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00102	mg/L	1	0.001	<0.0002	102		80 - 120	20

Sample: MSD

QC Batch: QC07689

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00103	mg/L	1	0.001	<0.0002	103	1	80 - 120	20

Sample: MS

QC Batch: QC07700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.43	mg/L	1	2	<0.5	121		75 - 125	20
Total Arsenic		0.928	mg/L	1	1	0.01	91		75 - 125	20
Total Barium		1.66	mg/L	1	2	0.02	82		75 - 125	20
Total Beryllium		0.16	mg/L	1	0.20	<0.01	80		75 - 125	20
Total Boron		2.02	mg/L	1	1	1.12	90		75 - 125	20
Total Cadmium		0.153	mg/L	1	0.20	<0.002	76		75 - 125	20
Total Chromium		0.337	mg/L	1	0.40	0.005	82		75 - 125	20
Total Cobalt		0.79	mg/L	1	1	<0.01	79		75 - 125	20
Total Copper		0.373	mg/L	1	0.40	<0.01	93		75 - 125	20
Total Iron		5.1	mg/L	1	2	3.43	83		75 - 125	20
Total Lead		0.765	mg/L	1	1	0.01	75		75 - 125	20
Total Manganese		0.354	mg/L	1	0.20	0.19	80		75 - 125	20
Total Molybdenum		0.826	mg/L	1	1	0.01	81		75 - 125	20
Total Nickel		0.902	mg/L	1	1	0.01	89		75 - 125	20
Total Selenium		0.87	mg/L	1	1	0.03	84		75 - 125	20
Total Silver		0.178	mg/L	1	0.20	<0.01	89		75 - 125	20
Total Uranium		1.66	mg/L	1	2	<0.5	83		75 - 125	20
Total Vanadium		0.839	mg/L	1	1	0.01	82		75 - 125	20
Total Zinc		0.16	mg/L	1	0.20	<0.1	80		75 - 125	20

Sample: MSD

QC Batch: QC07700

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.41	mg/L	1	2	<0.5	120	1	75 - 125	20
Total Arsenic		0.937	mg/L	1	1	0.01	92	1	75 - 125	20
Total Barium		1.68	mg/L	1	2	0.02	83	1	75 - 125	20
Total Beryllium		0.162	mg/L	1	0.20	<0.01	81	1	75 - 125	20
Total Boron		2.11	mg/L	1	1	1.12	99	10	75 - 125	20
Total Cadmium		0.153	mg/L	1	0.20	<0.002	76	0	75 - 125	20
Total Chromium		0.34	mg/L	1	0.40	0.005	83	1	75 - 125	20
Total Cobalt		0.798	mg/L	1	1	<0.01	79	1	75 - 125	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Copper		0.365	mg/L	1	0.40	<0.01	91	2	75 - 125	20
Total Iron		5.13	mg/L	1	2	3.43	85	2	75 - 125	20
Total Lead		0.77	mg/L	1	1	0.01	75	1	75 - 125	20
Total Manganese		0.36	mg/L	1	0.20	0.19	83	4	75 - 125	20
Total Molybdenum		0.84	mg/L	1	1	0.01	82	2	75 - 125	20
Total Nickel		0.914	mg/L	1	1	0.01	90	1	75 - 125	20
Total Selenium		0.876	mg/L	1	1	0.03	84	1	75 - 125	20
Total Silver		0.18	mg/L	1	0.20	<0.01	90	1	75 - 125	20
Total Uranium		1.69	mg/L	1	2	<0.5	84	2	75 - 125	20
Total Vanadium		0.85	mg/L	1	1	0.01	83	1	75 - 125	20
Total Zinc		0.158	mg/L	1	0.20	<0.1	79	1	75 - 125	20

Sample: MS

QC Batch: QC08027

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1870	mg/L	1	1000	800	107		75 - 125	20
Dissolved Magnesium		1330	mg/L	1	1000	264	107		75 - 125	20
Dissolved Potassium		1360	mg/L	1	1000	78.7	128		75 - 125	20
Dissolved Sodium		3890	mg/L	1	1000	2500	139		75 - 125	20

Sample: MSD

QC Batch: QC08027

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1890	mg/L	1	1000	800	109	2	75 - 125	20
Dissolved Magnesium		1350	mg/L	1	1000	264	108	2	75 - 125	20
Dissolved Potassium		1340	mg/L	1	1000	78.7	126	2	75 - 125	20
Dissolved Sodium		3720	mg/L	1	1000	2500	122	13	75 - 125	20

Quality Control Report
Duplicate Samples

Sample: Duplicate

QC Batch: QC07727

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	11
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	11
Bicarbonate Alkalinity		200	208	mg/L as CaCo3	1	4	11
Total Alkalinity		200	208	mg/L as CaCo3	1	4	11

Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC07633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.48	99	80 - 120	12/22/00
CL		mg/L	12.50	11.81	94	80 - 120	12/22/00
Fluoride		mg/L	2.50	2.44	97	80 - 120	12/22/00
Nitrate-N		mg/L	2.50	2.41	96	80 - 120	12/22/00
Sulfate		mg/L	12.50	12.01	96	80 - 120	12/22/00

Sample: ICV (1)

QC Batch: QC07633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.49	99	80 - 120	12/22/00
CL		mg/L	12.50	11.72	93	80 - 120	12/22/00
Fluoride		mg/L	2.50	2.42	96	80 - 120	12/22/00
Nitrate-N		mg/L	2.50	2.40	96	80 - 120	12/22/00
Sulfate		mg/L	12.50	11.88	95	80 - 120	12/22/00

Sample: CCV (1)

QC Batch: QC07634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.52	100	80 - 120	12/22/00
CL		mg/L	12.50	11.83	94	80 - 120	12/22/00
Fluoride		mg/L	2.50	2.47	98	80 - 120	12/22/00
Nitrate-N		mg/L	2.50	2.41	96	80 - 120	12/22/00
Sulfate		mg/L	12.50	11.99	95	80 - 120	12/22/00

Sample: ICV (1)

QC Batch: QC07634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.48	99	80 - 120	12/22/00
CL		mg/L	12.50	11.81	94	80 - 120	12/22/00
Fluoride		mg/L	2.50	2.44	97	80 - 120	12/22/00
Nitrate-N		mg/L	2.50	2.41	96	80 - 120	12/22/00
Sulfate		mg/L	12.50	12.01	96	80 - 120	12/22/00

Sample: CCV (1)

QC Batch: QC07688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00096	96	80 - 120	12/27/00

Sample: ICV (1)

QC Batch: QC07688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00104	104	80 - 120	12/27/00

Sample: CCV (1)

QC Batch: QC07689

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00103	103	80 - 120	12/27/00

Sample: ICV (1)

QC Batch: QC07689

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00104	104	80 - 120	12/27/00

Sample: CCV (1)

QC Batch: QC07700

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	5.28	105	75 - 125	12/28/00
Total Arsenic		mg/L	2.50	2.68	107	75 - 125	12/28/00
Total Barium		mg/L	5	5.36	107	75 - 125	12/28/00
Total Beryllium		mg/L	0.50	0.529	105	75 - 125	12/28/00
Total Boron		mg/L	2.50	2.62	104	75 - 125	12/28/00
Total Cadmium		mg/L	0.50	0.523	104	75 - 125	12/28/00
Total Chromium		mg/L	1	1.06	105	75 - 125	12/28/00
Total Cobalt		mg/L	2.50	2.65	106	75 - 125	12/28/00
Total Copper		mg/L	1	1.07	107	75 - 125	12/28/00
Total Iron		mg/L	5	5.36	107	75 - 125	12/28/00
Total Lead		mg/L	2.50	2.66	106	75 - 125	12/28/00
Total Manganese		mg/L	0.50	0.532	106	75 - 125	12/28/00
Total Molybdenum		mg/L	2.50	2.66	106	75 - 125	12/28/00
Total Nickel		mg/L	2.50	2.67	106	75 - 125	12/28/00
Total Selenium		mg/L	2.50	2.68	106	75 - 125	12/28/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.50	0.53	106	75 - 125	12/28/00
Total Uranium		mg/L	5	5.4	108	75 - 125	12/28/00
Total Vanadium		mg/L	2.50	2.65	106	75 - 125	12/28/00
Total Zinc		mg/L	0.50	0.517	103	75 - 125	12/28/00

Sample: ICV (1)

QC Batch: QC07700

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.82	96	75 - 125	12/28/00
Total Arsenic		mg/L	2.50	2.5	100	75 - 125	12/28/00
Total Barium		mg/L	5	4.99	99	75 - 125	12/28/00
Total Beryllium		mg/L	0.50	0.492	98	75 - 125	12/28/00
Total Boron		mg/L	2.50	2.37	94	75 - 125	12/28/00
Total Cadmium		mg/L	0.50	0.495	99	75 - 125	12/28/00
Total Chromium		mg/L	1	0.991	99	75 - 125	12/28/00
Total Cobalt		mg/L	2.50	2.46	98	75 - 125	12/28/00
Total Copper		mg/L	1	0.977	97	75 - 125	12/28/00
Total Iron		mg/L	5	4.98	99	75 - 125	12/28/00
Total Lead		mg/L	2.50	2.49	99	75 - 125	12/28/00
Total Manganese		mg/L	0.50	0.492	98	75 - 125	12/28/00
Total Molybdenum		mg/L	2.50	2.46	98	75 - 125	12/28/00
Total Nickel		mg/L	2.50	2.48	99	75 - 125	12/28/00
Total Selenium		mg/L	2.50	2.48	99	75 - 125	12/28/00
Total Silver		mg/L	0.50	0.492	98	75 - 125	12/28/00
Total Uranium		mg/L	5	4.93	98	75 - 125	12/28/00
Total Vanadium		mg/L	2.50	2.46	98	75 - 125	12/28/00
Total Zinc		mg/L	0.50	0.493	98	75 - 125	12/28/00

Sample: CCV (1)

QC Batch: QC07727

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	12/28/00
Carbonate Alkalinity		mg/L as CaCo3	0	208	0	80 - 120	12/28/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	35	0	80 - 120	12/28/00
Total Alkalinity		mg/L as CaCo3	250	243	97	80 - 120	12/28/00

Sample: ICV (1)

QC Batch: QC07727

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	12/28/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Carbonate Alkalinity		mg/L as CaCo3	0	212	0	80 - 120	12/28/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	32	0	80 - 120	12/28/00
Total Alkalinity		mg/L as CaCo3	250	244	97	80 - 120	12/28/00

Sample: CCV (1)

QC Batch: QC07891

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.106	106	80 - 120	1/3/01
Benzene		mg/L	0.10	0.095	95	80 - 120	1/3/01
Toluene		mg/L	0.10	0.1	100	80 - 120	1/3/01
Ethylbenzene		mg/L	0.10	0.093	93	80 - 120	1/3/01
M,P,O-Xylene		mg/L	0.30	0.286	95	80 - 120	1/3/01

Sample: CCV (2)

QC Batch: QC07891

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.101	101	80 - 120	1/3/01
Benzene		mg/L	0.10	0.085	85	80 - 120	1/3/01
Toluene		mg/L	0.10	0.088	88	80 - 120	1/3/01
Ethylbenzene		mg/L	0.10	0.084	84	80 - 120	1/3/01
M,P,O-Xylene		mg/L	0.30	0.256	85	80 - 120	1/3/01

Sample: ICV (1)

QC Batch: QC07891

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.12	120	80 - 120	1/3/01
Benzene		mg/L	0.10	0.103	103	80 - 120	1/3/01
Toluene		mg/L	0.10	0.102	102	80 - 120	1/3/01
Ethylbenzene		mg/L	0.10	0.116	116	80 - 120	1/3/01
M,P,O-Xylene		mg/L	0.30	0.345	115	80 - 120	1/3/01

Sample: CCV (1)

QC Batch: QC07893

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60	61.16	101	80 - 120	1/4/01
1,4-Dichlorobenzene		mg/L	60	60.83	101	80 - 120	1/4/01

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Nitrophenol		mg/L	60	60.51	100	80 - 120	1/4/01
2,4-Dichlorophenol		mg/L	60	58.91	98	80 - 120	1/4/01
Hexachlorobutadiene		mg/L	60	61.07	101	80 - 120	1/4/01
4-Chloro-3-methylphenol		mg/L	60	55.56	92	80 - 120	1/4/01
2,4,6-Trichlorophenol		mg/L	60	59.84	99	80 - 120	1/4/01
Acenaphthene		mg/L	60	59.13	98	80 - 120	1/4/01
Diphenylamine		mg/L	60	59.43	99	80 - 120	1/4/01
Pentachlorophenol		mg/L	60	69.73	116	80 - 120	1/4/01
Fluoranthene		mg/L	60	61.26	102	80 - 120	1/4/01
Di-n-octylphthalate		mg/L	60	62.23	103	80 - 120	1/4/01
Benzo(a)pyrene		mg/L	60	58.64	97	80 - 120	1/4/01
2-Fluorophenol		mg/L	60	63.04	105	80 - 120	1/4/01
Phenol-d5		mg/L	60	59.65	99	80 - 120	1/4/01
Nitrobenzene-d5		mg/L	60	60.63	101	80 - 120	1/4/01
2-Fluorobiphenyl		mg/L	60	60.98	101	80 - 120	1/4/01
2,4,6-Tribromophenol		mg/L	60	65.72	109	80 - 120	1/4/01
Terphenyl-d14		mg/L	60	69.64	116	80 - 120	1/4/01

Sample: CCV (1)

QC Batch: QC08027

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.5	98	75 - 125	1/3/01
Dissolved Magnesium		mg/L	25	23.9	95	75 - 125	1/3/01
Dissolved Potassium		mg/L	25	25.2	100	75 - 125	1/3/01
Dissolved Sodium		mg/L	25	25.6	102	75 - 125	1/3/01

Sample: ICV (1)

QC Batch: QC08027

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	23.6	94	75 - 125	1/3/01
Dissolved Magnesium		mg/L	25	23.3	93	75 - 125	1/3/01
Dissolved Potassium		mg/L	25	25.5	102	75 - 125	1/3/01
Dissolved Sodium		mg/L	25	25.2	100	75 - 125	1/3/01

Trace Analysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # AD0122215

Consulting Company Name:

WA 1A50

Phone #:-

Fax #:

Consulting Contact:

Cost Center #:

Location Code:

Casualty Loss #:

Equiva Job #

Consultant Job # Tonds

Location Address:

Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
161401	over OCD 4	1	1 L	X					X			12/20/00	1040
	11 11	1	500ml	X						X		12/20/00	1040
	11 11	2	40ml	X				X				12/20/00	1040
402	MW - 2A	1	1 L	X					X			12/20/00	1000
	11 11	1	500ml	X					X			12/20/00	1000
	11 11	2	40ml	X				X				12/20/00	1000
403	over OCD - 2	1	1 L	X					X			12/20/00	1030
	11 11	1	500ml	X					X			12/20/00	1030
	11 11	2	40ml	X				X				12/20/00	1030

Relinquished by:

Time:

Received by:

Date: Time:

Relinquished by:

Time:

Received by:

Date: _____ Time: _____

Relinquished by:

Time:

Received at/L

Date: Time:

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

C.O.C.
ORIGINAL COPY

Carrier # FED EX 3126194967

10/2/09

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB USE ONLY

REMARKS

Intact Y / N

Headspace Y

2

Temp

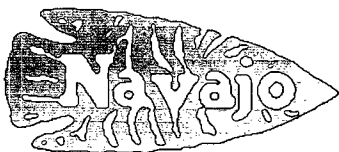
Carrier #

6954967

6954967

ELEPHONE
(505) 748-3311

EASYLINK
62905278



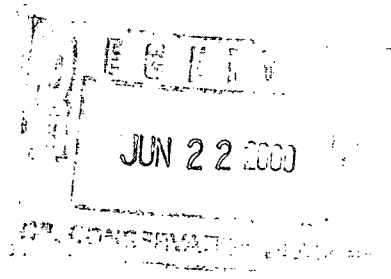
REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

June 19, 2000

Mr. Roger Anderson
NM Oil Conservation Division
Environmental Bureau
2040 S. Pacheco St.
Santa Fe, NM 87505-5472



RE: SPRING 2000 REPORT GROUND WATER SAMPLING AROUND EVAPORATION PONDS

Dear Roger:

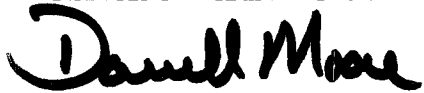
Enclosed are results from our Spring 2000 sampling of the monitor wells around the evaporation ponds. This is on a staggered schedule per your letter of October 21, 1991. Due to some miscommunications internally at Navajo, ALL of the wells were sampled during this sampling event and those results are included. In December, when the wells are scheduled to be sampled for the Fall, we will get back onto the staggered schedule mentioned earlier.

MW-1 was run over by pipeline digging equipment and is no longer useful. We can discuss if and/or when it will need to be replaced. The following is a summary of field observations:

<u>Well #</u>	<u>Ground water</u> <u>ft amsL</u>	<u>pH</u>	<u>EC</u> <u>umhos</u>	<u>Deg. C</u>	<u>Description</u>
MW-1	NA	NA	NA	NA	NA
MW-2A	3299.94	7.2	13000	21.8	Odor
MW-3	3298.65	7.14	12300	20.2	Moderate odor
MW-4	3298.59	7.5	11900	20.2	Mod. Odor
MW-5A	3298.32	7.23	15000	21.8	Odor, Silty
MW-6A	3299.08	7.63	11600	20.4	Odor
MW-7A	3297.55	7.26	12100	18.5	Odor
OCD-1A	3301.25	7.26	13000	21.7	Mild Odor
OCD-2A	3299.10	7.4	13600	20.4	Odor
OCD-3A	3298.71	7.33	11600	20.3	Silt, odor
OCD-4A	3298.41	7.19	13700	19.4	Odor
OCD-5A	3297.80	7.20	12900	18.9	Odor
OCD-6A	3297.52	7.03	12400	20.3	Mild odor
OCD-7A	3298.20	7.13	12300	18.4	Strong Odor
OCD-8A	3297.68	7.22	11900	21.65	Odor

If you have any questions, please contact me at 748-3311, extension 281.

Respectfully yours,
NAVAJO REFINING CO.

A handwritten signature in black ink that reads "Darrell Moore". The signature is written in a cursive, flowing style with a large initial "D".

