Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

John Corra, Director

December 29, 2011

Mr. Thomas McLaughlin
U.S. Nuclear Regulatory Commission
Mail Stop 8-TF5
Washington, D.C. 20555-001

RE: Annual Reports for CY 2010 and 2011
WDEQ – ANC Reclamation Project
Mine Permit 352

Dear Mr. McLaughlin,

Enclosed are the WDEQ's annual reports summarizing activities at the ANC site during CY 2010 and CY 2011.

Please feel free to contact me should you have any questions regarding the reports.

Sincerely,

Mark Moxley
LQD District Supervisor

Enclosures:
2010 Report on ANC Project, incl. lab data from 10/10 sampling
2011 Report on ANC Project, incl. lab data from 9/11 sampling and settlement chart

cc: Nancy Nuttbrock, LQD Administrator, Cheyenne

WDEQ Annual Report for CY 2011
ANC - Gas Hills Reclamation Project

Site Inspections:

Inspection Date	Activities
4/13/11	Routine inspection
7/1/11	Repaired sprinkler system and started R-4 pump
7/22/11	Routine inspection
8/19/11	Routine inspection
9/12-14/11	Well Sampling
9/20/11	On-site meeting with NRC
9/30/11	Routine inspection
10/20/10	Routine inspection, shut off R-4 pump

Groundwater Monitoring:

Sampling of wells and springs was conducted September 12-14, 2011. The locations of all wells and springs are shown on the attached map. Split samples were sent to ORISE for radiological analysis. Copies of lab reports are attached.

Groundwater Corrective Action:

The R-4 pump and sprinkler system was not started until 7/1/11 due to a late spring with cool temperatures and higher than normal precipitation. The system operated until 10/20/11 when it was turned off. Unfortunately the flow meter did not operate and there is no record of how much water was recovered. Based on performance in past years, the estimated volume of water pumped and evaporated over the 3 ½ months of operation was on the order of 250,000 gallons.

Pond No.1 Settlement Monument Survey:

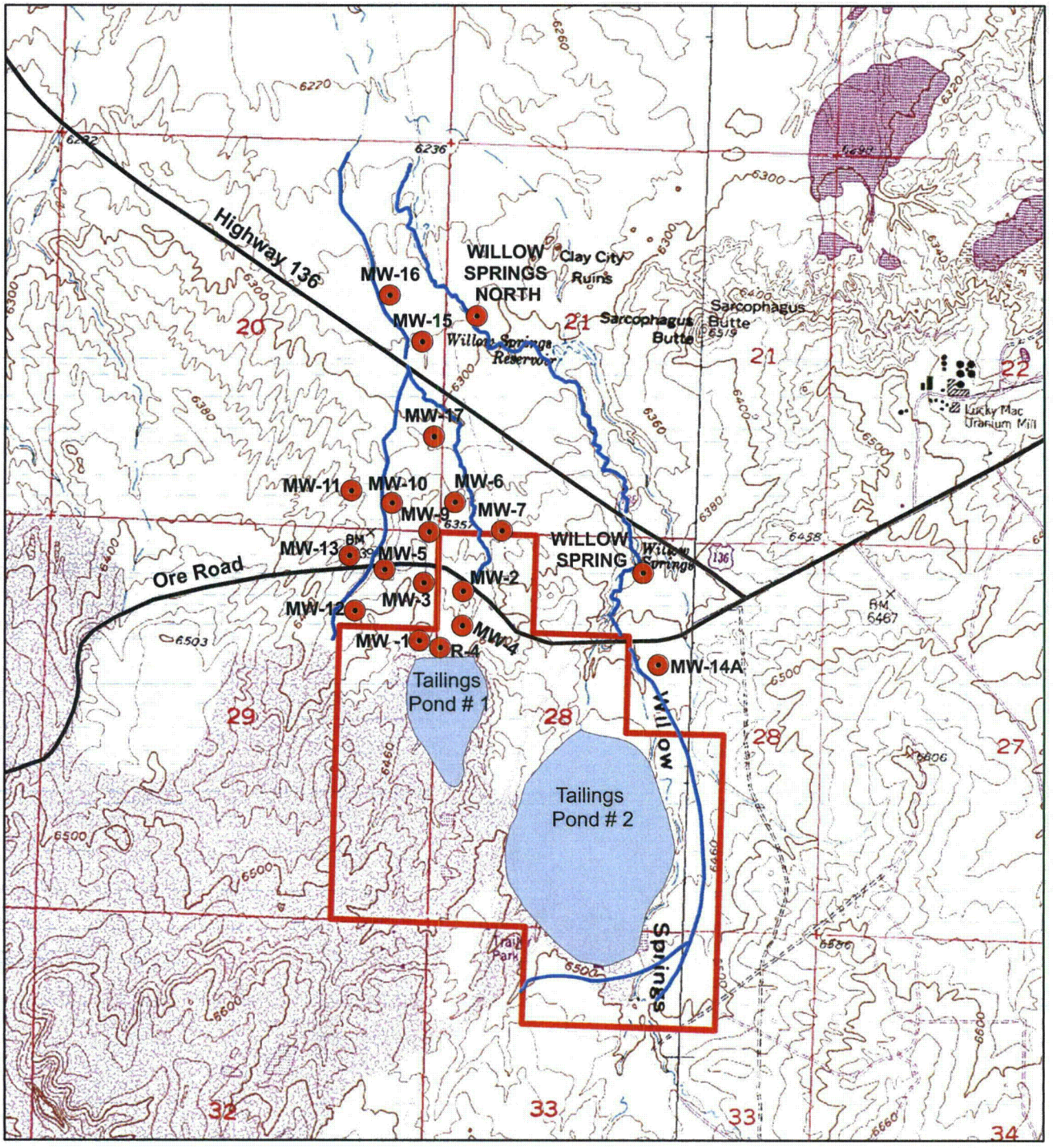
The settlement monuments on tailings pond no.1 were surveyed in October, 2011. A table and graph depicting the post 2000 survey data is attached to this report.

Other Activities:

WDEQ entered into a contract with AVI pc. in June, 2011 to refine the grading plan design for the capping and closure of tailings pond no.1. This work is on-going as of year-end 2011. It is expected that this plan will be sent to NRC for review in early 2012.

MM:mm

Wyoming DEQ ANC Project



0 1,200 2,400 4,800 Feet

Scale 1:24,000

N

Legend

- Wells
- TailingsPonds
- Drainages
- Roads
- ANC Property Boundary

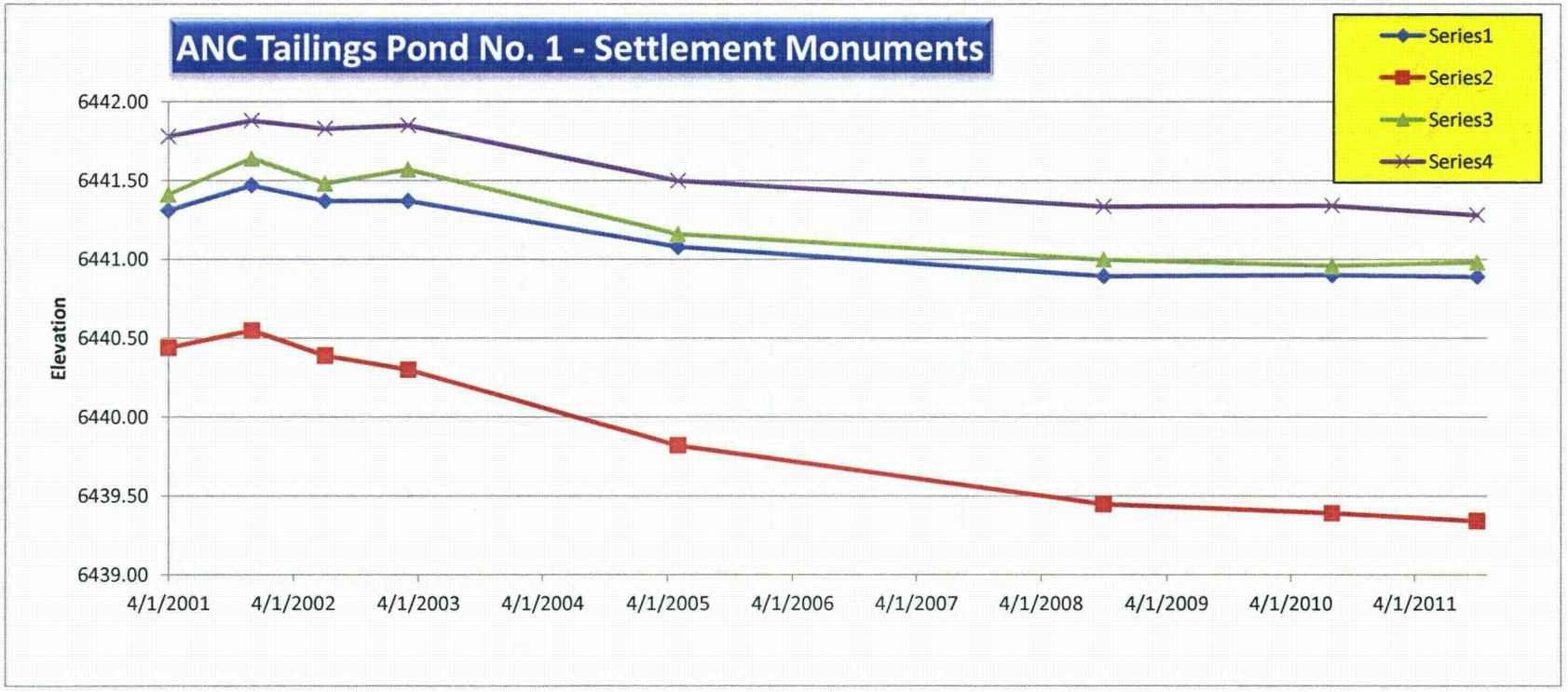
Map Created by: M. Bautz & M. Moxley (307-332-3047)
Created on: August 22, 2008
Base Map: EDRG-24K, NAD 1927, Zone 13N
Site Location: T.33N, R.90W, Fremont County, Wyoming
File Name: ANC-MAP_8-22-08

DEPARTMENT OF ENVIRONMENTAL QUALITY
WYOMING

WDEQ - ANC Gas Hills Project

Monument Number	11/15/2000	4/3/2001	12/6/2001	7/30/2002	3/19/2003	5/19/2005	10/22/2008	8/6/2010	10/15/2011
16 (DS1)	6441.33	6441.31	6441.47	6441.37	6441.37	6441.08	6440.89	6440.90	6440.89
15 (DS2)	6440.53	6440.44	6440.55	6440.39	6440.30	6439.82	6439.45	6439.39	6439.34
14 (DS3)	6441.44	6441.41	6441.64	6441.48	6441.57	6441.16	6441.00	6440.96	6440.98
10 (DS4)	6441.81	6441.78	6441.88	6441.83	6441.85	6441.50	6441.34	6441.34	6441.28

(old numbers in parentheses)



[redacted]

ORISE
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

November 3, 2011

Thomas McLaughlin, PhD
U. S. Nuclear Regulatory Commission
11545 Rockville Pike
Mail Stop: T-8F5
Rockville, Maryland 20852

SUBJECT: ORISE CONTRACT NO. DE-AC05-06OR23100
LETTER REPORT FOR ANALYTICAL RESULTS FOR SIXTEEN WATER SAMPLES ASSOCIATED WITH AMERICAN NUCLEAR CORPORATION – GAS HILLS SITE, LANDERS, WYOMING
[RFTA NO. 09-010] DCN: 1794-LR-04-0

Dear Dr. McLaughlin:

The Oak Ridge Institute for Science and Education (ORISE) received sixteen water samples from Mark Moxley of the Wyoming Department of Environmental Quality. The water samples were collected at the American Nuclear Corporation Gas Hills site in Landers, Wyoming. ORISE received the samples on September 22, 2011. The analytical request included isotopic uranium, radium-226 (Ra-226), and radium-228 (Ra-228). The sample identifications are presented in Table 1. The isotopic uranium, Ra-226, and Ra-228 results are presented in Tables 2 through 4, respectively. The pertinent procedure references are in the data tables.

ORISE's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request.

My contact information is listed below. You may also contact Dale Condra at 865.241.3242 with any questions or comments.

Sincerely,

Wade P. Ivey

Wade Ivey, Manager
Laboratory

WPI/RDC:bj

c: T. Carter, NRC/FSME/DWMEP T-8F5
L. Guo, NRC/FSME/DWMEP T-8F5
S. Nesmith, NRC/FSME/TWFN 8D42
File 1794

electronic: S. Roberts, ORISE
T. Vitkus, ORISE

Distribution approval and concurrence:	Initials
Technical Management Team Member	[illegible]
Quality Manager	[illegible]

Voice: 865.576.9184 Fax: 865.241.3248 E-mail: Wade.Ivey@orau.org
P.O. Box 117 I Oak Ridge, TN 37831 I www.orise.orau.gov

TABLE 1

SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE
LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Collection Date	Collection Time
1794W0050	MW-15	9/12/2011	11:00 AM
1794W0051	Willow Spring, North	9/12/2011	11:30 AM
1794W0052	Willow Spring	9/12/2011	12:15 PM
1794W0053	MW-7	9/12/2011	1:30 PM
1794W0054	MW-17	9/12/2011	2:00 PM
1794W0055	MW-6	9/12/2011	3:00 PM
1794W0056	MW-14A	9/13/2011	11:15 AM
1794W0057	MW-9	9/13/2011	12:30 PM
1794W0058	MW-11	9/13/2011	1:15 PM
1794W0059	MW-13	9/13/2011	2:30 PM
1794W0060	MW-10	9/14/2011	10:15 AM
1794W0061	MW-12	9/14/2011	10:45 AM
1794W0062	MW-3	9/14/2011	11:45 AM
1794W0063	MW-2	9/14/2011	12:45 PM
1794W0064	MW-4	9/14/2011	2:00 PM
1794W0065	R-4	9/14/2011	2:15 PM

TABLE 2

CONCENTRATIONS OF URANIUM IN WATER SAMPLES BY ALPHA SPECTROSCOPY AP11, REVISION 5; CP2, REVISION 16 AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Radionuclide Concentrations, TPUs[a], and MDCs[b] (pCi/L)											
		U-234			U-235			U-238			Total U[c]		
1794W0050	MW-15	111.1 ± 7.8 , 0.2			4.14 ± 0.64 , 0.35			96.5 ± 6.8 , 0.2			212 ± 10		
1794W0051	Willow Spring, North	129.6 ± 9.6 , 0.4			5.52 ± 0.82 , 0.30			108.5 ± 8.1 , 0.2			244 ± 13		
1794W0052	Willow Spring	102.3 ± 7.3 , 0.2			3.77 ± 0.61 , 0.26			80.5 ± 5.9 , 0.2			186.6 ± 9.4		
1794W0053	MW-7	345 ± 24 , 0[d]			12.3 ± 1.3 , 0.1			254 ± 18 , 0			612 ± 30		
1794W0054	MW-17	0.36 ± 0.20 , 0.35			0.06 ± 0.09 , 0.20			0.20 ± 0.13 , 0.21			0.62 ± 0.26		
1794W0055	MW-6	26.6 ± 2.3 , 0.4			0.85 ± 0.30 , 0.36			18.9 ± 1.7 , 0.3			46.3 ± 2.9		
1794W0056	MW-14A	68.2 ± 5.1 , 0.3			2.15 ± 0.45 , 0.21			47.4 ± 3.7 , 0.2			117.8 ± 6.3		
1794W0057	MW-9	2.35 ± 0.44 , 0.25			0.09 ± 0.09 , 0.07			1.02 ± 0.28 , 0.25			3.45 ± 0.53		
1794W0058	MW-11	6.00 ± 0.78 , 0.26			0.48 ± 0.21 , 0.07			6.51 ± 0.81 , 0.18			13.0 ± 1.1		
1794W0059	MW-13	0.66 ± 0.22 , 0.05			0.02 ± 0.08 , 0.22			0.22 ± 0.12 , 0.05			0.90 ± 0.26		
1794W0060	MW-10	913.5 ± 70.8 , 1.1			32.7 ± 7.7 , 1.3			684 ± 55 , 1			1,630 ± 90		
1794W0061	MW-12	2,170 ± 190 , 29			92 ± 28 , 7			1,810 ± 165 , 28			4,071 ± 253		
1794W0062	MW-3	1.90 ± 0.43 , 0.38			0.00 ± 0.07 , 0.23			1.22 ± 0.33 , 0.24			3.13 ± 0.54		
1794W0063	MW-2	3,769 ± 307 , 38			139 ± 39 , 37			3,226 ± 268 , 23			7,134 ± 409		
1794W0064	MW-4	923 ± 71 , 6			33.4 ± 7.9 , 4.2			801 ± 63 , 5			1,757 ± 95		
1794W0065	R-4	541 ± 47 , 7			31.2 ± 7.9 , 4.5			568 ± 48 , 8			1,140 ± 68		

[a]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[b]MDCs are after the commas.

[c]Total uranium is calculated using U-234 + U-235 + U-238.

[d]Zero values are due to rounding or equal counts for the sample and background.

TABLE 3

CONCENTRATIONS OF Ra-226
IN WATER SAMPLES
BY ALPHA SPECTROSCOPY AP7, REVISION 19; CP2, REVISION 16
AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE
LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Ra-226 Concentrations, TPUs[a], and MDCs[b] (pCi/L)
1794W0050	MW-15	0.33 ± 0.23 , 0.44
1794W0051	Willow Spring, North	0.47 ± 0.23 , 0.32
1794W0052	Willow Spring	0.23 ± 0.26 , 0.55
1794W0053	MW-7	2.54 ± 0.52 , 0.53
1794W0054	MW-17	0.60 ± 0.33 , 0.63
1794W0055	MW-6	2.97 ± 0.53 , 0.40
1794W0056	MW-14A	2.35 ± 0.46 , 0.40
1794W0057	MW-9	0.04 ± 0.06 , 0.79
1794W0058	MW-11	2.76 ± 0.71 , 1.10
1794W0059	MW-13	4.03 ± 0.80 , 0.61
1794W0060	MW-10	5.05 ± 0.84 , 0.43
1794W0061	MW-12	29.6 ± 2.2 , 0.8
1794W0062	MW-3	2.72 ± 0.50 , 0.22
1794W0063	MW-2	71.3 ± 6.0 , 2.1
1794W0064	MW-4	21.1 ± 1.5 , 0.5
1794W0065	R-4	7.00 ± 0.73 , 0.44

[a]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.
[b]MDCs are after the commas.

TABLE 4

CONCENTRATIONS OF Ra-228
IN WATER SAMPLES
BY LOW BACKGROUND BETA COUNTING
AP8, REVISION 5; CP3, REVISION 3
AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE
LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Ra-228 Concentrations, TPUs[a], and MDCs[b](pCi/L)
1794W0050	MW-15	1.2 ± 1.7 , 2.9
1794W0051	Willow Spring, North	3.3 ± 1.7 , 2.7
1794W0052	Willow Spring	0.1 ± 1.7 , 3.0
1794W0053	MW-7	7.4 ± 2.3 , 3.2
1794W0054	MW-17	2.4 ± 1.5 , 2.3
1794W0055	MW-6	8.5 ± 2.1 , 2.7
1794W0056	MW-14A	4.4 ± 1.7 , 2.6
1794W0057	MW-9	2.4 ± 1.8 , 2.9
1794W0058	MW-11	7.2 ± 2.4 , 3.4
1794W0059	MW-13	5.0 ± 2.0 , 2.9
1794W0060	MW-10	7.9 ± 2.5 , 3.4
1794W0061	MW-12	18.5 ± 3.3 , 3.8
1794W0062	MW-3	2.0 ± 1.8 , 3.0
1794W0063	MW-2	67.0 ± 4.9 , 3.3
1794W0064	MW-4	31.6 ± 3.3 , 2.9
1794W0065	R-4	52.7 ± 4.2 , 3.1

[a]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.
[b]MDCs are after the commas.

ANALYTICAL SUMMARY REPORT

December 28, 2011

WY DEQ-WQD
208 S College Dr
Cheyenne, WY 82002

Workorder No.: C11090541 Quote ID: C3417 - WYDEQ-LQD Guide 8

Project Name: ANC

Energy Laboratories, Inc. Casper WY received the following 17 samples for WY DEQ-WQD on 9/14/2011 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C11090541-001	MW-16	09/12/11 10:30	09/14/11	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Conductivity Sample Filtering Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Solids, Total Dissolved
C11090541-002	MW-15	09/12/11 11:00	09/14/11	Aqueous	Same As Above
C11090541-003	Willow Spring North	09/12/11 11:30	09/14/11	Aqueous	Same As Above
C11090541-004	Willow Spring	09/12/11 12:15	09/14/11	Aqueous	Same As Above
C11090541-005	MW-7	09/12/11 13:30	09/14/11	Aqueous	Same As Above
C11090541-006	MW-17	09/12/11 14:00	09/14/11	Aqueous	Same As Above
C11090541-007	MW-6	09/12/11 15:00	09/14/11	Aqueous	Same As Above
C11090541-008	MW-14A	09/13/11 11:15	09/14/11	Aqueous	Same As Above
C11090541-009	MW-9	09/13/11 12:30	09/14/11	Aqueous	Same As Above
C11090541-010	MW-11	09/13/11 13:15	09/14/11	Aqueous	Same As Above
C11090541-011	MW-13	09/13/11 14:30	09/14/11	Aqueous	Same As Above
C11090541-012	MW-10	09/14/11 10:15	09/14/11	Aqueous	Same As Above
C11090541-013	MW-12	09/14/11 10:45	09/14/11	Aqueous	Same As Above
C11090541-014	MW-3	09/14/11 11:45	09/14/11	Aqueous	Same As Above
C11090541-015	MW-2	09/14/11 12:45	09/14/11	Aqueous	Same As Above
C11090541-016	MW-4	09/14/11 14:00	09/14/11	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C11090541-017	R-4	09/14/11 14:15 09/14/11	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Acidity, Total as CaCO3 Alkalinity QA Calculations Conductivity Sample Filtering Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Solids, Total Dissolved

The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing. Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. Data corrected for moisture content are typically noted as - dry on the report. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2011.12.28 10:05:34 -07:00

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-001
Client Sample ID: MW-16

Report Date: 12/28/11
Collection Date: 09/12/11 10:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:10 / jba
Bicarbonate as HCO3	315	mg/L		5		A2320 B	09/16/11 13:10 / jba
Calcium	391	mg/L		1		E200.8	09/19/11 23:35 / sml
Chloride	85	mg/L	D	2		E300.0	09/18/11 00:08 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 17:17 / jba
Magnesium	74	mg/L		1		E200.8	09/19/11 23:35 / sml
Nitrogen, Ammonia as N	2.01	mg/L		0.05		A4500-NH3 G	09/28/11 12:56 / dc
Nitrogen, Nitrate+Nitrite as N	7.5	mg/L	D	0.5		E353.2	09/20/11 17:11 / dc
Potassium	34	mg/L		1		E200.7	09/21/11 20:22 / cp
Silica	53.1	mg/L		0.2		E200.7	09/21/11 20:22 / cp
Sodium	185	mg/L		1		E200.7	09/21/11 20:22 / cp
Sulfate	1400	mg/L	D	8		E300.0	09/17/11 04:25 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2740	umhos/cm		1		A2510 B	09/15/11 11:35 / lmc
pH	7.76	s.u.		0.01		A4500-H B	09/15/11 11:35 / lmc
Solids, Total Dissolved TDS @ 180 C	2370	mg/L		10		A2540 C	09/15/11 16:33 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	09/19/11 23:35 / sml
Arsenic	0.009	mg/L		0.001		E200.8	09/20/11 14:53 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 19:19 / sml
Boron	0.3	mg/L		0.1		E200.7	09/21/11 20:22 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 19:19 / sml
Chromium	ND	mg/L		0.05		E200.8	09/21/11 19:19 / sml
Copper	ND	mg/L		0.01		E200.8	09/21/11 19:19 / sml
Iron	ND	mg/L		0.03		E200.7	09/21/11 20:22 / cp
Lead	ND	mg/L		0.001		E200.8	09/16/11 20:17 / sml
Manganese	ND	mg/L		0.01		E200.8	09/21/11 19:19 / sml
Mercury	ND	mg/L		0.001		E200.8	09/21/11 19:19 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:22 / cp
Nickel	ND	mg/L		0.05		E200.8	09/21/11 19:19 / sml
Selenium	0.003	mg/L		0.001		E200.8	09/20/11 14:53 / sml
Uranium	0.293	mg/L		0.0003		E200.8	09/16/11 20:17 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 20:17 / sml
Zinc	0.01	mg/L		0.01		E200.7	09/21/11 20:22 / cp
METALS - TOTAL							
Iron	0.43	mg/L	B	0.03		E200.8	09/22/11 17:07 / sml
Manganese	ND	mg/L		0.01		E200.8	09/22/11 17:07 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-001
Client Sample ID: MW-16

