LANL 6/17/99 White Rock Canyon Off site

CT&E Environmental Services Inc.

LIBRARY COPY

1200 Conrad Industrial Drive
Ludington, MI 49431
Tel: 616-843-1877
Fax: 616-845-9942

JUL 1999 RECEIVED

July 16, 1999

John Young
NMED-HRMB
2044A Galisteo St.
Santa Fe, NM 87505

RE: White Rock Canyon #WRC-5-99

Dear Mr. Young:

Enclosed are the analytical results associated with the above project.

Except as specifically noted, all statements and data in this report are in conformance to the QA/QC set forth in the referenced method.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (616) - 843-1877.

Sincerely,

Jason Asher
Project Manager
CT&E Environmental Services, Inc.

Enclosure

TC

4103

CT&E Environmental Services Inc.

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Project Name: White Rock Canyon
Project Number: WRC-5-99
CT&E MI Laboratory ID: 92169

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4. CT&E QUALITY CONTROL SUMMARY
5. CHAIN OF CUSTODY

CT&E Environmental Services Inc.

LABORATORY NARRATIVE

Project Name: White Rock Canyon
Project Number: WRC-5-99
CT&E MI Laboratory ID: 92169

Sample Receipt:

The samples were received at CT&E Laboratory without incident via Federal Express Next Day. Standard Chain of custody procedures were followed. Samples were collected in preserved sample containers, where appropriate, supplied by the client. Following log-in, the samples were stored at 4 degree C, where required, per SW-846 protocol until sample preparation or analysis.

Sample containers for radiological analysis were forwarded to CORE laboratories via UPS next day.

Sample Analysis:

No problems or anomalies were encountered during the analysis.

If you have any questions regarding this or any other analysis please feel free to call me at 616-843-1877.

Jason A. Asher 7-16-99
Jason A. Asher — Date
Project Manager

CT&E Environmental Services Inc.

CT&E MI LABORATORY REPORT

CT&E Environmental Services Inc.

Anatech Division
Analytical Report

Lab I.D. :	92169
Report Date :	06/10/1999
Project :	White Rock Canyon WRC-5-99
Client :	NMED-HRMB
	20449 Galisteo
	Sante Fe, NM 87505
Attention :	Mr. John Young

9 pages including cover sheet

Anatech Division
1200 Conrad Ind. Dr.
Ludington, MI 49431

616-843-1877 - Phone
616-845-9942 - Fax

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9917	Matrix:	Water / Grab
Client Sample:	Spring 5	Location:	
COLLECTED:	05/11/1999 10:35	Project:	White Rock Canyon WRC-5-99
RECEIVED:	05/21/1999 :	Sampled By:	JY

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
TOTAL METALS ANALYSIS					
Aluminum (ICAP)	0.21	mg/L	0.1	SW-846 Mtd. 6010B	06/04/1999 JAC
Antimony (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7041	06/04/1999 JAC
Arsenic (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7060A	06/04/1999 JAC
Barium (ICAP)	0.036	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Beryllium (ICAP)	ND	mg/L	0.001	"	06/08/1999 JAC
Cadmium (GFAA)	ND	mg/L	0.001	SW-846 Mtd. 7131A	06/04/1999 JAC
Calcium (ICAP)	17	mg/L	0.2	SW-846 Mtd. 6010B	06/04/1999 JAC
Chromium, Total (ICAP)	ND	mg/L	0.05	"	06/04/1999 JAC
Cobalt (ICAP)	ND	mg/L	0.001	"	06/04/1999 JAC
Copper (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Iron (ICAP)	ND	mg/L	0.1	"	06/04/1999 JAC
Lead (GFAA)	ND	mg/L	0.005	SW-846 Mtd. 7421	06/04/1999 JAC
Magnesium (ICAP)	4.6	mg/L	0.03	SW-846 Mtd. 6010B	06/04/1999 JAC
Manganese (ICAP)	ND	mg/L	0.003	"	06/04/1999 JAC
Mercury (Cold Vapor)	ND	mg/L	0.0002	SW-846 Mtd. 7470A	06/02/1999 SMM
Nickel (ICAP)	ND	mg/L	0.005	SW-846 Mtd. 6010B	06/08/1999 JAC
Potassium (Flame)	1.5	mg/L	0.5	SW-846 Mtd. 7610	06/07/1999 SMM
Selenium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7740	06/08/1999 JAC
Silver (GFAA)	ND	mg/L	0.0005	SW-846 Mtd. 7761	06/04/1999 JAC
Sodium (ICAP)	13	mg/L	0.5	SW-846 Mtd. 6010B	06/04/1999 JAC
Thallium (GFAA)	ND	mg/L	0.04	SW-846 Mtd. 7841	06/08/1999 JAC
Vanadium (ICAP)	0.01	mg/L	0.01	SW-846 Mtd. 6010B	06/04/1999 JAC
Zinc (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Mercury Cold Vapor Preparation	-	-	-	SW-846 Mtd. 7470A	06/01/1999 SMM
Graphite Furnace Preparation	-	-	-	Furnace Preparatio	06/04/1999 WD
ICAP Preparation	-	-	-	ICAP Preparation	06/04/1999 WD
GENERAL CHEMISTRY					
Cyanide, Total	ND	mg/L	0.005	SW-846 Mtd. 9010 A	06/01/1999 LRS
Total Organic Carbon (TOC)	ND	mg/L	1	EPA 415.1	06/04/1999 JL
INORGANIC PREPS					
ICP Digestion	-	-	-	SW-846 Mtd. 3010A	06/04/1999 WD
GFAA Digestion	-	-	-	SW-846 Mtd. 3020A	06/04/1999 WD
ICP/GFAA Digestion (Antimony)	-	-	-	SW-846 Mtd. 3005A	06/04/1999 WD

ND = Non Detectable

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9917	Matrix:	Water	/ Grab
Client Sample:	Spring 5	Location:		
COLLECTED:	05/11/1999 10:35	Project:	White Rock Canyon WRC-5-99	
RECEIVED:	05/21/1999 :	Sampled By:	JY	

