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Analytical and Quality Control Report

RECEIVED

Bill Olson
OCD
2040 S. Pacheco
Santa Fe, NM 87505

Report Date: October 18, 2000

OCT 23 2000

Order ID Number: A00100222

Project Number: N/A
Project Name: Jay Anthony
Project Location: Maralo #2

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

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
154674	0009281600 Anthony	Water	9/28/00	16:00	9/30/00

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 16 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 13142 Exhibit No. 10
Submitted By:
Maralo
Hearing Date: November 10, 2004

Analytical and Quality Control Report

Sample: 154674 - 0009281600 Anthony

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC05424 Date Analyzed: 10/6/00
Analyst: RS Preparation Method: N/A Prep Batch: PB04729 Date Prepared: 10/6/00

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		298	mg/L as CaCo3	1	1
Total Alkalinity		298	mg/L as CaCo3	1	1

Sample: 154674 - 0009281600 Anthony

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC05603 Date Analyzed: 10/11/00
Analyst: RC Preparation Method: 5035 Prep Batch: PB04891 Date Prepared: 10/11/00

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.001	mg/L	1	0.001
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.055	mg/L	1	0.10	55	72 - 128
4-BFB		0.053	mg/L	1	0.10	53	72 - 128

Sample: 154674 - 0009281600 Anthony

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC05257 Date Analyzed: 10/2/00
Analyst: JS Preparation Method: N/A Prep Batch: PB04587 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		2300	uMHOS/cm	1	

Sample: 154674 - 0009281600 Anthony

Analysis: Dissolved Metals Analytical Method: E 200.7 QC Batch: QC05668 Date Analyzed: 10/4/00
Analyst: RR Preparation Method: E 3005A Prep Batch: PB04956 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		112	mg/L	1	1
Dissolved Magnesium		91	mg/L	1	1
Dissolved Potassium		24	mg/L	1	1
Dissolved Sodium		297	mg/L	1	1

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N/A

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Maralo #2

Sample: 154674 - 0009281600 Anthony

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC05673 Date Analyzed: 10/13/00
Analyst: MS Preparation Method: N/A Prep Batch: PB04964 Date Prepared: 10/2/00

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

Sample: 154674 - 0009281600 Anthony

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC05456 Date Analyzed: 10/2/00
Analyst: JS Preparation Method: N/A Prep Batch: PB04739 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
CL		460	mg/L	1	0.50
Fluoride		2.5	mg/L	1	0.20
Nitrate-N	¹	<1.0	mg/L	1	0.20
Sulfate		250	mg/L	1	0.50

Sample: 154674 - 0009281600 Anthony

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC05422 Date Analyzed: 10/5/00
Analyst: RS Preparation Method: N/A Prep Batch: PB04731 Date Prepared: 10/4/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		1400	mg/L	1	10

Sample: 154674 - 0009281600 Anthony

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC05669 Date Analyzed: 10/6/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB04649 Date Prepared: 10/5/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		1.9	mg/L	1	0.50
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		<0.10	mg/L	1	0.10
Total Boron		0.61	mg/L	1	0.50
Total Cadmium		<0.01	mg/L	1	0.01
Total Chromium		<0.01	mg/L	1	0.01
Total Cobalt		<0.05	mg/L	1	0.05
Total Copper		<0.10	mg/L	1	0.10
Total Iron		1.8	mg/L	1	0.10
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		0.42	mg/L	1	0.01
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 Zinc		<0.10	mg/L	1	0.10

¹ Sample came in already out of holding time for NO3.

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N/A

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Maralo #2

Sample: 154674 - 0009281600 Anthony

Analysis: pH Analytical Method: E 150.1 QC Batch: QC05321 Date Analyzed: 10/2/00
Analyst: RS Preparation Method: N/A Prep Batch: PB04641 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
pH	2	7.4	s.u.	1	1

Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC05257

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		3.4	uMHOS/cm	

Sample: Method Blank QCBatch: QC05422

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

Sample: Method Blank QCBatch: QC05424

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: QC05456

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

²The sample was received out of holding time.

