1R - 177

REPORTS

DATE:

12/13/2000

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Bill Olson
OCD
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Santa Fe, NM 87505

Report Date: December 13, 2000

Order ID Number: A00120106

Project Number: N/A
Project Name: McCasland
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
159868	0011281230 (Windmill)	Water	11/28/00	12:30	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.

Dr. Blair Leftwich, Director

Cation-Anion Balance Sheet

Sample # 159868 Date: 12/13/00

MS

Cations

	ppm	meq/L
Calcium	525	26.1975
Magnesium	46.9	3.859401
Sodium	194	8.439
Potassium	9.07	0.2320106

Total Cations
38.7279 in meq/L

Anions

	ppm	meq/L
Alkalinity	150	3
Sulfate	88	1.83216
Chloride	1300	36.673
Nitrate as N	2.4	0.171336
Fluoride	1	0.05264

Total Anions
41.7291 in meq/L

Percentage Error
7.46044 %
(needs to be <10%)

OTHER INFORMATION

TDS	0
EC	0

Measure EC and Cation Sums	0	Range should be:	0	to	0
Measure EC and Anion Sums	0	Range should be:	0	to	0
Calculated TDS/Conductivity	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

Analytical and Quality Control Report

Sample: 159868 - 0011281230 (Windmill)

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		150	mg/L as CaCo3	1	1
Total Alkalinity		150	mg/L as CaCo3	1	1

Sample: 159868 - 0011281230 (Windmill)

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		4300	μMHOS/cm	1	

Sample: 159868 - 0011281230 (Windmill)

Analysis: Dissolved Metals | Analytical Method: E 200.7 | QC Batch: QC07192 | Date Analyzed: 12/6/00
Analyst: SSC | Preparation Method: E 3005A | Prep Batch: PB06172 | Date Prepared: 12/4/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		525	mg/L	1	0.50
Dissolved Magnesium		46.9	mg/L	1	0.50
Dissolved Potassium		9.07	mg/L	1	0.50
Dissolved Sodium		194	mg/L	1	0.50

Sample: 159868 - 0011281230 (Windmill)

Analysis: Hg, Total | Analytical Method: S 7470A | 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: 159868 - 0011281230 (Windmill)

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		1300	mg/L	1	0.50
Fluoride		1.0	mg/L	1	0.20
Nitrate-N	[1]	2.4	mg/L	1	0.20
Sulfate		88	mg/L	1	0.50

[1] Sample out of hold time for NO3.

Sample: 159868 - 0011281230 (Windmill)

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		2700	mg/L	1	10

Sample: 159868 - 0011281230 (Windmill)

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC07156	Date Analyzed:	12/6/00
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB06176	Date Prepared:	12/4/00

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		0.237	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		0.02	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		<0.01	mg/L	1	0.01
Total Molybdenum		<0.02	mg/L	1	0.02
Total Nickel		<0.01	mg/L	1	0.01
Total Selenium		<0.01	mg/L	1	0.01
Total Silica		7.66	mg/L	1	0.50
Total Silver		<0.01	mg/L	1	0.01
Total Zinc		<0.1	mg/L	1	0.10

Sample: 159868 - 0011281230 (Windmill)

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]	7.5	s.u.	1	1

Quality Control Report
Method Blank

Sample: Method Blank QCBatch: QC07062

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		15	μMHOS/cm	

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

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: 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: QC07152

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

Sample: Method Blank QCBatch: QC07156

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 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		<0.01	mg/L	0.01
Total Molybdenum		<0.02	mg/L	0.02
Total Nickel		<0.01	mg/L	0.01
Total Selenium		<0.01	mg/L	0.01
Total Silica		<0.5	mg/L	0.50
Total Silver		<0.01	mg/L	0.01
Total Zinc		<0.1	mg/L	0.10