Darrell Moore
Environmental Mgr. for Water and Waste

Encl.
cc: USEPA



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 5/24/00

Project Number: N/A
Project Name: Evaporation Ponds
Project Location: Artesia

Order ID Number: A00050905

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
145809	MW-4	Water	5/8/00	10:00	5/9/00
145810	MW-5A	Water	5/8/00	10:30	5/9/00
145811	OCD-4	Water	5/8/00	15:30	5/9/00
145812	OCD-3	Water	5/8/00	15:10	5/9/00
145813	OCD-2	Water	5/8/00	14:45	5/9/00
145814	MW-2A	Water	5/8/00	14:00	5/9/00
145815	MW-6A	Water	5/8/00	11:00	5/9/00
145816	MW-3	Water	5/8/00	13:30	5/9/00
145817	OCD-1	Water	5/8/00	14:20	5/9/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 145809

Description: MW-4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Naphthalene (mg/L)		<0.005	1	S 8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
1-Methylnaphthalene (mg/L)		<0.005	1	S 8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
2-Methylnaphthalene (mg/L)		<0.005	1	S 8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
2-Fluorophenol (mg/L)		21.60	1	80	27	8 - 73	MA	PB02230	QC02630	
Phenol-d5 (mg/L)		15.39	1	80	19	8 - 62	MA	PB02230	QC02630	
Nitrobenzene-d5 (mg/L)		42.21	1	80	53	44 - 109	MA	PB02230	QC02630	
2-Fluorobiphenyl (mg/L)		45.73	1	80	57	45 - 109	MA	PB02230	QC02630	
2,4,6-Tribromophenol (mg/L)		42.83	1	80	54	39 - 132	MA	PB02230	QC02630	
Terphenyl-d14 (mg/L)		38.46	1	80	48	46 - 121	MA	PB02230	QC02630	
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		205	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		205	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		0.008	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		0.035	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		0.037	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.08	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.362	1	0.1	72	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.486	1	0.1	97	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		620	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		188	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		192	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		1000	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	1200	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		2.6	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	2200	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-1.sch. ICV %IA = 95; CCV %IA = 96; Matrix spikes RPD = 0; Matrix spikes %EA = 96.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-1.sch. ICV %IA = 97; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 101.										
Total Aluminum (mg/L)		8.7	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		0.15	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		1.1	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01

Report Date: 5/24/00

Order ID Number: A00050905

Page Number: 3 of 21

N/A

Evaporation Ponds

Artesia

Total Cadmium (mg/L)	<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.12	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	7.9	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	2.5	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	0.12	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145810

Description: MW-5A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		426	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		426	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		0.01	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.01	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.445	1	0.1	89	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)	*	2.27	1	0.1	2270	72 - 128	RC	PB02156	QC02544	
* 4-BFB - Surrogate out of limits due to matrix.										
Dissolved Calcium (mg/L)		553	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		954	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		170	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		3955	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	5100	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		4.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	8800	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-1.sch. ICV %IA = 95; CCV %IA = 96; Matrix spikes RPD = 0; Matrix spikes %EA = 96.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-1.sch. ICV %IA = 97; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 101.										
Total Aluminum (mg/L)		21	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		0.20	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		1.5	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01

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Total Cadmium (mg/L)	<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.12	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	26	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	1.8	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145811

Description: OCD-4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		180	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		180	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.103	1	0.1	103	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.115	1	0.1	115	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		880	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		290	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		203	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		2465	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	4500	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		1.5	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	2900	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-1.sch. ICV %IA = 95; CCV %IA = 96; Matrix spikes RPD = 0; Matrix spikes %EA = 96.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-1.sch. ICV %IA = 97; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 101.										
Total Aluminum (mg/L)		<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		1.00	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)		<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001

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Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	3.6	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	0.19	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145812

Description: OCD-3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		194	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		194	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		<0.001	1	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.079	1	0.1	79	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.094	1	0.1	94	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		434	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		135	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		170	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		1058	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	1300	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		1.9	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	2000	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-1.sch. ICV %IA = 95; CCV %IA = 96; Matrix spikes RPD = 0; Matrix spikes %EA = 96.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-1.sch. ICV %IA = 97; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 101.										
Total Aluminum (mg/L)		<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		0.52	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)		<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)		<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001

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Total Cobalt (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	1.1	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	6.9	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	0.42	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145813

Description: OCD-2

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		550	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		550	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		0.012	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.012	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.503	1	0.1	101	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.594	1	0.1	119	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		728	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		390	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		170	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		2580	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	3600	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		2.5	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	3800	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-1.sch. ICV %IA = 95; CCV %IA = 96; Matrix spikes RPD = 0; Matrix spikes %EA = 96.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-1.sch. ICV %IA = 97; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 101.										
Total Aluminum (mg/L)		2.2	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)		<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)		<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)		0.13	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004

N/A

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Total Copper (mg/L)	0.77	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	11	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	1.8	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145814

Description: MW-2A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		522	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		522	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.005	5	S 8021B	5/14/00	5/14/00	ML	PB02245	QC02646	0.001
Toluene (mg/L)		<0.005	5	S 8021B	5/14/00	5/14/00	ML	PB02245	QC02646	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/14/00	5/14/00	ML	PB02245	QC02646	0.001
M,P,O-Xylene (mg/L)		<0.005	5	S 8021B	5/14/00	5/14/00	ML	PB02245	QC02646	0.001
Total BTEX (mg/L)		<0.005	5	S 8021B	5/14/00	5/14/00	ML	PB02245	QC02646	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.468	5	0.1	94	72 - 128	ML	PB02245	QC02646	
4-BFB (mg/L)		0.472	5	0.1	94	72 - 128	ML	PB02245	QC02646	
Dissolved Calcium (mg/L)		653	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		100	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		165	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		1890	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	2000	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		13	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	3200	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.										
* Nitrate-N - Sample out of holding time for NO3.										
* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.										
Total Aluminum (mg/L)		<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)		0.81	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)		<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)		<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)		0.19	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)		<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

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N/A

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Total Iron (mg/L)	7.6	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	2.8	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145815

Description: MW-6A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Naphthalene (mg/L)		<0.005	1	S 8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
1-Methylnaphthalene (mg/L)		<0.005	1	S-8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
2-Methylnaphthalene (mg/L)		<0.005	1	S 8270C	5/10/00	5/10/00	MA	PB02230	QC02630	0.005
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
2-Fluorophenol (mg/L)		21.67	1	80	27	8 - 73	MA	PB02230	QC02630	
Phenol-d5 (mg/L)		15.32	1	80	19	8 - 62	MA	PB02230	QC02630	
Nitrobenzene-d5 (mg/L)		47.68	1	80	60	44 - 109	MA	PB02230	QC02630	
2-Fluorobiphenyl (mg/L)		50.16	1	80	63	45 - 109	MA	PB02230	QC02630	
2,4,6-Tribromophenol (mg/L)		43.31	1	80	54	39 - 132	MA	PB02230	QC02630	
Terphenyl-d14 (mg/L)		40.34	1	80	50	46 - 121	MA	PB02230	QC02630	
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		110	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		110	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.43	1	0.1	86	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.56	1	0.1	112	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		564	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		97	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		156	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		622	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	610	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		2.7	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	2100	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5

N/A

Evaporation Ponds

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* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.

* Nitrate-N - Sample out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.

Total Aluminum (mg/L)	21	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)	0.18	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)	<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)	<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.11	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	13	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	0.77	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145816

Description: MW-3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RIDL
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCo3)		286	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCo3)		286	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.395	1	0.1	79	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		1.13	1	0.1	226	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		570	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		240	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		152	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		1064	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	1200	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		3.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	2700	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5

N/A

Evaporation Ponds

Artesia

* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.

* Nitrate-N - Sample out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.

Total Aluminum (mg/L)	3.6	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)	<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)	<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	22	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	3.4	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Sample Number: 145817

Description: OCD-1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Hydroxide Alkalinity (mg/L as CaCO3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Carbonate Alkalinity (mg/L as CaCO3)		<1.0	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Bicarbonate Alkalinity (mg/L as CaCO3)		598	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Total Alkalinity (mg/L as CaCO3)		598	1	E 310.1	5/10/00	5/11/00	LD	PB02198	QC02592	1
Benzene (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Toluene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Ethylbenzene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
M,P,O-Xylene (mg/L)		<0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Total BTEX (mg/L)		0.005	5	S 8021B	5/9/00	5/9/00	RC	PB02156	QC02544	0.001
Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.43	1	0.1	86	72 - 128	RC	PB02156	QC02544	
4-BFB (mg/L)		0.746	1	0.1	149	72 - 128	RC	PB02156	QC02544	
Dissolved Calcium (mg/L)		574	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Magnesium (mg/L)		138	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Potassium (mg/L)		150	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Dissolved Sodium (mg/L)		2270	1	E 200.7	5/10/00	5/16/00	RR	PB02160	QC02672	0.5
Total Mercury (mg/L)		<0.0002	1	S 7470A	5/9/00	5/10/00	JM	PB02381	QC02794	0.0002
CL (mg/L)	*	2500	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5
Fluoride (mg/L)		11	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Nitrate-N (mg/L)	*	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.2
Sulfate (mg/L)	*	3600	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02578	0.5

* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.

* Nitrate-N - Sample out of holding time for NO3.

* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.

Total Aluminum (mg/L)	8.3	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Arsenic (mg/L)	0.99	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Barium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.5
Total Beryllium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Boron (mg/L)	<0.50	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Cadmium (mg/L)	<0.02	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0001
Total Chromium (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.001
Total Cobalt (mg/L)	0.14	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Copper (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Iron (mg/L)	11	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Lead (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Manganese (mg/L)	2.7	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Molybdenum (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002
Total Nickel (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.004
Total Selenium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0005
Total Silver (mg/L)	<0.05	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.0002
Total Uranium (mg/L)	<2.0	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.01
Total Vanadium (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.005
Total Zinc (mg/L)	<0.10	1	E 200.7	5/10/00	5/16/00	RR	PB02159	QC02670	0.002

Quality Control Report Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Naphthalene (mg/L)		<0.005	0.005	5/10/00	PB02230	QC02630
1-Methylnaphthalene (mg/L)		<0.005	0.005	5/10/00	PB02230	QC02630
2-Methylnaphthalene (mg/L)		<0.005	0.005	5/10/00	PB02230	QC02630
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
2-Fluorophenol (mg/L)		30.48	80	38	8 - 73	QC02630
Phenol-d5 (mg/L)		22.67	80	28	8 - 62	QC02630
Nitrobenzene-d5 (mg/L)		51.21	80	64	44 - 109	QC02630
2-Fluorobiphenyl (mg/L)		53.49	80	67	45 - 109	QC02630
2,4,6-Tribromophenol (mg/L)		44.52	80	56	39 - 132	QC02630
Terphenyl-d14 (mg/L)		44.07	80	55	46 - 121	QC02630

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCO ₃)		<1.0	1	5/11/00	PB02198	QC02592
Carbonate Alkalinity (mg/L as CaCO ₃)		<1.0	1	5/11/00	PB02198	QC02592
Bicarbonate Alkalinity (mg/L as CaCO ₃)		<4	1	5/11/00	PB02198	QC02592
Total Alkalinity (mg/L as CaCO ₃)		<4	1	5/11/00	PB02198	QC02592

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Benzene (mg/L)		<0.001	0.001	5/9/00	PB02156	QC02544
Toluene (mg/L)		<0.001	0.001	5/9/00	PB02156	QC02544
Ethylbenzene (mg/L)		<0.001	0.001	5/9/00	PB02156	QC02544
M,P,O-Xylene (mg/L)		<0.001	0.001	5/9/00	PB02156	QC02544
Total BTEX (mg/L)		<0.001	0.001	5/9/00	PB02156	QC02544
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)		0.091	0.1	91	72 - 128	QC02544
4-BFB (mg/L)		0.095	0.1	95	72 - 128	QC02544
Benzene (mg/L)		<0.001	0.001	5/14/00	PB02245	QC02646
Toluene (mg/L)		<0.001	0.001	5/14/00	PB02245	QC02646
Ethylbenzene (mg/L)		<0.001	0.001	5/14/00	PB02245	QC02646
M,P,O-Xylene (mg/L)		0.001	0.001	5/14/00	PB02245	QC02646
Total BTEX (mg/L)		0.001	0.001	5/14/00	PB02245	QC02646
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)		0.089	0.1	89	72 - 128	QC02646
4-BFB (mg/L)		0.086	0.1	86	72 - 128	QC02646

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Dissolved Calcium (mg/L)		<5.0	0.5	5/16/00	PB02160	QC02672
Dissolved Magnesium (mg/L)		<5.0	0.5	5/16/00	PB02160	QC02672
Dissolved Potassium (mg/L)		<5.0	0.5	5/16/00	PB02160	QC02672
Dissolved Sodium (mg/L)		<5.0	0.5	5/16/00	PB02160	QC02672

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Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	5/10/00	PB02381	QC02794

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	5/10/00	PB02187	QC02578
Fluoride (mg/L)		<0.2	0.2	5/10/00	PB02187	QC02578
Nitrate-N (mg/L)		<0.2	0.2	5/10/00	PB02187	QC02578
Sulfate (mg/L)		<0.5	0.5	5/10/00	PB02187	QC02578

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<0.50	0.01	5/16/00	PB02159	QC02670
Total Arsenic (mg/L)		<0.10	0.001	5/16/00	PB02159	QC02670
Total Barium (mg/L)		<0.10	0.5	5/16/00	PB02159	QC02670
Total Beryllium (mg/L)		<0.10	0.0005	5/16/00	PB02159	QC02670
Total Boron (mg/L)		<0.50	0.01	5/16/00	PB02159	QC02670
Total Cadmium (mg/L)		<0.02	0.0001	5/16/00	PB02159	QC02670
Total Chromium (mg/L)		<0.05	0.001	5/16/00	PB02159	QC02670
Total Cobalt (mg/L)		<0.10	0.004	5/16/00	PB02159	QC02670
Total Copper (mg/L)		<0.10	0.002	5/16/00	PB02159	QC02670
Total Iron (mg/L)		<0.10	0.01	5/16/00	PB02159	QC02670
Total Lead (mg/L)		<0.10	0.01	5/16/00	PB02159	QC02670
Total Manganese (mg/L)		<0.10	0.01	5/16/00	PB02159	QC02670
Total Molybdenum (mg/L)		<0.10	0.002	5/16/00	PB02159	QC02670
Total Nickel (mg/L)		<0.10	0.004	5/16/00	PB02159	QC02670
Total Selenium (mg/L)		<0.10	0.0005	5/16/00	PB02159	QC02670
Total Silver (mg/L)		<0.05	0.0002	5/16/00	PB02159	QC02670
Total Uranium (mg/L)		<2.0	0.01	5/16/00	PB02159	QC02670
Total Vanadium (mg/L)		<0.10	0.005	5/16/00	PB02159	QC02670
Total Zinc (mg/L)		<0.10	0.002	5/16/00	PB02159	QC02670

Quality Control Report

Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)	2.5	1	12.5	14.34	95		80 - 120	0 - 20	QC02578
MS	Nitrate-N (mg/L)	<1.0	1	25	25.50	102		80 - 120	0 - 20	QC02578
MSD	Fluoride (mg/L)	2.5	1	12.5	14.36	95	0	80 - 120	0 - 20	QC02578
MSD	Nitrate-N (mg/L)	<1.0	1	25	25.06	100	2	80 - 120	0 - 20	QC02578

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Arsenic (mg/L)	<0.10	1	2	2.33	117		75 - 125	0 - 20	QC02670
MS	Total Barium (mg/L)	0.15	1	2	1.97	91		75 - 125	0 - 20	QC02670
MS	Total Beryllium (mg/L)	<0.10	1	2	1.99	100		75 - 125	0 - 20	QC02670
MS	Total Boron (mg/L)	1.1	1	2	2.72	81		75 - 125	0 - 20	QC02670
MS	Total Cadmium (mg/L)	<0.02	1	2	1.85	93		75 - 125	0 - 20	QC02670
MS	Total Chromium (mg/L)	<0.05	1	2	1.99	100		75 - 125	0 - 20	QC02670
MS	Total Cobalt (mg/L)	0.12	1	2	2.10	99		75 - 125	0 - 20	QC02670
MS	Total Copper (mg/L)	<0.10	1	2	2.07	103		75 - 125	0 - 20	QC02670
MS	Total Lead (mg/L)	<0.10	1	2	1.80	90		75 - 125	0 - 20	QC02670
MS	Total Manganese (mg/L)	2.5	1	2	4.4	95		75 - 125	0 - 20	QC02670
MS	Total Molybdenum (mg/L)	0.12	1	2	2.06	97		75 - 125	0 - 20	QC02670
MS	Total Selenium (mg/L)	<0.10	1	2	1.74	87		75 - 125	0 - 20	QC02670
MS	Total Uranium (mg/L)	<2.0	1	2	2.44	122		75 - 125	0 - 20	QC02670
MS	Total Vanadium (mg/L)	<0.10	1	2	2.09	105		75 - 125	0 - 20	QC02670
MSD	Total Arsenic (mg/L)	<0.10	1	2	2.40	120	3	75 - 125	0 - 20	QC02670
MSD	Total Barium (mg/L)	0.15	1	2	2.01	93	2	75 - 125	0 - 20	QC02670
MSD	Total Beryllium (mg/L)	<0.10	1	2	1.95	98	2	75 - 125	0 - 20	QC02670
MSD	Total Boron (mg/L)	1.1	1	2	2.51	70	14	75 - 125	0 - 20	QC02670
MSD	Total Cadmium (mg/L)	<0.02	1	2	1.80	90	3	75 - 125	0 - 20	QC02670
MSD	Total Chromium (mg/L)	<0.05	1	2	1.93	97	3	75 - 125	0 - 20	QC02670
MSD	Total Cobalt (mg/L)	0.12	1	2	2.09	98	1	75 - 125	0 - 20	QC02670
MSD	Total Copper (mg/L)	<0.10	1	2	2.08	104	0	75 - 125	0 - 20	QC02670
MSD	Total Lead (mg/L)	<0.10	1	2	1.85	93	3	75 - 125	0 - 20	QC02670
MSD	Total Manganese (mg/L)	2.5	1	2	4.4	95	0	75 - 125	0 - 20	QC02670
MSD	Total Molybdenum (mg/L)	0.12	1	2	1.99	94	4	75 - 125	0 - 20	QC02670
MSD	Total Selenium (mg/L)	<0.10	1	2	1.80	90	3	75 - 125	0 - 20	QC02670
MSD	Total Uranium (mg/L)	<2.0	1	2	2.30	115	6	75 - 125	0 - 20	QC02670
MSD	Total Vanadium (mg/L)	<0.10	1	2	2.09	105	0	75 - 125	0 - 20	QC02670

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Dissolved Calcium (mg/L)	620	1	1000	1634	101		75 - 125	0 - 20	QC02672
MS	Dissolved Magnesium (mg/L)	188	1	1000	1207	102		75 - 125	0 - 20	QC02672
MS	Dissolved Potassium (mg/L)	192	1	1000	986	79		75 - 125	0 - 20	QC02672
MS	Dissolved Sodium (mg/L)	1000	1	1000	1802	80		75 - 125	0 - 20	QC02672
MSD	Dissolved Calcium (mg/L)	620	1	1000	1654	103	2	75 - 125	0 - 20	QC02672
MSD	Dissolved Magnesium (mg/L)	188	1	1000	1227	104	2	75 - 125	0 - 20	QC02672
MSD	Dissolved Potassium (mg/L)	192	1	1000	1032	84	6	75 - 125	0 - 20	QC02672
MSD	Dissolved Sodium (mg/L)	1000	1	1000	1842	84	5	75 - 125	0 - 20	QC02672

Quality Control Report Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC02592
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC02592
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		168	169	1	1	0 - 20	QC02592
Duplicate	Total Alkalinity (mg/L as CaCo3)		168	169	1	1	0 - 20	QC02592

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/L)	<0.001	1	0.1	0.08	80		80 - 120	0 - 20	QC02544
LCS Benzene (mg/L)	<0.001	1	0.1	0.094	94		80 - 120	0 - 20	QC02544
LCS Toluene (mg/L)	<0.001	1	0.1	0.102	102		80 - 120	0 - 20	QC02544
LCS Ethylbenzene (mg/L)	<0.001	1	0.1	0.1	100		80 - 120	0 - 20	QC02544
LCS M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.304	101		80 - 120	0 - 20	QC02544
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCS TFT (mg/L)		1	0.1	0.09	90		72 - 128		QC02544
LCS 4-BFB (mg/L)		1	0.1	0.096	96		72 - 128		QC02544
LCSD MTBE (mg/L)	<0.001	1	0.1	0.079	79	1	80 - 120	0 - 20	QC02544
LCSD Benzene (mg/L)	<0.001	1	0.1	0.092	92	2	80 - 120	0 - 20	QC02544
LCSD Toluene (mg/L)	<0.001	1	0.1	0.099	99	3	80 - 120	0 - 20	QC02544
LCSD Ethylbenzene (mg/L)	<0.001	1	0.1	0.098	98	2	80 - 120	0 - 20	QC02544
LCSD M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.295	98	3	80 - 120	0 - 20	QC02544
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCSD TFT (mg/L)		1	0.1	0.089	89		72 - 128		QC02544
LCSD 4-BFB (mg/L)		1	0.1	0.095	95		72 - 128		QC02544