Sample: Method Blank

QCBatch: QC05603

Param	Flag	Results	Units	Reporting Limit
MTBE		<0.001	mg/L	0.001
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		0.088	mg/L	0.10	88	72 - 128
4-BFB		0.092	mg/L	0.10	92	72 - 128

Sample: Method Blank

QCBatch: QC05668

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<1.0	mg/L	1
Dissolved Magnesium		<1.0	mg/L	1
Dissolved Potassium		<1.0	mg/L	1
Dissolved Sodium		<1.0	mg/L	1

Sample: Method Blank

QCBatch: QC05669

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.50	mg/L	0.50
Total Arsenic		<0.05	mg/L	0.05
Total Barium		<0.10	mg/L	0.10
Total Boron		<0.50	mg/L	0.50
Total Cadmium		<0.01	mg/L	0.01
Total Chromium		<0.01	mg/L	0.01
Total Cobalt		<0.05	mg/L	0.05
Total Copper		<0.10	mg/L	0.10
Total Iron		<0.10	mg/L	0.10
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		<0.05	mg/L	0.05
Total Silver		<0.01	mg/L	0.01
Total Zinc		<0.10	mg/L	0.10

Sample: Method Blank

QCBatch: QC05673

Report Date: October 18, 2000
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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: QC05603

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.093	mg/L	1	0.10	<0.001	93		80 - 120	20
Benzene		0.092	mg/L	1	0.10	<0.001	92		80 - 120	20
Toluene		0.092	mg/L	1	0.10	<0.001	92		80 - 120	20
Ethylbenzene		0.093	mg/L	1	0.10	<0.001	93		80 - 120	20
M,P,O-Xylene		0.279	mg/L	1	0.30	<0.001	93		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.089	mg/L	1	0.10	89	72 - 128
4-BFB		0.09	mg/L	1	0.10	90	72 - 128

Sample: LCSD

QC Batch: QC05603

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.102	mg/L	1	0.10	<0.001	102	9	80 - 120	20
Benzene		0.101	mg/L	1	0.10	<0.001	101	9	80 - 120	20
Toluene		0.101	mg/L	1	0.10	<0.001	101	9	80 - 120	20
Ethylbenzene		0.104	mg/L	1	0.10	<0.001	104	11	80 - 120	20
M,P,O-Xylene		0.309	mg/L	1	0.30	<0.001	103	10	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.098	mg/L	1	0.10	98	72 - 128
4-BFB		0.1	mg/L	1	0.10	100	72 - 128

Sample: LCS

QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1069	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Magnesium		1062	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Potassium		1062	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Sodium		1033	mg/L	1	1000	<1.0	103		75 - 125	20

Sample: LCSD

QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1079	mg/L	1	1000	<1.0	107	1	75 - 125	20
Dissolved Magnesium		1036	mg/L	1	1000	<1.0	103	2	75 - 125	20
Dissolved Potassium		1095	mg/L	1	1000	<1.0	109	3	75 - 125	20
Dissolved Sodium		1013	mg/L	1	1000	<1.0	101	2	75 - 125	20

Sample: LCS

QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		1.98	mg/L	1	2	<0.50	99		75 - 125	20
Total Arsenic		0.96	mg/L	1	1	<0.05	96		75 - 125	20
Total Barium		2.08	mg/L	1	2	<0.10	104		75 - 125	20
Total Boron		1.08	mg/L	1	1	<0.50	108		75 - 125	20
Total Cadmium		0.20	mg/L	1	0.20	<0.01	100		75 - 125	20
Total Chromium		0.42	mg/L	1	0.40	<0.01	105		75 - 125	20
Total Cobalt		1.02	mg/L	1	1	<0.05	102		75 - 125	20
Total Copper		0.40	mg/L	1	0.40	<0.10	100		75 - 125	20
Total Iron		2.08	mg/L	1	2	<0.10	104		75 - 125	20
Total Lead		1.01	mg/L	1	1	<0.01	101		75 - 125	20
Total Manganese		0.21	mg/L	1	0.20	<0.01	105		75 - 125	20
Total Molybdenum		1.06	mg/L	1	1	<0.01	106		75 - 125	20
Total Nickel		0.98	mg/L	1	1	<0.01	98		75 - 125	20
Total Selenium		0.87	mg/L	1	1	<0.05	87		75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.01	100		75 - 125	20
Total Zinc		0.23	mg/L	1	0.20	<0.10	115		75 - 125	20

Sample: LCSD

QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.01	mg/L	1	2	<0.50	100	2	75 - 125	20
Total Arsenic		0.94	mg/L	1	1	<0.05	94	2	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 Barium		2.04	mg/L	1	2	<0.10	102	2	75 - 125	20
Total Boron		1.17	mg/L	1	1	<0.50	117	8	75 - 125	20
Total Cadmium		0.20	mg/L	1	0.20	<0.01	100	0	75 - 125	20
Total Chromium		0.41	mg/L	1	0.40	<0.01	102	2	75 - 125	20
Total Cobalt		1.01	mg/L	1	1	<0.05	101	1	75 - 125	20
Total Copper		0.40	mg/L	1	0.40	<0.10	100	0	75 - 125	20
Total Iron		2.04	mg/L	1	2	<0.10	102	2	75 - 125	20
Total Lead		0.98	mg/L	1	1	<0.01	98	3	75 - 125	20
Total Manganese		0.20	mg/L	1	0.20	<0.01	100	5	75 - 125	20
Total Molybdenum		1.03	mg/L	1	1	<0.01	103	3	75 - 125	20
Total Nickel		0.97	mg/L	1	1	<0.01	97	1	75 - 125	20
Total Selenium		0.86	mg/L	1	1	<0.05	86	1	75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.01	100	0	75 - 125	20
Total Zinc		0.24	mg/L	1	0.20	<0.10	120	4	75 - 125	20