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
INORGANIC PREPS					
GFAA Digestion (Arsenic)	-	-	-	SW-846 Mtd. 7060A	06/04/1999 WD
GFAA Digestion (Selenium)	-	-	-	SW-846 Mtd. 7740	06/04/1999 WD
ICP/GFAA Digestion (Silver)	-	-	-	SW-846 Mtd. 7760A	06/04/1999 WD

ND = Non Detectable

Project Manager

Jason A. Asher

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9918	Matrix:	Water	/ Grab	
Client Sample:	Spring 6	Location:			
COLLECTED:	05/13/1999 08:35	Project:	White Rock Canyon WRC-5-99		
RECEIVED:	05/21/1999 :	Sampled By:	JY		

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
TOTAL METALS ANALYSIS					
Aluminum (ICAP)	0.21	mg/L	0.1	SW-846 Mtd. 6010B	06/04/1999 JAC
Antimony (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7041	06/04/1999 JAC
Arsenic (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7060A	06/04/1999 JAC
Barium (ICAP)	0.036	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Beryllium (ICAP)	ND	mg/L	0.001	"	06/08/1999 JAC
Cadmium (GFAA)	ND	mg/L	0.001	SW-846 Mtd. 7131A	06/08/1999 JAC
Calcium (ICAP)	12	mg/L	0.2	SW-846 Mtd. 6010B	06/04/1999 JAC
Chromium, Total (ICAP)	ND	mg/L	0.05	"	06/04/1999 JAC
Cobalt (ICAP)	ND	mg/L	0.001	"	06/04/1999 JAC
Copper (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Iron (ICAP)	ND	mg/L	0.1	"	06/04/1999 JAC
Lead (GFAA)	ND	mg/L	0.005	SW-846 Mtd. 7421	06/04/1999 JAC
Magnesium (ICAP)	3.9	mg/L	0.03	SW-846 Mtd. 6010B	06/04/1999 JAC
Manganese (ICAP)	ND	mg/L	0.003	"	06/04/1999 JAC
Mercury (Cold Vapor)	ND	mg/L	0.0002	SW-846 Mtd. 7470A	06/02/1999 SMM
Nickel (ICAP)	0.0075	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Potassium (Flame)	1.6	mg/L	0.5	SW-846 Mtd. 7610	06/07/1999 SMM
Selenium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7740	06/04/1999 JAC
Silver (GFAA)	ND	mg/L	0.0005	SW-846 Mtd. 7761	06/04/1999 JAC
Sodium (ICAP)	12	mg/L	0.5	SW-846 Mtd. 6010B	06/04/1999 JAC
Thallium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7841	06/04/1999 JAC
Vanadium (ICAP)	0.01	mg/L	0.01	SW-846 Mtd. 6010B	06/04/1999 JAC
Zinc (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Mercury Cold Vapor Preparation	-	-	-	SW-846 Mtd. 7470A	06/01/1999 SMM
Graphite Furnace Preparation	-	-	-	Furnace Preparatio	06/04/1999 WD
ICAP Preparation	-	-	-	ICAP Preparation	06/04/1999 WD
GENERAL CHEMISTRY					
Cyanide, Total	ND	mg/L	0.005	SW-846 Mtd. 9010 A	06/01/1999 LRS
INORGANIC PREPS					
ICP Digestion	-	-	-	SW-846 Mtd. 3010A	06/04/1999 WD
GFAA Digestion	-	-	-	SW-846 Mtd. 3020A	06/04/1999 WD
ICP/GFAA Digestion (Antimony)	-	-	-	SW-846 Mtd. 3005A	06/04/1999 WD
GFAA Digestion (Arsenic)	-	-	-	SW-846 Mtd. 7060A	06/04/1999 WD

ND = Non Detectable

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9918	Matrix:	Water / Grab
Client Sample:	Spring 6	Location:	
COLLECTED:	05/13/1999 08:35	Project:	White Rock Canyon WRC-5-99
RECEIVED:	05/21/1999 :	Sampled By:	JY

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
INORGANIC PREPS					
GFAA Digestion (Selenium)	-	-	-	SW-846 Mtd. 7740	06/04/1999 WD
ICP/GFAA Digestion (Silver)	-	-	-	SW-846 Mtd. 7760A	06/04/1999 WD

ND = Non Detectable

Project Manager

Jason A. Asher

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9919	Matrix:	Water / Grab
Client Sample:	Ancho Spring	Location:	
COLLECTED:	05/13/1999 10:35	Project:	White Rock Canyon WRC-5-99
RECEIVED:	05/21/1999 :	Sampled By:	JY