Report Date: 12/28/11
Collection Date: 09/12/11 10:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.78	%				Calculation	09/22/11 11:05 / kbh
Anions	37.2	meq/L				Calculation	09/22/11 11:05 / kbh
Cations	34.5	meq/L				Calculation	09/22/11 11:05 / kbh
Solids, Total Dissolved Calculated	2420	mg/L				Calculation	09/22/11 11:05 / kbh
TDS Balance (0.80 - 1.20)	0.980					Calculation	09/22/11 11:05 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-002
Client Sample ID: MW-15

Report Date: 12/28/11
Collection Date: 09/12/11 11:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:18 / jba
Bicarbonate as HCO3	326	mg/L		5		A2320 B	09/16/11 13:18 / jba
Calcium	458	mg/L		1		E200.7	09/21/11 20:26 / cp
Chloride	100	mg/L	D	2		E300.0	09/18/11 00:23 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 17:37 / jba
Magnesium	94	mg/L		1		E200.7	09/21/11 20:26 / cp
Nitrogen, Ammonia as N	1.69	mg/L		0.05		A4500-NH3 G	09/28/11 12:58 / dc
Nitrogen, Nitrate+Nitrite as N	6.6	mg/L	D	0.5		E353.2	09/20/11 17:13 / dc
Potassium	38	mg/L		1		E200.7	09/21/11 20:26 / cp
Silica	58.0	mg/L		0.2		E200.7	09/21/11 20:26 / cp
Sodium	214	mg/L		1		E200.7	09/21/11 20:26 / cp
Sulfate	1640	mg/L	D	8		E300.0	09/17/11 04:41 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3090	umhos/cm		1		A2510 B	09/15/11 11:38 / lmc
pH	7.54	s.u.		0.01		A4500-H B	09/15/11 11:38 / lmc
Solids, Total Dissolved TDS @ 180 C	2740	mg/L		10		A2540 C	09/15/11 16:33 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	09/19/11 23:40 / sml
Arsenic	0.009	mg/L		0.001		E200.8	09/20/11 15:01 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 19:22 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 20:26 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 19:22 / sml
Chromium	ND	mg/L		0.05		E200.8	09/21/11 19:22 / sml
Copper	0.01	mg/L		0.01		E200.8	09/21/11 19:22 / sml
Iron	ND	mg/L		0.03		E200.7	09/21/11 20:26 / cp
Lead	ND	mg/L		0.001		E200.8	09/16/11 20:22 / sml
Manganese	ND	mg/L		0.01		E200.8	09/21/11 19:22 / sml
Mercury	ND	mg/L		0.001		E200.8	09/21/11 19:22 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:26 / cp
Nickel	ND	mg/L		0.05		E200.8	09/21/11 19:22 / sml
Selenium	0.003	mg/L		0.001		E200.8	09/20/11 15:01 / sml
Uranium	0.352	mg/L		0.0003		E200.8	09/16/11 20:22 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 20:22 / sml
Zinc	ND	mg/L		0.01		E200.7	09/21/11 20:26 / cp
METALS - TOTAL							
Iron	0.64	mg/L	B	0.03		E200.8	09/22/11 17:10 / sml
Manganese	ND	mg/L		0.01		E200.8	09/22/11 17:10 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-002
Client Sample ID: MW-15

Report Date: 12/28/11
Collection Date: 09/12/11 11:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.44	%				Calculation	09/22/11 11:08 / kbh
Anions	42.9	meq/L				Calculation	09/22/11 11:08 / kbh
Cations	40.9	meq/L				Calculation	09/22/11 11:08 / kbh
Solids, Total Dissolved Calculated	2810	mg/L				Calculation	09/22/11 11:08 / kbh
TDS Balance (0.80 - 1.20)	0.980					Calculation	09/22/11 11:08 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-003
Client Sample ID: Willow Spring North

Report Date: 12/28/11
Collection Date: 09/12/11 11:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:26 / jba
Bicarbonate as HCO3	352	mg/L		5		A2320 B	09/16/11 13:26 / jba
Calcium	400	mg/L		1		E200.7	09/21/11 20:30 / cp
Chloride	89	mg/L	D	2		E300.0	09/18/11 00:39 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	09/15/11 17:41 / jba
Magnesium	95	mg/L		1		E200.7	09/21/11 20:30 / cp
Nitrogen, Ammonia as N	2.34	mg/L		0.05		A4500-NH3 G	09/28/11 13:00 / dc
Nitrogen, Nitrate+Nitrite as N	7.6	mg/L	D	0.5		E353.2	09/20/11 17:16 / dc
Potassium	36	mg/L		1		E200.7	09/21/11 20:30 / cp
Silica	38.4	mg/L		0.2		E200.7	09/21/11 20:30 / cp
Sodium	199	mg/L		1		E200.7	09/21/11 20:30 / cp
Sulfate	1450	mg/L	D	8		E300.0	09/17/11 04:56 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2880	umhos/cm		1		A2510 B	09/15/11 11:43 / lmc
pH	7.90	s.u.		0.01		A4500-H B	09/15/11 11:43 / lmc
Solids, Total Dissolved TDS @ 180 C	2490	mg/L		10		A2540 C	09/15/11 16:33 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	09/19/11 23:44 / sml
Arsenic	0.012	mg/L		0.001		E200.8	09/20/11 15:32 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 20:30 / cp
Boron	0.2	mg/L		0.1		E200.7	09/21/11 20:30 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 20:30 / cp
Chromium	ND	mg/L		0.05		E200.7	09/21/11 20:30 / cp
Copper	ND	mg/L	D	0.03		E200.7	09/21/11 20:30 / cp
Iron	ND	mg/L		0.03		E200.7	09/21/11 20:30 / cp
Lead	ND	mg/L		0.001		E200.8	09/20/11 15:32 / sml
Manganese	0.38	mg/L		0.01		E200.7	09/21/11 20:30 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 15:32 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:30 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 20:30 / cp
Selenium	0.003	mg/L		0.001		E200.8	09/20/11 15:32 / sml
Uranium	0.334	mg/L		0.0003		E200.8	09/16/11 20:27 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 20:27 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 15:32 / sml
METALS - TOTAL							
Iron	0.22	mg/L	B	0.03		E200.8	09/22/11 17:26 / sml
Manganese	0.41	mg/L		0.01		E200.7	09/26/11 20:37 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-003
Client Sample ID: Willow Spring North

Report Date: 12/28/11
Collection Date: 09/12/11 11:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.31	%				Calculation	09/22/11 11:10 / kbh
Anions	39.1	meq/L				Calculation	09/22/11 11:10 / kbh
Cations	37.3	meq/L				Calculation	09/22/11 11:10 / kbh
Solids, Total Dissolved Calculated	2530	mg/L				Calculation	09/22/11 11:10 / kbh
TDS Balance (0.80 - 1.20)	0.980					Calculation	09/22/11 11:10 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-004
Client Sample ID: Willow Spring

Report Date: 12/28/11
Collection Date: 09/12/11 12:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:35 / jba
Bicarbonate as HCO3	414	mg/L		5		A2320 B	09/16/11 13:35 / jba
Calcium	356	mg/L		1		E200.7	09/21/11 20:34 / cp
Chloride	80	mg/L	D	2		E300.0	09/18/11 01:25 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	09/15/11 17:48 / jba
Magnesium	96	mg/L		1		E200.7	09/21/11 20:34 / cp
Nitrogen, Ammonia as N	9.7	mg/L	D	0.1		A4500-NH3 G	09/28/11 13:02 / dc
Nitrogen, Nitrate+Nitrite as N	1.2	mg/L		0.1		E353.2	09/20/11 17:18 / dc
Potassium	38	mg/L		1		E200.7	09/21/11 20:34 / cp
Silica	39.0	mg/L		0.2		E200.7	09/21/11 20:34 / cp
Sodium	180	mg/L		1		E200.7	09/21/11 20:34 / cp
Sulfate	1380	mg/L	D	8		E300.0	09/17/11 05:11 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2800	umhos/cm		1		A2510 B	09/15/11 11:46 / lmc
pH	8.11	s.u.		0.01		A4500-H B	09/15/11 11:46 / lmc
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		10		A2540 C	09/15/11 16:33 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 20:34 / cp
Arsenic	0.008	mg/L		0.001		E200.8	09/21/11 19:25 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 19:25 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 20:34 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 19:25 / sml
Chromium	ND	mg/L		0.05		E200.8	09/21/11 19:25 / sml
Copper	ND	mg/L		0.01		E200.8	09/21/11 19:25 / sml
Iron	ND	mg/L		0.03		E200.7	09/21/11 20:34 / cp
Lead	ND	mg/L		0.001		E200.8	09/21/11 19:25 / sml
Manganese	1.13	mg/L		0.01		E200.7	09/21/11 20:34 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 00:09 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:34 / cp
Nickel	ND	mg/L		0.05		E200.8	09/21/11 19:25 / sml
Selenium	0.002	mg/L		0.001		E200.8	09/21/11 19:25 / sml
Uranium	0.260	mg/L		0.0003		E200.8	09/16/11 20:32 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 20:32 / sml
Zinc	ND	mg/L		0.01		E200.7	09/21/11 20:34 / cp
METALS - TOTAL							
Iron	0.08	mg/L	B	0.03		E200.8	09/22/11 17:30 / sml
Manganese	1.15	mg/L		0.01		E200.7	09/26/11 20:41 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-004
Client Sample ID: Willow Spring

Report Date: 12/28/11
Collection Date: 09/12/11 12:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.68	%				Calculation	09/22/11 11:11 / kbh
Anions	37.9	meq/L				Calculation	09/22/11 11:11 / kbh
Cations	34.5	meq/L				Calculation	09/22/11 11:11 / kbh
Solids, Total Dissolved Calculated	2390	mg/L				Calculation	09/22/11 11:11 / kbh
TDS Balance (0.80 - 1.20)	0.960					Calculation	09/22/11 11:11 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-005
Client Sample ID: MW-7

Report Date: 12/28/11
Collection Date: 09/12/11 13:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:43 / jba
Bicarbonate as HCO3	404	mg/L		5		A2320 B	09/16/11 13:43 / jba
Calcium	474	mg/L		1		E200.7	09/21/11 20:38 / cp
Chloride	46	mg/L	D	4		E300.0	09/18/11 02:11 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	09/15/11 17:55 / jba
Magnesium	142	mg/L		1		E200.7	09/21/11 20:38 / cp
Nitrogen, Ammonia as N	48	mg/L	D	1		A4500-NH3 G	09/28/11 16:48 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/20/11 17:21 / dc
Potassium	46	mg/L		1		E200.7	09/21/11 20:38 / cp
Silica	20.3	mg/L		0.2		E200.7	09/21/11 20:38 / cp
Sodium	154	mg/L		1		E200.7	09/21/11 20:38 / cp
Sulfate	1930	mg/L	D	20		E300.0	09/18/11 02:11 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3500	umhos/cm		1		A2510 B	09/15/11 11:47 / lmc
pH	6.91	s.u.		0.01		A4500-H B	09/15/11 11:47 / lmc
Solids, Total Dissolved TDS @ 180 C	2960	mg/L		10		A2540 C	09/15/11 16:33 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 20:38 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/21/11 19:28 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 20:38 / cp
Boron	0.2	mg/L		0.1		E200.7	09/21/11 20:38 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 20:38 / cp
Chromium	ND	mg/L		0.05		E200.7	09/21/11 20:38 / cp
Copper	0.01	mg/L		0.01		E200.8	09/21/11 19:28 / sml
Iron	0.82	mg/L		0.03		E200.7	09/21/11 20:38 / cp
Lead	ND	mg/L		0.001		E200.8	09/21/11 19:28 / sml
Manganese	5.54	mg/L		0.01		E200.7	09/21/11 20:38 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 00:14 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:38 / cp
Nickel	0.05	mg/L		0.05		E200.7	09/21/11 20:38 / cp
Selenium	0.001	mg/L		0.001		E200.8	09/21/11 19:28 / sml
Uranium	0.747	mg/L		0.0003		E200.8	09/16/11 20:56 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 20:56 / sml
Zinc	ND	mg/L		0.01		E200.7	09/21/11 20:38 / cp
METALS - TOTAL							
Iron	1.52	mg/L		0.03		E200.8	09/22/11 17:33 / sml
Manganese	5.98	mg/L		0.01		E200.7	11/16/11 16:00 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-005
Client Sample ID: MW-7

Report Date: 12/28/11
Collection Date: 09/12/11 13:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-5.44	%				Calculation	09/22/11 11:15 / kbh
Anions	48.1	meq/L				Calculation	09/22/11 11:15 / kbh
Cations	43.1	meq/L				Calculation	09/22/11 11:15 / kbh
Solids, Total Dissolved Calculated	3010	mg/L				Calculation	09/22/11 11:15 / kbh
TDS Balance (0.80 - 1.20)	0.980					Calculation	09/22/11 11:15 / kbh

- The Anion / Cation balance was confirmed by re-analysis.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-006
Client Sample ID: MW-17

Report Date: 12/28/11
Collection Date: 09/12/11 14:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 13:51 / jba
Bicarbonate as HCO3	266	mg/L		5		A2320 B	09/16/11 13:51 / jba
Calcium	109	mg/L		1		E200.7	09/21/11 20:42 / cp
Chloride	11	mg/L		1		E300.0	09/18/11 02:27 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 18:02 / jba
Magnesium	26	mg/L		1		E200.7	09/21/11 20:42 / cp
Nitrogen, Ammonia as N	0.5	mg/L	D	0.2		A4500-NH3 G	10/02/11 10:50 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/20/11 17:23 / dc
Potassium	16	mg/L		1		E200.7	09/21/11 20:42 / cp
Silica	17.1	mg/L		0.2		E200.7	09/21/11 20:42 / cp
Sodium	182	mg/L		1		E200.7	09/21/11 20:42 / cp
Sulfate	574	mg/L	D	4		E300.0	09/17/11 05:42 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1440	umhos/cm		1		A2510 B	09/15/11 11:52 / lmc
pH	7.69	s.u.		0.01		A4500-H B	09/15/11 11:52 / lmc
Solids, Total Dissolved TDS @ 180 C	1060	mg/L		10		A2540 C	09/15/11 16:34 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 20:42 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/21/11 19:51 / sml
Barium	ND	mg/L		0.1		E200.8	09/20/11 15:56 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 20:42 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/20/11 15:56 / sml
Chromium	ND	mg/L		0.05		E200.8	09/21/11 19:51 / sml
Copper	ND	mg/L		0.01		E200.8	09/21/11 19:51 / sml
Iron	ND	mg/L		0.03		E200.7	09/21/11 20:42 / cp
Lead	ND	mg/L		0.001		E200.8	09/21/11 19:51 / sml
Manganese	0.15	mg/L		0.01		E200.7	09/21/11 20:42 / cp
Mercury	ND	mg/L		0.001		E200.8	09/21/11 19:51 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 20:42 / cp
Nickel	ND	mg/L		0.05		E200.8	09/21/11 19:51 / sml
Selenium	ND	mg/L		0.001		E200.8	09/21/11 19:51 / sml
Uranium	0.0006	mg/L		0.0003		E200.8	09/16/11 21:01 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 21:01 / sml
Zinc	ND	mg/L		0.01		E200.7	09/21/11 20:42 / cp
METALS - TOTAL							
Iron	0.71	mg/L	B	0.03		E200.8	09/22/11 17:36 / sml
Manganese	0.15	mg/L		0.01		E200.7	09/26/11 21:02 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-006
Client Sample ID: MW-17

Report Date: 12/28/11
Collection Date: 09/12/11 14:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.25	%				Calculation	09/22/11 11:17 / kbh
Anions	16.6	meq/L				Calculation	09/22/11 11:17 / kbh
Cations	15.9	meq/L				Calculation	09/22/11 11:17 / kbh
Solids, Total Dissolved Calculated	1070	mg/L				Calculation	09/22/11 11:17 / kbh
TDS Balance (0.80 - 1.20)	0.990					Calculation	09/22/11 11:17 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-007
Client Sample ID: MW-6

Report Date: 12/28/11
Collection Date: 09/12/11 15:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:00 / jba
Bicarbonate as HCO3	663	mg/L		5		A2320 B	09/16/11 14:00 / jba
Calcium	508	mg/L		1		E200.7	09/21/11 21:43 / cp
Chloride	139	mg/L	D	2		E300.0	09/18/11 02:42 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	09/15/11 18:09 / jba
Magnesium	88	mg/L		1		E200.7	09/21/11 21:43 / cp
Nitrogen, Ammonia as N	ND	mg/L	D	0.2		A4500-NH3 G	10/02/11 10:56 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:15 / dc
Potassium	27	mg/L		1		E200.7	09/21/11 21:43 / cp
Silica	22.6	mg/L		0.2		E200.7	09/21/11 21:43 / cp
Sodium	264	mg/L		1		E200.7	09/21/11 21:43 / cp
Sulfate	1580	mg/L	D	8		E300.0	09/17/11 05:58 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3400	umhos/cm		1		A2510 B	09/15/11 11:55 / lmc
pH	7.11	s.u.		0.01		A4500-H B	09/15/11 11:55 / lmc
Solids, Total Dissolved TDS @ 180 C	2960	mg/L		10		A2540 C	09/15/11 16:35 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 21:43 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/20/11 15:59 / sml
Barium	ND	mg/L		0.1		E200.8	09/20/11 15:59 / sml
Boron	0.4	mg/L		0.1		E200.7	09/21/11 21:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/20/11 15:59 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 21:43 / cp
Copper	ND	mg/L	D	0.03		E200.7	09/21/11 21:43 / cp
Iron	0.18	mg/L		0.03		E200.7	09/21/11 21:43 / cp
Lead	ND	mg/L		0.001		E200.8	09/20/11 15:59 / sml
Manganese	0.65	mg/L		0.01		E200.7	09/21/11 21:43 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 15:59 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 21:43 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 21:43 / cp
Selenium	0.001	mg/L		0.001		E200.8	09/20/11 15:59 / sml
Uranium	0.0658	mg/L		0.0003		E200.8	09/16/11 21:06 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 21:06 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 15:59 / sml
METALS - TOTAL							
Iron	0.95	mg/L		0.03		E200.8	09/22/11 16:27 / sml
Manganese	0.66	mg/L		0.01		E200.7	11/16/11 16:19 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-007
Client Sample ID: MW-6

Report Date: 12/28/11
Collection Date: 09/12/11 15:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.18	%				Calculation	09/22/11 11:18 / kbh
Anions	47.7	meq/L				Calculation	09/22/11 11:18 / kbh
Cations	44.8	meq/L				Calculation	09/22/11 11:18 / kbh
Solids, Total Dissolved Calculated	2960	mg/L				Calculation	09/22/11 11:18 / kbh
TDS Balance (0.80 - 1.20)	1.00					Calculation	09/22/11 11:18 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-008
Client Sample ID: MW-14A

Report Date: 12/28/11
Collection Date: 09/13/11 11:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:08 / jba
Bicarbonate as HCO3	305	mg/L		5		A2320 B	09/16/11 14:08 / jba
Calcium	216	mg/L		1		E200.8	09/16/11 22:29 / sml
Chloride	25	mg/L		1		E300.0	09/17/11 06:44 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 18:16 / jba
Magnesium	42	mg/L		1		E200.8	09/16/11 22:29 / sml
Nitrogen, Ammonia as N	ND	mg/L	D	0.2		A4500-NH3 G	10/02/11 10:58 / dc
Nitrogen, Nitrate+Nitrite as N	0.2	mg/L		0.1		E353.2	09/21/11 14:22 / dc
Potassium	20	mg/L		1		E200.8	09/16/11 22:29 / sml
Silica	26.7	mg/L		0.2		E200.7	09/21/11 21:55 / cp
Sodium	103	mg/L		1		E200.8	09/16/11 22:29 / sml
Sulfate	740	mg/L	D	4		E300.0	09/17/11 06:44 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1690	umhos/cm		1		A2510 B	09/15/11 12:00 / lmc
pH	7.48	s.u.		0.01		A4500-H B	09/15/11 12:00 / lmc
Solids, Total Dissolved TDS @ 180 C	1350	mg/L		10		A2540 C	09/15/11 16:36 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 21:55 / cp
Arsenic	0.003	mg/L		0.001		E200.8	09/20/11 16:02 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 19:54 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 21:55 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 19:54 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 21:55 / cp
Copper	ND	mg/L		0.01		E200.8	09/21/11 19:54 / sml
Iron	ND	mg/L		0.03		E200.8	09/16/11 22:29 / sml
Lead	ND	mg/L		0.001		E200.8	09/21/11 19:54 / sml
Manganese	0.17	mg/L		0.01		E200.7	09/21/11 21:55 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 00:43 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 21:55 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 21:55 / cp
Selenium	0.009	mg/L		0.001		E200.8	09/20/11 16:02 / sml
Uranium	0.179	mg/L		0.0003		E200.8	09/16/11 22:29 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:29 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 16:02 / sml
METALS - TOTAL							
Iron	0.59	mg/L	B	0.03		E200.8	09/22/11 16:30 / sml
Manganese	0.18	mg/L		0.01		E200.8	09/22/11 16:30 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-008
Client Sample ID: MW-14A

Report Date: 12/28/11
Collection Date: 09/13/11 11:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.69	%				Calculation	09/22/11 11:18 / kbh
Anions	21.1	meq/L				Calculation	09/22/11 11:18 / kbh
Cations	19.2	meq/L				Calculation	09/22/11 11:18 / kbh
Solids, Total Dissolved Calculated	1330	mg/L				Calculation	09/22/11 11:18 / kbh
TDS Balance (0.80 - 1.20)	1.02					Calculation	09/22/11 11:18 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-009
Client Sample ID: MW-9

Report Date: 12/28/11
Collection Date: 09/13/11 12:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:16 / jba
Bicarbonate as HCO3	250	mg/L		5		A2320 B	09/16/11 14:16 / jba
Calcium	220	mg/L		1		E200.7	09/21/11 22:03 / cp
Chloride	18	mg/L		1		E300.0	09/17/11 07:30 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 18:23 / jba
Magnesium	58	mg/L		1		E200.7	09/21/11 22:03 / cp
Nitrogen, Ammonia as N	0.3	mg/L	D	0.2		A4500-NH3 G	10/02/11 11:00 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:25 / dc
Potassium	19	mg/L		1		E200.7	09/21/11 22:03 / cp
Silica	15.9	mg/L		0.2		E200.7	09/21/11 22:03 / cp
Sodium	85	mg/L		1		E200.7	09/21/11 22:03 / cp
Sulfate	773	mg/L	D	4		E300.0	09/17/11 07:30 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1620	umhos/cm		1		A2510 B	09/15/11 12:14 / lmc
pH	7.93	s.u.		0.01		A4500-H B	09/15/11 12:14 / lmc
Solids, Total Dissolved TDS @ 180 C	1280	mg/L		10		A2540 C	09/15/11 16:36 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:03 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/21/11 19:57 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 19:57 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 22:03 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 19:57 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:03 / cp
Copper	ND	mg/L		0.01		E200.8	09/21/11 19:57 / sml
Iron	ND	mg/L		0.03		E200.8	09/16/11 22:34 / sml
Lead	ND	mg/L		0.001		E200.8	09/21/11 19:57 / sml
Manganese	0.10	mg/L		0.01		E200.7	09/21/11 22:03 / cp
Mercury	ND	mg/L		0.001		E200.8	09/21/11 19:57 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:03 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 22:03 / cp
Selenium	ND	mg/L		0.001		E200.8	09/21/11 19:57 / sml
Uranium	0.0045	mg/L		0.0003		E200.8	09/16/11 22:34 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:34 / sml
Zinc	ND	mg/L		0.01		E200.8	09/21/11 19:57 / sml
METALS - TOTAL							
Iron	0.55	mg/L	B	0.03		E200.8	09/22/11 16:46 / sml
Manganese	0.10	mg/L		0.01		E200.8	09/22/11 16:46 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-009
Client Sample ID: MW-9