Sample: LCS

QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00081	mg/L	1	0.001	<0.0002	81		80 - 120	20

Sample: LCSD

QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00085	mg/L	1	0.001	<0.0002	85	5	80 - 120	20

Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC05456

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		987.91	mg/L	1	625	460	84		80 - 120	20
Fluoride		123.62	mg/L	1	125	2.5	96		80 - 120	20
Nitrate-N		122.13	mg/L	1	125	<1.0	97		80 - 120	20
Sulfate		846.21	mg/L	1	625	250	95		80 - 120	20

Sample: MSD

QC Batch: QC05456

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		991.26	mg/L	1	625	460	85	1	80 - 120	20
Fluoride		123.68	mg/L	1	125	2.5	96	0	80 - 120	20
Nitrate-N		120.50	mg/L	1	125	<1.0	96	1	80 - 120	20
Sulfate		834.07	mg/L	1	625	250	93	2	80 - 120	20

Sample: MS

QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1128	mg/L	1	1000	63	106		75 - 125	20
Dissolved Magnesium		1071	mg/L	1	1000	14	105		75 - 125	20
Dissolved Potassium		1128	mg/L	1	1000	11	111		75 - 125	20
Dissolved Sodium		1085	mg/L	1	1000	37	104		75 - 125	20

Sample: MSD

QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1127	mg/L	1	1000	63	106	0	75 - 125	20
Dissolved Magnesium		1058	mg/L	1	1000	14	104	1	75 - 125	20
Dissolved Potassium		1117	mg/L	1	1000	11	110	1	75 - 125	20
Dissolved Sodium		1078	mg/L	1	1000	37	104	1	75 - 125	20

Sample: MS

QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.14	mg/L	1	2	<0.50	107		75 - 125	20
Total Arsenic		0.89	mg/L	1	1	<0.05	89		75 - 125	20
Total Barium		1.92	mg/L	1	2	0.16	88		75 - 125	20
Total Boron		1.37	mg/L	1	1	0.57	80		75 - 125	20
Total Cadmium		0.17	mg/L	1	0.20	<0.01	85		75 - 125	20
Total Chromium		0.35	mg/L	1	0.40	<0.01	87		75 - 125	20
Total Cobalt		0.83	mg/L	1	1	<0.05	83		75 - 125	20
Total Copper		0.36	mg/L	1	0.40	<0.10	90		75 - 125	20
Total Iron		1.77	mg/L	1	2	<0.10	88		75 - 125	20
Total Lead		0.81	mg/L	1	1	<0.01	81		75 - 125	20
Total Manganese		0.17	mg/L	1	0.20	<0.01	85		75 - 125	20
Total Molybdenum		0.90	mg/L	1	1	<0.01	90		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 Nickel		0.85	mg/L	1	1	<0.01	85		75 - 125	20
Total Selenium		0.82	mg/L	1	1	<0.05	82		75 - 125	20
Total Silver		0.18	mg/L	1	0.20	<0.01	90		75 - 125	20
Total Zinc		0.19	mg/L	1	0.20	<0.10	95		75 - 125	20

Sample: MSD

QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.15	mg/L	1	2	<0.50	107	0	75 - 125	20
Total Arsenic		0.90	mg/L	1	1	<0.05	90	1	75 - 125	20
Total Barium		1.95	mg/L	1	2	0.16	89	2	75 - 125	20
Total Boron		1.40	mg/L	1	1	0.57	83	4	75 - 125	20
Total Cadmium		0.17	mg/L	1	0.20	<0.01	85	0	75 - 125	20
Total Chromium		0.35	mg/L	1	0.40	<0.01	87	0	75 - 125	20
Total Cobalt		0.84	mg/L	1	1	<0.05	84	1	75 - 125	20
Total Copper		0.36	mg/L	1	0.40	<0.10	90	0	75 - 125	20
Total Iron		1.80	mg/L	1	2	<0.10	90	2	75 - 125	20
Total Lead		0.83	mg/L	1	1	<0.01	83	2	75 - 125	20
Total Manganese		0.17	mg/L	1	0.20	<0.01	85	0	75 - 125	20
Total Molybdenum		0.91	mg/L	1	1	<0.01	91	1	75 - 125	20
Total Nickel		0.85	mg/L	1	1	<0.01	85	0	75 - 125	20
Total Selenium		0.83	mg/L	1	1	<0.05	83	1	75 - 125	20
Total Silver		0.18	mg/L	1	0.20	<0.01	90	0	75 - 125	20
Total Zinc		0.20	mg/L	1	0.20	<0.10	100	5	75 - 125	20