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
TOTAL METALS ANALYSIS					
Aluminum (ICAP)	0.21	mg/L	0.1	SW-846 Mtd. 6010B	06/04/1999 JAC
Antimony (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7041	06/04/1999 JAC
Arsenic (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7060A	06/04/1999 JAC
Barium (ICAP)	0.033	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Beryllium (ICAP)	ND	mg/L	0.001	"	06/08/1999 JAC
Cadmium (GFAA)	ND	mg/L	0.001	SW-846 Mtd. 7131A	06/04/1999 JAC
Calcium (ICAP)	14	mg/L	0.2	SW-846 Mtd. 6010B	06/04/1999 JAC
Chromium, Total (ICAP)	ND	mg/L	0.05	"	06/04/1999 JAC
Cobalt (ICAP)	ND	mg/L	0.001	"	06/04/1999 JAC
Copper (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Iron (ICAP)	ND	mg/L	0.1	"	06/04/1999 JAC
Lead (GFAA)	ND	mg/L	0.005	SW-846 Mtd. 7421	06/04/1999 JAC
Magnesium (ICAP)	3.4	mg/L	0.03	SW-846 Mtd. 6010B	06/04/1999 JAC
Manganese (ICAP)	0.0069	mg/L	0.003	"	06/04/1999 JAC
Mercury (Cold Vapor)	ND	mg/L	0.0002	SW-846 Mtd. 7470A	06/02/1999 SMM
Nickel (ICAP)	ND	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Potassium (Flame)	1.4	mg/L	0.5	SW-846 Mtd. 7610	06/07/1999 SMM
Selenium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7740	06/08/1999 JAC
Silver (GFAA)	ND	mg/L	0.0005	SW-846 Mtd. 7761	06/04/1999 JAC
Sodium (ICAP)	12	mg/L	0.5	SW-846 Mtd. 6010B	06/04/1999 JAC
Thallium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7841	06/04/1999 JAC
Vanadium (ICAP)	ND	mg/L	0.01	SW-846 Mtd. 6010B	06/04/1999 JAC
Zinc (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Mercury Cold Vapor Preparation	-	-	-	SW-846 Mtd. 7470A	06/01/1999 SMM
Graphite Furnace Preparation	-	-	-	Furnace Preparatio	06/04/1999 WD
ICAP Preparation	-	-	-	ICAP Preparation	06/04/1999 WD
GENERAL CHEMISTRY					
Cyanide, Total	ND	mg/L	0.005	SW-846 Mtd. 9010 A	06/01/1999 LRS
INORGANIC PREPS					
ICP Digestion	-	-	-	SW-846 Mtd. 3010A	06/04/1999 WD
GFAA Digestion	-	-	-	SW-846 Mtd. 3020A	06/04/1999 WD
ICP/GFAA Digestion (Antimony)	-	-	-	SW-846 Mtd. 3005A	06/04/1999 WD
GFAA Digestion (Arsenic)	-	-	-	SW-846 Mtd. 7060A	06/04/1999 WD

ND = Non Detectable

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9919	Matrix:	Water	/ Grab
Client Sample:	Ancho Spring	Location:		
COLLECTED:	05/13/1999 10:35	Project:	White Rock Canyon WRC-5-99	
RECEIVED:	05/21/1999 :	Sampled By:	JY	

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
INORGANIC PREPS					
GFAA Digestion (Selenium)	-	-	-	SW-846 Mtd. 7740	06/04/1999 WD
ICP/GFAA Digestion (Silver)	-	-	-	SW-846 Mtd. 7760A	06/04/1999 WD

ND = Non Detectable

Project Manager

Jason A. Asher

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9920	Matrix:	Water / Grab
Client Sample:	Sprin 9A	Location:	
COLLECTED:	05/18/1999 10:20	Project:	White Rock Canyon WRC-5-99
RECEIVED:	05/21/1999 :	Sampled By:	JY

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
TOTAL METALS ANALYSIS					
Aluminum (ICAP)	0.16	mg/L	0.1	SW-846 Mtd. 6010B	06/04/1999 JAC
Antimony (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7041	06/04/1999 JAC
Arsenic (GFAA)	ND	mg/L	0.01	SW-846 Mtd. 7060A	06/08/1999 JAC
Barium (ICAP)	0.016	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Beryllium (ICAP)	ND	mg/L	0.001	"	06/08/1999 JAC
Cadmium (GFAA)	ND	mg/L	0.001	SW-846 Mtd. 7131A	06/04/1999 JAC
Calcium (ICAP)	11	mg/L	0.2	SW-846 Mtd. 6010B	06/04/1999 JAC
Chromium, Total (ICAP)	ND	mg/L	0.05	"	06/04/1999 JAC
Cobalt (ICAP)	ND	mg/L	0.001	"	06/08/1999 JAC
Copper (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Iron (ICAP)	ND	mg/L	0.1	"	06/04/1999 JAC
Lead (GFAA)	ND	mg/L	0.005	SW-846 Mtd. 7421	06/04/1999 JAC
Magnesium (ICAP)	3.2	mg/L	0.03	SW-846 Mtd. 6010B	06/04/1999 JAC
Manganese (ICAP)	ND	mg/L	0.003	"	06/04/1999 JAC
Mercury (Cold Vapor)	ND	mg/L	0.0002	SW-846 Mtd. 7470A	06/02/1999 SMM
Nickel (ICAP)	ND	mg/L	0.005	SW-846 Mtd. 6010B	06/04/1999 JAC
Potassium (Flame)	1.2	mg/L	0.5	SW-846 Mtd. 7610	06/07/1999 SMM
Selenium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7740	06/04/1999 JAC
Silver (GFAA)	ND	mg/L	0.0005	SW-846 Mtd. 7761	06/04/1999 JAC
Sodium (ICAP)	12	mg/L	0.5	SW-846 Mtd. 6010B	06/04/1999 JAC
Thallium (GFAA)	ND	mg/L	0.02	SW-846 Mtd. 7841	06/04/1999 JAC
Vanadium (ICAP)	ND	mg/L	0.01	SW-846 Mtd. 6010B	06/04/1999 JAC
Zinc (ICAP)	ND	mg/L	0.02	"	06/04/1999 JAC
Mercury Cold Vapor Preparation	-	-	-	SW-846 Mtd. 7470A	06/01/1999 SMM
Graphite Furnace Preparation	-	-	-	Furnace Preparatio	06/04/1999 WD
ICAP Preparation	-	-	-	ICAP Preparation	06/04/1999 WD
GENERAL CHEMISTRY					
Cyanide, Total	ND	mg/L	0.005	SW-846 Mtd. 9010 A	06/01/1999 LRS
INORGANIC PREPS					
ICP Digestion	-	-	-	SW-846 Mtd. 3010A	06/04/1999 WD
GFAA Digestion	-	-	-	SW-846 Mtd. 3020A	06/04/1999 WD
ICP/GFAA Digestion (Antimony)	-	-	-	SW-846 Mtd. 3005A	06/04/1999 WD
GFAA Digestion (Arsenic)	-	-	-	SW-846 Mtd. 7060A	06/04/1999 WD

ND = Non Detectable

Reported : 06/10/1999

CT&E Environmental Services Inc.