Sample: Method Blank QCBatch: QC07192

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

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: QC07064

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: QC07156

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		1.96	mg/L	1	2	<0.5	98		75 - 125	20
Total Arsenic		0.996	mg/L	1	1	<0.01	99		75 - 125	20
Total Barium		2.16	mg/L	1	2	<0.01	108		75 - 125	20
Total Boron		0.979	mg/L	1	1	<0.5	97		75 - 125	20
Total Cadmium		0.207	mg/L	1	0.20	<0.002	103		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 Chromium		0.439	mg/L	1	0.40	<0.005	109		75 - 125	20
Total Cobalt		1.06	mg/L	1	1	<0.01	106		75 - 125	20
Total Copper		0.48	mg/L	1	0.40	<0.01	120		75 - 125	20
Total Iron		2.22	mg/L	1	2	<0.02	111		75 - 125	20
Total Lead		1.05	mg/L	1	1	<0.01	105		75 - 125	20
Total Manganese		0.214	mg/L	1	0.20	<0.01	107		75 - 125	20
Total Molybdenum		1.06	mg/L	1	1	<0.02	106		75 - 125	20
Total Nickel		1.04	mg/L	1	1	<0.01	104		75 - 125	20
Total Selenium		0.913	mg/L	1	1	<0.01	91		75 - 125	20
Total Silica		0.661	mg/L	1	0.50	<0.5	132		75 - 125	20
Total Silver		0.208	mg/L	1	0.20	<0.01	104		75 - 125	20
Total Zinc		0.242	mg/L	1	0.20	<0.1	121		75 - 125	20

Sample: LCSD QC Batch: QC07156

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		1.9	mg/L	1	2	<0.5	95	3	75 - 125	20
Total Arsenic		0.98	mg/L	1	1	<0.01	98	2	75 - 125	20
Total Barium		2.09	mg/L	1	2	<0.01	104	3	75 - 125	20
Total Boron		0.938	mg/L	1	1	<0.5	93	4	75 - 125	20
Total Cadmium		0.202	mg/L	1	0.20	<0.002	101	2	75 - 125	20
Total Chromium		0.433	mg/L	1	0.40	<0.005	108	1	75 - 125	20
Total Cobalt		1.03	mg/L	1	1	<0.01	103	3	75 - 125	20
Total Copper		0.4	mg/L	1	0.40	<0.01	100	18	75 - 125	20
Total Iron		2.12	mg/L	1	2	<0.02	106	5	75 - 125	20
Total Lead		1.02	mg/L	1	1	<0.01	102	3	75 - 125	20
Total Manganese		0.207	mg/L	1	0.20	<0.01	103	3	75 - 125	20
Total Molybdenum		1.04	mg/L	1	1	<0.02	104	2	75 - 125	20
Total Nickel		1	mg/L	1	1	<0.01	100	4	75 - 125	20
Total Selenium		0.889	mg/L	1	1	<0.01	88	3	75 - 125	20
Total Silica		0.646	mg/L	1	0.50	<0.5	129	2	75 - 125	20
Total Silver		0.2	mg/L	1	0.20	<0.01	100	4	75 - 125	20
Total Zinc		0.198	mg/L	1	0.20	<0.1	99	20	75 - 125	20

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

Sample: LCS QC Batch: QC07302

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00111	mg/L	1	0.001	<0.0002	111		80 - 120	20

Sample: LCSD QC Batch: QC07302

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00111	mg/L	1	0.001	<0.0002	111	0	80 - 120	20

Quality Control Report
Matrix Spikes and Duplicate Spikes

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: QC07156

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.06	mg/L	1	2	<0.5	103		75 - 125	20
Total Arsenic		0.938	mg/L	1	1	<0.01	93		75 - 125	20
Total Barium		2.1	mg/L	1	2	0.237	93		75 - 125	20
Total Boron		0.806	mg/L	1	1	<0.5	80		75 - 125	20
Total Cadmium		0.174	mg/L	1	0.20	<0.002	87		75 - 125	20
Total Chromium		0.379	mg/L	1	0.40	<0.005	94		75 - 125	20
Total Cobalt		0.878	mg/L	1	1	<0.01	87		75 - 125	20
Total Copper		0.389	mg/L	1	0.40	0.02	92		75 - 125	20
Total Iron		1.92	mg/L	1	2	0.02	95		75 - 125	20
Total Lead		0.896	mg/L	1	1	<0.01	89		75 - 125	20
Total Manganese		0.186	mg/L	1	0.20	<0.01	93		75 - 125	20
Total Molybdenum		0.928	mg/L	1	1	<0.02	92		75 - 125	20
Total Nickel		0.904	mg/L	1	1	<0.01	90		75 - 125	20
Total Selenium		0.858	mg/L	1	1	<0.01	85		75 - 125	20
Total Silica		8.08	mg/L	1	0.50	7.66	84		75 - 125	20
Total Silver		0.184	mg/L	1	0.20	<0.01	92		75 - 125	20
Total Zinc		0.249	mg/L	1	0.20	<0.1	124		75 - 125	20