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/L)	<0.001	1	0.1	0.086	86		80 - 120	0 - 20	QC02646
LCS Benzene (mg/L)	<0.001	1	0.1	0.086	86		80 - 120	0 - 20	QC02646
LCS Toluene (mg/L)	<0.001	1	0.1	0.087	87		80 - 120	0 - 20	QC02646
LCS Ethylbenzene (mg/L)	<0.001	1	0.1	0.088	88		80 - 120	0 - 20	QC02646
LCS M,P,O-Xylene (mg/L)	0.001	1	0.3	0.257	86		80 - 120	0 - 20	QC02646
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCS TFT (mg/L)		1	0.1	0.089	89		72 - 128		QC02646
LCS 4-BFB (mg/L)		1	0.1	0.089	89		72 - 128		QC02646
LCSD MTBE (mg/L)	<0.001	1	0.1	0.088	88	2	80 - 120	0 - 20	QC02646
LCSD Benzene (mg/L)	<0.001	1	0.1	0.088	88	2	80 - 120	0 - 20	QC02646
LCSD Toluene (mg/L)	<0.001	1	0.1	0.090	90	3	80 - 120	0 - 20	QC02646
LCSD Ethylbenzene (mg/L)	<0.001	1	0.1	0.090	90	2	80 - 120	0 - 20	QC02646
LCSD M,P,O-Xylene (mg/L)	0.001	1	0.3	0.263	88	2	80 - 120	0 - 20	QC02646
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCSD TFT (mg/L)		1	0.1	0.087	87		72 - 128		QC02646
LCSD 4-BFB (mg/L)		1	0.1	0.088	88		72 - 128		QC02646

N/A

Evaporation Ponds

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Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Dissolved Calcium (mg/L)	<5.0	1	1000	1054	105		75 - 125	0 - 20	QC02672
LCS Dissolved Magnesium (mg/L)	<5.0	1	1000	998	100		75 - 125	0 - 20	QC02672
LCS Dissolved Potassium (mg/L)	<5.0	1	1000	982	98		75 - 125	0 - 20	QC02672
LCS Dissolved Sodium (mg/L)	<5.0	1	1000	970	97		75 - 125	0 - 20	QC02672
LCSD Dissolved Calcium (mg/L)	<5.0	1	1000	1040	104	1	75 - 125	0 - 20	QC02672
LCSD Dissolved Magnesium (mg/L)	<5.0	1	1000	979	98	2	75 - 125	0 - 20	QC02672
LCSD Dissolved Potassium (mg/L)	<5.0	1	1000	982	98	0	75 - 125	0 - 20	QC02672
LCSD Dissolved Sodium (mg/L)	<5.0	1	1000	995	100	3	75 - 125	0 - 20	QC02672

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00112	112		80 - 120	0 - 20	QC02794
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00107	107	5	80 - 120	0 - 20	QC02794

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Aluminum (mg/L)	<0.50	1	2	2.09	105		75 - 125	0 - 20	QC02670
LCS Total Arsenic (mg/L)	<0.10	1	2	2.08	104		75 - 125	0 - 20	QC02670
LCS Total Barium (mg/L)	<0.10	1	2	2.11	106		75 - 125	0 - 20	QC02670
LCS Total Beryllium (mg/L)	<0.10	1	2	2.06	103		75 - 125	0 - 20	QC02670
LCS Total Boron (mg/L)	<0.50	1	2	2.07	103		75 - 125	0 - 20	QC02670
LCS Total Cadmium (mg/L)	<0.02	1	2	2.09	105		75 - 125	0 - 20	QC02670
LCS Total Chromium (mg/L)	<0.05	1	2	2.13	107		75 - 125	0 - 20	QC02670
LCS Total Cobalt (mg/L)	<0.10	1	2	2.10	105		75 - 125	0 - 20	QC02670
LCS Total Copper (mg/L)	<0.10	1	2	2.13	107		75 - 125	0 - 20	QC02670
LCS Total Iron (mg/L)	<0.10	1	2	2.11	106		75 - 125	0 - 20	QC02670
LCS Total Lead (mg/L)	<0.10	1	2	2.08	104		75 - 125	0 - 20	QC02670
LCS Total Manganese (mg/L)	<0.10	1	2	2.14	107		75 - 125	0 - 20	QC02670
LCS Total Molybdenum (mg/L)	<0.10	1	2	2.13	107		75 - 125	0 - 20	QC02670
LCS Total Nickel (mg/L)	<0.10	1	2	2.07	103		75 - 125	0 - 20	QC02670
LCS Total Selenium (mg/L)	<0.10	1	2	2.04	102		75 - 125	0 - 20	QC02670
LCS Total Silver (mg/L)	<0.05	1	0.4	0.412	103		75 - 125	0 - 20	QC02670
LCS Total Uranium (mg/L)	<2.0	1	2	2.21	111		75 - 125	0 - 20	QC02670
LCS Total Vanadium (mg/L)	<0.10	1	2	2.12	106		75 - 125	0 - 20	QC02670
LCS Total Zinc (mg/L)	<0.10	1	2	2.04	102		75 - 125	0 - 20	QC02670
LCSD Total Aluminum (mg/L)	<0.50	1	2	2.05	102	2	75 - 125	0 - 20	QC02670
LCSD Total Arsenic (mg/L)	<0.10	1	2	1.95	98	6	75 - 125	0 - 20	QC02670
LCSD Total Barium (mg/L)	<0.10	1	2	1.93	97	9	75 - 125	0 - 20	QC02670
LCSD Total Beryllium (mg/L)	<0.10	1	2	1.87	94	10	75 - 125	0 - 20	QC02670
LCSD Total Boron (mg/L)	<0.50	1	2	1.97	99	5	75 - 125	0 - 20	QC02670

N/A

Evaporation Ponds

Artesia

LCSD Total Cadmium (mg/L)	<0.02	1	2	1.83	92	13	75 - 125	0 - 20	QC02670
LCSD Total Chromium (mg/L)	<0.05	1	2	1.95	98	9	75 - 125	0 - 20	QC02670
LCSD Total Cobalt (mg/L)	<0.10	1	2	1.93	97	8	75 - 125	0 - 20	QC02670
LCSD Total Copper (mg/L)	<0.10	1	2	2.16	108	1	75 - 125	0 - 20	QC02670
LCSD Total Iron (mg/L)	<0.10	1	2	1.93	97	9	75 - 125	0 - 20	QC02670
LCSD Total Lead (mg/L)	<0.10	1	2	1.90	95	9	75 - 125	0 - 20	QC02670
LCSD Total Manganese (mg/L)	<0.10	1	2	1.98	99	8	75 - 125	0 - 20	QC02670
LCSD Total Molybdenum (mg/L)	<0.10	1	2	1.98	99	7	75 - 125	0 - 20	QC02670
LCSD Total Nickel (mg/L)	<0.10	1	2	1.94	97	6	75 - 125	0 - 20	QC02670
LCSD Total Selenium (mg/L)	<0.10	1	2	1.93	97	6	75 - 125	0 - 20	QC02670
LCSD Total Silver (mg/L)	<0.05	1	1	0.403	101	2	75 - 125	0 - 20	QC02670
LCSD Total Uranium (mg/L)	<2.0	1	2	2.27	114	3	75 - 125	0 - 20	QC02670
LCSD Total Vanadium (mg/L)	<0.10	1	2	2.02	101	5	75 - 125	0 - 20	QC02670
LCSD Total Zinc (mg/L)	<0.10	1	2	1.86	93	9	75 - 125	0 - 20	QC02670

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	5/11/00	QC02592
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	212	0	80 - 120	5/11/00	QC02592
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	26	0	80 - 120	5/11/00	QC02592
ICV	Total Alkalinity (mg/L as CaCo3)		250	238	95	80 - 120	5/11/00	QC02592
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	5/11/00	QC02592
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	220	0	80 - 120	5/11/00	QC02592
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	15	0	80 - 120	5/11/00	QC02592
CCV (1	Total Alkalinity (mg/L as CaCo3)		250	235	94	80 - 120	5/11/00	QC02592

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Benzene (mg/L)		0.1	0.09	90	80 - 120	5/9/00	QC02544
ICV	Toluene (mg/L)		0.1	0.1	100	80 - 120	5/9/00	QC02544
ICV	Ethylbenzene (mg/L)		0.1	0.096	96	80 - 120	5/9/00	QC02544
ICV	M,P,O-Xylene (mg/L)		0.3	0.294	98	80 - 120	5/9/00	QC02544
CCV (1	Benzene (mg/L)		0.1	0.092	92	80 - 120	5/9/00	QC02544
CCV (1	Toluene (mg/L)		0.1	0.098	98	80 - 120	5/9/00	QC02544
CCV (1	Ethylbenzene (mg/L)		0.1	0.098	98	80 - 120	5/9/00	QC02544
CCV (1	M,P,O-Xylene (mg/L)		0.3	0.297	99	80 - 120	5/9/00	QC02544
CCV (2	Benzene (mg/L)		0.1	0.091	91	80 - 120	5/9/00	QC02544
CCV (2	Toluene (mg/L)		0.1	0.097	97	80 - 120	5/9/00	QC02544
CCV (2	Ethylbenzene (mg/L)		0.1	0.098	98	80 - 120	5/9/00	QC02544
CCV (2	M,P,O-Xylene (mg/L)		0.3	0.295	98	80 - 120	5/9/00	QC02544

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Benzene (mg/L)		0.1	0.09	90	80 - 120	5/14/00	QC02646
ICV	Toluene (mg/L)		0.1	0.093	93	80 - 120	5/14/00	QC02646
ICV	Ethylbenzene (mg/L)		0.1	0.094	94	80 - 120	5/14/00	QC02646
ICV	M,P,O-Xylene (mg/L)		0.3	0.273	91	80 - 120	5/14/00	QC02646
CCV (1	Benzene (mg/L)		0.1	0.09	90	80 - 120	5/14/00	QC02646
CCV (1	Toluene (mg/L)		0.1	0.093	93	80 - 120	5/14/00	QC02646
CCV (1	Ethylbenzene (mg/L)		0.1	0.094	94	80 - 120	5/14/00	QC02646
CCV (1	M,P,O-Xylene (mg/L)		0.3	0.273	91	80 - 120	5/14/00	QC02646

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Calcium (mg/L)		20	20.7	103	75 - 125	5/16/00	QC02672

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Magnesium (mg/L)		20	20.9	105	75 - 125	5/16/00	QC02672
ICV	Dissolved Potassium (mg/L)		20	20.1	101	75 - 125	5/16/00	QC02672
ICV	Dissolved Sodium (mg/L)		20	20.2	101	75 - 125	5/16/00	QC02672
CCV (1	Dissolved Calcium (mg/L)		20	20.5	102	75 - 125	5/16/00	QC02672
CCV (1	Dissolved Magnesium (mg/L)		20	20.8	104	75 - 125	5/16/00	QC02672
CCV (1	Dissolved Potassium (mg/L)		20	20.8	104	75 - 125	5/16/00	QC02672
CCV (1	Dissolved Sodium (mg/L)		20	20.8	104	75 - 125	5/16/00	QC02672

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00104	104	80 - 120	5/10/00	QC02794
CCV (1	Total Mercury (mg/L)		0.001	0.00089	89	80 - 120	5/10/00	QC02794

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.65	93	80 - 120	5/10/00	QC02578
ICV	Fluoride (mg/L)		2.5	2.46	98	80 - 120	5/10/00	QC02578
ICV	Nitrate-N (mg/L)		5	4.76	95	80 - 120	5/10/00	QC02578
ICV	Sulfate (mg/L)		12.5	12.06	96	80 - 120	5/10/00	QC02578
CCV (1	CL (mg/L)		12.5	11.58	93	80 - 120	5/10/00	QC02578
CCV (1	Fluoride (mg/L)		2.5	2.45	98	80 - 120	5/10/00	QC02578
CCV (1	Nitrate-N (mg/L)		5	4.74	95	80 - 120	5/10/00	QC02578
CCV (1	Sulfate (mg/L)		12.5	11.98	96	80 - 120	5/10/00	QC02578

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02670
ICV	Total Arsenic (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02670
ICV	Total Barium (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02670
ICV	Total Beryllium (mg/L)		1	0.99	99	75 - 125	5/16/00	QC02670
ICV	Total Boron (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02670
ICV	Total Cadmium (mg/L)		1	0.98	98	75 - 125	5/16/00	QC02670
ICV	Total Chromium (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02670
ICV	Total Cobalt (mg/L)		1	1.01	101	75 - 125	5/16/00	QC02670
ICV	Total Copper (mg/L)		1	1.07	107	75 - 125	5/16/00	QC02670
ICV	Total Iron (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02670
ICV	Total Lead (mg/L)		1	1.01	101	75 - 125	5/16/00	QC02670
ICV	Total Manganese (mg/L)		1	1.02	102	75 - 125	5/16/00	QC02670
ICV	Total Molybdenum (mg/L)		1	1.01	101	75 - 125	5/16/00	QC02670

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Nickel (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02670
ICV	Total Selenium (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02670
ICV	Total Silver (mg/L)		0.2	0.205	102	75 - 125	5/16/00	QC02670
ICV	Total Uranium (mg/L)		1	1.08	108	75 - 125	5/16/00	QC02670
ICV	Total Vanadium (mg/L)		1	1.01	101	75 - 125	5/16/00	QC02670
ICV	Total Zinc (mg/L)		1	0.96	96	75 - 125	5/16/00	QC02670
CCV (1	Total Aluminum (mg/L)		1	0.99	99	75 - 125	5/16/00	QC02670
CCV (1	Total Arsenic (mg/L)		1	0.95	95	75 - 125	5/16/00	QC02670
CCV (1	Total Barium (mg/L)		1	0.92	92	75 - 125	5/16/00	QC02670
CCV (1	Total Beryllium (mg/L)		1	0.93	93	75 - 125	5/16/00	QC02670
CCV (1	Total Boron (mg/L)		1	0.96	96	75 - 125	5/16/00	QC02670
CCV (1	Total Cadmium (mg/L)		1	0.90	90	75 - 125	5/16/00	QC02670
CCV (1	Total Chromium (mg/L)		1	0.93	93	75 - 125	5/16/00	QC02670
CCV (1	Total Cobalt (mg/L)		1	0.93	93	75 - 125	5/16/00	QC02670
CCV (1	Total Copper (mg/L)		1	1.02	102	75 - 125	5/16/00	QC02670
CCV (1	Total Iron (mg/L)		1	0.92	92	75 - 125	5/16/00	QC02670
CCV (1	Total Lead (mg/L)		1	0.94	94	75 - 125	5/16/00	QC02670
CCV (1	Total Manganese (mg/L)		1	0.95	95	75 - 125	5/16/00	QC02670
CCV (1	Total Molybdenum (mg/L)		1	0.94	94	75 - 125	5/16/00	QC02670
CCV (1	Total Nickel (mg/L)		1	0.93	93	75 - 125	5/16/00	QC02670
CCV (1	Total Selenium (mg/L)		1	0.96	96	75 - 125	5/16/00	QC02670
CCV (1	Total Silver (mg/L)		0.2	0.193	97	75 - 125	5/16/00	QC02670
CCV (1	Total Uranium (mg/L)		1	1.06	106	75 - 125	5/16/00	QC02670
CCV (1	Total Vanadium (mg/L)		1	0.95	95	75 - 125	5/16/00	QC02670
CCV (1	Total Zinc (mg/L)		1	0.90	90	75 - 125	5/16/00	QC02670

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
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Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A00050905

Company Name: DAVAJO Phone #: 505 748 3311
Address: 501 E. Main Fax #: 505 748 9077
Contact Person: Darrell Moore or Charlie Pymale
Invoice to: (If different from above)
Project #:

Project Name: Evap. Ponds
Project Location: Artista
Sampler Signature: Charlynd

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX			PRESERVATIVE METHOD						SAMPLING	
				WATER	AIR	SLUDGE	HCL	HNO3	NaHSO4	NaOH	ICE	NONE	DATE	TIME
145809	MW-4	1	1L	X							X	X	5/8/00	10:00
	"	1	1L	X							X	X	5/8/00	10:00
	"	1	500ml	X				X			X		5/8/00	10:00
810	"	2	40ml	X					X		X		5/8/00	10:00
809	MW-5A	1	1L	X							X	X	5/8/00	10:30
	"	1	500ml	X				X			X		5/8/00	10:30
	"	2	40ml	X					X		X		5/8/00	10:30
810	OCD-4	1	1L	X							X	X	5/8/00	15:30
	"	1	500ml	X				X			X		5/8/00	15:30
	"	2	40ml	X					X		X		5/8/00	15:30

Relinquished by: Charlynd Date: 5/8/00 Time: 16:15
Relinquished by: Date: Time:
Relinquished by: Neil Green Date: 5-9-00 Time: 9:30 am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/IX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Turn Around Time if different from standard	
Hold	

See list

REMARKS:

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 60 °
Log-In Review MS

Carrier # 283-249-656

5/24/00

TraceAnalysis, Inc.
 6701 Aberdeen Avenue, Ste. 9
 Lubbock, Texas 79424
 Tel (806) 794-1296
 Fax (806) 794-1298
 1 (800) 378-1296

Company Name: NA/ASD
Address: (Street, City, Zip) 505748 -3311
Contact Person: Darrell Moore or Charlie Phymale
Invoice to: (If different from above)
Project #:
Project Name: Evap Ponds
Sampler Signature: Charlie Phymale

Project Location: Artesia
Field Code:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				DATE	TIME
			WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE		
145812	0CD-3	1	X						X	X	5/8/00	15:10
		1	X					X			5/8/00	15:10
802	0CD-2	2	X						X	X	5/8/00	15:10
		1	X						X		5/8/00	14:45
		1	X						X		5/8/00	14:45
		2	X						X	X	5/8/00	14:45
814 MW	-2A	1	X						X	X	5/8/00	14:00
		1	X					X			5/8/00	14:00
		2	X						X	X	5/8/00	14:00

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Quinn	5/8/00	16:00			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Darrell Moore	5-9-00	9:30am

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
LAB Order ID # A00050905

ANALYSIS REQUEST (Circle or Specify Method No.)											
MTBE 8021B/602											
BTEX 8021B/602											
TPH 418.1/TX1005											
PAH 8270C											
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7											
TCLP Metals Ag As Ba Cd Cr Pb Se Hg											
TCLP Semi Volatiles											
TCLP Pesticides											
RCI											
GC-MS Vol. 8260B/624											
GC/MS Semi. Vol. 8270C/625											
PCB's 8082/608											
Pesticides 8081A/608											
BOD, TSS, PH											
Turn Around Time if different from standard											

LAB USE ONLY		REMARKS:	
Intact	Y/N		
Headspace	Y/N		
Temp			
Log-In Review			

Carrier # 487-3497-656

Submittal of samples constitutes agreement to terms and conditions listed on reverse side of C.O.C.

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TraceAnalysis, Inc.