Report Date: 12/28/11
Collection Date: 09/13/11 12:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.85	%				Calculation	09/22/11 11:29 / kbh
Anions	20.7	meq/L				Calculation	09/22/11 11:29 / kbh
Cations	20.0	meq/L				Calculation	09/22/11 11:29 / kbh
Solids, Total Dissolved Calculated	1320	mg/L				Calculation	09/22/11 11:29 / kbh
TDS Balance (0.80 - 1.20)	0.970					Calculation	09/22/11 11:29 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-010
Client Sample ID: MW-11

Report Date: 12/28/11
Collection Date: 09/13/11 13:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:24 / jba
Bicarbonate as HCO3	276	mg/L		5		A2320 B	09/16/11 14:24 / jba
Calcium	446	mg/L		1		E200.7	09/21/11 22:07 / cp
Chloride	139	mg/L		1		E300.0	09/17/11 07:46 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	09/15/11 18:30 / jba
Magnesium	69	mg/L		1		E200.7	09/21/11 22:07 / cp
Nitrogen, Ammonia as N	ND	mg/L	D	0.2		A4500-NH3 G	10/02/11 11:02 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:27 / dc
Potassium	18	mg/L		1		E200.7	09/21/11 22:07 / cp
Silica	24.4	mg/L		0.2		E200.7	09/21/11 22:07 / cp
Sodium	82	mg/L		1		E200.7	09/21/11 22:07 / cp
Sulfate	1160	mg/L	D	8		E300.0	09/20/11 22:27 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2470	umhos/cm		1		A2510 B	09/15/11 12:16 / lmc
pH	7.33	s.u.		0.01		A4500-H B	09/15/11 12:16 / lmc
Solids, Total Dissolved TDS @ 180 C	2150	mg/L		10		A2540 C	09/15/11 16:36 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:07 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/20/11 16:19 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 20:00 / sml
Boron	ND	mg/L		0.1		E200.7	09/21/11 22:07 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 20:00 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:07 / cp
Copper	ND	mg/L		0.01		E200.8	09/21/11 20:00 / sml
Iron	ND	mg/L		0.03		E200.8	09/16/11 22:38 / sml
Lead	ND	mg/L		0.001		E200.8	09/21/11 20:00 / sml
Manganese	0.49	mg/L		0.01		E200.7	09/21/11 22:07 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 01:12 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:07 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 22:07 / cp
Selenium	0.002	mg/L		0.001		E200.8	09/20/11 16:19 / sml
Uranium	0.0221	mg/L		0.0003		E200.8	09/16/11 22:38 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:38 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 16:19 / sml
METALS - TOTAL							
Iron	2.67	mg/L		0.03		E200.8	09/22/11 16:49 / sml
Manganese	0.47	mg/L		0.01		E200.7	11/16/11 16:35 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-010
Client Sample ID: MW-11

Report Date: 12/28/11
Collection Date: 09/13/11 13:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-0.837	%				Calculation	09/23/11 08:17 / kbh
Anions	32.5	meq/L				Calculation	09/23/11 08:17 / kbh
Cations	32.0	meq/L				Calculation	09/23/11 08:17 / kbh
Solids, Total Dissolved Calculated	2080	mg/L				Calculation	09/23/11 08:17 / kbh
TDS Balance (0.80 - 1.20)	1.03					Calculation	09/23/11 08:17 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-011
Client Sample ID: MW-13

Report Date: 12/28/11
Collection Date: 09/13/11 14:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:32 / jba
Bicarbonate as HCO3	314	mg/L		5		A2320 B	09/16/11 14:32 / jba
Calcium	479	mg/L		1		E200.7	09/21/11 22:11 / cp
Chloride	124	mg/L	D	2		E300.0	09/17/11 08:01 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	09/15/11 18:56 / jba
Magnesium	76	mg/L		1		E200.7	09/21/11 22:11 / cp
Nitrogen, Ammonia as N	ND	mg/L	D	0.2		A4500-NH3 G	10/02/11 11:04 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:30 / dc
Potassium	19	mg/L		1		E200.7	09/21/11 22:11 / cp
Silica	27.9	mg/L		0.2		E200.7	09/21/11 22:11 / cp
Sodium	86	mg/L		1		E200.7	09/21/11 22:11 / cp
Sulfate	1310	mg/L	D	8		E300.0	09/17/11 08:01 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2590	umhos/cm		1		A2510 B	09/15/11 12:20 / lmc
pH	7.20	s.u.		0.01		A4500-H B	09/15/11 12:20 / lmc
Solids, Total Dissolved TDS @ 180 C	2290	mg/L		10		A2540 C	09/15/11 16:37 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:11 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/20/11 16:22 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 22:11 / cp
Boron	ND	mg/L		0.1		E200.7	09/21/11 22:11 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 22:11 / cp
Chromium	ND	mg/L		0.05		E200.8	09/20/11 16:22 / sml
Copper	ND	mg/L		0.01		E200.7	09/21/11 22:11 / cp
Iron	0.25	mg/L		0.03		E200.8	09/16/11 22:43 / sml
Lead	ND	mg/L		0.001		E200.8	09/20/11 16:22 / sml
Manganese	0.58	mg/L		0.01		E200.8	09/20/11 16:22 / sml
Mercury	ND	mg/L		0.001		E200.8	09/20/11 01:17 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:11 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 22:11 / cp
Selenium	0.002	mg/L		0.001		E200.8	09/20/11 16:22 / sml
Uranium	0.0005	mg/L		0.0003		E200.8	09/16/11 22:43 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:43 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 16:22 / sml
METALS - TOTAL							
Iron	0.89	mg/L		0.03		E200.7	09/26/11 21:14 / cp
Manganese	0.62	mg/L		0.01		E200.8	09/22/11 16:52 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-011
Client Sample ID: MW-13

Report Date: 12/28/11
Collection Date: 09/13/11 14:30
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.14	%				Calculation	09/22/11 11:31 / kbh
Anions	35.9	meq/L				Calculation	09/22/11 11:31 / kbh
Cations	34.4	meq/L				Calculation	09/22/11 11:31 / kbh
Solids, Total Dissolved Calculated	2280	mg/L				Calculation	09/22/11 11:31 / kbh
TDS Balance (0.80 - 1.20)	1.00					Calculation	09/22/11 11:31 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-012
Client Sample ID: MW-10

Report Date: 12/28/11
Collection Date: 09/14/11 10:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 14:49 / jba
Bicarbonate as HCO3	775	mg/L		5		A2320 B	09/16/11 14:49 / jba
Calcium	570	mg/L		1		E200.7	09/21/11 22:15 / cp
Chloride	277	mg/L	D	4		E300.0	09/23/11 12:45 / ljl
Fluoride	0.1	mg/L		0.1		A4500-F C	09/15/11 18:59 / jba
Magnesium	239	mg/L		1		E200.7	09/21/11 22:15 / cp
Nitrogen, Ammonia as N	70	mg/L	D	2		A4500-NH3 G	09/28/11 19:58 / dc
Nitrogen, Nitrate+Nitrite as N	14.6	mg/L	D	0.5		E353.2	09/21/11 14:32 / dc
Potassium	44	mg/L		1		E200.7	09/21/11 22:15 / cp
Silica	38.9	mg/L		0.2		E200.7	09/21/11 22:15 / cp
Sodium	340	mg/L		1		E200.7	09/21/11 22:15 / cp
Sulfate	2440	mg/L	D	20		E300.0	09/23/11 12:45 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	5200	umhos/cm		1		A2510 B	09/15/11 12:21 / lmc
pH	6.58	s.u.		0.01		A4500-H B	09/15/11 12:21 / lmc
Solids, Total Dissolved TDS @ 180 C	4240	mg/L	D	14		A2540 C	09/15/11 16:37 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:15 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/15/11 06:21 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 22:15 / cp
Boron	ND	mg/L		0.1		E200.7	09/21/11 22:15 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 22:15 / cp
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:15 / cp
Copper	ND	mg/L		0.01		E200.8	11/15/11 06:21 / sml
Iron	ND	mg/L		0.03		E200.8	09/16/11 22:48 / sml
Lead	ND	mg/L		0.001		E200.8	09/20/11 16:25 / sml
Manganese	8.95	mg/L		0.01		E200.7	11/10/11 15:31 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 01:22 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:15 / cp
Nickel	0.26	mg/L		0.05		E200.7	09/21/11 22:15 / cp
Selenium	0.019	mg/L		0.001		E200.8	11/08/11 18:53 / sml
Uranium	2.34	mg/L		0.0003		E200.8	09/16/11 22:48 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:48 / sml
Zinc	ND	mg/L		0.01		E200.7	11/10/11 15:31 / cp
METALS - TOTAL							
Iron	ND	mg/L	D	0.04		E200.7	11/16/11 16:52 / cp
Manganese	8.83	mg/L		0.01		E200.7	11/16/11 16:52 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-012
Client Sample ID: MW-10

Report Date: 12/28/11
Collection Date: 09/14/11 10:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.44	%				Calculation	10/03/11 07:19 / kbh
Anions	72.4	meq/L				Calculation	10/03/11 07:19 / kbh
Cations	69.0	meq/L				Calculation	10/03/11 07:19 / kbh
Solids, Total Dissolved Calculated	4410	mg/L				Calculation	10/03/11 07:19 / kbh
TDS Balance (0.80 - 1.20)	0.960					Calculation	10/03/11 07:19 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-013
Client Sample ID: MW-12

Report Date: 12/28/11
Collection Date: 09/14/11 10:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 15:21 / jba
Bicarbonate as HCO3	467	mg/L		5		A2320 B	09/16/11 15:21 / jba
Calcium	607	mg/L		1		E200.7	09/21/11 22:19 / cp
Chloride	207	mg/L	D	4		E300.0	09/17/11 08:32 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	09/15/11 19:06 / jba
Magnesium	80	mg/L		1		E200.8	09/16/11 22:53 / sml
Nitrogen, Ammonia as N	0.6	mg/L	D	0.2		A4500-NH3 G	10/02/11 11:06 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:35 / dc
Potassium	24	mg/L		1		E200.8	09/16/11 22:53 / sml
Silica	24.2	mg/L		0.2		E200.7	09/21/11 22:19 / cp
Sodium	194	mg/L		1		E200.8	09/16/11 22:53 / sml
Sulfate	1790	mg/L	D	20		E300.0	09/17/11 08:32 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3600	umhos/cm		1		A2510 B	09/15/11 12:28 / lmc
pH	7.18	s.u.		0.01		A4500-H B	09/15/11 12:28 / lmc
Solids, Total Dissolved TDS @ 180 C	3220	mg/L		10		A2540 C	09/15/11 16:37 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:19 / cp
Arsenic	0.006	mg/L		0.001		E200.8	09/20/11 16:28 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 22:19 / cp
Boron	ND	mg/L		0.1		E200.7	09/21/11 22:19 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 22:19 / cp
Chromium	ND	mg/L		0.05		E200.8	09/20/11 16:28 / sml
Copper	ND	mg/L	D	0.03		E200.7	09/21/11 22:19 / cp
Iron	0.47	mg/L		0.03		E200.8	09/16/11 22:53 / sml
Lead	ND	mg/L		0.001		E200.8	09/20/11 16:28 / sml
Manganese	1.04	mg/L		0.01		E200.7	09/21/11 22:19 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 01:27 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:19 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 22:19 / cp
Selenium	ND	mg/L	D	0.1		E200.7	09/21/11 22:19 / cp
Uranium	5.90	mg/L		0.0003		E200.8	09/16/11 22:53 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:53 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 16:28 / sml
METALS - TOTAL							
Iron	0.64	mg/L	D	0.04		E200.7	09/26/11 21:18 / cp
Manganese	1.14	mg/L		0.01		E200.8	09/22/11 16:55 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-013
Client Sample ID: MW-12

Report Date: 12/28/11
Collection Date: 09/14/11 10:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.94	%				Calculation	09/22/11 12:15 / kbh
Anions	50.7	meq/L				Calculation	09/22/11 12:15 / kbh
Cations	45.9	meq/L				Calculation	09/22/11 12:15 / kbh
Solids, Total Dissolved Calculated	3150	mg/L				Calculation	09/22/11 12:15 / kbh
TDS Balance (0.80 - 1.20)	1.02					Calculation	09/22/11 12:15 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-014
Client Sample ID: MW-3

Report Date: 12/28/11
Collection Date: 09/14/11 11:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 15:29 / jba
Bicarbonate as HCO3	300	mg/L		5		A2320 B	09/16/11 15:29 / jba
Calcium	232	mg/L		1		E200.7	09/21/11 22:35 / cp
Chloride	22	mg/L		1		E300.0	09/17/11 08:47 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 19:13 / jba
Magnesium	45	mg/L		1		E200.7	09/21/11 22:35 / cp
Nitrogen, Ammonia as N	ND	mg/L	D	0.2		A4500-NH3 G	10/02/11 11:08 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:37 / dc
Potassium	17	mg/L	D	7		E200.7	09/21/11 22:35 / cp
Silica	22.6	mg/L		0.2		E200.7	09/21/11 22:35 / cp
Sodium	108	mg/L		1		E200.7	09/21/11 22:35 / cp
Sulfate	780	mg/L	D	4		E300.0	09/17/11 08:47 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1700	umhos/cm		1		A2510 B	09/15/11 12:32 / lmc
pH	7.56	s.u.		0.01		A4500-H B	09/15/11 12:32 / lmc
Solids, Total Dissolved TDS @ 180 C	1360	mg/L		10		A2540 C	09/15/11 16:37 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:35 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/20/11 16:31 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 20:02 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 22:35 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 20:02 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:35 / cp
Copper	ND	mg/L		0.01		E200.8	09/21/11 20:02 / sml
Iron	ND	mg/L		0.03		E200.8	09/16/11 22:58 / sml
Lead	ND	mg/L		0.001		E200.8	09/21/11 20:02 / sml
Manganese	0.14	mg/L		0.01		E200.7	09/21/11 22:35 / cp
Mercury	ND	mg/L		0.001		E200.8	09/20/11 01:32 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:35 / cp
Nickel	ND	mg/L		0.05		E200.7	09/21/11 22:35 / cp
Selenium	ND	mg/L		0.001		E200.8	09/20/11 16:31 / sml
Uranium	0.0062	mg/L		0.0003		E200.8	09/16/11 22:58 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 22:58 / sml
Zinc	ND	mg/L		0.01		E200.8	09/20/11 16:31 / sml
METALS - TOTAL							
Iron	0.09	mg/L	B	0.03		E200.8	09/22/11 16:58 / sml
Manganese	0.14	mg/L		0.01		E200.8	09/22/11 16:58 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
B - The analyte was detected in the method blank.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-014
Client Sample ID: MW-3

Report Date: 12/28/11
Collection Date: 09/14/11 11:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.24	%				Calculation	09/22/11 12:17 / kbh
Anions	21.8	meq/L				Calculation	09/22/11 12:17 / kbh
Cations	20.4	meq/L				Calculation	09/22/11 12:17 / kbh
Solids, Total Dissolved Calculated	1380	mg/L				Calculation	09/22/11 12:17 / kbh
TDS Balance (0.80 - 1.20)	0.990					Calculation	09/22/11 12:17 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-015
Client Sample ID: MW-2

Report Date: 12/28/11
Collection Date: 09/14/11 12:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 15:48 / jba
Bicarbonate as HCO3	1490	mg/L		5		A2320 B	09/16/11 15:48 / jba
Calcium	568	mg/L		1		E200.8	09/16/11 23:02 / sml
Chloride	351	mg/L	D	10		E300.0	09/23/11 13:00 / ljl
Fluoride	0.9	mg/L		0.1		A4500-F C	09/15/11 19:16 / jba
Magnesium	450	mg/L		1		E200.8	09/16/11 23:02 / sml
Nitrogen, Ammonia as N	334	mg/L	D	10		A4500-NH3 G	09/28/11 17:16 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	09/21/11 14:40 / dc
Potassium	71	mg/L		1		E200.8	09/16/11 23:02 / sml
Silica	24.9	mg/L		0.2		E200.7	09/21/11 22:39 / cp
Sodium	422	mg/L		1		E200.8	09/16/11 23:02 / sml
Sulfate	3570	mg/L	D	40		E300.0	09/23/11 13:00 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	7890	umhos/cm		1		A2510 B	09/15/11 12:42 / lmc
pH	7.10	s.u.		0.01		A4500-H B	09/15/11 12:42 / lmc
Solids, Total Dissolved TDS @ 180 C	5690	mg/L	D	21		A2540 C	09/15/11 16:37 / lmc
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/21/11 22:39 / cp
Arsenic	0.002	mg/L		0.001		E200.8	09/21/11 20:05 / sml
Barium	ND	mg/L		0.1		E200.8	09/21/11 20:05 / sml
Boron	0.2	mg/L		0.1		E200.7	09/21/11 22:39 / cp
Cadmium	ND	mg/L		0.005		E200.8	09/21/11 20:05 / sml
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:39 / cp
Copper	0.06	mg/L	D	0.06		E200.7	09/21/11 22:39 / cp
Iron	6.10	mg/L		0.03		E200.8	09/16/11 23:02 / sml
Lead	ND	mg/L		0.001		E200.8	09/21/11 20:05 / sml
Manganese	18.7	mg/L		0.01		E200.7	09/21/11 22:39 / cp
Mercury	ND	mg/L		0.001		E200.8	09/21/11 20:05 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:39 / cp
Nickel	0.95	mg/L		0.05		E200.7	09/21/11 22:39 / cp
Selenium	0.003	mg/L		0.001		E200.8	09/21/11 20:05 / sml
Uranium	10.2	mg/L		0.0003		E200.8	09/16/11 23:02 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 23:02 / sml
Zinc	0.05	mg/L		0.01		E200.8	09/21/11 20:05 / sml
METALS - TOTAL							
Iron	8.72	mg/L	D	0.08		E200.7	11/16/11 16:43 / cp
Manganese	18.6	mg/L		0.01		E200.8	09/22/11 17:01 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-015
Client Sample ID: MW-2

Report Date: 12/28/11
Collection Date: 09/14/11 12:45
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.349	%				Calculation	10/03/11 07:19 / kbh
Anions	109	meq/L				Calculation	10/03/11 07:19 / kbh
Cations	109	meq/L				Calculation	10/03/11 07:19 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				Calculation	10/03/11 07:19 / kbh
TDS Balance (0.80 - 1.20)	0.920					Calculation	10/03/11 07:19 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-016
Client Sample ID: MW-4

Report Date: 12/28/11
Collection Date: 09/14/11 14:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 16:00 / jba
Bicarbonate as HCO3	1020	mg/L		5		A2320 B	09/16/11 16:00 / jba
Calcium	502	mg/L		1		E200.7	09/21/11 22:43 / cp
Chloride	280	mg/L	D	10		E300.0	09/23/11 13:16 / ljl
Fluoride	0.8	mg/L		0.1		A4500-F C	09/15/11 19:23 / jba
Magnesium	298	mg/L		1		E200.7	09/21/11 22:43 / cp
Nitrogen, Ammonia as N	332	mg/L	D	10		A4500-NH3 G	09/28/11 17:22 / dc
Nitrogen, Nitrate+Nitrite as N	0.2	mg/L		0.1		E353.2	09/21/11 14:42 / dc
Potassium	ND	mg/L	D	30		E200.7	09/21/11 22:43 / cp
Silica	23.6	mg/L		0.2		E200.7	09/21/11 22:43 / cp
Sodium	356	mg/L	D	2		E200.7	09/28/11 17:37 / cp
Sulfate	3340	mg/L	D	40		E300.0	09/23/11 13:16 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	7140	umhos/cm		1		A2510 B	09/15/11 12:44 / lmc
pH	6.38	s.u.		0.01		A4500-H B	09/15/11 12:44 / lmc
Solids, Total Dissolved TDS @ 180 C	4910	mg/L	D	20		A2540 C	09/15/11 16:38 / lmc
METALS - DISSOLVED							
Aluminum	0.1	mg/L		0.1		E200.7	09/26/11 15:46 / cp
Arsenic	0.009	mg/L		0.001		E200.8	11/15/11 06:26 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 22:43 / cp
Boron	ND	mg/L		0.1		E200.7	09/21/11 22:43 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/21/11 22:43 / cp
Chromium	ND	mg/L		0.05		E200.7	09/26/11 15:46 / cp
Copper	ND	mg/L		0.01		E200.8	11/15/11 06:26 / sml
Iron	27.6	mg/L		0.03		E200.8	09/16/11 23:07 / sml
Lead	ND	mg/L		0.001		E200.8	09/20/11 17:34 / sml
Manganese	13.1	mg/L		0.01		E200.7	09/27/11 18:36 / cp
Mercury	0.001	mg/L		0.001		E200.8	11/15/11 06:26 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/26/11 15:46 / cp
Nickel	0.80	mg/L		0.05		E200.7	09/26/11 15:46 / cp
Selenium	ND	mg/L		0.001		E200.8	11/08/11 18:56 / sml
Uranium	2.51	mg/L		0.0003		E200.8	09/16/11 23:07 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 23:07 / sml
Zinc	0.10	mg/L		0.01		E200.7	09/26/11 15:46 / cp
METALS - TOTAL							
Iron	32.1	mg/L		0.03		E200.8	09/22/11 17:04 / sml
Manganese	14.0	mg/L		0.01		E200.7	11/16/11 16:48 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-016
Client Sample ID: MW-4

Report Date: 12/28/11
Collection Date: 09/14/11 14:00
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.19	%				Calculation	10/03/11 12:12 / kbh
Anions	94.2	meq/L				Calculation	10/03/11 12:12 / kbh
Cations	90.2	meq/L				Calculation	10/03/11 12:12 / kbh
Solids, Total Dissolved Calculated	5350	mg/L				Calculation	10/03/11 12:12 / kbh
TDS Balance (0.80 - 1.20)	0.920					Calculation	10/03/11 12:12 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-017
Client Sample ID: R-4