NMED-HRMB

Sample:	92169-9920	Matrix:	Water	/ Grab
Client Sample:	Sprin 9A	Location:		
COLLECTED:	05/18/1999 10:20	Project:	White Rock Canyon WRC-5-99	
RECEIVED:	05/21/1999 :	Sampled By:	JY	

Test Description	Result	Unit	Reporting Detection Limit	Method	Date/Analyst
INORGANIC PREPS					
GFAA Digestion (Selenium)	-	-	-	SW-846 Mtd. 7740	06/04/1999 WD
ICP/GFAA Digestion (Silver)	-	-	-	SW-846 Mtd. 7760A	06/04/1999 WD

ND = Non Detectable

Project Manager

Jason A. Asher

Reported : 06/10/1999

Certification Numbers: WI #999959180; MI #0021; AK UST #048; ND R-081; MD #266; IN C-MI-01

CT&E Environmental Services Inc.

Explanation of Terms and Data Qualifiers

Term/Qualifier	Description
Result	The value calculated from the analytical test reported to two significant figures.
Reporting Detection Limit	The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. Reporting Detection Limits are often based on cleanup requirements, drinking water MCLs or permits and are always greater than the MDL.
MDL - Method Detection Limit.	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. This value is determined using 40 CFR pt. 136 Appendix B.
Surrogates	Organic compounds that are added to the sample prior to testing to monitor the efficiency of the sample preparation and potential matrix interference.
Qualifiers	Flags which indicate problems or issues that could affect the result.
ND	Indicates compound was analyzed for but not detected at or above the reporting detection limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the reporting detection limit but greater than the method detection limit. Also used to report estimated results when matrix interference is present.
N	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor. Also indicates that the sample has been diluted when used with a ND result.
X	The data should be considered suspect because some aspect of the test did not meet method requirements. This flag must always be accompanied by a explanation.

CT&E Environmental Services Inc.

CORE LABORATORY REPORT

CORE LABORATORIES

ANALYTICAL REPORT

JOB NUMBER: 994971

Prepared For:

Commercial Testing & Engineering
Anatech Division
1200 Conrad Industrial Dr
Ludington, MI 49431-2681

Attention: Jason Asher

Date: 06/28/99

Don Ukele
Signature

Date 6/28/99

Name: Don W. Ukele

Title: Project Manager

420 West First Street
Casper, WY 82601

PHONE: 307-235-5741
FAX..: 307-266-1676

The analytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories. Core Laboratories, however, makes no warranty or representation, express or implied, of any type, and expressly disclaims same as to the productivity, proper operations or profitableness of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Core Laboratories.

CORELAB

ENVIRONMENTAL TESTING SERVICES

Sample Delivery Group Narrative

June 28, 1999

Customer: Commercial Testing and Engineering
Project: WRC-5-99
Core Laboratories – Casper Job Number: 994971

The following information is pertinent to the interpretation of the data.

On June 2, 1999, Core Laboratories - Casper received 4 water samples in good condition.

The Sr89 blank activity is slightly above its detection limit. However all of the samples in the batch have less activity than the blank, which would indicate that the slight contamination present in the blank is not present in the samples. Therefore the batch was not reanalyzed.

If you have any questions concerning this data, please call me at (307) 235-5741.

Debra Phillabaum
QA/QC Coordinator

Core Laboratories, Inc.
420 West First Street, Casper, Wyoming 82601, (307) 235-5741, (800) 666-0306, Fax (307) 266-1676

CORE LABORATORIES

SAMPLE INFORMATION
Date: 06/28/99

Job Number.: 994971
Customer...: Commercial Testing & Engineering
Attn.....: Jason Asher

Project Number.....: 98000031
Customer Project ID....: WRC-5-99
Project Description....: Licensed Facility Samples

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
994971-1	Spring 5	Water	05/11/1999	10:35	06/02/1999	09:50
994971-2	Spring 6	Water	05/13/1999	08:35	06/02/1999	09:50
994971-3	Ancho Spring	Water	05/13/1999	10:35	06/02/1999	09:50
994971-4	Spring 9A	Water	05/18/1999	10:20	06/02/1999	09:50

The analytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories. Core Laboratories, however, makes no warranty or representation, express or implied, of any type, and expressly disclaims same as to the productivity, proper operations or profitableness of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Core Laboratories.

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 994971

Date: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: WRC-5-99 ATTN: Jason Asher

Customer Sample ID: Spring 5
Date Sampled.....: 05/11/1999
Time Sampled.....: 10:35
Sample Matrix.....: Water

Laboratory Sample ID: 994971-1
Date Received.....: 06/02/1999
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 900.0	Gross Alpha, Activity, Total	1.9		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, Error +/-, Total	0.8		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, LLD, Total	1.2		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Activity, Total	5.7		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Error +/-, Total	0.6		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, LLD, Total	0.9		pCi/L	06/04/99	klf
EPA 905.0	Strontium-89 activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, error, +/-, Total	0.8		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, lLD, Total	1.9		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Error +/-, Total	0.4		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, LLD, Total	1.0		pCi/L	06/22/99	mdg
mod. HASL 300	Uranium-234, Activity, Total	0.5		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, Error +/-, Total	0.3		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Error +/-, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, LLD, Total	0.1		pCi/L	06/09/99	kah

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CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 994971

Date: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: WRC-5-99 ATTN: Jason Asher

Customer Sample ID: Spring 6
Date Sampled.....: 05/13/1999
Time Sampled.....: 08:35
Sample Matrix.....: Water

Laboratory Sample ID: 994971-2
Date Received.....: 06/02/1999
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 900.0	Gross Alpha, Activity, Total	4.2		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, Error +/-, Total	0.8		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, LLD, Total	1.0		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Activity, Total	2.9		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Error +/-, Total	0.5		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, LLD, Total	0.8		pCi/L	06/04/99	klf
EPA 905.0	Strontium-89 activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, error, +/-, Total	0.8		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, lLD, Total	1.9		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Error +/-, Total	0.4		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, LLD, Total	1.0		pCi/L	06/22/99	mdg
mod. HASL 300	Uranium-234, Activity, Total	0.3		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, Error +/-, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Activity, Total	ND		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, LLD, Total	0.1		pCi/L	06/09/99	kah

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CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 994971