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El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # **A00050905**

Company Name: **AVAJO**

Phone #: **5057483311**

Address:

(Street, City, Zip)

501 E. Main

Fax #:

5057489077

Contact Person:

Darrell-Moore or Charlie Phymale

Invoice to:

(If different from above)

Project #:

Project Name:

Evaporation Ponds

Project Location:

Artesia

Sampler Signature:

Charles

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD							SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	NaHSO ₄	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
145815	MW 6 RT	1	1L	X									X	X	5/8/00	11:00
	"	1	1L	X									X	X	5/8/00	11:00
	"	1	500ml	X						X					5/8/00	11:00
	"	2	40ml	X						X			X	X	5/8/00	11:00
816	MW 3	1	1L	X									X	X	5/8/00	13:30
	"	1	500ml	X									X	X	5/8/00	13:30
	"	2	40ml	X						X			X	X	5/8/00	13:30
817	OCD-1	1	1L	X									X	X	5/8/00	14:20
	"	1	500ml	X									X	X	5/8/00	14:20
	"	2	40ml	X								X	X	X	5/8/00	14:20

Relinquished by: <i>Charles</i>	Date: 5/8/00	Time: 16:15	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: <i>Nell Green</i>	Date: 5-9-00	Time: 9:30am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Turn Around Time if different from standard	

See list

LAB USE ONLY

REMARKS:

Intact ☒ Y ☐ N

Headspace ☒ Y ☐ N

Temp ☒ 60 ☐ 100

Log-In Review *ms*

Carrier # **Fed Ex 287 2497-656**



TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 5/24/00

Project Number: N/A
Project Name: Evaporation Ponds
Project Location: Artesia

Order ID Number: A00051010

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
145879	OCD-8	Water	5/9/00	10:50	5/10/00
145880	OCD-5	Water	5/9/00	9:30	5/10/00
145881	OCD-7AR	Water	5/9/00	10:30	5/10/00
145882	OCD-6	Water	5/9/00	10:00	5/10/00
145883	MW-7A	Water	5/9/00	11:15	5/10/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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Dr. Blair Leftwich, Director

Report Date: 5/24/00
N/A

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Analytical Results Report

Sample Number: 145879
Description: OCD-8

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Carbonate Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Bicarbonate Alkalinity	437	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Total Alkalinity	437	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
BTEX (mg/L)									
Benzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Toluene	0.008	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Ethylbenzene	0.007	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
M,P,O-Xylene	0.014	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Total BTEX	0.028	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Surrogate (mg/L)									
	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT	0.44	1	0.1	88	72 - 128	RC	PB02204	QC02601	
4-BFB	0.843	1	0.1	422	72 - 128	RC	PB02204	QC02601	
Dissolved Metals (mg/L)									
Dissolved Calcium	690	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Magnesium	340	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Potassium	210	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Sodium	1800	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Hg, Total (mg/L)									
Total Mercury	<0.0002	1	S 7470A	5/15/00	5/15/00	JM	PB02262	QC02666	0.0002
Ion Chromatography (IC) (mg/L)									
CL	* 2100	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
Fluoride	3.9	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Nitrate-N	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Sulfate	* 3300	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.									
* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.									
Total Metals (mg/L)									
Total Aluminum	24	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Arsenic	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Barium	0.13	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Beryllium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Boron	1.4	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Cadmium	<0.02	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.02
Total Chromium	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Cobalt	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Copper	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Iron	14	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Lead	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Manganese	3.4	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Molybdenum	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Nickel	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Selenium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

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Total Silver	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Uranium	<1.0	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	1
Total Vanadium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Zinc	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Sample Number: 145880

Description: OCD-5

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Carbonate Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Bicarbonate Alkalinity	229	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Total Alkalinity	229	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1

BTEX (mg/L)

Benzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Toluene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Ethylbenzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
M,P,O-Xylene	0.005	5	S 8021B	5/10/00	5/10/00	-RC	PB02204	QC02601	0.001
Total BTEX	0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001

Surrogate (mg/L)

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.392	1	0.1	78	72 - 128	RC	PB02204	QC02601
4-BFB	0.562	1	0.1	112	72 - 128	RC	PB02204	QC02601

Dissolved Metals (mg/L)

Dissolved Calcium	880	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Magnesium	290	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Potassium	186	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Sodium	2670	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1

Hg, Total (mg/L)

Total Mercury	<0.0002	1	S 7470A	5/15/00	5/15/00	JM	PB02262	QC02666	0.0002
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Ion Chromatography (IC) (mg/L)

CL	* 4700	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
Fluoride	2.2	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Nitrate-N	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Sulfate	* 3000	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5

* CL - Chloride re-ran on IC051500-2.sch. ICV %IA = 96; CCV %IA = 95; Matrix spikes RPD = 0; Matrix spikes %EA = 94.

* Sulfate - Sulfate re-ran on IC051500-2.sch. ICV %IA = 100; CCV %IA = 100; Matrix spikes RPD = 1; Matrix spikes %EA = 95.

Total Metals (mg/L)

Total Aluminum	1.9	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Arsenic	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Barium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Beryllium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Boron	1.3	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Cadmium	0.09	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.02
Total Chromium	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Cobalt	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Copper	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Iron	6.8	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Lead	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Manganese	0.23	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Molybdenum	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Total Nickel	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Selenium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Silver	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Uranium	<1.0	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	1
Total Vanadium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Zinc	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Sample Number: 145881
Description: OCD-7AR

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Carbonate Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Bicarbonate Alkalinity	569	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Total Alkalinity	569	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1

BTEX (mg/L)

Benzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Toluene	<0.005	5	S 8021B	5/10/00	5/10/00	-RC	PB02204	QC02601	0.001
Ethylbenzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
M,P,O-Xylene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Total BTEX	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001

* Test Comments - Elevated reporting limits due to silt in the sample matrix.

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.445	1	0.1	89	72 - 128	RC	PB02204	QC02601
4-BFB	* 0.688	1	0.1	688	72 - 128	RC	PB02204	QC02601

* 4-BFB - BFB is high due to matrix.

Dissolved Metals (mg/L)

Dissolved Calcium	650	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Magnesium	246	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Potassium	160	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Sodium	1790	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1

Hg, Total (mg/L)

Total Mercury	<0.0002	1	S 7470A	5/15/00	5/15/00	JM	PB02262	QC02666	0.0002
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Ion Chromatography (IC) (mg/L)

CL	* 1800	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
Fluoride	3.9	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Nitrate-N	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Sulfate	* 3300	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5

* CL - Chloride re-ran on IC051600A-1.sch. ICV %IA = 93; CCV %IA = 93; Blank spikes RPD = 0; Blank spikes %EA = 93. Blank used because I'm re-running the sample that I spiked.

* Sulfate - Sulfate re-ran on IC051600A-1.sch. ICV %IA = 98; CCV %IA = 98; Blank spikes RPD = 0; Blank spikes %EA = 97. Blank used because I'm re-running the sample that I spiked.

Total Metals (mg/L)

Total Aluminum	1.5	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Arsenic	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Barium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Beryllium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Boron	0.71	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Cadmium	0.11	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.02
Total Chromium	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05

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Total Cobalt	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Copper	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Iron	32	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Lead	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Manganese	4.6	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Molybdenum	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Nickel	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Selenium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Silver	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Uranium	<1.0	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	1
Total Vanadium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Zinc	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Sample Number: 145882

Description: OCD-6

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Carbonate Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Bicarbonate Alkalinity	656	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Total Alkalinity	656	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
BTEX (mg/L)									
Benzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Toluene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Ethylbenzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
M,P,O-Xylene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Total BTEX	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001

* Test Comments - Elevated reporting limits due to silt in the sample matrix.

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.434	1	0.1	87	72 - 128	RC	PB02204	QC02601
4-BFB	* 0.678	1	0.1	678	72 - 128	RC	PB02204	QC02601

* 4-BFB - BFB is high due to matrix.

Dissolved Metals (mg/L)									
Dissolved Calcium	624	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Magnesium	214	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Potassium	162	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Sodium	2480	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1

Hg, Total (mg/L)									
Total Mercury	<0.0002	1	S 7470A	5/15/00	5/15/00	JM	PB02262	QC02666	0.0002

Ion Chromatography (IC) (mg/L)									
CL	* 2500	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
Fluoride	5.7	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Nitrate-N	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Sulfate	* 3500	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5

* CL - Chloride re-ran on IC051600A-1.sch. ICV %IA = 93; CCV %IA = 93; Blank spikes RPD = 0; Blank spikes %EA = 93. Blank used because I'm re-running the sample that I spiked.

* Sulfate - Sulfate re-ran on IC051600A-1.sch. ICV %IA = 98; CCV %IA = 98; Blank spikes RPD = 0; Blank spikes %EA = 97. Blank used because I'm re-running the sample that I spiked.

Total Metals (mg/L)									
Total Aluminum	1.8	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

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Total Arsenic	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Barium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Beryllium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Boron	0.49	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Cadmium	0.12	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.02
Total Chromium	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Cobalt	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Copper	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Iron	13	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Lead	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Manganese	2.2	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Molybdenum	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Nickel	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Selenium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Silver	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Uranium	<1.0	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	1
Total Vanadium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Zinc	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Sample Number: 145883

Description: MW-7A

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Carbonate Alkalinity	<1.0	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Bicarbonate Alkalinity	242	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
Total Alkalinity	242	1	E 310.1	5/16/00	5/16/00	LD	PB02295	QC02689	1
BTEX (mg/L)									
Benzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Toluene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Ethylbenzene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
M,P,O-Xylene	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001
Total BTEX	<0.005	5	S 8021B	5/10/00	5/10/00	RC	PB02204	QC02601	0.001

* Test Comments - Elevated reporting limits due to silt in the sample matrix.

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT	0.413	1	0.1	83	72 - 128	RC	PB02204	QC02601
4-BFB	* 0.655	1	0.1	655	72 - 128	RC	PB02204	QC02601

* 4-BFB - BFB is high due to matrix.

Dissolved Metals (mg/L)

Dissolved Calcium	527	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Magnesium	357	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Potassium	162	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1
Dissolved Sodium	1830	1	E 200.7	5/15/00	5/16/00	RR	PB02252	QC02808	1

Hg, Total (mg/L)

Total Mercury	<0.0002	1	S 7470A	5/15/00	5/15/00	JM	PB02262	QC02666	0.0002
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Ion Chromatography (IC) (mg/L)

CL	* 2100	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5
Fluoride	2.4	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Nitrate-N	<1.0	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.2
Sulfate	* 3300	1	E 300.0	5/9/00	5/10/00	JS	PB02187	QC02581	0.5

N/A

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* CL - Chloride re-ran on IC051600A-1.sch. ICV %IA = 93; CCV %IA = 93; Blank spikes RPD = 0; Blank spikes %EA = 93. Blank used because I'm re-running the sample that I spiked.

* Sulfate - Sulfate re-ran on IC051600A-1.sch. ICV %IA = 98; CCV %IA = 98; Blank spikes RPD = 0; Blank spikes %EA = 97. Blank used because I'm re-running the sample that I spiked.

Total Metals (mg/L)

Total Aluminum	5.3	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Arsenic	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Barium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Beryllium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Boron	0.86	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Cadmium	0.12	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.02
Total Chromium	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Cobalt	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Copper	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Iron	14	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Lead	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Manganese	0.69	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Molybdenum	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Nickel	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Selenium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Silver	<0.05	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.05
Total Uranium	<1.0	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	1
Total Vanadium	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1
Total Zinc	<0.10	1	E 200.7	5/15/00	5/16/00	RR	PB02243	QC02724	0.1

Quality Control Report

Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Benzene (mg/L)		<0.001	0.001	5/10/00	PB02204	QC02601
Toluene (mg/L)		<0.001	0.001	5/10/00	PB02204	QC02601
Ethylbenzene (mg/L)		<0.001	0.001	5/10/00	PB02204	QC02601
M,P,O-Xylene (mg/L)		<0.001	0.001	5/10/00	PB02204	QC02601
Total BTEX (mg/L)		<0.001	0.001	5/10/00	PB02204	QC02601
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)		0.104	0.1	104	72 - 128	QC02601
4-BFB (mg/L)		0.108	0.1	108	72 - 128	QC02601

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Dissolved Calcium (mg/L)		<1.0	1	5/16/00	PB02252	QC02808
Dissolved Magnesium (mg/L)		<1.0	1	5/16/00	PB02252	QC02808
Dissolved Potassium (mg/L)		<1.0	1	5/16/00	PB02252	QC02808
Dissolved Sodium (mg/L)		<1.0	1	5/16/00	PB02252	QC02808

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	5/15/00	PB02262	QC02666

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	5/10/00	PB02187	QC02581
Fluoride (mg/L)		<0.2	0.2	5/10/00	PB02187	QC02581
Nitrate-N (mg/L)		<0.2	0.2	5/10/00	PB02187	QC02581
Sulfate (mg/L)		<0.5	0.5	5/10/00	PB02187	QC02581

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Arsenic (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Barium (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Beryllium (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Boron (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Cadmium (mg/L)		<0.02	0.02	5/16/00	PB02243	QC02724
Total Chromium (mg/L)		<0.05	0.05	5/16/00	PB02243	QC02724
Total Cobalt (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Copper (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Iron (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Lead (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Manganese (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Molybdenum (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724
Total Nickel (mg/L)		<0.10	0.1	5/16/00	PB02243	QC02724

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Total Selenium (mg/L)	<0.10	0.1	5/16/00	PB02243	QC02724
Total Silver (mg/L)	<0.05	0.05	5/16/00	PB02243	QC02724
Total Uranium (mg/L)	<1.0	1	5/16/00	PB02243	QC02724
Total Vanadium (mg/L)	<0.10	0.1	5/16/00	PB02243	QC02724
Total Zinc (mg/L)	<0.10	0.1	5/16/00	PB02243	QC02724

Quality Control Report

Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)		1	12.5	14.90	95		80 - 120	-	QC02581
MS	Nitrate-N (mg/L)	3.4	1	25	26.22	91		80 - 120	-	QC02581
MSD	Fluoride (mg/L)		1	12.5	14.56	92	3	-	0 - 20	QC02581
MSD	Nitrate-N (mg/L)	3.4	1	25	26.25	91	0	-	0 - 20	QC02581

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00090	90		80 - 120	-	QC02666
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00093	93	3	-	0 - 20	QC02666

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Arsenic (mg/L)	<0.10	1	2	2.2	110		75 - 125	-	QC02724
MS	Total Barium (mg/L)	0.13	1	2	2.1	99		75 - 125	-	QC02724
MS	Total Beryllium (mg/L)	<0.10	1	2	2.0	100		75 - 125	-	QC02724
MS	Total Boron (mg/L)	1.4	1	2	3.1	85		75 - 125	-	QC02724
MS	Total Cadmium (mg/L)	<0.02	1	2	2.1	105		75 - 125	-	QC02724
MS	Total Chromium (mg/L)	<0.05	1	2	2.0	100		75 - 125	-	QC02724
MS	Total Cobalt (mg/L)	<0.10	1	2	2.0	100		75 - 125	-	QC02724
MS	Total Copper (mg/L)	<0.10	1	2	2.0	100		75 - 125	-	QC02724
MS	Total Lead (mg/L)	<0.10	1	2	2.0	100		75 - 125	-	QC02724
MS	Total Manganese (mg/L)	3.4	1	2	5.4	100		75 - 125	-	QC02724
MS	Total Molybdenum (mg/L)	<0.10	1	2	2.1	105		75 - 125	-	QC02724
MS	Total Nickel (mg/L)	<0.10	1	100	1.9	2		75 - 125	-	QC02724
MS	Total Selenium (mg/L)	<0.10	1	2	2.3	115		75 - 125	-	QC02724
MS	Total Silver (mg/L)	<0.05	1	0.4	0.44	110		75 - 125	-	QC02724
MS	Total Uranium (mg/L)	<1.0	1	2	2.4	120		75 - 125	-	QC02724
MS	Total Vanadium (mg/L)	<0.10	1	2	2.1	105		75 - 125	-	QC02724
MSD	Total Arsenic (mg/L)	<0.10	1	2	2.7	135	20	-	0 - 20	QC02724
MSD	Total Barium (mg/L)	0.13	1	2	2.1	99	0	-	0 - 20	QC02724
MSD	Total Beryllium (mg/L)	<0.10	1	2	2.0	100	0	-	0 - 20	QC02724
MSD	Total Boron (mg/L)	1.4	1	2	3.0	80	6	-	0 - 20	QC02724
MSD	Total Cadmium (mg/L)	<0.02	1	2	2.1	105	0	-	0 - 20	QC02724
MSD	Total Chromium (mg/L)	<0.05	1	2	2.0	100	0	-	0 - 20	QC02724
MSD	Total Cobalt (mg/L)	<0.10	1	2	2.0	100	0	-	0 - 20	QC02724
MSD	Total Copper (mg/L)	<0.10	1	2	2.0	100	0	-	0 - 20	QC02724
MSD	Total Lead (mg/L)	<0.10	1	2	2.0	100	0	-	0 - 20	QC02724

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MSD	Total Manganese (mg/L)	3.4	1	2	5.5	105	5	-	0 - 20	QC02724
MSD	Total Molybdenum (mg/L)	<0.10	1	2	2.1	105	0	-	0 - 20	QC02724
MSD	Total Nickel (mg/L)	<0.10	1	100	2.1	2	10	-	0 - 20	QC02724
MSD	Total Selenium (mg/L)	<0.10	1	2	2.3	115	0	-	0 - 20	QC02724
MSD	Total Silver (mg/L)	<0.05	1	1	.37	93	17	-	0 - 20	QC02724
MSD	Total Uranium (mg/L)	<1.0	1	2	2.4	120	0	-	0 - 20	QC02724
MSD	Total Vanadium (mg/L)	<0.10	1	2	2.1	105	0	-	0 - 20	QC02724

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Dissolved Calcium (mg/L)	690	1	1000	1710	102		75 - 125	-	QC02808
MS	Dissolved Magnesium (mg/L)	340	1	1000	1370	103		75 - 125	-	QC02808
MS	Dissolved Potassium (mg/L)	210	1	1000	1000	79		75 - 125	-	QC02808
MS	Dissolved Sodium (mg/L)	1800	1	1000	2700	90		75 - 125	-	QC02808
MSD	Dissolved Calcium (mg/L)	690	1	1000	1703	101	1	-	0 - 20	QC02808
MSD	Dissolved Magnesium (mg/L)	340	1	1000	1360	102	1	-	0 - 20	QC02808
MSD	Dissolved Potassium (mg/L)	210	1	1000	993	78	1	-	0 - 20	QC02808
MSD	Dissolved Sodium (mg/L)	1800	1	1000	2680	88	2	-	0 - 20	QC02808

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/L)	<0.001	1	0.1	0.103	103		80 - 120	-	QC02601
LCS Benzene (mg/L)	<0.001	1	0.1	0.098	98		80 - 120	-	QC02601
LCS Toluene (mg/L)	<0.001	1	0.1	0.106	106		80 - 120	-	QC02601
LCS Ethylbenzene (mg/L)	<0.001	1	0.1	0.106	106		80 - 120	-	QC02601
LCS M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.323	108		80 - 120	-	QC02601
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCS TFT (mg/L)		1	0.1	0.101	101		72 - 128		QC02601
LCS 4-BFB (mg/L)		1	0.1	0.106	106		72 - 128		QC02601
LCSD MTBE (mg/L)	<0.001	1	0.1	0.11	110	7	-	0 - 20	QC02601
LCSD Benzene (mg/L)	<0.001	1	0.1	0.105	105	7	-	0 - 20	QC02601
LCSD Toluene (mg/L)	<0.001	1	0.1	0.113	113	6	-	0 - 20	QC02601
LCSD Ethylbenzene (mg/L)	<0.001	1	0.1	0.113	113	6	-	0 - 20	QC02601
LCSD M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.345	115	7	-	0 - 20	QC02601
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCSD TFT (mg/L)		1	0.1	0.102	102		72 - 128		QC02601
LCSD 4-BFB (mg/L)		1	0.1	0.109	109		72 - 128		QC02601

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Dissolved Calcium (mg/L)	<1.0	1	1000	1083	108		75 - 125	-	QC02808
LCS Dissolved Magnesium (mg/L)	<1.0	1	1000	1027	103		75 - 125	-	QC02808
LCS Dissolved Potassium (mg/L)	<1.0	1	1000	947	95		75 - 125	-	QC02808
LCS Dissolved Sodium (mg/L)	<1.0	1	1000	963	96		75 - 125	-	QC02808
LCSD Dissolved Calcium (mg/L)	<1.0	1	1000	1092	109	1	-	0 - 20	QC02808
LCSD Dissolved Magnesium (mg/L)	<1.0	1	100	1035	103	1	-	0 - 20	QC02808
LCSD Dissolved Potassium (mg/L)	<1.0	1	1000	953	95	1	-	0 - 20	QC02808
LCSD Dissolved Sodium (mg/L)	<1.0	1	1000	917	92	5	-	0 - 20	QC02808

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00091	91		80 - 120	-	QC02666
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00101	101	10	-	0 - 20	QC02666

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Param		Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Total Zinc (mg/L)	*	<0.10	1	2	1.96	98	75 - 125	-	QC02724

* Total Zinc - Matrix spike invalid due to required dilution. LCS demonstrates process under control.