Report Date: 12/28/11
Collection Date: 09/14/11 14:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	830	mg/L		5		A2310 B	09/19/11 10:22 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	09/16/11 16:04 / jba
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	09/16/11 16:04 / jba
Calcium	420	mg/L		1		E200.7	09/21/11 22:48 / cp
Chloride	252	mg/L	D	10		E300.0	09/23/11 13:31 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	09/15/11 19:30 / jba
Magnesium	305	mg/L		1		E200.7	09/21/11 22:48 / cp
Nitrogen, Ammonia as N	320	mg/L	D	10		A4500-NH3 G	09/28/11 17:24 / dc
Nitrogen, Nitrate+Nitrite as N	8.2	mg/L	D	0.5		E353.2	09/21/11 15:02 / dc
Potassium	ND	mg/L	D	30		E200.7	09/21/11 22:48 / cp
Silica	96.0	mg/L		0.2		E200.7	09/21/11 22:48 / cp
Sodium	350	mg/L	D	2		E200.7	09/21/11 22:48 / cp
Sulfate	4920	mg/L	D	40		E300.0	09/23/11 13:31 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	7230	umhos/cm		1		A2510 B	09/15/11 12:45 / lmc
pH	3.99	s.u.		0.01		A4500-H B	09/15/11 12:45 / lmc
Solids, Total Dissolved TDS @ 180 C	6160	mg/L	D	20		A2540 C	09/15/11 16:38 / lmc
METALS - DISSOLVED							
Aluminum	80.8	mg/L		0.1		E200.8	09/16/11 23:32 / sml
Arsenic	0.016	mg/L		0.001		E200.8	11/15/11 06:31 / sml
Barium	ND	mg/L		0.1		E200.7	09/21/11 22:48 / cp
Boron	0.1	mg/L		0.1		E200.8	09/16/11 23:32 / sml
Cadmium	0.076	mg/L		0.005		E200.7	09/21/11 22:48 / cp
Chromium	ND	mg/L		0.05		E200.7	09/21/11 22:48 / cp
Copper	0.19	mg/L	D	0.06		E200.7	09/21/11 22:48 / cp
Iron	57.8	mg/L		0.03		E200.8	09/16/11 23:32 / sml
Lead	0.165	mg/L		0.001		E200.8	09/20/11 17:37 / sml
Manganese	29.6	mg/L		0.01		E200.7	11/10/11 15:44 / cp
Mercury	ND	mg/L		0.001		E200.8	11/15/11 06:31 / sml
Molybdenum	ND	mg/L		0.1		E200.7	09/21/11 22:48 / cp
Nickel	1.96	mg/L		0.05		E200.7	09/21/11 22:48 / cp
Selenium	0.098	mg/L		0.001		E200.8	09/20/11 01:46 / sml
Uranium	1.86	mg/L		0.0003		E200.8	09/16/11 23:32 / sml
Vanadium	ND	mg/L		0.1		E200.8	09/16/11 23:32 / sml
Zinc	1.83	mg/L		0.01		E200.7	11/10/11 15:44 / cp
METALS - TOTAL							
Iron	64.5	mg/L	D	0.08		E200.7	09/26/11 21:22 / cp
Manganese	30.1	mg/L		0.01		E200.7	09/26/11 21:22 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Project: ANC
Lab ID: C11090541-017
Client Sample ID: R-4

Report Date: 12/28/11
Collection Date: 09/14/11 14:15
DateReceived: 09/14/11
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.43	%				Calculation	10/03/11 12:15 / kbh
Anions	110	meq/L				Calculation	10/03/11 12:15 / kbh
Cations	101	meq/L				Calculation	10/03/11 12:15 / kbh
Solids, Total Dissolved Calculated	6400	mg/L				Calculation	10/03/11 12:15 / kbh
TDS Balance (0.80 - 1.20)	0.960					Calculation	10/03/11 12:15 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Report Date: 12/28/11
Project: ANC
Work Order: C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2310 B									Batch: 110919_1_ACID-W	
Sample ID: MBLK-1_110919		Method Blank				Run: ACIDITY_110919A			09/19/11 10:14	
Acidity, Total as CaCO3		ND	mg/L	1						
Sample ID: LCS-1_110919		Laboratory Control Sample				Run: ACIDITY_110919A			09/19/11 10:18	
Acidity, Total as CaCO3		1150	mg/L	5.0	115	80	120			
Sample ID: C11090541-017ADUP		Sample Duplicate				Run: ACIDITY_110919A			09/19/11 10:25	
Acidity, Total as CaCO3		850	mg/L	5.0				2.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B									Batch: R150729	
Sample ID: MBLK	3	Method Blank				Run: MANTECH_110916A			09/16/11 07:56	
Alkalinity, Total as CaCO3		2	mg/L	2						
Carbonate as CO3		ND	mg/L	1						
Bicarbonate as HCO3		3	mg/L	1						
Sample ID: LCS		Laboratory Control Sample				Run: MANTECH_110916A			09/16/11 08:14	
Alkalinity, Total as CaCO3		195	mg/L	5.0	97	90	110			
Sample ID: C11090536-001AMS		Sample Matrix Spike				Run: MANTECH_110916A			09/16/11 12:11	
Alkalinity, Total as CaCO3		370	mg/L	5.0	104	80	120			
Sample ID: C11090541-011ADUP	3	Sample Duplicate				Run: MANTECH_110916A			09/16/11 14:41	
Alkalinity, Total as CaCO3		265	mg/L	5.0				2.9	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		324	mg/L	5.0				2.9	10	
Sample ID: C11090541-014ADUP	3	Sample Duplicate				Run: MANTECH_110916A			09/16/11 15:37	
Alkalinity, Total as CaCO3		248	mg/L	5.0				0.9	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		302	mg/L	5.0				0.9	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B									Analytical Run: ORION555A_110915B	
Sample ID: ICV2_110915_2		Initial Calibration Verification Standard							09/15/11 11:13	
Conductivity @ 25 C		1380	umhos/cm	1.0	98	90	110			
Method: A2510 B									Batch: 110915_2_PH-W_555A-1	
Sample ID: MBLK1_110915_2		Method Blank				Run: ORION555A_110915B			09/15/11 11:10	
Conductivity @ 25 C		0.5	umhos/cm	0.2						
Sample ID: C11090541-008ADUP		Sample Duplicate				Run: ORION555A_110915B			09/15/11 12:04	
Conductivity @ 25 C		1690	umhos/cm	1.0				0.1	10	
Sample ID: C11090541-017ADUP		Sample Duplicate				Run: ORION555A_110915B			09/15/11 12:47	
Conductivity @ 25 C		7260	umhos/cm	1.0				0.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: 110915_1_SLDS-TDS-W	
Sample ID: MBLK1_110915		Method Blank				Run: BAL-1_110915B			09/15/11 16:29	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS1_110915		Laboratory Control Sample				Run: BAL-1_110915B			09/15/11 16:29	
Solids, Total Dissolved TDS @ 180 C		994	mg/L	10	99	90	110			
Sample ID: C11090541-006AMS		Sample Matrix Spike				Run: BAL-1_110915B			09/15/11 16:34	
Solids, Total Dissolved TDS @ 180 C		3090	mg/L	10	102	90	110			
Sample ID: C11090541-007ADUP		Sample Duplicate				Run: BAL-1_110915B			09/15/11 16:36	
Solids, Total Dissolved TDS @ 180 C		2930	mg/L	10				1.0	10	
Sample ID: C11090541-016ADUP		Sample Duplicate				Run: BAL-1_110915B			09/15/11 16:38	
Solids, Total Dissolved TDS @ 180 C		4930	mg/L	19				0.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-F C										Batch: R150670
Sample ID: MBLK	Method Blank					Run: MANTECH_110915A			09/15/11 12:59	
Fluoride		0.01	mg/L	0.008						
Sample ID: LCS	Laboratory Control Sample					Run: MANTECH_110915A			09/15/11 13:04	
Fluoride		1.96	mg/L	0.10	98	90	110			
Sample ID: C11090541-001AMS	Sample Matrix Spike					Run: MANTECH_110915A			09/15/11 17:24	
Fluoride		2.16	mg/L	0.10	90	80	120			
Sample ID: C11090541-001AMSD	Sample Matrix Spike Duplicate					Run: MANTECH_110915A			09/15/11 17:31	
Fluoride		2.12	mg/L	0.10	88	80	120	1.9	10	
Sample ID: C11090541-017AMS	Sample Matrix Spike					Run: MANTECH_110915A			09/15/11 19:37	
Fluoride		0.600	mg/L	0.10	10	80	120			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C11090541-017AMSD	Sample Matrix Spike Duplicate					Run: MANTECH_110915A			09/15/11 19:44	
Fluoride		0.580	mg/L	0.10	9	80	120	3.4	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**								Analytical Run: ORION555A_110915B		
Sample ID: **ICV1_110915_2**	Initial Calibration Verification Standard								09/15/11 11:11	
pH		6.88	s.u.	0.010	100	98	102			
Method: **A4500-H B**								Batch: 110915_2_PH-W_555A-1		
Sample ID: **C11090541-008ADUP**	Sample Duplicate					Run: ORION555A_110915B			09/15/11 12:04	
pH		7.46	s.u.	0.010				0.3	3	
Sample ID: **C11090541-017ADUP**	Sample Duplicate					Run: ORION555A_110915B			09/15/11 12:47	
pH		3.98	s.u.	0.010				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R151226
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_110928A				09/28/11 12:36
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_110928A				09/28/11 12:38
Nitrogen, Ammonia as N		2.03	mg/L	0.050	101	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_110928A				09/28/11 12:40
Nitrogen, Ammonia as N		2.04	mg/L	0.050	104	80	120			
Sample ID: C11090528-001FMS		Sample Matrix Spike				Run: TECHNICON_110928A				09/28/11 12:44
Nitrogen, Ammonia as N		43.5	mg/L	0.50	95	80	120			
Sample ID: C11090528-001FMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_110928A				09/28/11 12:46
Nitrogen, Ammonia as N		41.4	mg/L	0.50	84	80	120	4.9	10	
Method: A4500-NH3 G										Batch: R151251
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_110928B				09/28/11 16:42
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_110928B				09/28/11 16:44
Nitrogen, Ammonia as N		2.11	mg/L	0.050	105	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_110928B				09/28/11 16:46
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	80	120			
Sample ID: C11090541-005DMS		Sample Matrix Spike				Run: TECHNICON_110928B				09/28/11 16:50
Nitrogen, Ammonia as N		100	mg/L	1.2	108	80	120			
Sample ID: C11090541-005DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_110928B				09/28/11 16:52
Nitrogen, Ammonia as N		99.1	mg/L	1.2	106	80	120	0.9	10	
Sample ID: C11090541-015DMS		Sample Matrix Spike				Run: TECHNICON_110928B				09/28/11 17:18
Nitrogen, Ammonia as N		816	mg/L	12	100	80	120			
Sample ID: C11090541-015DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_110928B				09/28/11 17:20
Nitrogen, Ammonia as N		816	mg/L	12	100	80	120	0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R151252
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_110928C				09/28/11 19:06
Nitrogen, Ammonia as N		0.05	mg/L	0.02						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_110928C				09/28/11 19:08
Nitrogen, Ammonia as N		2.11	mg/L	0.050	103	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_110928C				09/28/11 19:10
Nitrogen, Ammonia as N		1.87	mg/L	0.050	93	80	120			
Sample ID: C11090626-007CMS	Sample Matrix Spike					Run: TECHNICON_110928C				09/28/11 19:42
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	80	120			
Sample ID: C11090626-007CMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_110928C				09/28/11 19:44
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	80	120	1.0	10	
Method: A4500-NH3 G										Batch: R151373
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_111002A				10/02/11 10:44
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_111002A				10/02/11 10:46
Nitrogen, Ammonia as N		2.03	mg/L	0.050	101	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_111002A				10/02/11 10:48
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	80	120			
Sample ID: C11090541-006DMS	Sample Matrix Spike					Run: TECHNICON_111002A				10/02/11 10:52
Nitrogen, Ammonia as N		10.5	mg/L	0.25	102	80	120			
Sample ID: C11090541-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_111002A				10/02/11 10:54
Nitrogen, Ammonia as N		10.4	mg/L	0.25	101	80	120	1.0	10	
Sample ID: C11090693-011AMS	Sample Matrix Spike					Run: TECHNICON_111002A				10/02/11 11:16
Nitrogen, Ammonia as N		18.7	mg/L	0.25	102	80	120			
Sample ID: C11090693-011AMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_111002A				10/02/11 11:18
Nitrogen, Ammonia as N		18.7	mg/L	0.25	102	80	120	0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_110921A	
Sample ID: ICV	17	Initial Calibration Verification Standard							09/21/11 09:34	
Aluminum		2.52	mg/L	0.10	101	95	105			
Barium		2.50	mg/L	0.10	100	95	105			
Boron		2.48	mg/L	0.10	99	95	105			
Cadmium		2.50	mg/L	0.010	100	95	105			
Calcium		24.9	mg/L	0.50	100	95	105			
Chromium		2.51	mg/L	0.050	101	95	105			
Copper		2.50	mg/L	0.010	100	95	105			
Iron		2.41	mg/L	0.030	97	95	105			
Magnesium		24.6	mg/L	0.50	98	95	105			
Manganese		2.41	mg/L	0.010	96	95	105			
Molybdenum		2.51	mg/L	0.10	100	95	105			
Nickel		2.54	mg/L	0.050	102	95	105			
Potassium		23.9	mg/L	0.50	95	95	105			
Selenium		2.52	mg/L	0.10	101	95	105			
Silicon		4.80	mg/L	0.10	96	95	105			
Sodium		24.8	mg/L	0.50	99	95	105			
Zinc		2.52	mg/L	0.010	101	95	105			
Sample ID: ICSA	17	Interference Check Sample A							09/21/11 11:07	
Aluminum		483	mg/L	0.10	97	80	120			
Barium		0.00290	mg/L	0.10						
Boron		-0.0202	mg/L	0.10						
Cadmium		0.0294	mg/L	0.010						
Calcium		494	mg/L	0.50	99	80	120			
Chromium		0.00200	mg/L	0.050						
Copper		0.000700	mg/L	0.010						
Iron		186	mg/L	0.030	93	80	120			
Magnesium		547	mg/L	0.50	109	80	120			
Manganese		-0.000900	mg/L	0.010						
Molybdenum		-0.0166	mg/L	0.10						
Nickel		-0.00190	mg/L	0.050						
Potassium		0.00780	mg/L	0.50						
Selenium		-0.0320	mg/L	0.10						
Silicon		0.00300	mg/L	0.10						
Sodium		0.550	mg/L	0.50						
Zinc		-0.0113	mg/L	0.010						
Sample ID: ICSAB	17	Interference Check Sample AB							09/21/11 11:11	
Aluminum		488	mg/L	0.10	98	80	120			
Barium		0.531	mg/L	0.10	106	80	120			
Boron		-0.0259	mg/L	0.10						
Cadmium		1.04	mg/L	0.010	104	80	120			
Calcium		497	mg/L	0.50	99	80	120			
Chromium		0.516	mg/L	0.050	103	80	120			
Copper		0.523	mg/L	0.015	105	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_110921A	
Sample ID: ICSAB	17	Interference Check Sample AB							09/21/11 11:11	
Iron		188	mg/L	0.030	94	80	120			
Magnesium		549	mg/L	0.50	110	80	120			
Manganese		0.512	mg/L	0.010	102	80	120			
Molybdenum		-0.0217	mg/L	0.10						
Nickel		1.06	mg/L	0.050	106	80	120			
Potassium		0.0103	mg/L	0.50						
Selenium		-0.0339	mg/L	0.10						
Silicon		0.000900	mg/L	0.10						
Sodium		0.230	mg/L	0.50						
Zinc		1.04	mg/L	0.010	104	80	120			
Method: E200.7									Batch: R150898	
Sample ID: MB-110921A	17	Method Blank				Run: ICP2-C_110921A			09/21/11 10:56	
Aluminum		ND	mg/L	0.01						
Barium		ND	mg/L	0.0006						
Boron		ND	mg/L	0.01						
Cadmium		0.0009	mg/L	0.0005						
Calcium		ND	mg/L	0.1						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.006						
Iron		ND	mg/L	0.001						
Magnesium		ND	mg/L	0.05						
Manganese		ND	mg/L	0.0003						
Molybdenum		ND	mg/L	0.001						
Nickel		ND	mg/L	0.002						
Potassium		ND	mg/L	0.05						
Selenium		ND	mg/L	0.03						
Silicon		ND	mg/L	0.007						
Sodium		ND	mg/L	0.2						
Zinc		ND	mg/L	0.001						
Sample ID: LFB-110921A	17	Laboratory Fortified Blank				Run: ICP2-C_110921A			09/21/11 11:00	
Aluminum		0.974	mg/L	0.10	97	85	115			
Barium		0.955	mg/L	0.10	96	85	115			
Boron		0.936	mg/L	0.10	94	85	115			
Cadmium		0.959	mg/L	0.010	96	85	115			
Calcium		48.0	mg/L	0.50	96	85	115			
Chromium		0.954	mg/L	0.050	95	85	115			
Copper		0.961	mg/L	0.010	96	85	115			
Iron		0.937	mg/L	0.030	94	85	115			
Magnesium		47.3	mg/L	0.50	95	85	115			
Manganese		0.961	mg/L	0.010	96	85	115			
Molybdenum		0.947	mg/L	0.10	95	85	115			
Nickel		0.985	mg/L	0.050	99	85	115			
Potassium		49.2	mg/L	0.50	98	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R150898	
Sample ID: LFB-110921A	17	Laboratory Fortified Blank				Run: ICP2-C_110921A			09/21/11 11:00	
Selenium		0.969	mg/L	0.10	97	85	115			
Silicon		0.419	mg/L	0.10	93	85	115			
Sodium		46.9	mg/L	0.50	94	85	115			
Zinc		0.953	mg/L	0.010	95	85	115			
Sample ID: C11090622-001CMS2	17	Sample Matrix Spike				Run: ICP2-C_110921A			09/21/11 19:45	
Aluminum		2.00	mg/L	0.10	98	70	130			
Barium		1.94	mg/L	0.10	94	70	130			
Boron		2.73	mg/L	0.10	98	70	130			
Cadmium		1.99	mg/L	0.010	97	70	130			
Calcium		103	mg/L	1.0	98	70	130			
Chromium		1.97	mg/L	0.050	97	70	130			
Copper		2.02	mg/L	0.012	99	70	130			
Iron		1.99	mg/L	0.030	97	70	130			
Magnesium		99.4	mg/L	1.0	97	70	130			
Manganese		1.96	mg/L	0.010	96	70	130			
Molybdenum		1.92	mg/L	0.10	94	70	130			
Nickel		2.01	mg/L	0.050	99	70	130			
Potassium		87.2	mg/L	1.0	84	70	130			
Selenium		2.06	mg/L	0.054	101	70	130			
Silicon		4.79	mg/L	0.10		70	130			A
Sodium		485	mg/L	1.0	92	70	130			
Zinc		1.98	mg/L	0.010	96	70	130			
Sample ID: C11090622-001CMSD	17	Sample Matrix Spike Duplicate				Run: ICP2-C_110921A			09/21/11 19:49	
Aluminum		2.04	mg/L	0.10	100	70	130	2.0	20	
Barium		1.97	mg/L	0.10	95	70	130	1.2	20	
Boron		2.77	mg/L	0.10	100	70	130	1.6	20	
Cadmium		1.96	mg/L	0.010	96	70	130	1.5	20	
Calcium		103	mg/L	1.0	98	70	130	0.4	20	
Chromium		1.98	mg/L	0.050	97	70	130	0.4	20	
Copper		2.08	mg/L	0.012	102	70	130	2.5	20	
Iron		2.02	mg/L	0.030	98	70	130	1.7	20	
Magnesium		98.6	mg/L	1.0	96	70	130	0.8	20	
Manganese		1.97	mg/L	0.010	96	70	130	0.4	20	
Molybdenum		1.96	mg/L	0.10	96	70	130	1.6	20	
Nickel		2.00	mg/L	0.050	98	70	130	0.6	20	
Potassium		86.9	mg/L	1.0	84	70	130	0.3	20	
Selenium		2.04	mg/L	0.054	100	70	130	0.9	20	
Silicon		4.83	mg/L	0.10		70	130	0.8	20	A
Sodium		488	mg/L	1.0	95	70	130	0.7	20	
Zinc		2.02	mg/L	0.010	99	70	130	2.2	20	
Sample ID: C11090541-007BMS2	17	Sample Matrix Spike				Run: ICP2-C_110921A			09/21/11 21:47	
Aluminum		5.04	mg/L	0.10	99	70	130			
Barium		5.02	mg/L	0.10	98	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R150898	
Sample ID: C11090541-007BMS2	17	Sample Matrix Spike				Run: ICP2-C_110921A			09/21/11 21:47	
Boron		5.32	mg/L	0.10	97	70	130			
Cadmium		4.95	mg/L	0.010	97	70	130			
Calcium		746	mg/L	1.0	94	70	130			
Chromium		4.94	mg/L	0.050	97	70	130			
Copper		5.08	mg/L	0.029	100	70	130			
Iron		5.01	mg/L	0.030	95	70	130			
Magnesium		330	mg/L	1.0	95	70	130			
Manganese		5.66	mg/L	0.010	98	70	130			
Molybdenum		4.85	mg/L	0.10	95	70	130			
Nickel		4.94	mg/L	0.050	97	70	130			
Potassium		228	mg/L	1.0	79	70	130			
Selenium		5.04	mg/L	0.14	99	70	130			
Silicon		12.4	mg/L	0.10		70	130			A
Sodium		508	mg/L	1.0	95	70	130			
Zinc		4.93	mg/L	0.010	96	70	130			
Sample ID: C11090541-007BMSD	17	Sample Matrix Spike Duplicate				Run: ICP2-C_110921A			09/21/11 21:51	
Aluminum		5.11	mg/L	0.10	100	70	130	1.4	20	
Barium		5.00	mg/L	0.10	97	70	130	0.3	20	
Boron		5.37	mg/L	0.10	98	70	130	0.9	20	
Cadmium		4.96	mg/L	0.010	97	70	130	0.1	20	
Calcium		745	mg/L	1.0	93	70	130	0.2	20	
Chromium		4.94	mg/L	0.050	97	70	130	0.1	20	
Copper		5.16	mg/L	0.029	101	70	130	1.6	20	
Iron		5.02	mg/L	0.030	95	70	130	0.3	20	
Magnesium		330	mg/L	1.0	95	70	130	0.2	20	
Manganese		5.65	mg/L	0.010	98	70	130	0.2	20	
Molybdenum		4.89	mg/L	0.10	96	70	130	0.8	20	
Nickel		5.00	mg/L	0.050	98	70	130	1.1	20	
Potassium		225	mg/L	1.0	77	70	130	1.6	20	
Selenium		4.98	mg/L	0.14	98	70	130	1.2	20	
Silicon		12.4	mg/L	0.10		70	130	0.2	20	A
Sodium		507	mg/L	1.0	95	70	130	0.2	20	
Zinc		4.88	mg/L	0.010	95	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_110926B	
Sample ID: ICV	7	Initial Calibration Verification Standard							09/26/11 09:46	
Aluminum		2.47	mg/L	0.10	99	95	105			
Chromium		2.50	mg/L	0.050	100	95	105			
Iron		2.52	mg/L	0.030	101	95	105			
Manganese		2.48	mg/L	0.010	99	95	105			
Molybdenum		2.45	mg/L	0.10	98	95	105			
Nickel		2.54	mg/L	0.050	101	95	105			
Zinc		2.47	mg/L	0.010	99	95	105			
Sample ID: ICSA	7	Interference Check Sample A							09/26/11 10:08	
Aluminum		535	mg/L	0.10	107	80	120			
Chromium		-0.000200	mg/L	0.050						
Iron		192	mg/L	0.030	96	80	120			
Manganese		-0.00180	mg/L	0.010						
Molybdenum		-0.0170	mg/L	0.10						
Nickel		-0.00230	mg/L	0.050						
Zinc		-0.0195	mg/L	0.010						
Sample ID: ICSAB	7	Interference Check Sample AB							09/26/11 10:14	
Aluminum		510	mg/L	0.10	102	80	120			
Chromium		0.496	mg/L	0.050	99	80	120			
Iron		191	mg/L	0.030	95	80	120			
Manganese		0.497	mg/L	0.010	99	80	120			
Molybdenum		-0.0175	mg/L	0.10						
Nickel		0.977	mg/L	0.050	98	80	120			
Zinc		1.01	mg/L	0.010	101	80	120			
Method: E200.7									Batch: 31231	
Sample ID: MB-31231	2	Method Blank				Run: ICP2-C_110926B			09/26/11 20:21	
Iron		0.07	mg/L	0.008						
Manganese		0.0008	mg/L	0.0002						
Sample ID: LCS3-31231	2	Laboratory Control Sample				Run: ICP2-C_110926B			09/26/11 20:25	
Iron		2.72	mg/L	0.030	106	85	115			
Manganese		2.60	mg/L	0.010	104	85	115			
Sample ID: C11090541-006CMS3	2	Sample Matrix Spike				Run: ICP2-C_110926B			09/26/11 21:06	
Iron		5.97	mg/L	0.030	103	70	130			
Manganese		5.23	mg/L	0.010	102	70	130			
Sample ID: C11090541-006CMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_110926B			09/26/11 21:10	
Iron		6.10	mg/L	0.030	106	70	130	2.2	20	
Manganese		5.37	mg/L	0.010	104	70	130	2.6	20	
Method: E200.7									Batch: R151157	
Sample ID: MB-110926A	7	Method Blank				Run: ICP2-C_110926B			09/26/11 10:38	
Aluminum		ND	mg/L	0.01						
Chromium		ND	mg/L	0.002						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R151157
Sample ID: MB-110926A	7	Method Blank				Run: ICP2-C_110926B				09/26/11 10:38
Iron		ND	mg/L	0.001						
Manganese		0.0004	mg/L	0.0003						
Molybdenum		ND	mg/L	0.001						
Nickel		ND	mg/L	0.002						
Zinc		ND	mg/L	0.001						
Sample ID: LFB-110926A	7	Laboratory Fortified Blank				Run: ICP2-C_110926B				09/26/11 10:42
Aluminum		0.892	mg/L	0.10	89	85	115			
Chromium		0.922	mg/L	0.050	92	85	115			
Iron		0.942	mg/L	0.030	94	85	115			
Manganese		0.934	mg/L	0.010	93	85	115			
Molybdenum		0.928	mg/L	0.10	93	85	115			
Nickel		0.928	mg/L	0.050	93	85	115			
Zinc		0.932	mg/L	0.010	93	85	115			
Sample ID: C11090611-001BMS2	7	Sample Matrix Spike				Run: ICP2-C_110926B				09/26/11 15:58
Aluminum		19.3	mg/L	0.23	95	70	130			
Chromium		19.4	mg/L	0.050	95	70	130			
Iron		19.7	mg/L	0.030	95	70	130			
Manganese		20.3	mg/L	0.010	97	70	130			
Molybdenum		19.3	mg/L	0.10	94	70	130			
Nickel		19.5	mg/L	0.050	95	70	130			
Zinc		19.4	mg/L	0.029	95	70	130			
Sample ID: C11090611-001BMSD	7	Sample Matrix Spike Duplicate				Run: ICP2-C_110926B				09/26/11 16:02
Aluminum		18.8	mg/L	0.23	92	70	130	2.7	20	
Chromium		18.9	mg/L	0.050	92	70	130	2.8	20	
Iron		18.8	mg/L	0.030	91	70	130	4.3	20	
Manganese		19.5	mg/L	0.010	93	70	130	4.2	20	
Molybdenum		19.3	mg/L	0.10	94	70	130	0.2	20	
Nickel		18.9	mg/L	0.050	92	70	130	3.2	20	
Zinc		19.2	mg/L	0.029	94	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_110927A	
Sample ID: ICV		Initial Calibration Verification Standard							09/27/11 12:15	
Manganese		2.40	mg/L	0.010	96	95	105			
Sample ID: ICSA		Interference Check Sample A							09/27/11 12:35	
Manganese		-0.00130	mg/L	0.010		0	0			
Sample ID: ICSAB		Interference Check Sample AB							09/27/11 12:40	
Manganese		0.527	mg/L	0.010	105	80	120			
Method: E200.7									Batch: R151203	
Sample ID: MB-110927A		Method Blank				Run: ICP2-C_110927A			09/27/11 13:06	
Manganese		0.0003	mg/L	0.0003						
Sample ID: LFB-110927A		Laboratory Fortified Blank				Run: ICP2-C_110927A			09/27/11 13:10	
Manganese		0.909	mg/L	0.010	91	85	115			
Sample ID: C11090564-005BMS2		Sample Matrix Spike				Run: ICP2-C_110927A			09/27/11 19:57	
Manganese		2.08	mg/L	0.010	94	70	130			
Sample ID: C11090564-005BMSD		Sample Matrix Spike Duplicate				Run: ICP2-C_110927A			09/27/11 20:01	
Manganese		2.15	mg/L	0.010	98	70	130	3.4	20	
Method: E200.7									Analytical Run: ICP2-C_110928A	
Sample ID: ICV		Initial Calibration Verification Standard							09/28/11 15:03	
Sodium		24.2	mg/L	0.50	97	95	105			
Sample ID: ICSA		Interference Check Sample A							09/28/11 15:25	
Sodium		0.423	mg/L	0.50		0	0			
Sample ID: ICSAB		Interference Check Sample AB							09/28/11 15:29	
Sodium		0.340	mg/L	0.50		0	0			
Method: E200.7									Batch: R151312	
Sample ID: MB-110928A		Method Blank				Run: ICP2-C_110928A			09/28/11 15:54	
Sodium		ND	mg/L	0.2						
Sample ID: LFB-110928A		Laboratory Fortified Blank				Run: ICP2-C_110928A			09/28/11 15:58	
Sodium		45.4	mg/L	0.50	91	85	115			
Sample ID: C11090205-001EMS2		Sample Matrix Spike				Run: ICP2-C_110928A			09/28/11 17:07	
Sodium		97.6	mg/L	1.0	94	70	130			
Sample ID: C11090205-001EMSD		Sample Matrix Spike Duplicate				Run: ICP2-C_110928A			09/28/11 17:11	
Sodium		98.8	mg/L	1.0	95	70	130	1.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_111110A	
Sample ID: ICV	2	Initial Calibration Verification Standard							11/10/11 13:21	
Manganese		2.45	mg/L	0.010	98	95	105			
Zinc		2.47	mg/L	0.010	99	95	105			
Sample ID: ICSA	2	Interference Check Sample A							11/10/11 13:41	
Manganese		-0.00420	mg/L	0.010						
Zinc		-0.00150	mg/L	0.010						
Sample ID: ICSAB	2	Interference Check Sample AB							11/10/11 13:45	
Manganese		0.492	mg/L	0.010	98	80	120			
Zinc		1.01	mg/L	0.010	101	80	120			
Method: E200.7									Batch: R153141	
Sample ID: MB-111110A	2	Method Blank				Run: ICP2-C_111110A			11/10/11 14:15	
Manganese		ND	mg/L	0.0003						
Zinc		ND	mg/L	0.001						
Sample ID: LFB-111110A	2	Laboratory Fortified Blank				Run: ICP2-C_111110A			11/10/11 14:19	
Manganese		0.955	mg/L	0.010	96	85	115			
Zinc		0.963	mg/L	0.010	96	85	115			
Sample ID: C11090541-012BMS2	2	Sample Matrix Spike				Run: ICP2-C_111110A			11/10/11 15:35	
Manganese		13.2	mg/L	0.010	84	70	130			
Zinc		4.86	mg/L	0.010	95	70	130			
Sample ID: C11090541-012BMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_111110A			11/10/11 15:40	
Manganese		13.4	mg/L	0.010	86	70	130	1.1	20	
Zinc		4.88	mg/L	0.010	96	70	130	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Report Date: 12/28/11
Project: ANC
Work Order: C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_111116A	
Sample ID: ICV	2	Initial Calibration Verification Standard							11/16/11 13:39	
Iron		2.55	mg/L	0.030	102	95	105			
Manganese		2.50	mg/L	0.010	100	95	105			
Sample ID: ICSA	2	Interference Check Sample A							11/16/11 14:03	
Iron		188	mg/L	0.030	94	80	120			
Manganese		-0.00430	mg/L	0.010						
Sample ID: ICSAB	2	Interference Check Sample AB							11/16/11 14:07	
Iron		189	mg/L	0.030	94	80	120			
Manganese		0.486	mg/L	0.010	97	80	120			
Method: E200.7									Batch: 31231	
Sample ID: MB-31231	2	Method Blank				Run: ICP2-C_111116A			11/16/11 15:52	
Iron		0.08	mg/L	0.008						
Manganese		0.001	mg/L	0.0002						
Sample ID: LCS3-31231	2	Laboratory Control Sample				Run: ICP2-C_111116A			11/16/11 15:56	
Iron		2.76	mg/L	0.030	107	85	115			
Manganese		2.70	mg/L	0.010	108	85	115			
Sample ID: C11090541-006CMS3	2	Sample Matrix Spike				Run: ICP2-C_111116A			11/16/11 16:11	
Iron		6.32	mg/L	0.030	110	70	130			
Manganese		5.49	mg/L	0.010	107	70	130			
Sample ID: C11090541-006CMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_111116A			11/16/11 16:15	
Iron		6.22	mg/L	0.030	108	70	130	1.5	20	
Manganese		5.42	mg/L	0.010	105	70	130	1.3	20	
Method: E200.7									Batch: R153422	
Sample ID: MB-111116A	2	Method Blank				Run: ICP2-C_111116A			11/16/11 14:43	
Iron		ND	mg/L	0.001						
Manganese		ND	mg/L	0.0003						
Sample ID: LFB-111116A	2	Laboratory Fortified Blank				Run: ICP2-C_111116A			11/16/11 14:47	
Iron		0.964	mg/L	0.030	96	85	115			
Manganese		0.922	mg/L	0.010	92	85	115			
Sample ID: C11100953-001CMS2	2	Sample Matrix Spike				Run: ICP2-C_111116A			11/16/11 17:48	
Iron		1.97	mg/L	0.030	96	70	130			
Manganese		1.98	mg/L	0.010	95	70	130			
Sample ID: C11100953-001CMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_111116A			11/16/11 17:52	
Iron		1.95	mg/L	0.030	95	70	130	1.1	20	
Manganese		1.94	mg/L	0.010	93	70	130	2.2	20	
Sample ID: C11110414-001BMS2	2	Sample Matrix Spike				Run: ICP2-C_111116A			11/16/11 22:59	
Iron		1.96	mg/L	0.030	96	70	130			
Manganese		1.96	mg/L	0.010	95	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R153422	
Sample ID: C11110414-001BMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_111116A			11/16/11 23:03	
Iron		1.95	mg/L	0.030	95	70	130	0.6	20	
Manganese		1.95	mg/L	0.010	94	70	130	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_110920A	
Sample ID: ICV	9	Initial Calibration Verification Standard							09/20/11 12:30	
Arsenic		0.0512	mg/L	0.0010	102	90	110			
Barium		0.0518	mg/L	0.0010	103	90	110			
Cadmium		0.0522	mg/L	0.0010	104	90	110			
Chromium		0.0526	mg/L	0.0010	105	90	110			
Lead		0.0505	mg/L	0.0010	101	90	110			
Manganese		0.0528	mg/L	0.0010	106	90	110			
Mercury		0.00527	mg/L	0.0010	105	90	110			
Selenium		0.0516	mg/L	0.0010	103	90	110			
Zinc		0.0526	mg/L	0.0010	105	90	110			
Method: E200.8									Batch: R150839	
Sample ID: LRB	9	Method Blank				Run: ICPMS2-C_110920A			09/20/11 12:08	
Arsenic		ND	mg/L	0.0001						
Barium		ND	mg/L	0.0001						
Cadmium		ND	mg/L	0.0001						
Chromium		ND	mg/L	8E-05						
Lead		ND	mg/L	9E-05						
Manganese		ND	mg/L	3E-05						
Mercury		7E-05	mg/L	2E-05						
Selenium		ND	mg/L	0.0003						
Zinc		ND	mg/L	6E-05						
Sample ID: LFB	9	Laboratory Fortified Blank				Run: ICPMS2-C_110920A			09/20/11 12:11	
Arsenic		0.0451	mg/L	0.0010	90	85	115			
Barium		0.0461	mg/L	0.0010	92	85	115			
Cadmium		0.0461	mg/L	0.0010	92	85	115			
Chromium		0.0447	mg/L	0.0010	89	85	115			
Lead		0.0452	mg/L	0.0010	90	85	115			
Manganese		0.0460	mg/L	0.0010	92	85	115			
Mercury		0.00466	mg/L	0.0010	92	85	115			
Selenium		0.0448	mg/L	0.0010	90	85	115			
Zinc		0.0489	mg/L	0.0010	98	85	115			
Sample ID: C11090541-005BMS4	9	Sample Matrix Spike				Run: ICPMS2-C_110920A			09/20/11 15:48	
Arsenic		0.0520	mg/L	0.0010	102	70	130			
Barium		0.0692	mg/L	0.0010	101	70	130			
Cadmium		0.0453	mg/L	0.010	91	70	130			
Chromium		0.0495	mg/L	0.0010	98	70	130			
Lead		0.0519	mg/L	0.050	104	70	130			
Manganese		5.06	mg/L	0.010		70	130			A
Mercury		0.00493	mg/L	0.0010	99	70	130			
Selenium		0.0502	mg/L	0.0010	97	70	130			
Zinc		0.0546	mg/L	0.010	84	70	130			
Sample ID: C11090541-005BMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS2-C_110920A			09/20/11 15:51	
Arsenic		0.0525	mg/L	0.0010	103	70	130	1.0	20	