Sample: MS

QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00086	mg/L	1	0.001	<0.0002	86		80 - 120	20

Sample: MSD

QC Batch: QC05673

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	12	80 - 120	20

Quality Control Report Duplicate Samples

Sample: Duplicate

QC Batch: QC05257

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		2286		uMHOS/cm	1	1	20
Specific Conductance		2286	2300	uMHOS/cm	1	1	20

Sample: Duplicate

QC Batch: QC05321

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.6	7.6	s.u.	1	0	20

Sample: Duplicate

QC Batch: QC05422

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1326	1400	mg/L	1	5	20

Sample: Duplicate

QC Batch: QC05424

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	214	mg/L as CaCo3	1	1	20
Total Alkalinity		212	214	mg/L as CaCo3	1	1	20

Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC05257

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		uMHOS/cm	1413	1399	99	80 - 120	10/2/00

Sample: ICV (1)

QC Batch: QC05257

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		uMHOS/cm	1413	1413	100	80 - 120	10/2/00

Sample: CCV (1)

QC Batch: QC05321

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	10/2/00

Sample: ICV (1)

QC Batch: QC05321

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	10/2/00

Sample: CCV (1)

QC Batch: QC05422

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	972	97	80 - 120	10/5/00

Sample: ICV (1)

QC Batch: QC05422

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	953	95	80 - 120	10/5/00

Sample: CCV (1)

QC Batch: QC05424

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	0	80 - 120	10/6/00
Carbonate Alkalinity		mg/L as CaCo3	0	220	0	80 - 120	10/6/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	10/6/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	228	91	80 - 120	10/6/00

Sample: ICV (1) QC Batch: QC05424

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	10/6/00
Carbonate Alkalinity		mg/L as CaCo3	0	240	0	80 - 120	10/6/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	10/6/00
Total Alkalinity		mg/L as CaCo3	250	240	96	80 - 120	10/6/00

Sample: CCV (1) QC Batch: QC05456

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.43	91	80 - 120	10/2/00
Fluoride		mg/L	2.50	2.40	96	80 - 120	10/2/00
Nitrate-N		mg/L	2.50	2.30	92	80 - 120	10/2/00
Sulfate		mg/L	12.50	11.71	93	80 - 120	10/2/00

Sample: ICV (1) QC Batch: QC05456

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.53	92	80 - 120	10/2/00
Fluoride		mg/L	2.50	2.40	96	80 - 120	10/2/00
Nitrate-N		mg/L	2.50	2.30	92	80 - 120	10/2/00
Sulfate		mg/L	12.50	11.73	93	80 - 120	10/2/00

Sample: CCV (1) QC Batch: QC05603

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.088	88	80 - 120	10/11/00
Benzene		mg/L	0.10	0.09	90	80 - 120	10/11/00
Toluene		mg/L	0.10	0.09	90	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.089	89	80 - 120	10/11/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
M,P,O-Xylene		mg/L	0.30	0.267	89	80 - 120	10/11/00

Sample: CCV (2) QC Batch: QC05603

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.093	93	80 - 120	10/11/00
Benzene		mg/L	0.10	0.097	97	80 - 120	10/11/00
Toluene		mg/L	0.10	0.094	94	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.096	96	80 - 120	10/11/00
M,P,O-Xylene		mg/L	0.30	0.276	92	80 - 120	10/11/00

Sample: ICV (1) QC Batch: QC05603

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	10/11/00
Benzene		mg/L	0.10	0.105	105	80 - 120	10/11/00
Toluene		mg/L	0.10	0.106	106	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.11	110	80 - 120	10/11/00
M,P,O-Xylene		mg/L	0.30	0.333	111	80 - 120	10/11/00

Sample: CCV (1) QC Batch: QC05668

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	135	1350	75 - 125	10/4/00
Dissolved Magnesium		mg/L	10	133	1330	75 - 125	10/4/00
Dissolved Potassium		mg/L	10	134	1340	75 - 125	10/4/00
Dissolved Sodium		mg/L	10	126	1260	75 - 125	10/4/00