LCSD	Total Zinc (mg/L)	*	<0.10	1	2	1.94	97	1	-	0 - 20	QC02724
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* Total Zinc - Matrix spike invalid due to required dilution. LCS demonstrates process under control.

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	5/16/00	QC02689
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	240	0	80 - 120	5/16/00	QC02689
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	8	0	80 - 120	5/16/00	QC02689
ICV	Total Alkalinity (mg/L as CaCo3)		250	248	99	80 - 120	5/16/00	QC02689
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	5/16/00	QC02689
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	212	0	80 - 120	5/16/00	QC02689
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	29	0	80 - 120	5/16/00	QC02689
CCV 1	Total Alkalinity (mg/L as CaCo3)		250	241	96	80 - 120	5/16/00	QC02689

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Benzene (mg/L)		0.1	0.103	103	80 - 120	5/10/00	QC02601
ICV	Toluene (mg/L)		0.1	0.112	112	80 - 120	5/10/00	QC02601
ICV	Ethylbenzene (mg/L)		0.1	0.112	112	80 - 120	5/10/00	QC02601
ICV	M,P,O-Xylene (mg/L)		0.3	0.341	114	80 - 120	5/10/00	QC02601
CCV 1	Benzene (mg/L)		0.1	0.096	96	80 - 120	5/10/00	QC02601
CCV 1	Toluene (mg/L)		0.1	0.104	104	80 - 120	5/10/00	QC02601
CCV 1	Ethylbenzene (mg/L)		0.1	0.103	103	80 - 120	5/10/00	QC02601
CCV 1	M,P,O-Xylene (mg/L)		0.3	0.314	105	80 - 120	5/10/00	QC02601
CCV 2	Benzene (mg/L)		0.1	0.096	96	80 - 120	5/10/00	QC02601
CCV 2	Toluene (mg/L)		0.1	0.103	103	80 - 120	5/10/00	QC02601
CCV 2	Ethylbenzene (mg/L)		0.1	0.103	103	80 - 120	5/10/00	QC02601
CCV 2	M,P,O-Xylene (mg/L)		0.3	0.315	105	80 - 120	5/10/00	QC02601

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Calcium (mg/L)		20	21.5	108	75 - 125	5/16/00	QC02808
ICV	Dissolved Magnesium (mg/L)		20	21.7	109	75 - 125	5/16/00	QC02808
ICV	Dissolved Potassium (mg/L)		20	19.9	99	75 - 125	5/16/00	QC02808
ICV	Dissolved Sodium (mg/L)		20	20.4	102	75 - 125	5/16/00	QC02808
CCV 1	Dissolved Calcium (mg/L)		20	21.6	108	75 - 125	5/16/00	QC02808
CCV 1	Dissolved Magnesium (mg/L)		20	21.9	110	75 - 125	5/16/00	QC02808
CCV 1	Dissolved Potassium (mg/L)		20	20.1	101	75 - 125	5/16/00	QC02808
CCV 1	Dissolved Sodium (mg/L)		20	20.6	103	75 - 125	5/16/00	QC02808

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00097	97	80 - 120	5/15/00	QC02666

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Total Mercury (mg/L)		0.001	0.00102	102	80 - 120	5/15/00	QC02666

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.56	92	80 - 120	5/10/00	QC02581
ICV	Fluoride (mg/L)		2.5	2.45	98	80 - 120	5/10/00	QC02581
ICV	Nitrate-N (mg/L)		5	4.76	95	80 - 120	5/10/00	QC02581
ICV	Sulfate (mg/L)		12.5	11.94	96	80 - 120	5/10/00	QC02581
CCV 1	CL (mg/L)		12.5	11.58	93	80 - 120	5/10/00	QC02581
CCV 1	Fluoride (mg/L)		2.5	2.44	98	80 - 120	5/10/00	QC02581
CCV 1	Nitrate-N (mg/L)		5	4.70	94	80 - 120	5/10/00	QC02581
CCV 1	Sulfate (mg/L)		12.5	12.13	97	80 - 120	5/10/00	QC02581

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		1	0.99	99	75 - 125	5/16/00	QC02724
ICV	Total Arsenic (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Barium (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Beryllium (mg/L)		1	0.96	96	75 - 125	5/16/00	QC02724
ICV	Total Boron (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02724
ICV	Total Cadmium (mg/L)		1	0.96	96	75 - 125	5/16/00	QC02724
ICV	Total Chromium (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Cobalt (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Copper (mg/L)		1	1.00	100	75 - 125	5/16/00	QC02724
ICV	Total Iron (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Lead (mg/L)		1	0.98	98	75 - 125	5/16/00	QC02724
ICV	Total Manganese (mg/L)		1	0.99	99	75 - 125	5/16/00	QC02724
ICV	Total Molybdenum (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Nickel (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Selenium (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Silver (mg/L)		0.2	0.196	98	75 - 125	5/16/00	QC02724
ICV	Total Uranium (mg/L)		1	1.02	102	75 - 125	5/16/00	QC02724
ICV	Total Vanadium (mg/L)		1	0.97	97	75 - 125	5/16/00	QC02724
ICV	Total Zinc (mg/L)		1	0.95	95	75 - 125	5/16/00	QC02724
CCV 1	Total Aluminum (mg/L)		1	1.02	102	75 - 125	5/16/00	QC02724
CCV 1	Total Arsenic (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02724
CCV 1	Total Barium (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724
CCV 1	Total Beryllium (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02724
CCV 1	Total Boron (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Total Cadmium (mg/L)		1	1.06	106	75 - 125	5/16/00	QC02724
CCV 1	Total Chromium (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724
CCV 1	Total Cobalt (mg/L)		1	1.04	104	75 - 125	5/16/00	QC02724
CCV 1	Total Copper (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02724
CCV 1	Total Iron (mg/L)		1	1.04	104	75 - 125	5/16/00	QC02724
CCV 1	Total Lead (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724
CCV 1	Total Manganese (mg/L)		1	1.06	106	75 - 125	5/16/00	QC02724
CCV 1	Total Molybdenum (mg/L)		1	1.04	104	75 - 125	5/16/00	QC02724
CCV 1	Total Nickel (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724
CCV 1	Total Selenium (mg/L)		1	1.05	105	75 - 125	5/16/00	QC02724
CCV 1	Total Silver (mg/L)		0.2	0.207	103	- 75 - 125	5/16/00	QC02724
CCV 1	Total Uranium (mg/L)		1	1.04	104	75 - 125	5/16/00	QC02724
CCV 1	Total Vanadium (mg/L)		1	1.03	103	75 - 125	5/16/00	QC02724
CCV 1	Total Zinc (mg/L)		1	1.02	102	75 - 125	5/16/00	QC02724

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

TraceAnalysis, Inc.

Company Name:

VAVA50

Phone #:

505 748 3311

Address:

(Street: City: Zip)

Fax #.

505-7489077

Contact Person:

Dairell Moore a Charlie Plimake

Invoice to:

Invoice to: (If different from above)

Project #:

Project Name:

name: Evaporation ponds

Sampler Signature:

nature: *CP - the Principle*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HN03	ICE	NONE	DATE	TIME	
145879	OC0-8	1	1L	X					X		X		5/9/00	1050
	"	1	500ml	X					X	X			5/9/00	1050
	"	2	400ml	X					X		X		5/9/00	1050
80	OC0-5	1	1L	X					X		X		5/9/00	930
	"	1	500ml	X					X		X		5/9/00	930
	"	2	400ml	X							X	X	5/9/00	930

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A020 510 10

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

LAB USE ONLY

Intact Y / N
 Headspace Y / N
 Temp 0 °
 Log-In Review ms

REMARKS:

5/25/60

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Carrier # FedEx 282-7595-732

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296		TraceAnalysis, Inc.		4725 Ripley Dr., Ste A El Paso, Texas 79922-1028 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443		
Company Name: NAVAJO		Phone #: 505 748 3311				
Address: (Street, City, Zip) 501 S Main		Fax #: 505 748 9077				
Contact Person: Darrell Moore or Charlie Plymale						
Invoice to: (If different from above)						
Project #: 501		Project Name: Evaporation Ponds				
Project Location: Artesia		Sampler Signature: Charlie Plymale				
LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX WATER SOIL AIR SLUDGE	PRESERVATIVE METHOD HCL HNO3 ICE NONE NaHSO4	SAMPLING DATE TIME
145881	0CD-7AR	1	1L	X	X	5/9/00 10:30
	"	1	500mL	X	X	5/9/00 10:30
	"	2	40mL	X	X	5/9/00 10:30
82	0CD-6	1	1L	X	X	5/9/00 1000
	"	1	500mL	X	X	5/9/00 1000
	"	2	40mL	X	X	5/9/00 1000
83	MW-7A	1	1L	X	X	5/9/00 1115
	"	1	500mL	X	X	5/9/00 1115
	"	2	40mL	X	X	5/9/00 1115
Relinquished by: [Signature]		Date: 5/9/00	Time: 16:15	Received by: [Signature]		
Relinquished by: [Signature]		Date: [Signature]	Time: [Signature]	Received by: [Signature]		
Relinquished by: [Signature]		Date: [Signature]	Time: [Signature]	Received by: [Signature]		

TELEPHONE
(505) 748-3311

EASYLINK
62905278



REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159

ARTESIA, NEW MEXICO 88411-0159

January 31, 2000

FAX

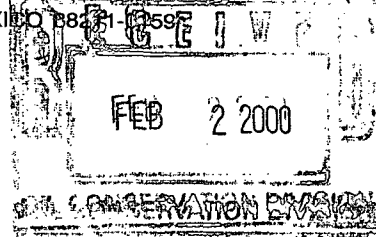
(505) 746-6410 ACCTG

(505) 746-6155 EXEC

(505) 748-9077 ENGR

(505) 746-4438 P / L

Mr. Roger Anderson
NM Oil Conservation Division
Environmental Bureau
2040 S. Pacheco St.
Santa Fe, NM 87505-5472



RE: FALL 1999 REPORT GROUND WATER SAMPLING AROUND EVAPORATION PONDS

Dear Roger:

Enclosed are results from our Fall 1999 sampling of the monitor wells around the evaporation ponds. This is on a staggered schedule per your letter of October 21, 1991. Since we had such heavy rains last summer, the Spring 1999 sampling was delayed. The following results are ALL the wells. Sampling was done on December 29, 1999 and January 4, 2000. Also, MW-1 was run over by pipeline digging equipment and is no longer useful. We can discuss if and/or when it will need to be replaced. The following is a summary of field observations:

<u>Well #</u>	<u>Ground water</u> <u>ft amsL</u>	<u>pH</u>	<u>EC</u> <u>umhos</u>	<u>Deg. C</u>	<u>Description</u>
MW-1	NA	NA	NA	NA	NA
MW-2A	3300.52	6.32	12000	17.5	Odor
MW-3	3299.35	6.50	8350	17.1	Moderate odor
MW-4	3299.19	6.26	8000	18.3	Mod. Odor
MW-5A	3298.69	6.72	12000	17.3	Odor, Silty
MW-6A	3299.57	7.64	9400	17.5	Odor
MW-7A	3298.20	6.60	13000	17.1	Odor
OCD-1A	3301.78	7.58	13000	17.3	Mild Odor
OCD-2A	3299.78	6.35	12000	17.6	Odor
OCD-3A	3299.74	6.33	8100	19.2	Silt, odor
OCD-4A	3298.61	6.35	12000	18.9	Odor
OCD-5A	3298.51	6.35	12100	18	Odor
OCD-6A	329.22	6.6	13000	17.4	Mild odor
OCD-7A	3299.45	6.6	13000	17.1	Strong Odor
OCD-8A	3297.93	6.46	12000	18.8	Odor

If you have any questions, please contact me at 748-3311, extension 281.

Respectfully yours,
NAVAJO REFINING CO.

Darrell Moore
Environmental Mgr. for Water and Waste

Encl.
cc: USEPA



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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Charlie Plymale
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 1/11/00

Project Number: N/A
Project Name: Evaporation Ponds
Project Location: Artesia

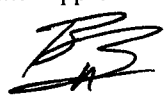
Order ID Number: 99123105

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
138121	OCD5	Water	12/29/99	14:30	12/31/99
138122	OCD4	Water	12/29/99	14:50	12/31/99
138123	OCD3	Water	12/29/99	15:10	12/31/99
138124	MW5A	Water	12/29/99	11:20	12/31/99
138125	MW7A	Water	12/29/99	13:45	12/31/99
138126	OCD8	Water	12/29/99	14:15	12/31/99
138127	OCD6	Water	12/29/99	10:20	12/31/99
138128	OCD1	Water	12/29/99	10:40	12/31/99
138129	MW4	Water	12/29/99	11:05	12/31/99
138130	OCD2	Water	12/29/99	15:15	12/31/99
138131	MW2A	Water	12/29/99	15:50	12/31/99
138132	MW6A	Water	12/29/99	8:50	12/31/99
138133	MW3	Water	12/29/99	9:20	12/31/99
138134	MW7A	Water	12/29/99	9:45	12/31/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 138121

Description: OCD5

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		210	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		210	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1

BTEX (mg/L)

MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.52	5	0.1	104	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	0.534	5	0.1	107	72 - 128	RC	PB00133	QC00177

Ion Chromatography (IC) (mg/L)

CL	*	4500	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		1.8	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	2900	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 91.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 93; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 93.

Sample Number: 138122

Description: OCD4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		192	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		192	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1

BTEX (mg/L)

MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #		
TFT (mg/L)	0.502	5	0.1	100	72 - 128	RC	PB00133	QC00177		
4-BFB (mg/L)	0.445	5	0.1	89	72 - 128	RC	PB00133	QC00177		
Ion Chromatography (IC) (mg/L)										
CL	*	4200	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		1.9	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	2900	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 91.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 93; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 93.

Sample Number: 138123

Description: OCD3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		186	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		186	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		<0.001	1	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.1	1	0.1	100	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	0.088	1	0.1	88	72 - 128	RC	PB00133	QC00177

Ion Chromatography (IC) (mg/L)										
CL	*	1200	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		1.8	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	2000	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 91.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 93; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 93.

Sample Number: 138124

Description: MW5A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1

Bicarbonate Alkalinity	430	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity	430	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1

BTEX (mg/L)

MTBE	0.007	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene	0.03	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX	0.03	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.508	5	0.1	102	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	*	4.3	0.1	860	72 - 128	RC	PB00133	QC00177

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	3100	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		3.7	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	4500	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 91.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 93; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 93.

Sample Number: 138125

Description: MW7A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		248	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		248	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.5	5	0.1	100	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	*	0.726	0.1	145	72 - 128	RC	PB00133	QC00177

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	2000	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		2.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	2900	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

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* CL - Chloride re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 91.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00214) ICV %IA = 93; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 93.

Sample Number: 138126

Description: OCD8

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		434	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		434	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		0.007	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)		0.482	5	0.1	96	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	*	0.826	5	0.1	165	72 - 128	RC	PB00133	QC00177

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	2100	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		3.3	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	3200	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138127

Description: OCD6

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		638	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		638	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

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Total BTEX	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)	0.514	5	0.1	103	72 - 128	RC	PB00133	QC00177	
4-BFB (mg/L)	* 0.656	5	0.1	131	72 - 128	RC	PB00133	QC00177	

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	2400	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		5.1	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	3700	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138128

Description: OCD1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		596	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		596	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		0.006	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		0.006	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)	0.493	5	0.1	99	72 - 128	RC	PB00133	QC00177	
4-BFB (mg/L)	* 0.737	5	0.1	147	72 - 128	RC	PB00133	QC00177	

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	2300	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		9.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	3700	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

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Sample Number: 138129

Description: MW4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		212	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		212	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		0.018	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		0.047	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		0.054	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		0.119	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.503	5	0.1	101	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	* 0.654	5	0.1	131	72 - 128	RC	PB00133	QC00177

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	1100	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		2.2	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	1600	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138130

Description: OCD2

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Bicarbonate Alkalinity		494	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
Total Alkalinity		494	1	E 310.1	1/5/00	1/5/00	JS	PB00178	QC00241	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.472	5	0.1	94	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	0.571	5	0.1	114	72 - 128	RC	PB00133	QC00177

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Ion Chromatography (IC) (mg/L)

CL	*	2900	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5
Fluoride		2.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.2
Sulfate	*	3700	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00195	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138131

Description: MW2A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Bicarbonate Alkalinity		510	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Total Alkalinity		510	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
BTEX (mg/L)										
MTBE		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene		<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene		0.01	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX		0.01	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.508	5	0.1	102	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	* 0.989	5	0.1	198	72 - 128	RC	PB00133	QC00177

* 4-BFB - BFB high due to matrix interference.

Ion Chromatography (IC) (mg/L)

CL	*	1800	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5
Fluoride		12	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.2
Sulfate	*	3000	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138132

Description: MW6A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Bicarbonate Alkalinity		120	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Total Alkalinity		120	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1

BTEX (mg/L)									
MTBE	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Benzene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Toluene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Ethylbenzene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
M,P,O-Xylene	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001
Total BTEX	<0.005	5	S 8021B	1/2/00	1/2/00	RC	PB00133	QC00177	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.488	5	0.1	98	72 - 128	RC	PB00133	QC00177
4-BFB (mg/L)	0.57	5	0.1	114	72 - 128	RC	PB00133	QC00177

Ion Chromatography (IC) (mg/L)

CL	*	590	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5
Fluoride		2.6	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.2
Sulfate	*	1200	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00215) ICV %IA = 94; CCV %IA = 91; Matrix spikes RPD = 2; Matrix spikes %EA = 94.

Sample Number: 138133

Description: MW3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Bicarbonate Alkalinity		288	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Total Alkalinity		288	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1

BTEX (mg/L)

MTBE	<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Benzene	<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Toluene	<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Ethylbenzene	<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
M,P,O-Xylene	0.009	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Total BTEX	0.009	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001

Surrogate	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
TFT (mg/L)	0.531	5	0.1	106	72 - 128	RC	PB00167	QC00225
4-BFB (mg/L)	*	0.713	5	0.1	713	72 - 128	RC	PB00167

* 4-BFB - 4-BFB IS HIGH DUE TO MATRIX.

Ion Chromatography (IC) (mg/L)

CL	*	1200	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5
Fluoride		2.7	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.2
Sulfate	*	2800	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00216) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00216) ICV %IA = 91; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 89.