Qualifiers:

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A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R150839	
Sample ID: C11090541-005BMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS2-C_110920A			09/20/11 15:51	
Barium		0.0690	mg/L	0.0010	101	70	130	0.2	20	
Cadmium		0.0446	mg/L	0.010	89	70	130	1.4	20	
Chromium		0.0487	mg/L	0.0010	96	70	130	1.6	20	
Lead		0.0519	mg/L	0.050	104	70	130	0.1	20	
Manganese		4.90	mg/L	0.010		70	130	3.1	20	A
Mercury		0.00493	mg/L	0.0010	99	70	130	0.0	20	
Selenium		0.0500	mg/L	0.0010	97	70	130	0.4	20	
Zinc		0.0548	mg/L	0.010	84	70	130	0.3	20	
Sample ID: C11090541-015BMS4	9	Sample Matrix Spike				Run: ICPMS2-C_110920A			09/20/11 16:36	
Arsenic		0.295	mg/L	0.0010	114	70	130			
Barium		0.325	mg/L	0.10	98	70	130			
Cadmium		0.204	mg/L	0.010	81	70	130			
Chromium		0.380	mg/L	0.050	102	70	130			
Lead		0.256	mg/L	0.050	101	70	130			
Manganese		75.7	mg/L	0.010		70	130			A
Mercury		0.0242	mg/L	0.0010	97	70	130			
Selenium		0.309	mg/L	0.0013	117	70	130			
Zinc		0.398	mg/L	0.010	79	70	130			
Sample ID: C11090541-015BMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS2-C_110920A			09/20/11 16:39	
Arsenic		0.315	mg/L	0.0010	122	70	130	6.6	20	
Barium		0.347	mg/L	0.10	107	70	130	6.5	20	
Cadmium		0.218	mg/L	0.010	87	70	130	6.6	20	
Chromium		0.394	mg/L	0.050	107	70	130	3.5	20	
Lead		0.277	mg/L	0.050	110	70	130	8.0	20	
Manganese		77.0	mg/L	0.010		70	130	1.7	20	A
Mercury		0.0254	mg/L	0.0010	102	70	130	4.8	20	
Selenium		0.331	mg/L	0.0013	126	70	130	6.8	20	
Zinc		0.415	mg/L	0.010	85	70	130	4.1	20	

Qualifiers:

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ND - Not detected at the reporting limit.

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_110921A	
Sample ID: ICV	11	Initial Calibration Verification Standard							09/21/11 12:22	
Arsenic		0.0478	mg/L	0.0010	96	90	110			
Barium		0.0483	mg/L	0.0010	97	90	110			
Cadmium		0.0484	mg/L	0.0010	97	90	110			
Chromium		0.0489	mg/L	0.0010	98	90	110			
Copper		0.0479	mg/L	0.0010	96	90	110			
Lead		0.0477	mg/L	0.0010	95	90	110			
Manganese		0.0497	mg/L	0.0010	99	90	110			
Mercury		0.00516	mg/L	0.0010	103	90	110			
Nickel		0.0483	mg/L	0.0010	97	90	110			
Selenium		0.0492	mg/L	0.0010	98	90	110			
Zinc		0.0458	mg/L	0.0010	92	90	110			
Method: E200.8									Batch: R150906	
Sample ID: LRB	11	Method Blank				Run: ICPMS2-C_110921A			09/21/11 13:41	
Arsenic		ND	mg/L	0.0001						
Barium		ND	mg/L	0.0001						
Cadmium		ND	mg/L	0.0001						
Chromium		0.0003	mg/L	8E-05						
Copper		ND	mg/L	7E-05						
Lead		ND	mg/L	9E-05						
Manganese		0.0002	mg/L	3E-05						
Mercury		3E-05	mg/L	2E-05						
Nickel		0.0002	mg/L	4E-05						
Selenium		ND	mg/L	0.0003						
Zinc		ND	mg/L	6E-05						
Sample ID: LFB	11	Laboratory Fortified Blank				Run: ICPMS2-C_110921A			09/21/11 13:44	
Arsenic		0.0512	mg/L	0.0010	102	85	115			
Barium		0.0513	mg/L	0.0010	103	85	115			
Cadmium		0.0506	mg/L	0.0010	101	85	115			
Chromium		0.0509	mg/L	0.0010	101	85	115			
Copper		0.0509	mg/L	0.0010	102	85	115			
Lead		0.0512	mg/L	0.0010	102	85	115			
Manganese		0.0513	mg/L	0.0010	102	85	115			
Mercury		0.00520	mg/L	0.0010	103	85	115			
Nickel		0.0509	mg/L	0.0010	101	85	115			
Selenium		0.0504	mg/L	0.0010	101	85	115			
Zinc		0.0512	mg/L	0.0010	102	85	115			
Sample ID: C11090541-005BMS4	11	Sample Matrix Spike				Run: ICPMS2-C_110921A			09/21/11 19:31	
Arsenic		0.0522	mg/L	0.0010	103	70	130			
Barium		0.0701	mg/L	0.0010	102	70	130			
Cadmium		0.0442	mg/L	0.010	88	70	130			
Chromium		0.0489	mg/L	0.0010	97	70	130			
Copper		0.0555	mg/L	0.010	88	70	130			

Qualifiers:

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ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R150906	
Sample ID: C11090541-005BMS4	11	Sample Matrix Spike				Run: ICPMS2-C_110921A			09/21/11 19:31	
Lead		0.0513	mg/L	0.050	103	70	130			
Manganese		4.98	mg/L	0.010		70	130			A
Mercury		0.00491	mg/L	0.0010	98	70	130			
Nickel		0.105	mg/L	0.050	79	70	130			
Selenium		0.0493	mg/L	0.0010	96	70	130			
Zinc		0.0524	mg/L	0.010	78	70	130			
Sample ID: C11090541-005BMSD	11	Sample Matrix Spike Duplicate				Run: ICPMS2-C_110921A			09/21/11 19:33	
Arsenic		0.0536	mg/L	0.0010	106	70	130	2.8	20	
Barium		0.0726	mg/L	0.0010	107	70	130	3.5	20	
Cadmium		0.0457	mg/L	0.010	91	70	130	3.5	20	
Chromium		0.0508	mg/L	0.0010	101	70	130	3.8	20	
Copper		0.0579	mg/L	0.010	93	70	130	4.2	20	
Lead		0.0537	mg/L	0.050	107	70	130	4.5	20	
Manganese		5.08	mg/L	0.010		70	130	2.0	20	A
Mercury		0.00519	mg/L	0.0010	104	70	130	5.5	20	
Nickel		0.113	mg/L	0.050	96	70	130	7.8	20	
Selenium		0.0510	mg/L	0.0010	99	70	130	3.3	20	
Zinc		0.0540	mg/L	0.010	81	70	130	3.0	20	
Method: E200.8									Analytical Run: ICPMS2-C_111108A	
Sample ID: ICV		Initial Calibration Verification Standard							11/08/11 11:49	
Selenium		0.0482	mg/L	0.0010	96	90	110			
Method: E200.8									Batch: R153025	
Sample ID: LRB		Method Blank				Run: ICPMS2-C_111108A			11/08/11 12:12	
Selenium		ND	mg/L	0.0003						
Sample ID: LFB		Laboratory Fortified Blank				Run: ICPMS2-C_111108A			11/08/11 12:15	
Selenium		0.0494	mg/L	0.0010	99	85	115			
Sample ID: C11100933-024CMS4		Sample Matrix Spike				Run: ICPMS2-C_111108A			11/08/11 18:11	
Selenium		0.0570	mg/L	0.0010	100	70	130			
Sample ID: C11100933-024CMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_111108A			11/08/11 18:14	
Selenium		0.0557	mg/L	0.0010	97	70	130	2.4	20	

Qualifiers:

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A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_110916A	
Sample ID: ICV	10	Initial Calibration Verification Standard							09/16/11 17:08	
Aluminum		0.0472	mg/L	0.0010	94	90	110			
Boron		0.0540	mg/L	0.0010	108	90	110			
Calcium		9.57	mg/L	0.0066	96	90	110			
Iron		0.994	mg/L	0.0010	99	90	110			
Lead		0.0514	mg/L	0.0010	103	90	110			
Magnesium		9.70	mg/L	0.0027	97	90	110			
Potassium		9.32	mg/L	0.0041	93	90	110			
Sodium		9.65	mg/L	0.0043	97	90	110			
Uranium		0.0511	mg/L	0.00030	102	90	110			
Vanadium		0.0518	mg/L	0.0010	104	90	110			
Method: E200.8									Batch: R150736A	
Sample ID: C11090531-018BMS4	10	Sample Matrix Spike				Run: ICPMS4-C_110916A			09/16/11 19:24	
Aluminum		0.0379	mg/L	0.0010	76	70	130			
Boron		0.115	mg/L	0.10	82	70	130			
Calcium		78.4	mg/L	1.0		70	130			A
Iron		1.55	mg/L	0.030	92	70	130			
Lead		0.0518	mg/L	0.050	103	70	130			
Magnesium		28.1	mg/L	1.0	86	70	130			
Potassium		16.1	mg/L	1.0	83	70	130			
Sodium		25.2	mg/L	1.0	87	70	130			
Uranium		1.35	mg/L	0.00030		70	130			A
Vanadium		0.0500	mg/L	0.0010	99	70	130			
Sample ID: C11090531-018BMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_110916A			09/16/11 19:29	
Aluminum		0.0415	mg/L	0.0010	83	70	130	9.1	20	
Boron		0.116	mg/L	0.10	85	70	130	1.3	20	
Calcium		77.2	mg/L	1.0		70	130	1.5	20	A
Iron		1.59	mg/L	0.030	95	70	130	2.5	20	
Lead		0.0566	mg/L	0.050	113	70	130	8.9	20	
Magnesium		28.6	mg/L	1.0	90	70	130	1.7	20	
Potassium		16.4	mg/L	1.0	85	70	130	1.7	20	
Sodium		25.4	mg/L	1.0	89	70	130	0.9	20	
Uranium		1.38	mg/L	0.00030		70	130	1.8	20	A
Vanadium		0.0515	mg/L	0.0010	102	70	130	3.1	20	
Sample ID: C11090541-017BMS4	10	Sample Matrix Spike				Run: ICPMS4-C_110916A			09/16/11 23:36	
Aluminum		77.4	mg/L	0.10		70	130			A
Boron		0.339	mg/L	0.10	81	70	130			
Calcium		404	mg/L	1.0		70	130			A
Iron		63.0	mg/L	0.030		70	130			A
Lead		0.302	mg/L	0.050	107	70	130			
Magnesium		303	mg/L	1.0		70	130			A
Potassium		65.0	mg/L	1.0	86	70	130			
Sodium		329	mg/L	1.0		70	130			A

Qualifiers:

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ND - Not detected at the reporting limit.