Date: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: WRC-5-99 ATTN: Jason Asher

Customer Sample ID: Ancho Spring
Date Sampled.....: 05/13/1999
Time Sampled.....: 10:35
Sample Matrix.....: Water

Laboratory Sample ID: 994971-3
Date Received.....: 06/02/1999
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 900.0	Gross Alpha, Activity, Total	0.2		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, Error +/-, Total	0.6		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, LLD, Total	1.0		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Activity, Total	2.3		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Error +/-, Total	0.5		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, LLD, Total	0.8		pCi/L	06/04/99	klf
EPA 905.0	Strontium-89 activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, error, +/-, Total	0.7		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, lLD, Total	1.9		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Error +/-, Total	0.4		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, LLD, Total	1.0		pCi/L	06/22/99	mdg
mod. HASL 300	Uranium-234, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, Error +/-, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Activity, Total	ND		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, LLD, Total	0.1		pCi/L	06/09/99	kah

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CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 994971

Date: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: WRC-5-99 ATTN: Jason Asher

Customer Sample ID: Spring 9A
Date Sampled.....: 05/18/1999
Time Sampled.....: 10:20
Sample Matrix.....: Water

Laboratory Sample ID: 994971-4
Date Received.....: 06/02/1999
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 900.0	Gross Alpha, Activity, Total	ND		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, Error +/-, Total	0.6		pCi/L	06/04/99	klf
EPA 900.0	Gross Alpha, LLD, Total	1.0		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Activity, Total	1.4		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, Error +/-, Total	0.5		pCi/L	06/04/99	klf
EPA 900.0	Gross Beta, LLD, Total	0.8		pCi/L	06/04/99	klf
EPA 905.0	Strontium-89 activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, error, +/-, Total	0.8		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-89, lLD, Total	1.9		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Activity, Total	ND		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, Error +/-, Total	0.4		pCi/L	06/22/99	mdg
EPA 905.0	Strontium-90, LLD, Total	1.0		pCi/L	06/22/99	mdg
mod. HASL 300	Uranium-234, Activity, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, Error +/-, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-234, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Activity, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, Error +/-, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-235, LLD, Total	0.1		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Activity, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, Error +/-, Total	0.2		pCi/L	06/09/99	kah
mod. HASL 300	Uranium-238, LLD, Total	0.1		pCi/L	06/09/99	kah

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 994971

Report Date.: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: Licensed Facility Samples ATTN: Jason Asher

Test Method.....: EPA 900.0
Method Description.: Gross alpha/beta
Parameter.....: Gross Alpha, Activity
Batch.....: 13341
Units.....: pCi/L
Analyst...: klf

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MD	994919-8		ND			0.6	0.6	A	0.6	06/04/1999	1545
LCS		L1A060799	27.3		25.5		107.1	%	70-125	06/04/1999	1545
MB		MB1AB0607	0.2							06/04/1999	1545
MS	994971-1	994971MSA	65.7		77.5	1.9	82.3	%	70-125	06/04/1999	1545

Test Method.....: EPA 900.0
Method Description.: Gross alpha/beta
Parameter.....: Gross Beta, Activity
Batch.....: 13341
Units.....: pCi/L
Analyst...: klf

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		MB1AB0607	ND							06/04/1999	1545
MS	994975-1	994975MSB	2810		1650	1070	105.5	%	70-125	06/04/1999	1545
MD	994919-8		0.4			0.3	0.1	A	0.1	06/04/1999	1545
LCS		L1B060799	15.6		16.5		94.5	%	70-125	06/04/1999	1545

Test Method.....: EPA 905.0
Method Description.: Strontium-89,90
Parameter.....: Strontium-89 activity
Batch.....: 13457
Units.....: pCi/L
Analyst...: mdg

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
LCS		L1SR060899	30.8		29.0		106.2	%	70-125	06/22/1999	0811
MS	994969-1	994969MS89	60.0		58.0	ND	103.4	%	70-125	06/22/1999	0811
MD	994971-2		ND			ND	0.0	R	20	06/22/1999	0811
MB		MB2SR0608	1.2							06/22/1999	0811

Test Method.....: EPA 905.0
Method Description.: Strontium-89,90
Parameter.....: Strontium-90, Activity
Batch.....: 13457
Units.....: pCi/L
Analyst...: mdg

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		MB2SR0608	0.1							06/22/1999	0811
LCS		L2SR060899	23.6		22.2		106.3	%	70-125	06/22/1999	0811
MS	994971-3	994971MS90	42.4		44.4	ND	95.5	%	70-125	06/22/1999	0811
MD	994971-2		ND			ND	0.0	R	20	06/22/1999	0811

Test Method.....: mod. HASL 300
Method Description.: Isotopic Uranium
Parameter.....: Uranium-234, Activity
Batch.....: 13359
Units.....: pCi/L
Analyst...: kah

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		MB1U0603	ND							06/09/1999	1433
MS	994936-3	994936MSU	15.5		14.4	0.2	106.2	%	70-125	06/09/1999	1433
LCS		L1U060399	3.7		3.6		102.8	%	70-125	06/09/1999	1433
MSD	994936-3	994936MSU	12.9	15.5	14.4	0.2	88.2	%	70-125	06/09/1999	1433
							18.3	R	20		

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 994971

Report Date.: 06/28/99

CUSTOMER: Commercial Testing & Engineering PROJECT: Licensed Facility Samples ATTN: Jason Asher

Test Method.....: mod. HASL 300
Method Description.: Isotopic Uranium
Parameter.....: Uranium-234, Activity
Batch.....: 13359
Units.....: pCi/L
Analyst...: kah

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MD	994936-7		0.4			0.1	0.3	A	0.4	06/09/1999	1433

Test Method.....: mod. HASL 300
Method Description.: Isotopic Uranium
Parameter.....: Uranium-235, Activity
Batch.....: 13359
Units.....: pCi/L
Analyst...: kah

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MD	994936-7		0.1			ND	0.1	A	0.1	06/09/1999	1433
MB		MB1U0603	ND							06/09/1999	1433