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Sample Number: 138134

Description: MW7A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCO ₃)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Bicarbonate Alkalinity		534	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Total Alkalinity		534	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
BTEX (mg/L)										
MTBE		0.006	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Benzene		<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Toluene		<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Ethylbenzene		0.006	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
M,P,O-Xylene		<0.005	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Total BTEX		0.006	5	S 8021B	1/4/00	1/4/00	RC	PB00167	QC00225	0.001
Surrogate										
		Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
TFT (mg/L)		0.486	5	0.1	97	72 - 128	RC	PB00167	QC00225	
4-BFB (mg/L)		0.473	5	0.1	95	72 - 128	RC	PB00167	QC00225	
Ion Chromatography (IC) (mg/L)										
CL	*	1900	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5
Fluoride		4.5	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.1
Nitrate-N		<1.0	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.2
Sulfate	*	3400	1	E 300.0	12/31/99	12/31/99	JS	PB00149	QC00196	0.5

* CL - Chloride re-ran on IC010300.sch (PB00165; QC00216) ICV %IA = 91; CCV %IA = 91; Matrix spikes RPD = 0; Matrix spikes %EA = 90.

* Sulfate - Sulfate re-ran on IC010300.sch (PB00165; QC00216) ICV %IA = 91; CCV %IA = 94; Matrix spikes RPD = 0; Matrix spikes %EA = 89.

Quality Control Report

Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<2.0	1	1/5/00	PB00178	QC00241
Carbonate Alkalinity (mg/L as CaCo3)		<2.0	1	1/5/00	PB00178	QC00241
Bicarbonate Alkalinity (mg/L as CaCo3)		<2.0	1	1/5/00	PB00178	QC00241
Total Alkalinity (mg/L as CaCo3)		<2.0	1	1/5/00	PB00178	QC00241
Hydroxide Alkalinity (mg/L as CaCo3)		<4.0	1	1/6/00	PB00179	QC00242
Carbonate Alkalinity (mg/L as CaCo3)		<4.0	1	1/6/00	PB00179	QC00242
Bicarbonate Alkalinity (mg/L as CaCo3)		<4.0	1	1/6/00	PB00179	QC00242
Total Alkalinity (mg/L as CaCo3)		<4.0	1	1/6/00	PB00179	QC00242

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
MTBE (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
Benzene (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
Toluene (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
Ethylbenzene (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
M,P,O-Xylene (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
Total BTEX (mg/L)		<0.001	0.001	1/2/00	PB00133	QC00177
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)		.103	0.1	103	72 - 128	QC00177
4-BFB (mg/L)		.094	0.1	94	72 - 128	QC00177
MTBE (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
Benzene (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
Toluene (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
Ethylbenzene (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
M,P,O-Xylene (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
Total BTEX (mg/L)		<0.001	0.001	1/4/00	PB00167	QC00225
Surrogate		Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
TFT (mg/L)		.102	0.1	102	72 - 128	QC00225
4-BFB (mg/L)		.096	0.1	96	72 - 128	QC00225

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	12/31/99	PB00149	QC00195
Fluoride (mg/L)		<.01	0.1	12/31/99	PB00149	QC00195
Nitrate-N (mg/L)		<0.2	0.2	12/31/99	PB00149	QC00195
Sulfate (mg/L)		<0.5	0.5	12/31/99	PB00149	QC00195
CL (mg/L)		<0.5	0.5	12/31/99	PB00149	QC00196
Fluoride (mg/L)		<0.1	0.1	12/31/99	PB00149	QC00196
Nitrate-N (mg/L)		<0.2	0.2	12/31/99	PB00149	QC00196
Sulfate (mg/L)		<0.5	0.5	12/31/99	PB00149	QC00196

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Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)	2.0	1	12.5	12.73	86		80 - 120	0 - 20	QC00195
MS	Nitrate-N (mg/L)	<1.0	1	25	23.61	94		80 - 120	0 - 20	QC00195
MSD	Fluoride (mg/L)	2.0	1	12.5	12.76	86	0	80 - 120	0 - 20	QC00195
MSD	Nitrate-N (mg/L)	<1.0	1	25	23.98	96	2	80 - 120	0 - 20	QC00195

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Fluoride (mg/L)	4.5	1	12.5	15.80	90		80 - 120	0 - 20	QC00196
MS	Nitrate-N (mg/L)	<1.0	1	25	24.34	97		80 - 120	0 - 20	QC00196
MSD	Fluoride (mg/L)	4.5	1	12.5	15.60	89	2	80 - 120	0 - 20	QC00196
MSD	Nitrate-N (mg/L)	<1.0	1	25	23.95	96	2	80 - 120	0 - 20	QC00196

Quality Control Report Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00241
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00241
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		498	494	1	1	0 - 20	QC00241
Duplicate	Total Alkalinity (mg/L as CaCo3)		498	494	1	1	0 - 20	QC00241

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00242
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC00242
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		336	335	1	0	0 - 20	QC00242
Duplicate	Total Alkalinity (mg/L as CaCo3)		336	335	1	0	0 - 20	QC00242

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/L)	<0.001	1	0.1	0.099	99		80 - 120	0 - 20	QC00177
LCS Benzene (mg/L)	<0.001	1	0.1	0.098	98		80 - 120	0 - 20	QC00177
LCS Toluene (mg/L)	<0.001	1	0.1	0.098	98		80 - 120	0 - 20	QC00177
LCS Ethylbenzene (mg/L)	<0.001	1	0.1	0.1	100		80 - 120	0 - 20	QC00177
LCS M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.293	98		80 - 120	0 - 20	QC00177
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCS TFT (mg/L)		1	0.1	0.098	98		72 - 128		QC00177
LCS 4-BFB (mg/L)		1	0.1	0.1	100		72 - 128		QC00177
LCSD MTBE (mg/L)	<0.001	1	0.1	0.099	99	0	80 - 120	0 - 20	QC00177
LCSD Benzene (mg/L)	<0.001	1	0.1	0.1	100	2	80 - 120	0 - 20	QC00177
LCSD Toluene (mg/L)	<0.001	1	0.1	0.1	100	2	80 - 120	0 - 20	QC00177
LCSD Ethylbenzene (mg/L)	<0.001	1	0.1	0.101	101	1	80 - 120	0 - 20	QC00177
LCSD M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.298	99	2	80 - 120	0 - 20	QC00177
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCSD TFT (mg/L)		1	0.1	0.097	97		72 - 128		QC00177
LCSD 4-BFB (mg/L)		1	0.1	0.1	100		72 - 128		QC00177

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/L)	<0.001	1	0.1	0.103	103		80 - 120	0 - 20	QC00225
LCS Benzene (mg/L)	<0.001	1	0.1	0.098	98		80 - 120	0 - 20	QC00225
LCS Toluene (mg/L)	<0.001	1	0.1	0.097	97		80 - 120	0 - 20	QC00225
LCS Ethylbenzene (mg/L)	<0.001	1	0.1	0.095	95		80 - 120	0 - 20	QC00225
LCS M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.254	85		80 - 120	0 - 20	QC00225
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCS TFT (mg/L)		1	0.1	0.095	95		72 - 128		QC00225
LCS 4-BFB (mg/L)		1	0.1	0.094	94		72 - 128		QC00225
LCSD MTBE (mg/L)	<0.001	1	0.1	0.111	111	7	80 - 120	0 - 20	QC00225
LCSD Benzene (mg/L)	<0.001	1	0.1	0.096	96	2	80 - 120	0 - 20	QC00225
LCSD Toluene (mg/L)	<0.001	1	0.1	0.096	96	1	80 - 120	0 - 20	QC00225
LCSD Ethylbenzene (mg/L)	<0.001	1	0.1	0.094	94	1	80 - 120	0 - 20	QC00225
LCSD M,P,O-Xylene (mg/L)	<0.001	1	0.3	0.287	96	12	80 - 120	0 - 20	QC00225
Standard Surrogate		Dil.	Spike Amount	Result	% Rec.		% Rec. Limit		QC Batch #
LCSD TFT (mg/L)		1	0.1	0.095	95		72 - 128		QC00225
LCSD 4-BFB (mg/L)		1	0.1	0.095	95		72 - 128		QC00225

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	340	0	80 - 120	1/5/00	QC00241
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2120	0	80 - 120	1/5/00	QC00241
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/5/00	QC00241
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2460	102	80 - 120	1/5/00	QC00241
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/5/00	QC00241
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	2040	0	80 - 120	1/5/00	QC00241
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	240	0	80 - 120	1/5/00	QC00241
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2280	95	80 - 120	1/5/00	QC00241

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/6/00	QC00242
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	2120	0	80 - 120	1/6/00	QC00242
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	140	0	80 - 120	1/6/00	QC00242
ICV	Total Alkalinity (mg/L as CaCo3)		2400	2260	94	80 - 120	1/6/00	QC00242
CCV (1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	1/6/00	QC00242
CCV (1	Carbonate Alkalinity (mg/L as CaCo3)		0	2040	0	80 - 120	1/6/00	QC00242
CCV (1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	180	0	80 - 120	1/6/00	QC00242
CCV (1	Total Alkalinity (mg/L as CaCo3)		2400	2220	93	80 - 120	1/6/00	QC00242

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE (mg/L)		0.1	0.098	98	80 - 120	1/2/00	QC00177
ICV	Benzene (mg/L)		0.1	0.098	98	80 - 120	1/2/00	QC00177
ICV	Toluene (mg/L)		0.1	0.098	98	80 - 120	1/2/00	QC00177
ICV	Ethylbenzene (mg/L)		0.1	0.099	99	80 - 120	1/2/00	QC00177
ICV	M,P,O-Xylene (mg/L)		0.3	0.29	97	80 - 120	1/2/00	QC00177
CCV (1	MTBE (mg/L)		0.1	0.094	94	80 - 120	1/2/00	QC00177
CCV (1	Benzene (mg/L)		0.1	0.093	93	80 - 120	1/2/00	QC00177
CCV (1	Toluene (mg/L)		0.1	0.093	93	80 - 120	1/2/00	QC00177
CCV (1	Ethylbenzene (mg/L)		0.1	0.094	94	80 - 120	1/2/00	QC00177
CCV (1	M,P,O-Xylene (mg/L)		0.3	0.275	92	80 - 120	1/2/00	QC00177
CCV (2	MTBE (mg/L)		0.1	0.094	94	80 - 120	1/2/00	QC00177
CCV (2	Benzene (mg/L)		0.1	0.094	94	80 - 120	1/2/00	QC00177
CCV (2	Toluene (mg/L)		0.1	0.094	94	80 - 120	1/2/00	QC00177
CCV (2	Ethylbenzene (mg/L)		0.1	0.095	95	80 - 120	1/2/00	QC00177
CCV (2	M,P,O-Xylene (mg/L)		0.3	0.277	92	80 - 120	1/2/00	QC00177

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE (mg/L)		0.1	0.096	96	80 - 120	1/4/00	QC00225
ICV	Benzene (mg/L)		0.1	0.095	95	80 - 120	1/4/00	QC00225
ICV	Toluene (mg/L)		0.1	0.094	94	80 - 120	1/4/00	QC00225
ICV	Ethylbenzene (mg/L)		0.1	0.092	92	80 - 120	1/4/00	QC00225
ICV	M,P,O-Xylene (mg/L)		0.3	0.282	94	80 - 120	1/4/00	QC00225
CCV (1	MTBE (mg/L)		0.1	0.107	107	80 - 120	1/4/00	QC00225
CCV (1	Benzene (mg/L)		0.1	0.103	103	80 - 120	1/4/00	QC00225
CCV (1	Toluene (mg/L)		0.1	0.103	103	80 - 120	1/4/00	QC00225
CCV (1	Ethylbenzene (mg/L)		0.1	0.101	101	80 - 120	1/4/00	QC00225
CCV (1	M,P,O-Xylene (mg/L)		0.3	0.309	103	80 - 120	1/4/00	QC00225
CCV (2	MTBE (mg/L)		0.1	0.103	103	80 - 120	1/4/00	QC00225
CCV (2	Benzene (mg/L)		0.1	0.100	100	80 - 120	1/4/00	QC00225
CCV (2	Toluene (mg/L)		0.1	0.099	99	80 - 120	1/4/00	QC00225
CCV (2	Ethylbenzene (mg/L)		0.1	0.098	98	80 - 120	1/4/00	QC00225
CCV (2	M,P,O-Xylene (mg/L)		0.3	0.300	100	80 - 120	1/4/00	QC00225
CCV (3	MTBE (mg/L)		0.1	0.102	102	80 - 120	1/4/00	QC00225
CCV (3	Benzene (mg/L)		0.1	0.099	99	80 - 120	1/4/00	QC00225
CCV (3	Toluene (mg/L)		0.1	0.099	99	80 - 120	1/4/00	QC00225
CCV (3	Ethylbenzene (mg/L)		0.1	0.097	97	80 - 120	1/4/00	QC00225
CCV (3	M,P,O-Xylene (mg/L)		0.3	0.296	99	80 - 120	1/4/00	QC00225

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.30	90	80 - 120	12/31/99	QC00195
ICV	Fluoride (mg/L)		2.5	2.29	92	80 - 120	12/31/99	QC00195
ICV	Nitrate-N (mg/L)		5	4.52	90	80 - 120	12/31/99	QC00195
ICV	Sulfate (mg/L)		12.5	11.31	90	80 - 120	12/31/99	QC00195
CCV (1	CL (mg/L)		12.5	11.52	92	80 - 120	12/31/99	QC00195
CCV (1	Fluoride (mg/L)		2.5	2.36	94	80 - 120	12/31/99	QC00195
CCV (1	Nitrate-N (mg/L)		5	4.52	90	80 - 120	12/31/99	QC00195
CCV (1	Sulfate (mg/L)		12.5	11.75	94	80 - 120	12/31/99	QC00195

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.52	92	80 - 120	12/31/99	QC00196
ICV	Fluoride (mg/L)		2.5	2.36	94	80 - 120	12/31/99	QC00196
ICV	Nitrate-N (mg/L)		5	4.52	90	80 - 120	12/31/99	QC00196
ICV	Sulfate (mg/L)		12.5	11.75	94	80 - 120	12/31/99	QC00196
CCV (1	CL (mg/L)		12.5	11.49	92	80 - 120	12/31/99	QC00196

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV (1	Fluoride (mg/L)		2.5	2.39	96	80 - 120	12/31/99	QC00196
CCV (1	Nitrate-N (mg/L)		5	4.53	91	80 - 120	12/31/99	QC00196
CCV (1	Sulfate (mg/L)		12.5	11.51	92	80 - 120	12/31/99	QC00196

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Analytical and Quality Control Report

Charlie Plymale
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: 1/12/00

Project Number: N/A
Project Name: Evaporation Ponds
Project Location: Artesia

Order ID Number: 99123105

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
138121	OCD5	Water	12/29/99	14:30	12/31/99
138122	OCD4	Water	12/29/99	14:50	12/31/99
138123	OCD3	Water	12/29/99	15:10	12/31/99
138124	MW5A	Water	12/29/99	11:20	12/31/99
138125	MW7A	Water	12/29/99	13:45	12/31/99
138126	OCD8	Water	12/29/99	14:15	12/31/99
138127	OCD6	Water	12/29/99	10:20	12/31/99
138128	OCD1	Water	12/29/99	10:40	12/31/99
138129	MW4	Water	12/29/99	11:05	12/31/99
138130	OCD2	Water	12/29/99	15:15	12/31/99
138131	MW2A	Water	12/29/99	15:50	12/31/99
138132	MW6A	Water	12/29/99	8:50	12/31/99
138133	MW3	Water	12/29/99	9:20	12/31/99
138134	MW7A	Water	12/29/99	9:45	12/31/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 138121

Description: OCD5

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		764	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		246	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		56	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2764	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00202	QC00267	0.0002
Total Metals (mg/L)										
Total Aluminum		12	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.22	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		1.6	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		40	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		0.84	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138122

Description: OCD4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		784	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		257	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		70	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2671	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00202	QC00267	0.0002
Total Metals (mg/L)										
Total Aluminum		5.6	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.16	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01

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N/A

Evaporation Ponds

Artesia

Total Boron	1.4	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron	17	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese	0.54	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138123

Description: OCD3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		395	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		116	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		21	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		980	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00202	QC00267	0.0002
Total Metals (mg/L)										
Total Aluminum		5.2	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.20	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		1.2	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		98	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		0.92	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Report Date: 1/12/00

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N/A

Evaporation Ponds

Artesia

Sample Number: 138124

Description: MW5A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		437	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		467	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		12	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2859	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00202	QC00267	0.0002
Total Metals (mg/L)										
Total Aluminum		71	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		0.45	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.85	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		1.5	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		0.06	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		76	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		0.08	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		3.3	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		0.19	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium		0.12	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc		0.17	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138125

Description: MW7A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		347	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		269	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		6.9	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		1717	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00202	QC00267	0.0002
Total Metals (mg/L)										
Total Aluminum		0.82	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		0.48	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		0.88	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05

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N/A	Evaporation Ponds								Artesia	
Total Cobalt	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05	
Total Copper	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Iron	41	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Lead	0.04	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005	
Total Manganese	4.7	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Molybdenum	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Nickel	0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Selenium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01	
Total Silver	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005	
Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Zinc	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	

Sample Number: 138126

Description: OCD8

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		546	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		256	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		12	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		1848	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		62	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.73	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Boron		1.0	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		51	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		0.06	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		4.9	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		0.13	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc		0.13	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138127

Description: OCD6

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		523	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		182	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		19	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2513	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5

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Hg, Total (mg/L)										
Total Mercury	<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002	
Total Metals (mg/L)										
Total Aluminum	18	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05	
Total Arsenic	0.18	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Barium	0.22	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Beryllium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01	
Total Boron	0.80	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Cadmium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05	
Total Chromium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05	
Total Cobalt	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05	
Total Copper	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Iron	61	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Lead	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005	
Total Manganese	2.9	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Molybdenum	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Nickel	0.11	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Selenium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01	
Total Silver	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005	
Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	
Total Zinc	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1	

Sample Number: 138128

Description: OCD1

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		526	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		139	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		11	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2405	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		51	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		0.24	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.79	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		0.65	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		50	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		4.2	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		0.14	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005

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Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc	0.13	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138129

Description: MW4

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		347	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		124	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		4.8	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		825	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		4.8	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.12	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron		0.59	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron		7.3	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese		2.3	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138130

Description: OCD2

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		549	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		276	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		9.7	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		2450	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		9.3	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Barium		0.16	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

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Total Beryllium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Boron	0.69	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Cadmium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Chromium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Cobalt	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.05
Total Copper	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Iron	32	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Lead	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Manganese	2.0	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Molybdenum	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Nickel	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Selenium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.01
Total Silver	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.005
Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1
Total Zinc	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00206	QC00309	0.1

Sample Number: 138131

Description: MW2A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		516	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		73	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		13	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		1906	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		0.64	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Arsenic		0.36	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Barium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Boron		0.56	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Chromium		0.12	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Iron		9.2	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Manganese		3.1	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1

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Sample Number: 138132

Description: MW6A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		237	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		76	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		1.9	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		494	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		14	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Arsenic		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Barium		0.19	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Boron		0.52	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Iron		12	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Manganese		0.66	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1

Sample Number: 138133

Description: MW3

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Alkalinity (mg/L as CaCo3)										
Hydroxide Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Carbonate Alkalinity		<1.0	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Bicarbonate Alkalinity		288	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Total Alkalinity		288	1	E 310.1	1/6/00	1/6/00	JS	PB00179	QC00242	1
Dissolved Metals (mg/L)										
Dissolved Calcium		505	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		229	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		8.9	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		1001	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		11	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05

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Total Arsenic	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Barium	0.30	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Beryllium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Boron	0.95	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Cadmium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Chromium	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Cobalt	<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Copper	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Iron	11	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Lead	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Manganese	3.8	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Molybdenum	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Nickel	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Selenium	<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Silver	<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Uranium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Vanadium	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Zinc	<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1