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R150736A	
Sample ID: C11090541-017BMS4	10	Sample Matrix Spike				Run: ICPMS4-C_110916A			09/16/11 23:36	
Uranium		2.10	mg/L	0.00030		70	130			A
Vanadium		0.310	mg/L	0.10	102	70	130			
Sample ID: C11090541-017BMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_110916A			09/16/11 23:41	
Aluminum		79.0	mg/L	0.10		70	130	2.1	20	A
Boron		0.337	mg/L	0.10	81	70	130	0.4	20	
Calcium		400	mg/L	1.0		70	130	1.0	20	A
Iron		60.8	mg/L	0.030		70	130	3.5	20	A
Lead		0.309	mg/L	0.050	110	70	130	2.1	20	
Magnesium		317	mg/L	1.0		70	130	4.8	20	A
Potassium		64.6	mg/L	1.0	85	70	130	0.7	20	
Sodium		345	mg/L	1.0		70	130	4.6	20	A
Uranium		2.15	mg/L	0.00030		70	130	2.6	20	A
Vanadium		0.306	mg/L	0.10	101	70	130	1.3	20	
Sample ID: LRB	10	Method Blank				Run: ICPMS4-C_110916A			09/16/11 17:57	
Aluminum		ND	mg/L	0.0002						
Boron		ND	mg/L	0.0003						
Calcium		ND	mg/L	0.007						
Iron		ND	mg/L	0.0006						
Lead		ND	mg/L	2E-05						
Magnesium		ND	mg/L	0.003						
Potassium		ND	mg/L	0.004						
Sodium		ND	mg/L	0.004						
Uranium		ND	mg/L	9E-06						
Vanadium		ND	mg/L	4E-05						
Sample ID: LFB	10	Laboratory Fortified Blank				Run: ICPMS4-C_110916A			09/16/11 18:02	
Aluminum		0.0544	mg/L	0.0010	109	85	115			
Boron		0.0566	mg/L	0.0010	113	85	115			
Calcium		13.3	mg/L	0.0066	106	85	115			
Iron		1.33	mg/L	0.0010	106	85	115			
Lead		0.0572	mg/L	0.0010	114	85	115			
Magnesium		13.3	mg/L	0.0027	106	85	115			
Potassium		12.8	mg/L	0.0041	102	85	115			
Sodium		13.3	mg/L	0.0043	106	85	115			
Uranium		0.0559	mg/L	0.00030	112	85	115			
Vanadium		0.0549	mg/L	0.0010	110	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_110919A	
Sample ID: ICV	5	Initial Calibration Verification Standard							09/19/11 12:45	
Aluminum		0.0492	mg/L	0.0010	98	90	110			
Calcium		9.68	mg/L	0.0066	97	90	110			
Magnesium		9.83	mg/L	0.0027	98	90	110			
Mercury		0.00529	mg/L	0.0010	106	90	110			
Selenium		0.0512	mg/L	0.0010	102	90	110			
Method: E200.8									Batch: R150803A	
Sample ID: C11090648-002BMS4	5	Sample Matrix Spike				Run: ICPMS4-C_110919A			09/19/11 22:36	
Aluminum		0.0482	mg/L	0.0010	95	70	130			
Calcium		61.8	mg/L	1.0	131	70	130			S
Magnesium		33.3	mg/L	1.0	106	70	130			
Mercury		0.00381	mg/L	0.0010	75	70	130			
Selenium		0.0586	mg/L	0.0010	100	70	130			
Sample ID: C11090648-002BMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS4-C_110919A			09/19/11 22:41	
Aluminum		0.0476	mg/L	0.0010	93	70	130	1.2	20	
Calcium		63.2	mg/L	1.0	143	70	130	2.3	20	S
Magnesium		34.2	mg/L	1.0	113	70	130	2.7	20	
Mercury		0.00403	mg/L	0.0010	79	70	130	5.6	20	
Selenium		0.0577	mg/L	0.0010	98	70	130	1.6	20	
Sample ID: C11090541-017BMS4	5	Sample Matrix Spike				Run: ICPMS4-C_110919A			09/20/11 01:51	
Aluminum		88.6	mg/L	0.10		70	130			A
Calcium		409	mg/L	1.0		70	130			A
Magnesium		327	mg/L	1.0		70	130			A
Mercury		0.0293	mg/L	0.0010	112	70	130			
Selenium		0.331	mg/L	0.0010	93	70	130			
Sample ID: C11090541-017BMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS4-C_110919A			09/20/11 02:16	
Aluminum		10.1	mg/L	0.10		70	130	160	20	AR
Calcium		414	mg/L	1.0		70	130	1.3	20	A
Magnesium		340	mg/L	1.0		70	130	3.6	20	A
Mercury		0.0280	mg/L	0.0010	107	70	130	4.4	20	
Selenium		0.334	mg/L	0.0010	94	70	130	1.0	20	
Sample ID: LRB	5	Method Blank				Run: ICPMS4-C_110919A			09/19/11 13:24	
Aluminum		0.001	mg/L	0.0002						
Calcium		ND	mg/L	0.007						
Magnesium		ND	mg/L	0.003						
Mercury		9E-05	mg/L	5E-05						
Selenium		ND	mg/L	7E-05						
Sample ID: LFB	5	Laboratory Fortified Blank				Run: ICPMS4-C_110919A			09/19/11 13:29	
Aluminum		0.0505	mg/L	0.0010	99	85	115			
Calcium		11.5	mg/L	0.0066	92	85	115			
Magnesium		11.5	mg/L	0.0027	92	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R150803A
Sample ID: LFB	5	Laboratory Fortified Blank				Run: ICPMS4-C_110919A				09/19/11 13:29
Mercury		0.00464	mg/L	0.0010	91	85	115			
Selenium		0.0437	mg/L	0.0010	87	85	115			
Method: E200.8										Analytical Run: ICPMS4-C_110922A
Sample ID: ICV	2	Initial Calibration Verification Standard								09/22/11 15:45
Iron		1.07	mg/L	0.0010	107	90	110			
Manganese		0.0496	mg/L	0.0010	99	90	110			
Method: E200.8										Batch: 31231
Sample ID: MB-31231	2	Method Blank				Run: ICPMS4-C_110922A				09/22/11 16:19
Iron		0.09	mg/L	0.0008						
Manganese		0.001	mg/L	4E-05						
Sample ID: LCS3-31231	2	Laboratory Control Sample				Run: ICPMS4-C_110922A				09/22/11 16:22
Iron		2.77	mg/L	0.030	107	85	115			
Manganese		2.80	mg/L	0.010	112	85	115			
Sample ID: C11090541-006CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_110922A				09/22/11 17:39
Iron		6.41	mg/L	0.030	114	70	130			
Manganese		5.80	mg/L	0.010	113	70	130			
Sample ID: C11090541-006CMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_110922A				09/22/11 17:42
Iron		5.80	mg/L	0.030	102	70	130	10.0	20	
Manganese		6.13	mg/L	0.010	119	70	130	5.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_111115A	
Sample ID: ICV	3	Initial Calibration Verification Standard							11/15/11 05:28	
Arsenic		0.0480	mg/L	0.0010	96	90	110			
Copper		0.0529	mg/L	0.0010	106	90	110			
Mercury		0.00506	mg/L	0.0010	101	90	110			
Method: E200.8									Batch: R153298A	
Sample ID: LRB	3	Method Blank				Run: ICPMS4-C_111115A			11/15/11 06:07	
Arsenic		ND	mg/L	5E-05						
Copper		ND	mg/L	3E-05						
Mercury		9E-05	mg/L	5E-05						
Sample ID: LFB	3	Laboratory Fortified Blank				Run: ICPMS4-C_111115A			11/15/11 06:12	
Arsenic		0.0499	mg/L	0.0010	100	85	115			
Copper		0.0525	mg/L	0.0010	105	85	115			
Mercury		0.00506	mg/L	0.0010	99	85	115			
Sample ID: C11110484-003BMS	3	Sample Matrix Spike				Run: ICPMS4-C_111115A			11/15/11 10:44	
Arsenic		0.0530	mg/L	0.0010	105	70	130			
Copper		0.0483	mg/L	0.0010	97	70	130			
Mercury		0.00525	mg/L	0.0010	103	70	130			
Sample ID: C11110484-003BMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS4-C_111115A			11/15/11 10:49	
Arsenic		0.0541	mg/L	0.0010	108	70	130	2.1	20	
Copper		0.0501	mg/L	0.0010	100	70	130	3.7	20	
Mercury		0.00550	mg/L	0.0010	108	70	130	4.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_110915A	
Sample ID: ICV091511-10	2	Initial Calibration Verification Standard							09/15/11 17:15	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.8	mg/L	1.0	102	90	110			
Method: E300.0									Batch: R150789	
Sample ID: ICB091511-11	2	Method Blank				Run: IC2-C_110915A			09/15/11 17:31	
Chloride		ND	mg/L	0.10						
Sulfate		0.3	mg/L	0.08						
Sample ID: LFB091511-12	2	Laboratory Fortified Blank				Run: IC2-C_110915A			09/15/11 17:46	
Chloride		9.94	mg/L	1.0	99	90	110			
Sulfate		40.0	mg/L	1.0	99	90	110			
Sample ID: C11090541-008AMS	2	Sample Matrix Spike				Run: IC2-C_110915A			09/17/11 06:59	
Chloride		73.1	mg/L	1.0	101	90	110			
Sulfate		911	mg/L	4.0	89	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C11090541-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_110915A			09/17/11 07:15	
Chloride		74.3	mg/L	1.0	103	80	120	1.7	10	
Sulfate		919	mg/L	4.0	93	80	120	0.9	10	
Sample ID: C11090531-001AMS	2	Sample Matrix Spike				Run: IC2-C_110915A			09/17/11 10:49	
Chloride		22.5	mg/L	1.0	102	90	110			
Sulfate		117	mg/L	1.0	101	90	110			
Sample ID: C11090531-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_110915A			09/17/11 11:17	
Chloride		22.1	mg/L	1.0	97	80	120	2.0	10	
Sulfate		113	mg/L	1.0	91	80	120	3.5	10	
Sample ID: C11090541-004AMS	2	Sample Matrix Spike				Run: IC2-C_110915A			09/18/11 01:40	
Chloride		173	mg/L	2.0	96	90	110			
Sulfate		1650	mg/L	8.0	82	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C11090541-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_110915A			09/18/11 01:56	
Chloride		172	mg/L	2.0	96	80	120	0.3	10	
Sulfate		1640	mg/L	8.0	81	80	120	0.3	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD **Report Date:** 12/28/11

Project: ANC **Work Order:** C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_110920A	
Sample ID: ICV092011-10		Initial Calibration Verification Standard							09/20/11 18:05	
Sulfate		40.8	mg/L	1.0	102	90	110			
Method: E300.0									Batch: R150940	
Sample ID: ICB092011-11		Method Blank				Run: IC2-C_110920A			09/20/11 18:21	
Sulfate		0.2	mg/L	0.08						
Sample ID: LFB092011-12		Laboratory Fortified Blank				Run: IC2-C_110920A			09/20/11 18:36	
Sulfate		40.9	mg/L	1.0	102	90	110			
Sample ID: C11090541-010AMS		Sample Matrix Spike				Run: IC2-C_110920A			09/20/11 22:43	
Sulfate		1470	mg/L	8.0	81	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C11090541-010AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_110920A			09/20/11 22:58	
Sulfate		1460	mg/L	8.0	78	90	110	0.8	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Method: E300.0									Analytical Run: IC2-C_110923A	
Sample ID: ICV092311-10	2	Initial Calibration Verification Standard							09/23/11 10:11	
Chloride		9.99	mg/L	1.0	100	90	110			
Sulfate		40.9	mg/L	1.0	102	90	110			
Method: E300.0									Batch: R151109	
Sample ID: ICB092311-11	2	Method Blank				Run: IC2-C_110923A			09/23/11 10:26	
Chloride		ND	mg/L	0.10						
Sulfate		0.2	mg/L	0.08						
Sample ID: LFB092311-12	2	Laboratory Fortified Blank				Run: IC2-C_110923A			09/23/11 10:42	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.7	mg/L	1.0	101	90	110			
Sample ID: C11090431-001AMS	2	Sample Matrix Spike				Run: IC2-C_110923A			09/23/11 11:43	
Chloride		396	mg/L	4.0	97	90	110			
Sulfate		1950	mg/L	16	93	90	110			
Sample ID: C11090431-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_110923A			09/23/11 11:59	
Chloride		395	mg/L	4.0	97	90	110	0.3	10	
Sulfate		1940	mg/L	16	92	90	110	0.4	10	
Sample ID: C11090631-001AMS	2	Sample Matrix Spike				Run: IC2-C_110923A			09/23/11 14:48	
Chloride		154	mg/L	2.0	101	90	110			
Sulfate		1400	mg/L	8.0	97	90	110			
Sample ID: C11090631-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_110923A			09/23/11 15:04	
Chloride		154	mg/L	2.0	102	90	110	0.3	10	
Sulfate		1390	mg/L	8.0	96	90	110	0.2	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: WY DEQ-WQD
Report Date: 12/28/11
Project: ANC
Work Order: C11090541

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R150834
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_110920A			09/20/11 15:41	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_110920A			09/20/11 15:43	
Nitrogen, Nitrate+Nitrite as N		2.48	mg/L	0.10	99	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_110920A			09/20/11 15:46	
Nitrogen, Nitrate+Nitrite as N		2.01	mg/L	0.10	103	90	110			
Sample ID: C11090541-006DMS	Sample Matrix Spike					Run: TECHNICON_110920A			09/20/11 17:26	
Nitrogen, Nitrate+Nitrite as N		2.15	mg/L	0.10	110	90	110			
Sample ID: C11090541-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_110920A			09/20/11 17:28	
Nitrogen, Nitrate+Nitrite as N		2.14	mg/L	0.10	109	90	110	0.5	10	
Method: E353.2										Batch: R150885
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_110921A			09/21/11 14:07	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_110921A			09/21/11 14:10	
Nitrogen, Nitrate+Nitrite as N		2.48	mg/L	0.10	99	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_110921A			09/21/11 14:12	
Nitrogen, Nitrate+Nitrite as N		1.98	mg/L	0.10	101	90	110			
Sample ID: C11090541-007DMS	Sample Matrix Spike					Run: TECHNICON_110921A			09/21/11 14:17	
Nitrogen, Nitrate+Nitrite as N		2.01	mg/L	0.10	103	90	110			
Sample ID: C11090541-007DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_110921A			09/21/11 14:20	
Nitrogen, Nitrate+Nitrite as N		2.03	mg/L	0.10	104	90	110	1.0	10	
Sample ID: C11090541-017DMS	Sample Matrix Spike					Run: TECHNICON_110921A			09/21/11 15:05	
Nitrogen, Nitrate+Nitrite as N		18.1	mg/L	0.50	103	90	110			
Sample ID: C11090541-017DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_110921A			09/21/11 15:07	
Nitrogen, Nitrate+Nitrite as N		18.0	mg/L	0.50	102	90	110	0.6	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

C11090541

WY DEQ-WQD

Login completed by: Edith McPike
Date Received: 9/14/2011

Reviewed by: BL2000\cwagner
Received by: ckw

Reviewed Date: 9/19/2011
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Container/Temp Blank temperature:	1.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

Samples for dissolved metals were subsampled, filtered and preserved with 2 mL HNO3 in lab upon receipt to pH <2.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
WDEQ-LQD	AVC	State: WY	Yes ☑ No ☐
Report Mail Address: 510 Meadowview Dr. Lander, WY 82520	**Contact Name:** Mark Moxley **Phone/Fax:** (307)332-3047 **Email:** mark.moxley@wyo.gov		**Sampler: (Please Print)** Mark Moxley
Invoice Address: Herschler Bldg. 122 W. 25th St. Cheyenne, WY 82002	**Invoice Contact & Phone:** Steve Todson (307)777-5933	**Purchase Order:**	**Quote/Bottle Order:**

Special Report/Formats:

☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: _____
☐ State: _____ ☐ LEVEL IV
☐ Other: _____ ☐ NELAC

Number of Containers
Sample Type: A Air W Water S Soils/Solids V Vegetation B Bioassay O Other D DW - Drinking Water

ANALYSIS REQUESTED

DEQ-LQD Guideline #8
No Radionuclides
SEE ATTACHED

Standard Turnaround (TAT)

R U S H

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): 3199, 3954, 3091
Receipt Temp: 1.2 °C
On Ice: (Y) N
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact: Y N
Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX
1	MW-16	9/12/11	10:30 AM	W
2	MW-15	9/12/11	11:00 AM	W
3	Willow Spring North	9/12/11	11:30 AM	W
4	Willow Spring	9/12/11	12:15 PM	W
5	MW-7	9/12/11	1:30 PM	W
6	MW-17	9/12/11	2:00 PM	W
7	MW-6	9/12/11	3:00 PM	W
8	MW-14A	9/13/11	11:15 AM	W
9	MW-9	9/13/11	12:30 PM	W
10	MW-11	9/13/11	1:15 PM	W

LABORATORY USE ONLY
1109034

Custody Record MUST be Signed

	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
	Mark Moxley	9/14/11 4:20 PM				
	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
				Received by Laboratory:	Date/Time: 9/14/11 16:20	Signature:

Sample Disposal: Return to Client: _____ Lab Disposal: _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: WDEQ-LQD	Project Name, PWS, Permit, Etc.: ANC	Sample Origin State: WY	EPA/State Compliance: Yes ☑ No ☐
Report Mail Address: 510 Meadowview Dr. Lander WY 82520	Contact Name: Mark Moxley Phone/Fax: (307) 332-3047 Email: Mark.Moxley@wyo.gov		Sampler: (Please Print) Mark Moxley
Invoice Address: Herschler Bldg. 122 W. 25th St. Cheyenne, WY 82002	Invoice Contact & Phone: Steve Tolson (307) 777-5933	Purchase Order:	Quote/Bottle Order:

Special Report/Formats:

☐ DW ☐ EDD/EDT (Electronic Data) Format: _____
☐ POTW/WWTP ☐ LEVEL IV
☐ State: _____ ☐ NELAC
☐ Other: _____

ANALYSIS REQUESTED

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	DEQ-LQD Guideline #8	No Radionuclides	SEE ATTACHED
1 MW-13	9/13/11	2:30 PM	W			
2 MW-10	9/14/11	10:15 AM	W			
3 MW-12	9/14/11	10:45 AM	W			
4 MW-3	9/14/11	11:45 AM	W			
5 MW-2	9/14/11	12:45 PM	W			
6 MW-4	9/14/11	2:00 PM	W			
7 R-4	9/14/11	2:15 PM	W			
8						
9						
10						

Standard Turnaround (TAT)

R U S H

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s):
Receipt Temp 1.4 °C
On Ice: (Y) N
Custody Seal On Bottle Y (N) On Cooler Y N
Intact Y N
Signature Match Y N

LABORATORY USE ONLY
C11090541

Custody Record MUST be Signed

	Relinquished by (print):	Date/Time:	Signature:
	Mark Moxley	9/14/11 4:20 PM	
	Relinquished by (print):	Date/Time:	Signature:
	Received by (print):	Date/Time:	Signature:
	Received by (print):	Date/Time:	Signature:
	Received by Laboratory:	Date/Time: 9/14/11	Signature: 16:20

Sample Disposal: Return to Client: _____ Lab Disposal: _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

WDEQ Annual Report for CY 2010
ANC - Gas Hills Reclamation Project

Site Inspections:

Inspection Date	Activities
4/28/10	Repaired sprinkler system and started R-4 pump
5/4/10	Joint inspection with NRC
5/17-18/10	Well sampling
6/16/10	Routine inspection
7/26/10	Routine inspection
9/2/10	Joint inspection with NRC
10/15/10	Routine inspection
10/21/11	Well sampling
10/27/10	Well sampling, shut off R-4 pump
12/9/10	Routine inspection

Groundwater Monitoring:

Two rounds of sampling were conducted: on 5/17- 18 and again on 10/21 and 27. The locations of all wells and springs are shown on the attached map. Split samples were sent to ORISE for radiological analysis. Copies of lab reports for the May sampling were sent to NRC on 6/22/10. Copies of lab reports from the October sampling are appended to this report.

Groundwater Corrective Action:

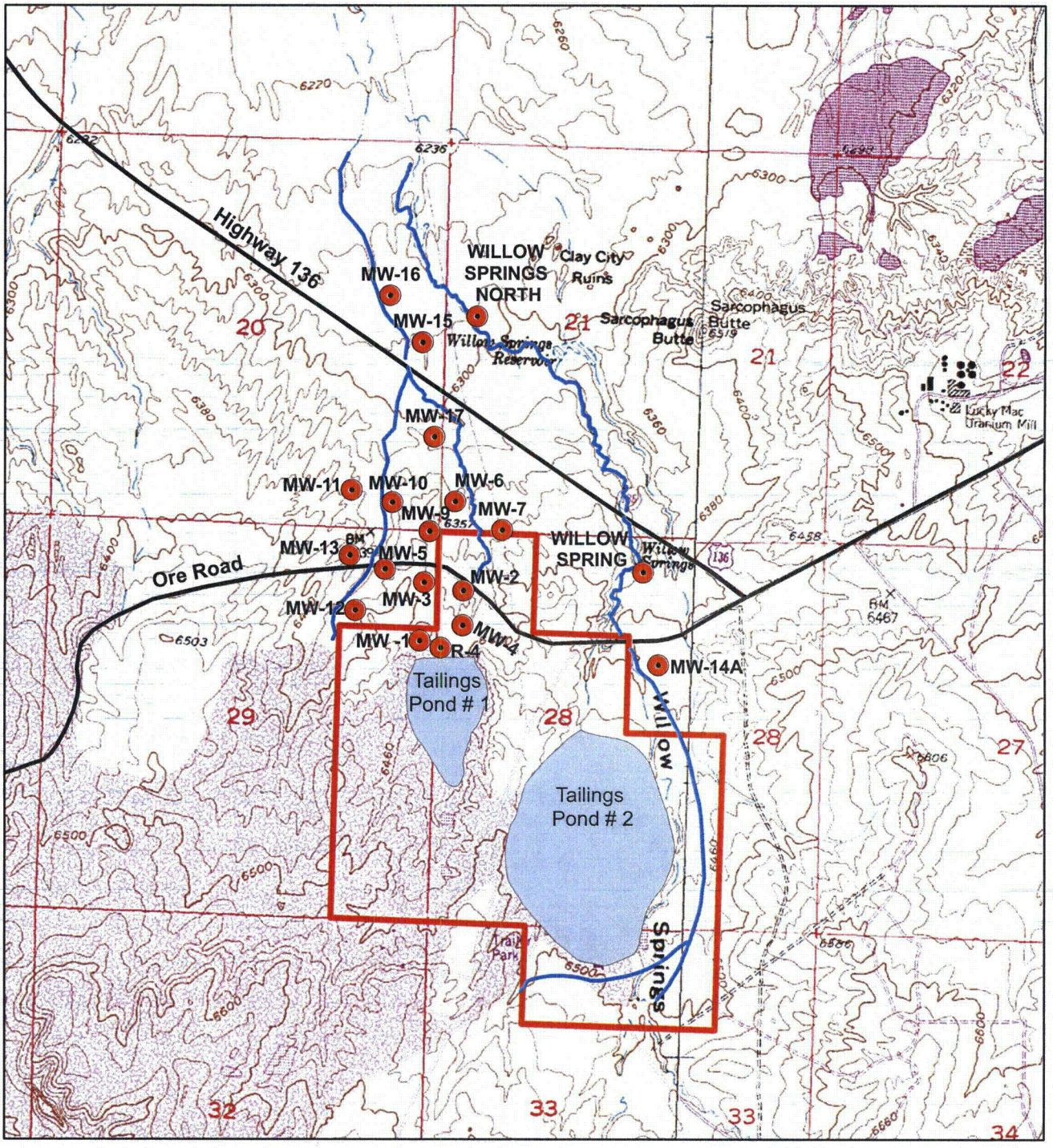
R-4 meter @ shutdown on 10/27/10	1,122,090 gallons
R-4 meter @ startup on 4/28/10	- 668,500 gallons
Total volume pumped in 2010	453,590 gallons

Pond No.1 Settlement Monument Survey:

The four settlement monuments on tailings pond no.1 were surveyed on 8/6/10. The previous survey was conducted on 10/22/08. Copies of the post 2000 survey data were sent to NRC on 1/19/11.