Test Method.....: mod. HASL 300
Method Description.: Isotopic Uranium
Parameter.....: Uranium-238, Activity
Batch.....: 13359
Units.....: pCi/L
Analyst...: kah

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
LCS		L1U060399	3.8		3.6		105.6	%	70-125	06/09/1999	1433
MB		MB1U0603	ND							06/09/1999	1433
MD	994936-7		0.5			ND	0.5	A	0.4	06/09/1999	1433
MSD	994936-3	994936MSU	14.1	16.3	14.4	ND	97.9	%	70-125	06/09/1999	1433
							14.5	R	20		
MS	994936-3	994936MSU	16.3		14.4	ND	113.2	%	70-125	06/09/1999	1433

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL FOOTER

METHOD REFERENCES

(1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
(2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86), Update I (7/92), Update II (9/94), Update IIA (8/93), Update IIB (1/95), Update III (6/97)
(3) Standard Methods for the Examination of Water and Wastewater, 18th, 1992
(4) EPA 600/4-80-032, Prescribed Procedures for Measurement of Radioactivity in Drinking Water, August 1980
(5) Federal Register, Friday, October 26, 1984 (40 CFR Part 136)
(6) EPA 600/8-78-017, Microbiological Methods for Monitoring the Environment, December 1978

COMMENTS

(1) The data in the Laboratory Test Results Report may differ from the data in the QC Report due to calculations for sample preparation and/or dilutions.
(2) The "Time Analyzed" in the QC Report may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis.
(3) Soil and sludge samples are reported on a wet basis or on an "as received" basis unless otherwise indicated.
(4) The data in this report are within the limits of uncertainty specified in the referenced method unless otherwise indicated.
(5) Analyses performed by a subcontract laboratory are indicated with an asterisk and associated code in the "Technician" data field.

Subcontract Laboratories	Code	Subcontract Laboratories	Code
Core Laboratories - Anaheim, CA	AN	Core Laboratories - Houston, TX (Pet)	HP
Core Laboratories - Aurora, CO	AU	Core Laboratories - Houston, TX (Env)	HR
Core Laboratories - Casper, WY	CA	Core Laboratories - Indianapolis, IN	IN
Core Laboratories - Corpus Christi, TX	CC	Core Laboratories - Lake Charles, LA	LC
Core Laboratories - Carson, CA	CR	Core Laboratories - Valparaiso, IN	VP
Core Laboratories - Edison, NJ	ED	Other Subcontract Laboratories	XX

DEFINITIONS

(1) NC = Not Calculable due to values lower than the reporting limit.
(2) ND = Not Detected above the reporting limit.

QC SAMPLE IDENTIFICATIONS

BLANKS

MB = Method Blank (also referred to as a preparation blank)
RB = Reagent Blank
IB = Instrument Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
HB = Holding Blank (also referred to as a storage blank)

DUPLICATES

MSD = Matrix Spike Duplicate
MD = Method Duplicate

SPIKES

MS = Matrix Spike
MSD = Matrix Spike Duplicate
PDS = Post Digestion Spike
BS = Blank Spike (also referred to as a method spike)
SS = Surrogate Spike

REFERENCE STANDARDS

CS = Calibration Standard
RS = Reference Standard (also referred to as an external reference standard)
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
LCS = Laboratory Control Sample

420 West First Street
Casper, WY 82601
(307) 235-5741

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CT&E Environmental Services Inc.

CT&E QUALITY CONTROL SUMMARY

CT & E Environmental Services, Inc. - Anatech Division

INORGANIC QC SUMMARY

ANALYTE:	Mercury	RUN DATE:	6/2/99
INSTRUMENT:	Varian AA20	REPORT DATE:	6/2/99
PREP BATCH:	686	ANALYTICAL BATCH:	1022 MCV
DIGESTION DATE:	6/1/99	METHOD:	7470A
ANALYST:	SMM	REVIEW:	
UNITS:	µg/L	PROJECT #:	92169

BLANKS	CONC.	LOD	COMMENT
PREP BLANK	ND	0.2	
ICB			
CCB1			
CCB2			
CCB3			
CCB4			
CCB5			

ICV/CCV	TRUE	FOUND	% RECOVERY	COMMENT
ICV				
CCV1				
CCV2				
CCV3				
CCV4				
CCV5				

SPIKES	SPK ADDED	SAMPLE CONC	SPK CONC	% RECOVERY	C
PREP SPK	1		0.911	91.10	
MS	1	ND	0.99	99.00	
MSD	1	ND	0.933	93.30	
			RPD=	5.93	

ASPK	SPK ADDED	SAMPLE CONC	ASPK CONC	% RECOVERY	C

MSA	SAMPLE ID:				
ADDITION 1:	ADDITION 2:	ADDITION 3:	ADDITION 4:	CORRELATION COEFFICIENT	VALUE

CT & E Environmental Services, Inc. - Anatech Division

INORGANIC QC SUMMARY

ANALYTE:	CN	RUN DATE:	6/1/99
INSTRUMENT:	Lachat QC 8000	REPORT DATE:	6/1/99
PREP BATCH:	1046	ANALYTICAL BATCH:	1017
DIGESTION DATE:	6/1/99	METHOD:	9010A
ANALYST:	LS	REVIEW:	
UNITS:	mg/L	PROJECT #:	92169

BLANKS	CONC.	LOD	COMMENT
PREP BLANK	ND	0.005	
ICB			
CCB1			
CCB2			
CCB3			
CCB4			
CCB5			

ICV/CCV	TRUE	FOUND	% RECOVERY	COMMENT
ICV				
CCV1				
CCV2				
CCV3				
CCV4				
CCV5				

SPIKES	SPK ADDED	SAMPLE CONC	SPK CONC	% RECOVERY	C
PREP SPK	0.2		0.2115	105.75	
MS	0.1	ND	0.095	95.00	
MSD	0.1	ND	0.0925	92.50	
			RPD=	2.67	