Sample Number: 138134

Description: MW7A

Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Dissolved Metals (mg/L)										
Dissolved Calcium		553	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Magnesium		193	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Potassium		8.7	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Dissolved Sodium		1853	1	S 6010B	1/4/00	1/5/00	RR	PB00224	QC00289	0.5
Hg, Total (mg/L)										
Total Mercury		<0.0002	1	S 7470A	1/5/00	1/5/00	BP	PB00205	QC00270	0.0002
Total Metals (mg/L)										
Total Aluminum		4.8	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Arsenic		0.20	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Barium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Beryllium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Boron		1.2	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Cadmium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Chromium		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Cobalt		<0.05	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.05
Total Copper		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Iron		40	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Lead		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Manganese		0.75	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Molybdenum		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Nickel		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Selenium		<0.01	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.01
Total Silver		<0.005	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.005
Total Uranium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Vanadium		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1
Total Zinc		<0.10	1	E 200.7	1/3/00	1/4/00	RR	PB00191	QC00252	0.1

Quality Control Report

Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Dissolved Calcium (mg/L)		<0.50	0.5	1/5/00	PB00224	QC00289
Dissolved Magnesium (mg/L)		<0.50	0.5	1/5/00	PB00224	QC00289
Dissolved Potassium (mg/L)		<0.50	0.5	1/5/00	PB00224	QC00289
Dissolved Sodium (mg/L)		<0.50	0.5	1/5/00	PB00224	QC00289

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	1/5/00	PB00202	QC00267
Total Mercury (mg/L)		<0.0002	0.0002	1/5/00	PB00205	QC00270

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<0.05	0.05	1/4/00	PB00191	QC00252
Total Arsenic (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Barium (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Beryllium (mg/L)		<0.01	0.01	1/4/00	PB00191	QC00252
Total Boron (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Cadmium (mg/L)		<0.05	0.05	1/4/00	PB00191	QC00252
Total Chromium (mg/L)		<0.05	0.05	1/4/00	PB00191	QC00252
Total Cobalt (mg/L)		<0.05	0.05	1/4/00	PB00191	QC00252
Total Copper (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Iron (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Lead (mg/L)		<0.005	0.005	1/4/00	PB00191	QC00252
Total Manganese (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Molybdenum (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Nickel (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Selenium (mg/L)		<0.01	0.01	1/4/00	PB00191	QC00252
Total Silver (mg/L)		<0.005	0.005	1/4/00	PB00191	QC00252
Total Uranium (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Vanadium (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Zinc (mg/L)		<0.10	0.1	1/4/00	PB00191	QC00252
Total Aluminum (mg/L)		<0.05	0.05	1/4/00	PB00206	QC00309
Total Arsenic (mg/L)		<0.10	0.1	1/4/00	PB00206	QC00309
Total Barium (mg/L)		<0.10	0.1	1/4/00	PB00206	QC00309
Total Beryllium (mg/L)		<0.01	0.01	1/4/00	PB00206	QC00309
Total Boron (mg/L)		<0.10	0.1	1/4/00	PB00206	QC00309
Total Cadmium (mg/L)		<0.05	0.05	1/4/00	PB00206	QC00309
Total Chromium (mg/L)		<0.05	0.05	1/4/00	PB00206	QC00309
Total Cobalt (mg/L)		<0.05	0.05	1/4/00	PB00206	QC00309
Total Copper (mg/L)		<0.10	0.1	1/4/00	PB00206	QC00309
Total Iron (mg/L)		<0.10	0.1	1/4/00	PB00206	QC00309
Total Lead (mg/L)		<0.005	0.005	1/4/00	PB00206	QC00309

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N/A

Evaporation Ponds

Artesia

Total Manganese (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309
Total Molybdenum (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309
Total Nickel (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309
Total Selenium (mg/L)	<0.01	0.01	1/4/00	PB00206	QC00309
Total Silver (mg/L)	<0.005	0.005	1/4/00	PB00206	QC00309
Total Uranium (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309
Total Vanadium (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309
Total Zinc (mg/L)	<0.10	0.1	1/4/00	PB00206	QC00309

Quality Control Report

Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Aluminum (mg/L)	0.64	1	2	2.84	110		75 - 125	0 - 20	QC00252
MS	Total Arsenic (mg/L)	0.36	1	2	2.32	98		75 - 125	0 - 20	QC00252
MS	Total Barium (mg/L)	<0.10	1	2	2.14	107		75 - 125	0 - 20	QC00252
MS	Total Beryllium (mg/L)	<0.01	1	2	1.93	97		75 - 125	0 - 20	QC00252
MS	Total Boron (mg/L)	0.56	1	2	2.29	87		75 - 125	0 - 20	QC00252
MS	Total Cadmium (mg/L)	<0.05	1	2	1.93	97		75 - 125	0 - 20	QC00252
MS	Total Chromium (mg/L)	0.12	1	2	2.05	96		75 - 125	0 - 20	QC00252
MS	Total Cobalt (mg/L)	<0.05	1	2	2.03	101		75 - 125	0 - 20	QC00252
MS	Total Copper (mg/L)	<0.10	1	2	2.03	101		75 - 125	0 - 20	QC00252
MS	Total Iron (mg/L)	9.2	1	2	11	90		75 - 125	0 - 20	QC00252
MS	Total Lead (mg/L)	<0.005	1	2	1.99	100		75 - 125	0 - 20	QC00252
MS	Total Manganese (mg/L)	3.1	1	2	4.9	90		75 - 125	0 - 20	QC00252
MS	Total Molybdenum (mg/L)	<0.10	1	2	1.97	99		75 - 125	0 - 20	QC00252
MS	Total Nickel (mg/L)	<0.10	1	100	2.09	2		75 - 125	0 - 20	QC00252
MS	Total Selenium (mg/L)	<0.01	1	2	1.88	94		75 - 125	0 - 20	QC00252
MS	Total Silver (mg/L)	<0.005	1	0.4	0.29	72		75 - 125	0 - 20	QC00252
MS	Total Uranium (mg/L)	<0.10	1	2	1.99	100		75 - 125	0 - 20	QC00252
MS	Total Vanadium (mg/L)	<0.10	1	2	1.91	96		75 - 125	0 - 20	QC00252
MS	Total Zinc (mg/L)	<0.10	1	2	2.05	102		75 - 125	0 - 20	QC00252
MSD	Total Aluminum (mg/L)	0.64	1	2	2.83	110	0	75 - 125	0 - 20	QC00252
MSD	Total Arsenic (mg/L)	0.36	1	2	2.33	99	1	75 - 125	0 - 20	QC00252
MSD	Total Barium (mg/L)	<0.10	1	2	2.24	112	5	75 - 125	0 - 20	QC00252
MSD	Total Beryllium (mg/L)	<0.01	1	2	2.01	100	4	75 - 125	0 - 20	QC00252
MSD	Total Boron (mg/L)	0.56	1	2	2.37	91	5	75 - 125	0 - 20	QC00252
MSD	Total Cadmium (mg/L)	<0.05	1	2	2.01	100	4	75 - 125	0 - 20	QC00252
MSD	Total Chromium (mg/L)	0.12	1	2	2.13	100	4	75 - 125	0 - 20	QC00252
MSD	Total Cobalt (mg/L)	<0.05	1	2	2.11	106	4	75 - 125	0 - 20	QC00252
MSD	Total Copper (mg/L)	<0.10	1	2	2.12	106	4	75 - 125	0 - 20	QC00252
MSD	Total Iron (mg/L)	9.2	1	2	11	90	0	75 - 125	0 - 20	QC00252
MSD	Total Lead (mg/L)	<0.005	1	2	2.08	104	4	75 - 125	0 - 20	QC00252
MSD	Total Manganese (mg/L)	3.1	1	2	5.1	100	11	75 - 125	0 - 20	QC00252
MSD	Total Molybdenum (mg/L)	<0.10	1	2	2.04	102	3	75 - 125	0 - 20	QC00252
MSD	Total Nickel (mg/L)	<0.10	1	100	2.18	2	4	75 - 125	0 - 20	QC00252
MSD	Total Selenium (mg/L)	<0.01	1	2	2.04	102	8	75 - 125	0 - 20	QC00252
MSD	Total Silver (mg/L)	<0.005	1	0.4	0.29	72	0	75 - 125	0 - 20	QC00252
MSD	Total Uranium (mg/L)	<0.10	1	2	2.01	100	1	75 - 125	0 - 20	QC00252
MSD	Total Vanadium (mg/L)	<0.10	1	2	2.00	100	5	75 - 125	0 - 20	QC00252
MSD	Total Zinc (mg/L)	<0.10	1	2	2.13	107	4	75 - 125	0 - 20	QC00252

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00088	88		80 - 120	0 - 20	QC00267
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00089	89	1	80 - 120	0 - 20	QC00267

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00088	88		80 - 120	0 - 20	QC00270
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00088	88	0	80 - 120	0 - 20	QC00270

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Dissolved Calcium (mg/L)	764	1	1000	1831	107		75 - 125	0 - 20	QC00289
MS	Dissolved Magnesium (mg/L)	246	1	1000	1279	103		75 - 125	0 - 20	QC00289
MS	Dissolved Potassium (mg/L)	56	1	1000	1199	114		75 - 125	0 - 20	QC00289
MS	Dissolved Sodium (mg/L)	* 2764	1	1000	4135	137		75 - 125	0 - 20	QC00289

* Dissolved Sodium - Poor MS result due to required dilution.

MSD	Dissolved Calcium (mg/L)	764	1	1000	1847	108	1	75 - 125	0 - 20	QC00289
MSD	Dissolved Magnesium (mg/L)	246	1	1000	1257	101	2	75 - 125	0 - 20	QC00289
MSD	Dissolved Potassium (mg/L)	56	1	1000	1196	114	0	75 - 125	0 - 20	QC00289
MSD	Dissolved Sodium (mg/L)	* 2764	1	1000	4086	132	4	75 - 125	0 - 20	QC00289

* Dissolved Sodium - Poor MS result due to required dilution.

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Aluminum (mg/L)	12	1	2	14	100		75 - 125	0 - 20	QC00309
MS	Total Arsenic (mg/L)	<0.10	1	2	2.08	104		75 - 125	0 - 20	QC00309
MS	Total Barium (mg/L)	0.22	1	2	2.41	110		75 - 125	0 - 20	QC00309
MS	Total Beryllium (mg/L)	<0.01	1	2	2.02	101		75 - 125	0 - 20	QC00309
MS	Total Boron (mg/L)	1.6	1	2	3.4	90		75 - 125	0 - 20	QC00309
MS	Total Cadmium (mg/L)	<0.05	1	2	1.99	100		75 - 125	0 - 20	QC00309
MS	Total Chromium (mg/L)	<0.05	1	2	2.00	100		75 - 125	0 - 20	QC00309
MS	Total Cobalt (mg/L)	<0.05	1	2	2.08	104		75 - 125	0 - 20	QC00309
MS	Total Copper (mg/L)	<0.10	1	2	2.1	105		75 - 125	0 - 20	QC00309
MS	Total Iron (mg/L)	40	1	2	42	100		75 - 125	0 - 20	QC00309
MS	Total Lead (mg/L)	<0.005	1	2	2.06	103		75 - 125	0 - 20	QC00309
MS	Total Manganese (mg/L)	0.84	1	2	2.86	101		75 - 125	0 - 20	QC00309
MS	Total Molybdenum (mg/L)	<0.10	1	2	2.02	101		75 - 125	0 - 20	QC00309
MS	Total Nickel (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00309
MS	Total Selenium (mg/L)	<0.01	1	2	2.04	102		75 - 125	0 - 20	QC00309
MS	Total Silver (mg/L)	<0.005	1	0.4	0.38	95		75 - 125	0 - 20	QC00309
MS	Total Uranium (mg/L)	<0.10	1	2	1.9	95		75 - 125	0 - 20	QC00309

N/A		Evaporation Ponds							Artesia	
MS	Total Vanadium (mg/L)	<0.10	1	2	2.00	100		75 - 125	0 - 20	QC00309
MS	Total Zinc (mg/L)	<0.10	1	2	2.1	105		75 - 125	0 - 20	QC00309
MSD	Total Aluminum (mg/L)	12	1	2	14	100	0	75 - 125	0 - 20	QC00309
MSD	Total Arsenic (mg/L)	<0.10	1	2	1.99	100	4	75 - 125	0 - 20	QC00309
MSD	Total Barium (mg/L)	0.22	1	2	2.38	108	1	75 - 125	0 - 20	QC00309
MSD	Total Beryllium (mg/L)	<0.01	1	2	1.98	99	2	75 - 125	0 - 20	QC00309
MSD	Total Boron (mg/L)	1.6	1	2	3.4	90	0	75 - 125	0 - 20	QC00309
MSD	Total Cadmium (mg/L)	<0.05	1	2	1.97	99	1	75 - 125	0 - 20	QC00309
MSD	Total Chromium (mg/L)	<0.05	1	2	1.97	99	2	75 - 125	0 - 20	QC00309
MSD	Total Cobalt (mg/L)	<0.05	1	2	2.06	103	1	75 - 125	0 - 20	QC00309
MSD	Total Copper (mg/L)	<0.10	1	2	2.1	105	0	75 - 125	0 - 20	QC00309
MSD	Total Iron (mg/L)	40	1	2	43	150	40	75 - 125	0 - 20	QC00309
MSD	Total Lead (mg/L)	<0.005	1	2	2.03	101	1	75 - 125	0 - 20	QC00309
MSD	Total Manganese (mg/L)	0.84	1	2	2.81	99	3	75 - 125	0 - 20	QC00309
MSD	Total Molybdenum (mg/L)	<0.10	1	2	2.00	100	1	75 - 125	0 - 20	QC00309
MSD	Total Nickel (mg/L)	<0.10	1	2	2.2	110	0	75 - 125	0 - 20	QC00309
MSD	Total Selenium (mg/L)	<0.01	1	2	2.01	100	1	75 - 125	0 - 20	QC00309
MSD	Total Silver (mg/L)	<0.005	1	0.4	0.37	93	3	75 - 125	0 - 20	QC00309
MSD	Total Uranium (mg/L)	<0.10	1	2	1.8	90	5	75 - 125	0 - 20	QC00309
MSD	Total Vanadium (mg/L)	<0.10	1	2	1.98	99	1	75 - 125	0 - 20	QC00309
MSD	Total Zinc (mg/L)	<0.10	1	2	2.1	105	0	75 - 125	0 - 20	QC00309

Quality Control Report

Lab Control Spikes and Duplicate Spike

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Dissolved Calcium (mg/L)	<0.50	1	1000	1004	100		75 - 125	0 - 20	QC00289
LCS Dissolved Magnesium (mg/L)	<0.50	1	1000	1032	103		75 - 125	0 - 20	QC00289
LCS Dissolved Potassium (mg/L)	<0.50	1	1000	1029	103		75 - 125	0 - 20	QC00289
LCS Dissolved Sodium (mg/L)	<0.50	1	1000	1016	102		75 - 125	0 - 20	QC00289
LCSD Dissolved Calcium (mg/L)	<0.50	1	1000	1018	102	1	75 - 125	0 - 20	QC00289
LCSD Dissolved Magnesium (mg/L)	<0.50	1	1000	1049	105	2	75 - 125	0 - 20	QC00289
LCSD Dissolved Potassium (mg/L)	<0.50	1	1000	1039	104	1	75 - 125	0 - 20	QC00289
LCSD Dissolved Sodium (mg/L)	<0.50	1	1000	1032	103	2	75 - 125	0 - 20	QC00289

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00110	110		80 - 120	0 - 20	QC00267
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00109	109	1	80 - 120	0 - 20	QC00267

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Mercury (mg/L)	<0.0002	1	0.001	0.00090	90		80 - 120	0 - 20	QC00270
LCSD Total Mercury (mg/L)	<0.0002	1	0.001	0.00083	83	8	80 - 120	0 - 20	QC00270

Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS Total Aluminum (mg/L)	<0.05	1	2	2.1	105		75 - 125	0 - 20	QC00252
LCS Total Arsenic (mg/L)	<0.10	1	2	1.99	100		75 - 125	0 - 20	QC00252
LCS Total Barium (mg/L)	<0.10	1	2	2.4	120		75 - 125	0 - 20	QC00252
LCS Total Beryllium (mg/L)	<0.01	1	2	2.1	105		75 - 125	0 - 20	QC00252
LCS Total Boron (mg/L)	<0.10	1	2	1.9	95		75 - 125	0 - 20	QC00252
LCS Total Cadmium (mg/L)	<0.05	1	2	2.2	110		75 - 125	0 - 20	QC00252
LCS Total Chromium (mg/L)	<0.05	1	2	2.2	110		75 - 125	0 - 20	QC00252
LCS Total Cobalt (mg/L)	<0.05	1	2	2.4	120		75 - 125	0 - 20	QC00252
LCS Total Copper (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00252
LCS Total Iron (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00252
LCS Total Lead (mg/L)	<0.005	1	2	2.3	115		75 - 125	0 - 20	QC00252
LCS Total Manganese (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00252
LCS Total Molybdenum (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00252
LCS Total Nickel (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00252

N/A		Evaporation Ponds						Artesia		
LCS	Total Selenium (mg/L)	<0.01	1	2	2.0	100	75 - 125	0 - 20	QC00252	
LCS	Total Silver (mg/L)	<0.005	1	0.4	0.39	98	75 - 125	0 - 20	QC00252	
LCS	Total Uranium (mg/L)	<0.10	1	2	2.3	115	75 - 125	0 - 20	QC00252	
LCS	Total Vanadium (mg/L)	<0.10	1	2	2.2	110	75 - 125	0 - 20	QC00252	
LCS	Total Zinc (mg/L)	<0.10	1	2	2.3	115	75 - 125	0 - 20	QC00252	
LCSD	Total Aluminum (mg/L)	<0.05	1	2	2.2	110	5	75 - 125	0 - 20	QC00252
LCSD	Total Arsenic (mg/L)	<0.10	1	2	2.0	100	1	75 - 125	0 - 20	QC00252
LCSD	Total Barium (mg/L)	<0.10	1	2	2.5	125	4	75 - 125	0 - 20	QC00252
LCSD	Total Beryllium (mg/L)	<0.01	1	2	2.2	110	5	75 - 125	0 - 20	QC00252
LCSD	Total Boron (mg/L)	<0.10	1	2	1.9	95	0	75 - 125	0 - 20	QC00252
LCSD	Total Cadmium (mg/L)	<0.05	1	2	2.2	110	0	75 - 125	0 - 20	QC00252
LCSD	Total Chromium (mg/L)	<0.05	1	2	2.3	115	4	75 - 125	0 - 20	QC00252
LCSD	Total Cobalt (mg/L)	<0.05	1	2	2.4	120	0	75 - 125	0 - 20	QC00252
LCSD	Total Copper (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00252
LCSD	Total Iron (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00252
LCSD	Total Lead (mg/L)	<0.005	1	2	2.3	115	0	75 - 125	0 - 20	QC00252
LCSD	Total Manganese (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00252
LCSD	Total Molybdenum (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00252
LCSD	Total Nickel (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00252
LCSD	Total Selenium (mg/L)	<0.01	1	2	2.0	100	0	75 - 125	0 - 20	QC00252
LCSD	Total Silver (mg/L)	<0.005	1	1	0.39	98	0	75 - 125	0 - 20	QC00252
LCSD	Total Uranium (mg/L)	<0.10	1	2	2.4	120	4	75 - 125	0 - 20	QC00252
LCSD	Total Vanadium (mg/L)	<0.10	1	2	2.2	110	0	75 - 125	0 - 20	QC00252
LCSD	Total Zinc (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00252