MM:mm

Wyoming DEQ ANC Project



Legend

- Wells
- TailingsPonds
- Drainages
- Roads
- ANC Property Boundary

Map Created by: M. Bautz & M. Moxley (307-332-3047)
Created on: August 22, 2008
Base Map: EDRG-24K, NAD 1927, Zone 13N
Site Location: T.33N, R.90W, Fremont County, Wyoming
File Name: ANC-MAP_8-22-08

DEPARTMENT OF ENVIRONMENTAL QUALITY
WYOMING

[redacted]

ORISE
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

January 25, 2011

Thomas McLaughlin, PhD
U. S. Nuclear Regulatory Commission
11545 Rockville Pike
Mail Stop: T-7E18
Rockville, Maryland 20852

SUBJECT: ORISE CONTRACT NO. DE-AC05-06OR23100
REVISED ANALYTICAL RESULTS FOR SIXTEEN WATER SAMPLES ASSOCIATED WITH AMERICAN NUCLEAR CORPORATION – GAS HILLS SITE, LANDERS, WYOMING
(INSPECTION REPORT #40-4492/2009001) [RFTA NO. 09-010]
DCN: 1794-LR-02-1

Dear Dr. McLaughlin:

The Oak Ridge Institute for Science and Education (ORISE) received sixteen water samples from Mark Moxley of the Wyoming Department of Environmental Quality on May 25, 2010. The water samples were collected at the American Nuclear Corporation (ANC) Gas Hills site in Landers, Wyoming. The analytical request included uranium (U), alpha isotopic, radium-226 (Ra-226), and radium-228 (Ra-228). The sample identifications are presented in Table 1. The uranium data are presented in Table 2, the Ra-226 results are presented in Table 3, and the Ra-228 results are presented in Table 4. The pertinent procedure references are in the data tables.

This a a revision to a letter report dated August 24, 2010. These sixteen water samples were the second set of samples received by ORISE from the ANC site. After further review of the data from this set of samples to the first and third set of samples from ANC, ORISE determined data from four of the Ra-226 samples may have been reported incorrectly. These four samples were re-processed and the corrected Ra-226 data are included in this letter report. The four samples affected include: Willow Spring North (1794W0019), MW-6 (1794W0022), MW-7 (1794W0024), and MW-10 (1794W0026).

ORISE apologizes for incorrectly reporting the Ra-226 data for these four samples. A non-conformance report (NC-2011-04) and corrective action plan were created on January 7, 2011 to ensure this type of error is minimized in the future.

ORISE's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request. The deviations to the Ra-228 procedure are documented in the task folder and are available for your review upon request.

My contact information is listed below. You may also contact Wade Ivey at 865.576.9184 with any questions or comments.

Sincerely,

Wade P. Ivey for

Dale Condra, Manager
Laboratory

RDC/WPI:fr

c: T. Carter, NRC/FSME/DWMEP T-8F5
Lifeng Guo, NRC/FSME/DWMEP T-8F5
S. Nesmith, NRC/FSME/TWFN 8D42
File 1794

electronic: S. Roberts, ORISE
T. Vitkus, ORISE

Distribution approval and concurrence:	Initials
Technical Management Team Member	ENB
Quality Manager	KB

Voice: 865.241.3242 Fax: 865.241.3248 E-mail: Dale.Condra@orau.org
P.O. Box 117 | Oak Ridge, TN 37831 | www.orise.orau.gov

TABLE 1

SAMPLE IDENTIFICATIONS AND COLLECTION DATA AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Collection Date	Collection Time
1794W0017	MW-16	5/17/10	10:00 AM
1794W0018	MW-15	5/17/10	11:00 AM
1794W0019	Willow Spring North	5/17/10	10:30 AM
1794W0020	Willow Spring	5/17/10	11:15 AM
1794W0021	MW-17	5/17/10	12:00 PM
1794W0022	MW-6	5/17/10	1:00 PM
1794W0023	MW-9	5/17/10	1:15 PM
1794W0024	MW-7	5/17/10	1:45 PM
1794W0025	MW-14A	5/18/10	9:30 AM
1794W0026	MW-10	5/18/10	9:45 AM
1794W0027	MW-11	5/18/10	11:00 AM
1794W0028	MW-13	5/18/10	12:00 PM
1794W0029	MW-12	5/18/10	1:15 PM
1794W0030	MW-2	5/18/10	2:15 PM
1794W0031	R-4	5/18/10	2:00 PM
1794W0032	MW-3	5/18/10	3:00 PM

TABLE 2

CONCENTRATIONS OF URANIUM IN WATER SAMPLES BY ALPHA SPECTROSCOPY AP11, REVISION 5; CP2, REVISION 15 AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Radionuclide Concentrations, TPUs, and MDCs (pCi/L)			
		U-234	U-235	U-238	Total U[a]	Total U in mg/L
1794W0017	MW-16	102 ± 15[b] , 1[c]	3.4 ± 1.5 , 0.5	101 ± 14 , 1	206 ± 21	0.30 ± 0.03
1794W0018	MW-15	106 ± 15 , 1	4.4 ± 1.8 , 1.0	94 ± 14 , 1	204 ± 21	0.28 ± 0.03
1794W0019	Willow Spring North	128 ± 18 , 1	6.0 ± 2.2 , 0.6	108 ± 16 , 1	242 ± 25	0.32 ± 0.03
1794W0020	Willow Spring	133 ± 19 , 0[d]	5.4 ± 2.1 , 0.5	113 ± 16 , 0	251 ± 25	0.34 ± 0.03
1794W0021	MW-17	0.24 ± 0.59 , 1.53	-0.05 ± 0.07 , 1.12	0.42 ± 0.57 , 1.07	0.61 ± 0.82	0.001 ± 0.002
1794W0022	MW-6	41.0 ± 7.2 , 1.3	0.64 ± 0.75 , 1.28	27.0 ± 5.3 , 0.8	68.6 ± 9.0	0.08 ± 0.01
1794W0023	MW-9	4.6 ± 1.8 , 0.7	-0.02 ± 0.05 , 0.90	2.8 ± 1.3 , 0.7	7.4 ± 2.2	0.008 ± 0.002
1794W0024	MW-7	312 ± 43 , 1	11.8 ± 3.3 , 0.6	223 ± 31 , 0	548 ± 53	0.67 ± 0.06
1794W0025	MW-14A	48.9 ± 7.9 , 0.9	1.7 ± 1.1 , 0.8	28.8 ± 5.3 , 0.9	79 ± 10	0.09 ± 0.01
1794W0026	MW-10	730 ± 110 , 0	26.6 ± 6.8 , 0.9	562 ± 88 , 1	1,320 ± 140	1.68 ± 0.18
1794W0027	MW-11	6.8 ± 2.1 , 0.4	0.35 ± 0.48 , 0.52	7.6 ± 2.2 , 0.4	14.7 ± 3.1	0.023 ± 0.005
1794W0028	MW-13	0.6 ± 0.6 , 0.5	-0.02 ± 0.04 , 0.87	0.41 ± 0.51 , 0.80	0.99 ± 0.78	0.001 ± 0.001
1794W0029	MW-12	2,480 ± 400 , 10	78 ± 27 , 6	1,900 ± 300 , 0	4,400 ± 500	5.60 ± 0.64
1794W0030	MW-2	3,890 ± 830 , 10	160 ± 61 , 23	3,510 ± 760 , 20	7,600 ± 1,100	10.5 ± 1.5
1794W0031	R-4	559 ± 99 , 4	26 ± 14 , 5	630 ± 110 , 10	1,220 ± 150	1.89 ± 0.23
1794W0032	MW-3	1.7 ± 1.1 , 1.2	0.17 ± 0.38 , 0.90	1.6 ± 1.0 , 1.1	3.5 ± 1.5	0.005 ± 0.002

[a]Total uranium is calculated using U-234 + U-235 + U-238.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[c]MDCs are after the commas.

[d]Zero values are due to rounding or equal counts for the sample and background.

TABLE 3

CONCENTRATIONS OF Ra-226 IN WATER SAMPLES BY ALPHA SPECTROSCOPY AP7, REVISION 19; CP2, REVISION 15 AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Ra-226 Concentrations, TPUs, and MDCs (pCi/L)
1794W0017	MW-16	0.27 ± 0.19[a] , 0.36[b]
1794W0018	MW-15	0.26 ± 0.15 , 0.06
1794W0019	Willow Spring North	0.05 ± 0.31 , 0.79
1794W0020	Willow Spring	0.75 ± 0.24 , 0.06
1794W0021	MW-17	0.59 ± 0.25 , 0.34
1794W0022	MW-6	3.07 ± 0.52 , 0.34
1794W0023	MW-9	0.86 ± 0.28 , 0.30
1794W0024	MW-7	1.85 ± 0.49 , 0.70
1794W0025	MW-14A	1.38 ± 0.34 , 0.31
1794W0026	MW-10	3.79 ± 0.56 , 0.29
1794W0027	MW-11	2.13 ± 0.42 , 0.20
1794W0028	MW-13	4.10 ± 0.58 , 0.19
1794W0029	MW-12	29.9 ± 1.7 , 0.3
1794W0030	MW-2	74.3 ± 3.1 , 0.1
1794W0031	R-4	5.51 ± 0.68 , 0.35
1794W0032	MW-3	1.88 ± 0.49 , 0.73

[a]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[b]MDCs are after the commas.

TABLE 4

CONCENTRATIONS OF Ra-228 IN WATER SAMPLES BY LOW BACKGROUND BETA COUNTING AP8, REVISION 4; CP2, REVISION 15 AMERICAN NUCLEAR CORPORATION - GAS HILLS SITE LANDERS, WYOMING

ORISE Sample ID	NRC HQ Sample ID	Ra-228 Concentrations, TPUs, and MDCs[a] (pCi/L)
1794W0017	MW-16	2.2 ± 1.8[b] , 2.9[c]
1794W0018	MW-15	2.5 ± 1.6 , 2.6
1794W0019	Willow Spring North	2.1 ± 1.8 , 3.0
1794W0020	Willow Spring	1.6 ± 1.9 , 3.3
1794W0021	MW-17	1.8 ± 1.5 , 2.5
1794W0022	MW-6	10.7 ± 2.3 , 2.9
1794W0023	MW-9	3.0 ± 2.0 , 3.2
1794W0024	MW-7	6.4 ± 2.0 , 2.8
1794W0025	MW-14A	2.2 ± 1.9 , 3.2
1794W0026	MW-10	7.6 ± 2.0 , 2.7
1794W0027	MW-11	7.8 ± 1.9 , 2.4
1794W0028	MW-13	7.4 ± 2.1 , 2.9
1794W0029	MW-12	24.4 ± 3.1 , 3.1
1794W0030	MW-2	59.5 ± 3.8 , 2.5
1794W0031	R-4	45.3 ± 3.8 , 3.0
1794W0032	MW-3	3.0 ± 2.1 , 3.4

[a]A procedure deviation was used to generate this data. The deviation is documented in the task folder.

[b]Uncertainties represent the 95% confidence level, based only on counting uncertainties.

[c]MDCs are after the commas.

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ANALYTICAL SUMMARY REPORT

December 08, 2010

WY DEQ-WQD
Hathaway Bldg 5th Fl
Cheyenne, WY 82002

Workorder No.: C10101130

Project Name: ANC

Energy Laboratories, Inc. received the following 17 samples for WY DEQ-WQD on 10/28/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C10101130-001	MW-16	10/21/10 09:45	10/28/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Conductivity Sample Filtering Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Solids, Total Dissolved
C10101130-002	Willow Spring North	10/21/10 10:20	10/28/10	Aqueous	Same As Above
C10101130-003	MW-15	10/21/10 10:30	10/28/10	Aqueous	Same As Above
C10101130-004	Willow Spring	10/21/10 10:45	10/28/10	Aqueous	Same As Above
C10101130-005	MW-17	10/21/10 11:30	10/28/10	Aqueous	Same As Above
C10101130-006	MW-9	10/21/10 12:15	10/28/10	Aqueous	Same As Above
C10101130-007	MW-6	10/21/10 12:45	10/28/10	Aqueous	Same As Above
C10101130-008	MW-7	10/21/10 13:30	10/28/10	Aqueous	Same As Above
C10101130-009	MW-11	10/21/10 14:00	10/28/10	Aqueous	Same As Above
C10101130-010	MW-13	10/21/10 14:45	10/28/10	Aqueous	Same As Above
C10101130-011	MW-14A	10/27/10 10:00	10/28/10	Aqueous	Same As Above
C10101130-012	R-4	10/27/10 10:30	10/28/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Acidity, Total as CaCO3 Alkalinity QA Calculations Conductivity Sample Filtering Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Solids, Total Dissolved

ANALYTICAL SUMMARY REPORT

C10101130-013	MW-10	10/27/10 11:20 10/28/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Conductivity Sample Filtering Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Solids, Total Dissolved
C10101130-014	MW-12	10/27/10 12:00 10/28/10	Aqueous	Same As Above
C10101130-015	MW-3	10/27/10 13:00 10/28/10	Aqueous	Same As Above
C10101130-016	MW-4	10/27/10 13:45 10/28/10	Aqueous	Same As Above
C10101130-017	MW-2	10/27/10 14:45 10/28/10	Aqueous	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By: Stephanie D. Waldrop

Stephanie D. Waldrop
Reporting Supervisor

CLIENT: WY DEQ-WQD
Project: ANC
Sample Delivery Group: C10101130

Report Date: 12/08/10

CASE NARRATIVE

PREP COMMENTS
The recommended holding time was exceeded by up to 6 days, for filtering of Dissolved Metals.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-001
Client Sample ID: MW-16

Report Date: 12/08/10
Collection Date: 10/21/10 09:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	285	mg/L		5		A2320 B	10/29/10 21:05 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:05 / jba
Bicarbonate as HCO3	348	mg/L		5		A2320 B	10/29/10 21:05 / jba
Calcium	403	mg/L		1		E200.7	11/02/10 13:46 / cp
Chloride	81	mg/L	D	2		E300.0	11/05/10 04:30 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	11/02/10 09:19 / jba
Magnesium	80	mg/L		1		E200.7	11/02/10 13:46 / cp
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	11/08/10 14:27 / dc
Nitrogen, Nitrate+Nitrite as N	6.6	mg/L	D	0.5		E353.2	11/10/10 12:09 / dc
Potassium	32	mg/L		1		E200.7	11/02/10 13:46 / cp
Silica	48.5	mg/L		0.2		E200.7	11/02/10 13:46 / cp
Sodium	183	mg/L		1		E200.7	11/02/10 13:46 / cp
Sulfate	1380	mg/L	D	8		E300.0	11/05/10 04:30 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2860	umhos/cm		1		A2510 B	11/01/10 09:10 / lr
pH	7.71	s.u.	H	0.01		A4500-H B	11/01/10 09:10 / lr
Solids, Total Dissolved TDS @ 180 C	2450	mg/L	H	10		A2540 C	11/01/10 17:10 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 13:46 / cp
Arsenic	0.009	mg/L		0.001		E200.8	11/03/10 01:59 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 13:46 / cp
Boron	0.1	mg/L		0.1		E200.7	11/02/10 13:46 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 01:59 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 13:46 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 13:46 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 13:46 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 01:59 / sml
Manganese	ND	mg/L		0.01		E200.7	11/02/10 13:46 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 01:59 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 13:46 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 13:46 / cp
Selenium	0.002	mg/L		0.001		E200.8	11/03/10 01:59 / sml
Uranium	0.317	mg/L		0.0003		E200.8	11/03/10 01:59 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 01:59 / sml
Zinc	0.02	mg/L		0.01		E200.7	11/02/10 13:46 / cp
METALS - TOTAL							
Iron	0.35	mg/L		0.03		E200.7	11/08/10 23:20 / cp
Manganese	ND	mg/L		0.01		E200.8	11/06/10 01:09 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-001
Client Sample ID: MW-16

Report Date: 12/08/10
Collection Date: 10/21/10 09:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.44	%				Calculation	11/13/10 11:08 / kbh
Anions	37.3	meq/L				Calculation	11/13/10 11:08 / kbh
Cations	35.5	meq/L				Calculation	11/13/10 11:08 / kbh
Solids, Total Dissolved Calculated	2420	mg/L				Calculation	11/13/10 11:08 / kbh
TDS Balance (0.80 - 1.20)	1.01					Calculation	11/13/10 11:08 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-002
Client Sample ID: Willow Spring North

Report Date: 12/08/10
Collection Date: 10/21/10 10:20
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	296	mg/L		5		A2320 B	10/29/10 21:13 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:13 / jba
Bicarbonate as HCO3	361	mg/L		5		A2320 B	10/29/10 21:13 / jba
Calcium	350	mg/L		1		E200.7	11/02/10 13:50 / cp
Chloride	74	mg/L	D	2		E300.0	11/05/10 04:46 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	11/02/10 09:24 / jba
Magnesium	81	mg/L		1		E200.7	11/02/10 13:50 / cp
Nitrogen, Ammonia as N	1.02	mg/L		0.05		A4500-NH3 G	11/08/10 14:29 / dc
Nitrogen, Nitrate+Nitrite as N	9	mg/L	D	1		E353.2	11/10/10 12:11 / dc
Potassium	31	mg/L		1		E200.7	11/02/10 13:50 / cp
Silica	34.5	mg/L		0.2		E200.7	11/02/10 13:50 / cp
Sodium	175	mg/L		1		E200.7	11/02/10 13:50 / cp
Sulfate	1260	mg/L	D	8		E300.0	11/05/10 04:46 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2710	umhos/cm		1		A2510 B	11/01/10 09:13 / lr
pH	7.63	s.u.	H	0.01		A4500-H B	11/01/10 09:13 / lr
Solids, Total Dissolved TDS @ 180 C	2270	mg/L	H	10		A2540 C	11/01/10 17:10 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 13:50 / cp
Arsenic	0.011	mg/L		0.001		E200.8	11/03/10 02:06 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 13:50 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 13:50 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 02:06 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 13:50 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 13:50 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 13:50 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:06 / sml
Manganese	ND	mg/L		0.01		E200.7	11/02/10 13:50 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:06 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 13:50 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 13:50 / cp
Selenium	0.001	mg/L		0.001		E200.8	11/03/10 02:06 / sml
Uranium	0.308	mg/L		0.0003		E200.8	11/03/10 02:06 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 02:06 / sml
Zinc	0.03	mg/L		0.01		E200.7	11/02/10 13:50 / cp
METALS - TOTAL							
Iron	0.11	mg/L		0.03		E200.7	11/08/10 23:24 / cp
Manganese	0.02	mg/L		0.01		E200.8	11/06/10 01:15 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-002
Client Sample ID: Willow Spring North

Report Date: 12/08/10
Collection Date: 10/21/10 10:20
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.45	%				Calculation	11/13/10 11:09 / kbh
Anions	34.9	meq/L				Calculation	11/13/10 11:09 / kbh
Cations	32.6	meq/L				Calculation	11/13/10 11:09 / kbh
Solids, Total Dissolved Calculated	2230	mg/L				Calculation	11/13/10 11:09 / kbh
TDS Balance (0.80 - 1.20)	1.02					Calculation	11/13/10 11:09 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-003
Client Sample ID: MW-15

Report Date: 12/08/10
Collection Date: 10/21/10 10:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	287	mg/L		5		A2320 B	10/29/10 21:21 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:21 / jba
Bicarbonate as HCO3	350	mg/L		5		A2320 B	10/29/10 21:21 / jba
Calcium	442	mg/L		1		E200.7	11/02/10 13:54 / cp
Chloride	92	mg/L	D	2		E300.0	11/05/10 05:03 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	11/02/10 09:27 / jba
Magnesium	93	mg/L		1		E200.7	11/02/10 13:54 / cp
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	11/08/10 14:31 / dc
Nitrogen, Nitrate+Nitrite as N	8.3	mg/L	D	0.5		E353.2	11/10/10 12:14 / dc
Potassium	36	mg/L		1		E200.7	11/02/10 13:54 / cp
Silica	55.5	mg/L		0.2		E200.7	11/02/10 13:54 / cp
Sodium	205	mg/L		1		E200.7	11/02/10 13:54 / cp
Sulfate	1540	mg/L	D	8		E300.0	11/05/10 05:03 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3110	umhos/cm		1		A2510 B	11/01/10 09:16 / lr
pH	7.63	s.u.	H	0.01		A4500-H B	11/01/10 09:16 / lr
Solids, Total Dissolved TDS @ 180 C	2730	mg/L	H	10		A2540 C	11/01/10 17:10 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 13:54 / cp
Arsenic	0.009	mg/L		0.001		E200.8	11/03/10 02:12 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 13:54 / cp
Boron	0.1	mg/L		0.1		E200.7	11/02/10 13:54 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 02:12 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 13:54 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 13:54 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 13:54 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:12 / sml
Manganese	ND	mg/L		0.01		E200.7	11/02/10 13:54 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:12 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 13:54 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 13:54 / cp
Selenium	0.001	mg/L		0.001		E200.8	11/03/10 02:12 / sml
Uranium	0.324	mg/L		0.0003		E200.8	11/03/10 02:12 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 02:12 / sml
Zinc	0.03	mg/L		0.01		E200.7	11/02/10 13:54 / cp
METALS - TOTAL							
Iron	ND	mg/L		0.03		E200.7	11/08/10 23:28 / cp
Manganese	ND	mg/L		0.01		E200.8	11/06/10 01:49 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-003
Client Sample ID: MW-15

Report Date: 12/08/10
Collection Date: 10/21/10 10:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.97	%				Calculation	11/13/10 11:09 / kbh
Anions	41.1	meq/L				Calculation	11/13/10 11:09 / kbh
Cations	39.5	meq/L				Calculation	11/13/10 11:09 / kbh
Solids, Total Dissolved Calculated	2690	mg/L				Calculation	11/13/10 11:09 / kbh
TDS Balance (0.80 - 1.20)	1.01					Calculation	11/13/10 11:09 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-004
Client Sample ID: Willow Spring

Report Date: 12/08/10
Collection Date: 10/21/10 10:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	425	mg/L		5		A2320 B	10/29/10 21:30 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:30 / jba
Bicarbonate as HCO3	518	mg/L		5		A2320 B	10/29/10 21:30 / jba
Calcium	350	mg/L		1		E200.7	11/02/10 14:19 / cp
Chloride	73	mg/L	D	2		E300.0	11/05/10 05:19 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 09:30 / jba
Magnesium	91	mg/L		1		E200.7	11/02/10 14:19 / cp
Nitrogen, Ammonia as N	17.9	mg/L	D	0.5		A4500-NH3 G	11/15/10 12:28 / dc
Nitrogen, Nitrate+Nitrite as N	0.8	mg/L		0.1		E353.2	11/10/10 12:24 / dc
Potassium	31	mg/L		1		E200.7	11/02/10 14:19 / cp
Silica	34.7	mg/L		0.2		E200.7	11/02/10 14:19 / cp
Sodium	169	mg/L		1		E200.7	11/02/10 14:19 / cp
Sulfate	1240	mg/L	D	8		E300.0	11/05/10 05:19 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2810	umhos/cm		1		A2510 B	11/01/10 09:22 / lr
pH	7.85	s.u.	H	0.01		A4500-H B	11/01/10 09:22 / lr
Solids, Total Dissolved TDS @ 180 C	2320	mg/L	H	10		A2540 C	11/01/10 17:10 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:19 / cp
Arsenic	0.007	mg/L		0.001		E200.8	11/03/10 02:19 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:19 / cp
Boron	0.2	mg/L		0.1		E200.7	11/02/10 14:19 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 02:19 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:19 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:19 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:19 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:19 / sml
Manganese	2.63	mg/L		0.01		E200.7	11/02/10 14:19 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:19 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:19 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:19 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 02:19 / sml
Uranium	0.295	mg/L		0.0003		E200.8	11/03/10 02:19 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 02:19 / sml
Zinc	0.03	mg/L		0.01		E200.7	11/02/10 14:19 / cp
METALS - TOTAL							
Iron	0.26	mg/L		0.03		E200.7	11/08/10 23:32 / cp
Manganese	2.90	mg/L		0.01		E200.8	11/06/10 01:56 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-004
Client Sample ID: Willow Spring