Sample: ICV (1) QC Batch: QC05668

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	126	1260	75 - 125	10/4/00
Dissolved Magnesium		mg/L	10	125	1250	75 - 125	10/4/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Potassium		mg/L	10	133	1330	75 - 125	10/4/00
Dissolved Sodium		mg/L	10	123	1230	75 - 125	10/4/00

Sample: CCV (1)

QC Batch: QC05669

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.75	95	75 - 125	10/6/00
Total Arsenic		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Barium		mg/L	5	4.92	98	75 - 125	10/6/00
Total Boron		mg/L	2.50	2.41	96	75 - 125	10/6/00
Total Cadmium		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Chromium		mg/L	1	0.98	98	75 - 125	10/6/00
Total Cobalt		mg/L	2.50	2.45	98	75 - 125	10/6/00
Total Copper		mg/L	1	0.96	96	75 - 125	10/6/00
Total Iron		mg/L	5	4.92	98	75 - 125	10/6/00
Total Lead		mg/L	2.50	2.46	98	75 - 125	10/6/00
Total Manganese		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Molybdenum		mg/L	2.50	2.45	98	75 - 125	10/6/00
Total Nickel		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Selenium		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Silver		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Zinc		mg/L	0.50	0.50	100	75 - 125	10/6/00

Sample: ICV (1)

QC Batch: QC05669

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.97	99	75 - 125	10/6/00
Total Arsenic		mg/L	2.50	2.49	99	75 - 125	10/6/00
Total Barium		mg/L	5	5.05	101	75 - 125	10/6/00
Total Boron		mg/L	2.50	2.54	101	75 - 125	10/6/00
Total Cadmium		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Chromium		mg/L	1	1.00	100	75 - 125	10/6/00
Total Cobalt		mg/L	2.50	2.51	100	75 - 125	10/6/00
Total Copper		mg/L	1	1.00	100	75 - 125	10/6/00
Total Iron		mg/L	5	5.05	101	75 - 125	10/6/00
Total Lead		mg/L	2.50	2.51	100	75 - 125	10/6/00
Total Manganese		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Molybdenum		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Nickel		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Selenium		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Silver		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Zinc		mg/L	0.50	0.50	100	75 - 125	10/6/00

Report Date: October 18, 2000
N/A

Order Number: A00100222
Jay Anthony

Page Number: 16 of 16
Maralo #2

Sample: CCV (1)

QC Batch: QC05673

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00082	82	80 - 120	10/13/00

Sample: ICV (1)

QC Batch: QC05673

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00090	90	80 - 120	10/13/00

4725 Ripley Dr., Ste A
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1 (888) 588-3443

Phone #: (505) 827-7154

Fax #:

Exa #: (505) 827-8177

Bill O'son

Project #:

Project Name:

Mesa #2

Sampler Signal

11/18/02

	MTBE 8021B/602
	BTEX 8021B/602
	TPH 418.1/TX1005
	PAH 8270C
	Total Metals Ag As B
	TCLP Metals Ag As B
	TCLP Volatiles
	TCLP Semi Volatiles
	TCLP Pesticides
	RCI
	GC-MS Vol. 8260B/6
	GC/MS Semi. Vol. 82
	PCB's 8082/608
	Pesticides 8081A/608
	BOD, TSS, pH
	OCD Catays
	OCD Metals
	Turn Around Time if o

Date: _____ Time: _____

Date: _____ Time: _____

Date: _____ Time: _____

REMARKS:

Temp 70 °

Log-in Review 734

902 463 3453

Cation-Anion Balance Sheet

Sample #

154674

Date:

10/19/00 *MS*

Cations

	ppm	meq/L
Calcium	112	5.5888
Magnesium	91	7.48839
Sodium	297	12.9195
Potassium	24	0.61392

Total Cations

26.6106 in meq/L

Anions

	ppm	meq/L
Alkalinity	298	5.96
Sulfate	250	5.205
Chloride	460	12.9766
Nitrate as N	0	0
Fluoride	2.5	0.1316

Total Anions

24.2732 in meq/L

Percentage Error

9.18724 %

(needs to be <10%)

OTHER INFORMATION

TDS

0

EC

0

Measure EC and Cation Sums

2661.061

Range should be:

0

to

0

Measure EC and Anion Sums

2427.32

Range should be:

0

to

0

Calculated TDS/Conductivity

#DIV/0!

Range should be:

0.55

to

0.77

Measure TDS and Cation Sums

0

Range should be:

0.55

to

0.77

Measure TDS and Anion Sums

0

Range should be:

0.55

to

0.77