ASPK	SPK ADDED	SAMPLE CONC	ASPK CONC	% RECOVERY	C

MSA	SAMPLE ID:				
ADDITION 1:	ADDITION 2:	ADDITION 3:	ADDITION 4:	CORRELATION COEFFICIENT	VALUE

CT & E Environmental Services, Inc. - Anatech Division

INORGANIC QC SUMMARY

ANALYTE:	TOC	RUN DATE:	6/4/99
INSTRUMENT:	Dohrmann Carbon Analyzer	REPORT DATE:	6/4/99
PREP BATCH:		ANALYTICAL BATCH:	1008
DIGESTION DATE:		METHOD:	415.1
ANALYST:	JL	REVIEW:	
UNITS:	mg/L	PROJECT #:	92169

BLANKS	CONC.	LOD	COMMENT
PREP BLANK			
ICB			
CCB1			
CCB2			
CCB3			
CCB4			
CCB5			

ICV/CCV	TRUE	FOUND	% RECOVERY	COMMENT
ICV				
CCV1				
CCV2				
CCV3				
CCV4				
CCV5				

SPIKES	SPK ADDED	SAMPLE CONC	SPK CONC	% RECOVERY	C
PREP SPK					
MS	5	0.503	5.9	107.94	
MSD	5	0.503	5.966	109.26	
			RPD=	1.22	

ASPK	SPK ADDED	SAMPLE CONC	ASPK CONC	% RECOVERY	C

MSA	SAMPLE ID:				
ADDITION 1:	ADDITION 2:	ADDITION 3:	ADDITION 4:	CORRELATION COEFFICIENT	VALUE

CT & E Environmental Services, Inc. - Anatech Division

METALS BATCH QC SUMMARY

PREP BATCH: M9686
PREP DATE: 6/4/99
UNITS: mg/L
RUN: 527

REPORT DATE: 6/4/99
METHOD: 6010

ELEMENT	PB	PS Result	PS (%)	Sample Result	MS Result	MS (%)	MSD Result	MSD (%)	RPD (%)	AS (%)
Silver	ND	0.0497	99.4	ND	0.0503	100.6	0.0506	101.2	0.6	
Aluminum	0.1506	5.833	116.7	0.2139	6.018	116.082	6.03	116.322	0.2	
Arsenic	ND	5.535	110.7	ND	5.541	110.82	5.489	109.78	0.9	
Barium	ND	5.607	112.1	0.0357	5.67	112.686	5.682	112.926	0.2	
Beryllium	ND	5.527	110.5	ND	5.638	112.76	5.589	111.78	0.9	
Calcium	ND	5.063	101.3	12.48	17.39	98.2	17.39	98.2	0.0	
Cadmium	ND	5.029	100.6	ND	5.074	101.48	5.02	100.4	1.1	
Cobalt	ND	4.903	98.1	ND	4.981	99.62	4.915	98.3	1.3	
Chromium	ND	5.093	101.9	ND	5.143	102.86	5.099	101.98	0.9	
Copper	ND	5.318	106.4	ND	5.47	109.4	5.424	108.48	0.8	
Iron	ND	5.036	100.7	ND	5.082	101.64	5.077	101.54	0.1	
Magnesium	ND	5.472	109.4	3.888	9.305	108.34	9.355	109.34	0.9	
Manganese	ND	4.961	99.2	ND	5.023	100.46	4.956	99.12	1.3	
Molybdenum										
Sodium	1.32	6.596	131.9	12.43	18.13	114	18.8	127.4	11.1	
Nickel	ND	4.966	99.3	0.0075	5.031	100.47	4.954	98.93	1.5	
Antimony	ND	10.24	102.4	ND	10.26	102.6	10.36	103.6	1.0	
Thallium	ND	5.397	107.9	ND	5.554	111.08	5.595	111.9	0.7	
Vanadium	ND	5.232	104.6	0.01	5.277	105.34	5.223	104.26	1.0	
Zinc	ND	5.009	100.2	ND	5.124	102.48	5.049	100.98	1.5	
Lead	ND	4.969	99.4	ND	5.034	100.68	4.942	98.84	1.8	
Selenium	0.0242	5.573	111.5	ND	5.599	111.98	5.534	110.68	1	

Spiked Sample: 2990731002

PS Acceptance Range - 85-115%

MS/MSD Range - 80-120%

CT&E Environmental Services Inc.

CHAIN OF CUSTODY

Chain of Custody

CT&E Environmental Services Inc.

Anatech Division, 1200 Conrad Industrial Dr., Ludington, MI 49431-2681

Lab ID# 92169

2990731

Page 1 of 1

Phone: 616-843-1877

FAX: 616-845-9942

Results To: ~~John Young~~ Jr NMED-HRMB
2044A Galisteo St.
Santa Fe, NM 87505

Attention: John Young

Telephone # 505 827 1558 x1036

FAX ? Yes (No) FAX # 505 827 1544

Invoice To: Steven Vigil
2044A Galisteo St.
Santa Fe, NM 87505

Telephone # 505 827 1566 x 1011

Project Name: White Rock Canyon

Project Number: WRC-5-99

State in which samples were collected: NM

REQUIRED COMPLETION DATE: 7/1/99

Sampled by: John Young, Robert Wings, Michael Dale

Work Authorization Signature: John R Young

This signature authorizes CT&E to perform the work requested on this form and acknowledges the terms and conditions of payment which are listed on the reverse side of this form.

Test Methods

Comment/Notes

Quote #

Please use the 4L containers for the metals, Gross alpha Beta, Isp. U, and Sr 89/90 Analyses.