Sample: MSD QC Batch: QC07156

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.06	mg/L	1	2	<0.5	103	0	75 - 125	20
Total Arsenic		0.95	mg/L	1	1	<0.01	95	1	75 - 125	20
Total Barium		2.1	mg/L	1	2	0.237	93	0	75 - 125	20
Total Boron		0.771	mg/L	1	1	<0.5	77	4	75 - 125	20
Total Cadmium		0.175	mg/L	1	0.20	<0.002	87	0	75 - 125	20
Total Chromium		0.39	mg/L	1	0.40	<0.005	97	3	75 - 125	20
Total Cobalt		0.882	mg/L	1	1	<0.01	88	0	75 - 125	20
Total Copper		0.385	mg/L	1	0.40	0.02	91	1	75 - 125	20
Total Iron		1.95	mg/L	1	2	0.02	96	2	75 - 125	20
Total Lead		0.897	mg/L	1	1	<0.01	89	0	75 - 125	20
Total Manganese		0.186	mg/L	1	0.20	<0.01	93	0	75 - 125	20
Total Molybdenum		0.922	mg/L	1	1	<0.02	92	1	75 - 125	20
Total Nickel		0.911	mg/L	1	1	<0.01	91	1	75 - 125	20
Total Selenium		0.874	mg/L	1	1	<0.01	87	2	75 - 125	20
Total Silica		8.03	mg/L	1	0.50	7.66	73	13	75 - 125	20
Total Silver		0.183	mg/L	1	0.20	<0.01	91	0	75 - 125	20
Total Zinc		0.252	mg/L	1	0.20	<0.1	126	1	75 - 125	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

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
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

Sample: MS QC Batch: QC07302

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00108	mg/L	1	0.001	<0.0002	108		80 - 120	20

Sample: MSD QC Batch: QC07302

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00114	mg/L	1	0.001	<0.0002	114	5	80 - 120	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: 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: 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: QC07062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/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		µMHOS/cm	1413	1398	98	80 - 120	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

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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: 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

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: 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

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: QC07156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.64	92	75 - 125	12/6/00
Total Arsenic		mg/L	2.50	2.41	96	75 - 125	12/6/00
Total Barium		mg/L	5	4.92	98	75 - 125	12/6/00
Total Boron		mg/L	2.50	2.24	89	75 - 125	12/6/00
Total Cadmium		mg/L	0.50	0.483	96	75 - 125	12/6/00
Total Chromium		mg/L	1	0.96	96	75 - 125	12/6/00
Total Cobalt		mg/L	2.50	2.43	97	75 - 125	12/6/00
Total Copper		mg/L	1	0.961	96	75 - 125	12/6/00
Total Iron		mg/L	5	4.91	98	75 - 125	12/6/00
Total Lead		mg/L	2.50	2.41	96	75 - 125	12/6/00
Total Manganese		mg/L	0.50	0.486	97	75 - 125	12/6/00
Total Molybdenum		mg/L	2.50	2.42	96	75 - 125	12/6/00
Total Nickel		mg/L	2.50	2.41	96	75 - 125	12/6/00
Total Selenium		mg/L	2.50	2.45	98	75 - 125	12/6/00
Total Silica		mg/L	2.50	2.46	98	75 - 125	12/6/00
Total Silver		mg/L	0.50	0.484	96	75 - 125	12/6/00
Total Zinc		mg/L	0.50	0.488	97	75 - 125	12/6/00

Sample: ICV (1) QC Batch: QC07156

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 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 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
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 Silica		mg/L	2.50	2.53	101	75 - 125	12/6/00
Total Silver		mg/L	0.50	0.504	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: 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

159868

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 # A0012010 6

Company Name: NM Oil Conservation Division
Phone #: (505) 827-7154
Address: (Street, City, Zip) 2040 S. Pacheco, Santa Fe, NM 87505
Fax #: (505) 827-8177
Contact Person: Bill Olson
Invoice to: (If different from above)
Project #:
Project Name: McCasland
Project Location:
Sampler Signature: Will Olson

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
159868	001128 1230 (windmill)	1	1 liter	✓									✓		11/28/00	1230
	001128 1230 (windmill)	1	500 ml	✓					✓				✓		11/28/00	1230

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	(Gen Chem (OCD Contact #24)	OCD metals (Contact #23)		Turn Around Time if different from standard	Hold
															✓	✓			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Will Olson	11/30/00	1600			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Jessica Kramer	12-1-00	10:00 AM

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp -1°
Log-in Review MB 12/13

REMARKS:

Carrier: Fedex 820920764559

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

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