		Blank		Spike	Matrix					
	Param	Result	Dil.	Amount	Spike	%		% Rec.	RPD	QC
				Added	Result	Rec.	RPD	Limit	Limit	Batch #
LCS	Total Aluminum (mg/L)	<0.05	1	2	2.1	105		75 - 125	0 - 20	QC00309
LCS	Total Arsenic (mg/L)	<0.10	1	2	1.99	100		75 - 125	0 - 20	QC00309
LCS	Total Barium (mg/L)	<0.10	1	2	2.4	120		75 - 125	0 - 20	QC00309
LCS	Total Beryllium (mg/L)	<0.01	1	2	2.1	105		75 - 125	0 - 20	QC00309
LCS	Total Boron (mg/L)	<0.10	1	2	1.9	95		75 - 125	0 - 20	QC00309
LCS	Total Cadmium (mg/L)	<0.05	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Chromium (mg/L)	<0.05	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Cobalt (mg/L)	<0.05	1	2	2.4	120		75 - 125	0 - 20	QC00309
LCS	Total Copper (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Iron (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00309
LCS	Total Lead (mg/L)	<0.005	1	2	2.3	115		75 - 125	0 - 20	QC00309
LCS	Total Manganese (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00309
LCS	Total Molybdenum (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Nickel (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Selenium (mg/L)	<0.01	1	2	2.0	100		75 - 125	0 - 20	QC00309
LCS	Total Silver (mg/L)	<0.005	1	0.4	0.39	98		75 - 125	0 - 20	QC00309
LCS	Total Uranium (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00309
LCS	Total Vanadium (mg/L)	<0.10	1	2	2.2	110		75 - 125	0 - 20	QC00309
LCS	Total Zinc (mg/L)	<0.10	1	2	2.3	115		75 - 125	0 - 20	QC00309

N/A

Evaporation Ponds

Artesia

LCSD Total Aluminum (mg/L)	<0.05	1	2	2.2	110	5	75 - 125	0 - 20	QC00309
LCSD Total Arsenic (mg/L)	<0.10	1	2	2.0	100	1	75 - 125	0 - 20	QC00309
LCSD Total Barium (mg/L)	<0.10	1	2	2.5	125	4	75 - 125	0 - 20	QC00309
LCSD Total Beryllium (mg/L)	<0.01	1	2	2.2	110	5	75 - 125	0 - 20	QC00309
LCSD Total Boron (mg/L)	<0.10	1	2	1.9	95	0	75 - 125	0 - 20	QC00309
LCSD Total Cadmium (mg/L)	<0.05	1	2	2.2	110	0	75 - 125	0 - 20	QC00309
LCSD Total Chromium (mg/L)	<0.05	1	2	2.3	115	4	75 - 125	0 - 20	QC00309
LCSD Total Cobalt (mg/L)	<0.05	1	2	2.4	120	0	75 - 125	0 - 20	QC00309
LCSD Total Copper (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00309
LCSD Total Iron (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00309
LCSD Total Lead (mg/L)	<0.005	1	2	2.3	115	0	75 - 125	0 - 20	QC00309
LCSD Total Manganese (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00309
LCSD Total Molybdenum (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00309
LCSD Total Nickel (mg/L)	<0.10	1	2	2.3	115	4	75 - 125	0 - 20	QC00309
LCSD Total Selenium (mg/L)	<0.01	1	2	2.0	100	0	75 - 125	0 - 20	QC00309
LCSD Total Silver (mg/L)	<0.005	1	0.4	0.39	98	0	75 - 125	0 - 20	QC00309
LCSD Total Uranium (mg/L)	<0.10	1	2	2.4	120	4	75 - 125	0 - 20	QC00309
LCSD Total Vanadium (mg/L)	<0.10	1	2	2.2	110	0	75 - 125	0 - 20	QC00309
LCSD Total Zinc (mg/L)	<0.10	1	2	2.3	115	0	75 - 125	0 - 20	QC00309

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Calcium (mg/L)		20	19.3	97	75 - 125	1/5/00	QC00289
ICV	Dissolved Magnesium (mg/L)		20	19.8	99	75 - 125	1/5/00	QC00289
ICV	Dissolved Potassium (mg/L)		20	19.8	99	75 - 125	1/5/00	QC00289
ICV	Dissolved Sodium (mg/L)		20	19.9	99	75 - 125	1/5/00	QC00289
CCV (1	Dissolved Calcium (mg/L)		20	19.5	98	75 - 125	1/5/00	QC00289
CCV (1	Dissolved Magnesium (mg/L)		20	20.4	102	75 - 125	1/5/00	QC00289
CCV (1	Dissolved Potassium (mg/L)		20	20.0	100	75 - 125	1/5/00	QC00289
CCV (1	Dissolved Sodium (mg/L)		20	19.9	99	75 - 125	1/5/00	QC00289

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00107	107	80 - 120	1/5/00	QC00267
CCV (1	Total Mercury (mg/L)		0.001	0.00100	100	80 - 120	1/5/00	QC00267

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	0.00107	107	80 - 120	1/5/00	QC00270
CCV (1	Total Mercury (mg/L)		0.001	0.00093	93	80 - 120	1/5/00	QC00270

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		20	20.5	102	75 - 125	1/4/00	QC00252
ICV	Total Arsenic (mg/L)		1	1.04	104	75 - 125	1/4/00	QC00252
ICV	Total Barium (mg/L)		20	21.9	110	75 - 125	1/4/00	QC00252
ICV	Total Beryllium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00252
ICV	Total Boron (mg/L)		2.5	2.54	102	75 - 125	1/4/00	QC00252
ICV	Total Cadmium (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00252
ICV	Total Chromium (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00252
ICV	Total Cobalt (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00252
ICV	Total Copper (mg/L)		2.5	2.55	102	75 - 125	1/4/00	QC00252
ICV	Total Iron (mg/L)		10	10.6	106	75 - 125	1/4/00	QC00252
ICV	Total Lead (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00252
ICV	Total Manganese (mg/L)		1.5	1.57	105	75 - 125	1/4/00	QC00252
ICV	Total Molybdenum (mg/L)		2.5	2.64	106	75 - 125	1/4/00	QC00252
ICV	Total Nickel (mg/L)		4	4.16	104	75 - 125	1/4/00	QC00252
ICV	Total Selenium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00252
ICV	Total Silver (mg/L)		1	1.03	103	75 - 125	1/4/00	QC00252
ICV	Total Uranium (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00252

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Vanadium (mg/L)		5	5.2	104	75 - 125	1/4/00	QC00252
ICV	Total Zinc (mg/L)		2	2.16	108	75 - 125	1/4/00	QC00252
CCV (1	Total Aluminum (mg/L)		20	20.5	102	75 - 125	1/4/00	QC00252
CCV (1	Total Arsenic (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00252
CCV (1	Total Barium (mg/L)		20	21.9	110	75 - 125	1/4/00	QC00252
CCV (1	Total Beryllium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00252
CCV (1	Total Boron (mg/L)		2.5	2.54	102	75 - 125	1/4/00	QC00252
CCV (1	Total Cadmium (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00252
CCV (1	Total Chromium (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00252
CCV (1	Total Cobalt (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00252
CCV (1	Total Copper (mg/L)		2.5	2.54	102	75 - 125	1/4/00	QC00252
CCV (1	Total Iron (mg/L)		10	10.5	105	75 - 125	1/4/00	QC00252
CCV (1	Total Lead (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00252
CCV (1	Total Manganese (mg/L)		1.5	1.57	105	75 - 125	1/4/00	QC00252
CCV (1	Total Molybdenum (mg/L)		2.5	2.64	106	75 - 125	1/4/00	QC00252
CCV (1	Total Nickel (mg/L)		4	4.16	104	75 - 125	1/4/00	QC00252
CCV (1	Total Selenium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00252
CCV (1	Total Silver (mg/L)		1	1.03	103	75 - 125	1/4/00	QC00252
CCV (1	Total Uranium (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00252
CCV (1	Total Vanadium (mg/L)		5	5.2	104	75 - 125	1/4/00	QC00252
CCV (1	Total Zinc (mg/L)		2	2.15	108	75 - 125	1/4/00	QC00252

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		20	20.4	102	75 - 125	1/4/00	QC00309
ICV	Total Arsenic (mg/L)		1	1.01	101	75 - 125	1/4/00	QC00309
ICV	Total Barium (mg/L)		20	21.8	109	75 - 125	1/4/00	QC00309
ICV	Total Beryllium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00309
ICV	Total Boron (mg/L)		2.5	2.56	102	75 - 125	1/4/00	QC00309
ICV	Total Cadmium (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00309
ICV	Total Chromium (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00309
ICV	Total Cobalt (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00309
ICV	Total Copper (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00309
ICV	Total Iron (mg/L)		10	10.5	105	75 - 125	1/4/00	QC00309
ICV	Total Lead (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00309
ICV	Total Manganese (mg/L)		1.5	1.57	105	75 - 125	1/4/00	QC00309
ICV	Total Molybdenum (mg/L)		2.5	2.62	105	75 - 125	1/4/00	QC00309
ICV	Total Nickel (mg/L)		4	4.15	104	75 - 125	1/4/00	QC00309
ICV	Total Selenium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00309
ICV	Total Silver (mg/L)		1	1.02	102	75 - 125	1/4/00	QC00309

Quality Control Report

Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Uranium (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00309
ICV	Total Vanadium (mg/L)		5	5.2	104	75 - 125	1/4/00	QC00309
ICV	Total Zinc (mg/L)		2	2.12	106	75 - 125	1/4/00	QC00309
CCV (1	Total Aluminum (mg/L)		20	20.5	102	75 - 125	1/4/00	QC00309
CCV (1	Total Arsenic (mg/L)		1	1.04	104	75 - 125	1/4/00	QC00309
CCV (1	Total Barium (mg/L)		20	21.9	110	75 - 125	1/4/00	QC00309
CCV (1	Total Beryllium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00309
CCV (1	Total Boron (mg/L)		2.5	2.54	102	75 - 125	1/4/00	QC00309
CCV (1	Total Cadmium (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00309
CCV (1	Total Chromium (mg/L)		1	1.05	105	75 - 125	1/4/00	QC00309
CCV (1	Total Cobalt (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00309
CCV (1	Total Copper (mg/L)		2.5	2.55	102	75 - 125	1/4/00	QC00309
CCV (1	Total Iron (mg/L)		10	10.6	106	75 - 125	1/4/00	QC00309
CCV (1	Total Lead (mg/L)		0.5	0.53	106	75 - 125	1/4/00	QC00309
CCV (1	Total Manganese (mg/L)		1.5	1.57	105	75 - 125	1/4/00	QC00309
CCV (1	Total Molybdenum (mg/L)		2.5	2.64	106	75 - 125	1/4/00	QC00309
CCV (1	Total Nickel (mg/L)		4	4.16	104	75 - 125	1/4/00	QC00309
CCV (1	Total Selenium (mg/L)		0.5	0.52	104	75 - 125	1/4/00	QC00309
CCV (1	Total Silver (mg/L)		1	1.03	103	75 - 125	1/4/00	QC00309
CCV (1	Total Uranium (mg/L)		5	5.3	106	75 - 125	1/4/00	QC00309
CCV (1	Total Vanadium (mg/L)		5	5.2	104	75 - 125	1/4/00	QC00309
CCV (1	Total Zinc (mg/L)		2	2.16	108	75 - 125	1/4/00	QC00309

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 99123105

Phone #: 505-748-3311

Fax #: 505-748-9077

Project #:

Project Name: Ever. funds

Project Location:

Sampler Signature:

Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
138/21	OCD 5	2	40ml	X				X			X	12/20/99	14:30
	"	1	1 L	X							X	12/20/99	14:30
	"	1	500 ml	X						X	X	12/20/99	14:30
122	OCD 4	2	40ml	X				X			X	12/20/99	14:50
	"	1	1 L	X							X	12/20/99	14:50
	"	1	500 ml	X						X	X	12/20/99	14:50
123	OCD 3	2	40ml	X				X			X	12/20/99	15:10
	"	1	1 L	X							X	12/20/99	15:10
	"	1	500 ml	X						X	X	12/20/99	15:10
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Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

12/2/99 11:01 AM

W. H. H. H.

10-12-91

[illegible]

<i>W. K. L.</i> Delinquent Date: Time:
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Acquired by _____
Date: _____

Received by: _____
Date: _____

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Relinquished by: _____
Date: _____
Time: _____

Received at Laboratory by: _____ Date: _____ Time: _____

Vicki Winder	12-31-98	10:00 AM
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Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

[illegible]

REMARKS:

LAB USE ONLY

Intact $\frac{Y}{N}$

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Temp 2Log-in Review *OK*

Carrier # Fed Ex 213 5604 426

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

Company Name: A/A R A T A

Phone #: 505-748-3311

Address: (Street, City, Zip)

Fax #: 505-748-9077

Contact Person: Charlie Pymade

Invoice to:

Invoice to:

(If different from above)

Project #:

Project Name:

Project Name: Evap. ponds

Sampler Signature:

Project Location	Artesia NM
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LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
138127	OCDC	2	40ml	X				X		X		12/29/99	10:20
	"	1	1L	X						X	X	12/29/99	10:20
	"	1	500ml	X						X		12/29/99	10:20
138	OCDC	2	40ml	X				X		X		12/29/99	10:40
	"	1	1L	X						X	X	12/29/99	10:40
	"	1	500ml	X						X		12/29/99	10:40
139	MW	2	40ml	X				X		X		12/29/99	11:05
	"	1	1L	X						X	X	12/29/99	11:05
	"	1	500ml	X						X		12/29/99	11:05

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

LAB USE ONLY

Intact Y N
 Headspace Y N
 Temp 2 °
 Log-in Review *AK*

REMARKS:

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Agnes M. M. M.

6701 Aberdeen Avenue, Ste. 9
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1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

Company Name: **NAA50**

Phone #: **505 748 3311**

Address: **PO Box 159**

Fax #: **505 748 9077**

Contact Person:

Invoice to:
(If different from above)

Project #:

Project Name: **Semi Annual Evap Ponds**

Project Location: **Artesia NM**

Sampler Signature: *[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
138/30	OC D 2	2	40ml	X				X		X		12/22/99	15:15
	"	1	1L	X				X		X		12/22/99	15:15
	"	1	500 ^{ml}	X				X		X		12/22/99	15:15
131	MW 2-A	2	40ml	X				X		X		12/22/99	05:51
	"	1	1L	X				X		X		12/22/99	15:51
	"	1	500 ^{ml}	X				X		X		12/22/99	05:51
	"	1	500 ^{ml}	X				X		X		12/22/99	15:50

Relinquished by: *[Signature]* Date: 12/30/99 Time: 16:15

Received by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Received at Laboratory by: *[Signature]* Date: 12-21-99 Time: 10:00

Relinquished by: _____ Date: _____ Time: _____

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
PCI	
GC-MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Turn Around Time if different from standard	

REMARKS:

LAB USE ONLY

Intact ☒ N

Headspace ☐ Y ☐ N

Temp 2 °

Log-in Review *[Signature]*

Carrier # **FD 60**

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
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Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: NAVAJO Phone #: 505 748 3311

Address: PO Box 159 Fax #: 505 748 9077

Contact Person: Charlie Phymale

Invoice to: _____
(If different from above)

Project #: _____

Project Location: Anterior NM Project Name: Evaporation Ponds

Sampler Signature: Charlie Phymale

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL	HNO3	ICE	NONE	DATE	TIME
132	MW 6A	2	40ml	X				X		X		12/24/99	8:50
	"	1	1L	X						X	X	12/29/99	8:50
	"	1	500ml	X					X	X		12/29/99	8:50
133	MW 3	2	40ml	X				X		X		12/29/99	9:20
	"	1	1L	X					X	X		12/29/99	9:20
	"	1	500ml	X					X	X		12/29/99	9:20
134	MW 7A	2	40ml	X				X		X		12/29/99	9:45
	"	1	1L	X					X	X		12/29/99	9:45
	"	1	500ml	X					X	X		12/29/99	9:45

Relinquished by: Charlie Phymale Date: 12/29/99 Time: 16:15

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

Received at Laboratory by: Mike Wondolm Date: 12/31/99 Time: 10:00

ANALYSIS REQUEST (Circle or Specify Method No.)													
MTBE 8021B/602													
BTEX 8021B/602													
TPH 418.1/TX1005													
PAH 8270C													
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7													
TCLP Metals Ag As Ba Cd Cr Pb Se Hg													
TCLP Volatiles													
TCLP Semi Volatiles													
TCLP Pesticides													
RCI													
GC-MS Vol. 8260B/624													
GC/MS Semi. Vol. 8270C/625													
PCBs 8082/608													
Pesticides 8081A/608													
BOD, TSS, pH													
Turn Around Time if different from standard													

REMARKS:

LAB USE ONLY

Intact Y N

Headspace Y N

Temp 2 °

Log-in Review gnc

Carrier # FedEx

TRACE ANALYSIS, INC.

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El Paso, Texas 79922 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

Bill To: **Navajo Refining**
501 E. Main
Artesia, NM 88210

Invoice # 40691

Invoice Date: **Jan 13, 2000**

Attn: **Charlie Plymale**

Order ID: **A00010505**

Project #: **N/A**
Project Name: **Semi Annual Evap. Ponds**
Project Location: **Artesia, NM**

Test	Quantity	Matrix	Description	Price	SubTotal
8270	2	Water	138247 - 138248	\$190.00	\$380.00
Payment Terms: Net 30 Days				Total	\$380.00



Director, Dr. Blair Leftwich

TRACE ANALYSIS, INC.

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ANALYTICAL RESULTS FOR
NAVAJO REFINING CO.
Attention: Charlie Plymale
P.O. Box 159
Artesia, NM 88210

January 12, 2000
Receiving Date: 1/5/00
Sample Type: Water
Project No: N/A
Project Loc.: Artesia, NM
Proj. Name.: Semi-Annual Evap Ponds
Sampling Date: 1/4/00
Sample Condition: I & C
Sample Received by: VW
Extraction Date: 1/11/00
Analysis Date: 1/11/00

PAH	Reporting	T138247				
8270 Compounds (mg/L)	Limit	MW4	CV	RPD	%EA	%IA
Naphthalene	0.005	ND				
2-Methylnaphthalene	0.005	ND				
1-Methylnaphthalene	0.005	ND				

ND = Not Detected

SURROGATES	% RECOVERY
2-Fluorophenol SURR	40
Phenol-d5 SURR	27
Nitrobenzene-d5 SURR	76
2-Fluorobiphenyl SURR	76
2,4,6-Tribromophenol SURR	82
Terphenyl-d14 SURR	78

METHODS: EPA SW 846-8270C, 3510C.

CHEMIST: MA



Director, Dr. Blair Leftwich

1-12-00

DATE

TRACE ANALYSIS, INC.

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Lubbock, Texas 79424 800•378•1296
El Paso, Texas 79922 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

ANALYTICAL RESULTS FOR
NAVAJO REFINING CO.
Attention: Charlie Plymale
P.O. Box 159
Artesia, NM 88210

January 12, 2000
Receiving Date: 1/5/00
Sample Type: Water
Project No: N/A
Project Loc.: Artesia, NM
Proj. Name.: Semi-Annual Evap Ponds
Sampling Date: 1/4/00
Sample Condition: I & C
Sample Received by: VW
Extraction Date: 1/11/00
Analysis Date: 1/11/00

PAH	Reporting	T138248				
8270 Compounds (mg/L)	Limit	MW6	CV	RPD	%EA	%IA
Naphthalene	0.005	ND				
2-Methylnaphthalene	0.005	ND				
1-Methylnaphthalene	0.005	ND				

ND = Not Detected

SURROGATES	% RECOVERY
2-Fluorophenol SURR	40
Phenol-d5 SURR	27
Nitrobenzene-d5 SURR	74
2-Fluorobiphenyl SURR	72
2,4,6-Tribromophenol SURR	84
Terphenyl-d14 SURR	60

METHODS: EPA SW 846-8270C, 3510C.

CHEMIST: MA

VBZ

1-12-00

Director, Dr. Blair Leftwich

DATE

Carrier # Fedex 273-5867-504