1 TOC sample for: Spring 5

Mercury 7470 or 7000

Sample ID	Client Sample ID	Sampling Location	Date	Time am / pm	Comp Grab C / G	Sample Matrix	Drinking Water Y / N	Field Filtered Y / N	6010/7000/9010 23TAL w/Cyanide Line Item 31	GFP Sr 89/90 Line Item 92	Alpha Spec. U 234-235-238 Line Item 74	Gross Alpha Beta GFP Line Item 89	415.2 Total Organic Carbon Line Item 65			VOC	Glass	O&G	250m Pl	500m Pl	1L Pl	4L Other	pH Check
9917	Spring 5	White Rock Canyon	5/11/99	1035A	G	water	N	N	X	X	X	X	X			2x40						X	✓
9918	Spring 6	" " "	5/13/99	0835A	G	water	N	N	X	X	X	X	X			2x40						X	✓
9919	Ancho Spring	" " "	5/13/99	1035A	G	water	N	N	X	X	X	X	X			2x40						X	✓
9920	Spring 9A	" " "	5/18/99	1020A	G	water	N	N	X	X	X	X	X			2x40						X	

Relinquished by	Date / Time (am / pm)	Relinquished by	Date / Time (am / pm)	Relinquished by	Date / Time (am / pm)
John Young	5/20/99 1330				
Received by	**Date / Time (am / pm)**	**Received by**	**Date / Time (am / pm)**	**Received by**	**Date / Time (am / pm)**
[illegible]	5-21-99				
Cooler Temp #1	Cooler Temp #2	Cooler Temp #3	Cooler Temp #4		

CT&E ENVIRONMENTAL SERVICES INC.

TERMS AND CONDITIONS

By accepting a proposal or price quotation, placing a work request, submitting a sample for testing, or using a report from CT&E Environmental Services Inc. (CT&E ESI) the Client agrees to the following terms and conditions:

SCOPE OF SERVICES

CT&E ESI performs testing services on samples submitted to or collected by CT&E ESI using environmental testing industry accepted protocols, practices and standards and as requested by Client. CT&E ESI provides a written report of analytical results.

Turn around time (TAT) is measured in business days (weekends and holidays excluded) and begins the day after the sample arrives at the laboratory. CT&E ESI's typical TAT is 10 business days. Expedited service may be available with advance consultation.

DUTIES OF CUSTOMER

Client will submit written work requests to CT&E ESI stating scope and timing of work, testing criteria and any other information necessary for CT&E ESI to perform the work. Client will designate a representative to transmit instructions, receive information, and make decisions.

Samples delivered to CT&E ESI must be preceded or accompanied by written disclosure of any hazardous substances known or suspected by Client. Samples suspected of containing a hazardous substance must be packaged, labeled, transported and delivered in accordance with applicable laws, with safety of utmost concern.

CT&E ESI reserves the absolute right to refuse delivery or revoke acceptance of any sample which in the sole judgment of CT&E ESI is of unsuitable volume, arrives in a leaking or damaged container, or may pose a risk in handling, transport or processing or for any other reason, whether or not due to the presence in the sample of any hazardous substance and whether or not such presence has been disclosed to CT&E ESI by the Client.

PAYMENT TERMS & PRICE

For clients with approved credit, CT&E ESI will bill monthly for work completed during the previous month. Client agrees to pay invoices within thirty (30)days after receipt. Client agrees to pay a late charge on past due invoices at one and one-half percent (1.5%) per month (eighteen percent (18%) per annum (or such lower rate required by law. Client agrees to pay all expenses incurred by CT&E ESI, including attorney fees and court costs, to collect any past due amounts.

Fees are per CT&E ESI's current price list and are subject to change without prior notice. Fees include sample and shipping containers. CT&E ESI requires at least 3 business days notice to prepare and ship sample containers. Non-expedited shipping costs to the client are assumed by CT&E ESI. Rush delivery shipping charges are assumed by the Client. Results are delivered by mail or with special arrangements verbally, by fax or computer disk. Surcharges for rush analysis are: 1-2 Day TAT = 2 X Standard Fee; 3-5 Day TAT = 1.5 X Standard Fee.

LIMITED WARRANTY

CT&E ESI shall perform all services with reasonable care and diligence normal to the environmental testing industry. CT&E ESI's sole obligation hereunder shall be to re-perform services which are materially deficient without charge, so long as such deficiencies are reported in writing to CT&E ESI within thirty (30) days after the discovery thereof, but in no event later than one (1) year from the performance of the services by CT&E ESI.

By their very nature sampling, testing, and other CT&E ESI services are limited in scope and subject to expected measurement variability and possible interferences in the measurement process caused by the sample matrix. CT&E ESI makes no warranty that the tested sample is representative of the source from which the sample was taken or that any particular analysis can be performed on a particular sample. CT&E ESI may on occasion utilize subcontractors.

CT&E ESI MAKES NO EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ON THE SERVICES OF CT&E ESI. IN NO EVENT SHALL CT&E ESI BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES. NOR SHALL CT&E ESI BE LIABLE IN ANY EVENT, INCLUDING ITS OBLIGATION TO RE-PERFORM, FOR ANY LOSSES, DAMAGES OR CLAIMS IN EXCESS OF THE AMOUNT PAID TO CT&E ESI FOR THE SERVICES HEREUNDER.

CONFIDENTIALITY

CT&E ESI shall keep documents and information related to the Client confidential and will not disclose any such information to third parties without Client permission except in response to legal process after giving a copy of such process to Client.

FORCE MAJEURE

CT&E ESI shall have no liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, acts of authorities, or delays in transportation, mail or delivery services.

RECORDS/SAMPLE RETENTION

CT&E ESI will retain copies of data and reports for five years after which such documents will be destroyed. If Client requests additional copies of reports or data during the retention period, an additional charge will apply for the preparation and delivery of such reports.

Samples known or suspected to contain hazardous substances or determined by CT&E ESI to be incompatible with existing waste streams may be returned at Client's cost, to the Client upon completion of testing. Samples not destroyed in testing and not returned to the Client will be retained for 30 days after submittal of the final data report, and thereafter disposed of by CT&E ESI. Samples can be retained beyond 30 days at a monthly storage charge payable in advance.

CHOICE OF LAW

The agreement between Client and CT&E ESI shall be interpreted under the laws of the state in which CT&E ESI receives the samples.

AMENDMENT AND CONFLICTING PROVISIONS

These Terms and Conditions may be amended only by written agreement of CT&E ESI. These Terms and Conditions shall override conflicting provisions contained in Client purchase order or other standard form documents.