Report Date: 12/08/10
Collection Date: 10/21/10 10:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.58	%				Calculation	11/13/10 11:09 / kbh
Anions	36.3	meq/L				Calculation	11/13/10 11:09 / kbh
Cations	33.2	meq/L				Calculation	11/13/10 11:09 / kbh
Solids, Total Dissolved Calculated	2250	mg/L				Calculation	11/13/10 11:09 / kbh
TDS Balance (0.80 - 1.20)	1.03					Calculation	11/13/10 11:09 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-005
Client Sample ID: MW-17

Report Date: 12/08/10
Collection Date: 10/21/10 11:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	240	mg/L		5		A2320 B	10/29/10 21:38 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:38 / jba
Bicarbonate as HCO3	293	mg/L		5		A2320 B	10/29/10 21:38 / jba
Calcium	106	mg/L		1		E200.7	11/29/10 15:13 / cp
Chloride	10	mg/L		1		E300.0	11/05/10 11:11 / ljl
Fluoride	0.5	mg/L		0.1		A4500-F C	11/02/10 09:37 / jba
Magnesium	26	mg/L		1		E200.7	11/29/10 15:13 / cp
Nitrogen, Ammonia as N	0.56	mg/L		0.05		A4500-NH3 G	11/08/10 14:41 / dc
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	11/10/10 12:26 / dc
Potassium	14	mg/L		1		E200.7	11/29/10 15:13 / cp
Silica	15.5	mg/L		0.2		E200.7	11/02/10 14:27 / cp
Sodium	168	mg/L		1		E200.7	11/29/10 15:13 / cp
Sulfate	556	mg/L	D	4		E300.0	11/05/10 11:11 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1500	umhos/cm		1		A2510 B	11/01/10 09:24 / lr
pH	7.71	s.u.	H	0.01		A4500-H B	11/01/10 09:24 / lr
Solids, Total Dissolved TDS @ 180 C	1060	mg/L	H	10		A2540 C	11/01/10 17:11 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:27 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 02:26 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:27 / cp
Boron	0.2	mg/L		0.1		E200.7	11/02/10 14:27 / cp
Cadmium	ND	mg/L		0.005		E200.7	11/02/10 14:27 / cp
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:27 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:27 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:27 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:26 / sml
Manganese	0.15	mg/L		0.01		E200.7	11/02/10 14:27 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:26 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:27 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:27 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 02:26 / sml
Uranium	0.0005	mg/L		0.0003		E200.8	11/03/10 02:26 / sml
Vanadium	ND	mg/L		0.1		E200.7	11/02/10 14:27 / cp
Zinc	ND	mg/L		0.01		E200.7	11/02/10 14:27 / cp
METALS - TOTAL							
Iron	0.58	mg/L		0.03		E200.7	11/08/10 23:36 / cp
Manganese	0.15	mg/L		0.01		E200.8	11/06/10 02:03 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-005
Client Sample ID: MW-17

Report Date: 12/08/10
Collection Date: 10/21/10 11:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.98	%				Calculation	12/01/10 07:57 / kbh
Anions	16.7	meq/L				Calculation	12/01/10 07:57 / kbh
Cations	15.1	meq/L				Calculation	12/01/10 07:57 / kbh
Solids, Total Dissolved Calculated	1050	mg/L				Calculation	12/01/10 07:57 / kbh
TDS Balance (0.80 - 1.20)	1.01					Calculation	12/01/10 07:57 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-006
Client Sample ID: MW-9

Report Date: 12/08/10
Collection Date: 10/21/10 12:15
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	223	mg/L		5		A2320 B	10/29/10 21:49 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:49 / jba
Bicarbonate as HCO3	272	mg/L		5		A2320 B	10/29/10 21:49 / jba
Calcium	204	mg/L		1		E200.7	11/02/10 14:31 / cp
Chloride	14	mg/L		1		E300.0	11/05/10 12:01 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	11/02/10 09:46 / jba
Magnesium	55	mg/L		1		E200.7	11/02/10 14:31 / cp
Nitrogen, Ammonia as N	0.27	mg/L		0.05		A4500-NH3 G	11/08/10 14:43 / dc
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	11/10/10 12:29 / dc
Potassium	19	mg/L		1		E200.7	11/02/10 14:31 / cp
Silica	13.7	mg/L		0.2		E200.7	11/02/10 14:31 / cp
Sodium	82	mg/L		1		E200.7	11/02/10 14:31 / cp
Sulfate	727	mg/L	D	4		E300.0	11/05/10 12:01 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1660	umhos/cm		1		A2510 B	11/01/10 09:26 / lr
pH	7.59	s.u.	H	0.01		A4500-H B	11/01/10 09:26 / lr
Solids, Total Dissolved TDS @ 180 C	1300	mg/L	H	10		A2540 C	11/01/10 17:11 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:31 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 02:33 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:31 / cp
Boron	0.2	mg/L		0.1		E200.8	11/03/10 02:33 / sml
Cadmium	ND	mg/L		0.005		E200.7	11/02/10 14:31 / cp
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:31 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:31 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:31 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:33 / sml
Manganese	0.07	mg/L		0.01		E200.7	11/02/10 14:31 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:33 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:31 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:31 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 02:33 / sml
Uranium	0.0042	mg/L		0.0003		E200.8	11/03/10 02:33 / sml
Vanadium	ND	mg/L		0.1		E200.7	11/02/10 14:31 / cp
Zinc	0.01	mg/L		0.01		E200.7	11/02/10 14:31 / cp
METALS - TOTAL							
Iron	8.67	mg/L		0.03		E200.7	11/08/10 23:40 / cp
Manganese	0.10	mg/L		0.01		E200.8	11/06/10 02:10 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-006
Client Sample ID: MW-9

Report Date: 12/08/10
Collection Date: 10/21/10 12:15
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.11	%				Calculation	11/13/10 11:10 / kbh
Anions	20.0	meq/L				Calculation	11/13/10 11:10 / kbh
Cations	18.8	meq/L				Calculation	11/13/10 11:10 / kbh
Solids, Total Dissolved Calculated	1250	mg/L				Calculation	11/13/10 11:10 / kbh
TDS Balance (0.80 - 1.20)	1.04					Calculation	11/13/10 11:10 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-007
Client Sample ID: MW-6

Report Date: 12/08/10
Collection Date: 10/21/10 12:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	598	mg/L		5		A2320 B	10/29/10 21:58 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 21:58 / jba
Bicarbonate as HCO3	730	mg/L		5		A2320 B	10/29/10 21:58 / jba
Calcium	510	mg/L		1		E200.7	11/02/10 14:35 / cp
Chloride	135	mg/L	D	2		E300.0	11/05/10 12:17 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	11/02/10 09:49 / jba
Magnesium	90	mg/L		1		E200.7	11/02/10 14:35 / cp
Nitrogen, Ammonia as N	0.20	mg/L		0.05		A4500-NH3 G	11/08/10 14:45 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 12:31 / dc
Potassium	24	mg/L		1		E200.7	11/02/10 14:35 / cp
Silica	21.5	mg/L		0.2		E200.7	11/02/10 14:35 / cp
Sodium	262	mg/L		1		E200.7	11/02/10 14:35 / cp
Sulfate	1540	mg/L	D	8		E300.0	11/05/10 12:17 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3470	umhos/cm		1		A2510 B	11/01/10 09:36 / lr
pH	7.51	s.u.	H	0.01		A4500-H B	11/01/10 09:36 / lr
Solids, Total Dissolved TDS @ 180 C	3010	mg/L	H	10		A2540 C	11/01/10 17:11 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:35 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 02:40 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:35 / cp
Boron	0.2	mg/L		0.1		E200.7	11/02/10 14:35 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 02:40 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:35 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:35 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:35 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 02:40 / sml
Manganese	0.63	mg/L		0.01		E200.7	11/02/10 14:35 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 02:40 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:35 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:35 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 02:40 / sml
Uranium	0.0722	mg/L		0.0003		E200.8	11/03/10 02:40 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 02:40 / sml
Zinc	0.02	mg/L		0.01		E200.7	11/02/10 14:35 / cp
METALS - TOTAL							
Iron	1.41	mg/L		0.03		E200.7	11/08/10 23:45 / cp
Manganese	0.65	mg/L		0.01		E200.8	11/06/10 02:16 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-007
Client Sample ID: MW-6

Report Date: 12/08/10
Collection Date: 10/21/10 12:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.10	%				Calculation	11/13/10 11:10 / kbh
Anions	47.8	meq/L				Calculation	11/13/10 11:10 / kbh
Cations	44.9	meq/L				Calculation	11/13/10 11:10 / kbh
Solids, Total Dissolved Calculated	2950	mg/L				Calculation	11/13/10 11:10 / kbh
TDS Balance (0.80 - 1.20)	1.02					Calculation	11/13/10 11:10 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-008
Client Sample ID: MW-7

Report Date: 12/08/10
Collection Date: 10/21/10 13:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	343	mg/L		5		A2320 B	10/29/10 22:06 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:06 / jba
Bicarbonate as HCO3	418	mg/L		5		A2320 B	10/29/10 22:06 / jba
Calcium	452	mg/L		1		E200.7	11/02/10 14:39 / cp
Chloride	37	mg/L	D	2		E300.0	11/05/10 12:34 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 09:51 / jba
Magnesium	143	mg/L		1		E200.7	11/02/10 14:39 / cp
Nitrogen, Ammonia as N	49	mg/L	D	1		A4500-NH3 G	11/08/10 15:59 / dc
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	11/10/10 12:34 / dc
Potassium	44	mg/L		1		E200.7	11/02/10 14:39 / cp
Silica	18.9	mg/L		0.2		E200.7	11/02/10 14:39 / cp
Sodium	141	mg/L		1		E200.7	11/02/10 14:39 / cp
Sulfate	1940	mg/L	D	8		E300.0	11/05/10 12:34 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3550	umhos/cm		1		A2510 B	11/01/10 09:37 / lr
pH	6.93	s.u.	H	0.01		A4500-H B	11/01/10 09:37 / lr
Solids, Total Dissolved TDS @ 180 C	3030	mg/L	H	10		A2540 C	11/01/10 17:11 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:39 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 03:14 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:39 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 14:39 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 03:14 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:39 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:39 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:39 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 03:14 / sml
Manganese	5.79	mg/L		0.01		E200.7	11/02/10 14:39 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 03:14 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:39 / cp
Nickel	0.05	mg/L		0.05		E200.7	11/02/10 14:39 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 03:14 / sml
Uranium	0.740	mg/L		0.0003		E200.8	11/03/10 03:14 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 03:14 / sml
Zinc	0.02	mg/L		0.01		E200.7	11/02/10 14:39 / cp
METALS - TOTAL							
Iron	1.82	mg/L		0.03		E200.7	11/08/10 23:49 / cp
Manganese	6.19	mg/L		0.01		E200.7	11/08/10 23:49 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-008
Client Sample ID: MW-7

Report Date: 12/08/10
Collection Date: 10/21/10 13:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.53	%				Calculation	11/13/10 11:11 / kbh
Anions	48.3	meq/L				Calculation	11/13/10 11:11 / kbh
Cations	45.0	meq/L				Calculation	11/13/10 11:11 / kbh
Solids, Total Dissolved Calculated	2990	mg/L				Calculation	11/13/10 11:11 / kbh
TDS Balance (0.80 - 1.20)	1.01					Calculation	11/13/10 11:11 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-009
Client Sample ID: MW-11

Report Date: 12/08/10
Collection Date: 10/21/10 14:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	241	mg/L		5		A2320 B	10/29/10 22:14 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:14 / jba
Bicarbonate as HCO3	294	mg/L		5		A2320 B	10/29/10 22:14 / jba
Calcium	423	mg/L		1		E200.7	11/02/10 14:43 / cp
Chloride	132	mg/L		1		E300.0	11/05/10 12:50 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 09:54 / jba
Magnesium	65	mg/L		1		E200.7	11/02/10 14:43 / cp
Nitrogen, Ammonia as N	0.07	mg/L		0.05		A4500-NH3 G	11/08/10 15:29 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 12:41 / dc
Potassium	18	mg/L		1		E200.7	11/02/10 14:43 / cp
Silica	21.8	mg/L		0.2		E200.7	11/02/10 14:43 / cp
Sodium	78	mg/L		1		E200.7	11/02/10 14:43 / cp
Sulfate	1150	mg/L	D	8		E300.0	11/09/10 04:32 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2490	umhos/cm		1		A2510 B	11/01/10 09:41 / lr
pH	7.55	s.u.	H	0.01		A4500-H B	11/01/10 09:41 / lr
Solids, Total Dissolved TDS @ 180 C	2210	mg/L	H	10		A2540 C	11/01/10 17:12 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:43 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 03:21 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:43 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 14:43 / cp
Cadmium	ND	mg/L		0.005		E200.7	11/02/10 14:43 / cp
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:43 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:43 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:43 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 03:21 / sml
Manganese	0.45	mg/L		0.01		E200.7	11/02/10 14:43 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 03:21 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:43 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:43 / cp
Selenium	0.002	mg/L		0.001		E200.8	11/03/10 03:21 / sml
Uranium	0.0214	mg/L		0.0003		E200.8	11/03/10 03:21 / sml
Vanadium	ND	mg/L		0.1		E200.7	11/02/10 14:43 / cp
Zinc	0.01	mg/L		0.01		E200.7	11/02/10 14:43 / cp
METALS - TOTAL							
Iron	1.72	mg/L		0.03		E200.7	11/09/10 00:05 / cp
Manganese	0.44	mg/L		0.01		E200.8	11/06/10 02:30 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-009
Client Sample ID: MW-11

Report Date: 12/08/10
Collection Date: 10/21/10 14:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.65	%				Calculation	11/13/10 11:11 / kbh
Anions	32.6	meq/L				Calculation	11/13/10 11:11 / kbh
Cations	30.3	meq/L				Calculation	11/13/10 11:11 / kbh
Solids, Total Dissolved Calculated	2040	mg/L				Calculation	11/13/10 11:11 / kbh
TDS Balance (0.80 - 1.20)	1.08					Calculation	11/13/10 11:11 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-010
Client Sample ID: MW-13

Report Date: 12/08/10
Collection Date: 10/21/10 14:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	271	mg/L		5		A2320 B	10/29/10 22:22 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:22 / jba
Bicarbonate as HCO3	330	mg/L		5		A2320 B	10/29/10 22:22 / jba
Calcium	449	mg/L		1		E200.7	11/02/10 14:47 / cp
Chloride	110	mg/L	D	2		E300.0	11/05/10 13:06 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 09:57 / jba
Magnesium	72	mg/L		1		E200.7	11/02/10 14:47 / cp
Nitrogen, Ammonia as N	0.11	mg/L		0.05		A4500-NH3 G	11/08/10 15:31 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 12:44 / dc
Potassium	19	mg/L		1		E200.7	11/02/10 14:47 / cp
Silica	25.1	mg/L		0.2		E200.7	11/02/10 14:47 / cp
Sodium	81	mg/L		1		E200.7	11/02/10 14:47 / cp
Sulfate	1300	mg/L	D	8		E300.0	11/05/10 13:06 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	2640	umhos/cm		1		A2510 B	11/01/10 09:47 / lr
pH	7.47	s.u.	H	0.01		A4500-H B	11/01/10 09:47 / lr
Solids, Total Dissolved TDS @ 180 C	2360	mg/L	H	10		A2540 C	11/01/10 17:12 / lr
- The sample was received past the EPA-recommended holding time for pH and TDS.							
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:47 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 03:48 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:47 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 14:47 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 03:48 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:47 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:47 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:47 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 03:48 / sml
Manganese	0.64	mg/L		0.01		E200.7	11/02/10 14:47 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 03:48 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:47 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:47 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 03:48 / sml
Uranium	0.0006	mg/L		0.0003		E200.8	11/03/10 03:48 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 03:48 / sml
Zinc	0.02	mg/L		0.01		E200.7	11/02/10 14:47 / cp
METALS - TOTAL							
Iron	0.62	mg/L		0.03		E200.7	11/09/10 00:09 / cp
Manganese	0.65	mg/L		0.01		E200.8	11/06/10 02:37 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-010
Client Sample ID: MW-13

Report Date: 12/08/10
Collection Date: 10/21/10 14:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.70	%				Calculation	11/13/10 11:12 / kbh
Anions	35.5	meq/L				Calculation	11/13/10 11:12 / kbh
Cations	32.3	meq/L				Calculation	11/13/10 11:12 / kbh
Solids, Total Dissolved Calculated	2220	mg/L				Calculation	11/13/10 11:12 / kbh
TDS Balance (0.80 - 1.20)	1.06					Calculation	11/13/10 11:12 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-011
Client Sample ID: MW-14A

Report Date: 12/08/10
Collection Date: 10/27/10 10:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	269	mg/L		5		A2320 B	10/29/10 22:30 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:30 / jba
Bicarbonate as HCO3	328	mg/L		5		A2320 B	10/29/10 22:30 / jba
Calcium	195	mg/L		1		E200.7	11/02/10 14:51 / cp
Chloride	19	mg/L		1		E300.0	11/05/10 13:23 / ljl
Fluoride	0.4	mg/L		0.1		A4500-F C	11/02/10 10:10 / jba
Magnesium	37	mg/L		1		E200.7	11/02/10 14:51 / cp
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	11/08/10 15:33 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 12:46 / dc
Potassium	19	mg/L		1		E200.7	11/02/10 14:51 / cp
Silica	24.6	mg/L		0.2		E200.7	11/02/10 14:51 / cp
Sodium	100	mg/L		1		E200.7	11/02/10 14:51 / cp
Sulfate	618	mg/L	D	4		E300.0	11/05/10 13:23 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1570	umhos/cm		1		A2510 B	11/01/10 09:49 / lr
pH	7.46	s.u.		0.01		A4500-H B	11/01/10 09:49 / lr
Solids, Total Dissolved TDS @ 180 C	1230	mg/L		10		A2540 C	11/01/10 17:12 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 14:51 / cp
Arsenic	0.003	mg/L		0.001		E200.8	11/03/10 03:55 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:51 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 14:51 / cp
Cadmium	ND	mg/L		0.005		E200.7	11/02/10 14:51 / cp
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:51 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 14:51 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 14:51 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 03:55 / sml
Manganese	0.15	mg/L		0.01		E200.7	11/02/10 14:51 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 03:55 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:51 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 14:51 / cp
Selenium	0.004	mg/L		0.001		E200.8	11/03/10 03:55 / sml
Uranium	0.117	mg/L		0.0003		E200.8	11/03/10 03:55 / sml
Vanadium	ND	mg/L		0.1		E200.7	11/02/10 14:51 / cp
Zinc	0.02	mg/L		0.01		E200.7	11/02/10 14:51 / cp
METALS - TOTAL							
Iron	2.83	mg/L		0.03		E200.7	11/09/10 00:13 / cp
Manganese	0.27	mg/L		0.01		E200.8	11/06/10 02:43 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-011
Client Sample ID: MW-14A

Report Date: 12/08/10
Collection Date: 10/27/10 10:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.26	%				Calculation	11/13/10 11:12 / kbh
Anions	18.8	meq/L				Calculation	11/13/10 11:12 / kbh
Cations	17.6	meq/L				Calculation	11/13/10 11:12 / kbh
Solids, Total Dissolved Calculated	1180	mg/L				Calculation	11/13/10 11:12 / kbh
TDS Balance (0.80 - 1.20)	1.04					Calculation	11/13/10 11:12 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-012
Client Sample ID: R-4

Report Date: 12/08/10
Collection Date: 10/27/10 10:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	800	mg/L		5		A2310 B	11/02/10 15:16 / jba
Alkalinity, Total as CaCO3	ND	mg/L		5		A2320 B	10/29/10 22:33 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:33 / jba
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/29/10 22:33 / jba
Calcium	391	mg/L	D	2		E200.7	11/02/10 14:55 / cp
Chloride	223	mg/L	D	10		E300.0	11/05/10 13:39 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 10:17 / jba
Magnesium	292	mg/L		1		E200.7	11/02/10 14:55 / cp
Nitrogen, Ammonia as N	314	mg/L	D	5		A4500-NH3 G	11/08/10 16:01 / dc
Nitrogen, Nitrate+Nitrite as N	9	mg/L	D	1		E353.2	11/10/10 12:49 / dc
Potassium	13	mg/L		1		E200.7	11/02/10 14:55 / cp
Silica	84.0	mg/L		0.2		E200.7	11/02/10 14:55 / cp
Sodium	333	mg/L	D	3		E200.7	11/02/10 14:55 / cp
Sulfate	4610	mg/L	D	40		E300.0	11/05/10 13:39 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	7310	umhos/cm		1		A2510 B	11/01/10 09:51 / lr
pH	4.09	s.u.		0.01		A4500-H B	11/01/10 09:51 / lr
Solids, Total Dissolved TDS @ 180 C	5150	mg/L	D	20		A2540 C	11/01/10 17:13 / lr
METALS - DISSOLVED							
Aluminum	88.4	mg/L		0.1		E200.7	11/02/10 14:55 / cp
Arsenic	0.014	mg/L		0.001		E200.8	11/03/10 04:02 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 14:55 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 14:55 / cp
Cadmium	0.057	mg/L		0.005		E200.8	11/03/10 04:02 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 14:55 / cp
Copper	0.21	mg/L		0.01		E200.8	11/03/10 04:02 / sml
Iron	62.9	mg/L		0.03		E200.7	11/02/10 14:55 / cp
Lead	0.044	mg/L		0.001		E200.8	11/03/10 04:02 / sml
Manganese	28.7	mg/L		0.01		E200.7	11/02/10 14:55 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 04:02 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 14:55 / cp
Nickel	1.74	mg/L		0.05		E200.7	11/02/10 14:55 / cp
Selenium	0.107	mg/L		0.001		E200.8	11/03/10 04:02 / sml
Uranium	1.85	mg/L		0.0003		E200.8	11/03/10 04:02 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 04:02 / sml
Zinc	1.77	mg/L		0.01		E200.7	11/02/10 14:55 / cp
METALS - TOTAL							
Iron	66.2	mg/L	D	0.04		E200.7	11/09/10 00:17 / cp
Manganese	30.2	mg/L		0.01		E200.7	11/09/10 00:17 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-012
Client Sample ID: R-4

Report Date: 12/08/10
Collection Date: 10/27/10 10:30
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.09	%				Calculation	11/13/10 11:12 / kbh
Anions	103	meq/L				Calculation	11/13/10 11:12 / kbh
Cations	96.7	meq/L				Calculation	11/13/10 11:12 / kbh
Solids, Total Dissolved Calculated	6010	mg/L				Calculation	11/13/10 11:12 / kbh
TDS Balance (0.80 - 1.20)	0.860					Calculation	11/13/10 11:12 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-013
Client Sample ID: MW-10

Report Date: 12/08/10
Collection Date: 10/27/10 11:20
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	643	mg/L		5		A2320 B	10/29/10 22:51 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:51 / jba
Bicarbonate as HCO3	785	mg/L		5		A2320 B	10/29/10 22:51 / jba
Calcium	542	mg/L		1		E200.7	11/02/10 15:11 / cp
Chloride	243	mg/L	D	4		E300.0	11/05/10 13:56 / ljl
Fluoride	0.1	mg/L		0.1		A4500-F C	11/02/10 10:22 / jba
Magnesium	206	mg/L		1		E200.7	11/02/10 15:11 / cp
Nitrogen, Ammonia as N	64	mg/L	D	1		A4500-NH3 G	11/08/10 15:45 / dc
Nitrogen, Nitrate+Nitrite as N	14	mg/L	D	1		E353.2	11/10/10 12:51 / dc
Potassium	39	mg/L		1		E200.7	11/02/10 15:11 / cp
Silica	33.8	mg/L		0.2		E200.7	11/02/10 15:11 / cp
Sodium	318	mg/L		1		E200.7	11/02/10 15:11 / cp
Sulfate	2190	mg/L	D	20		E300.0	11/05/10 13:56 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	4960	umhos/cm		1		A2510 B	11/01/10 09:53 / lr
pH	6.67	s.u.		0.01		A4500-H B	11/01/10 09:53 / lr
Solids, Total Dissolved TDS @ 180 C	4270	mg/L	D	12		A2540 C	11/01/10 17:13 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 15:11 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 04:09 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 15:11 / cp
Boron	0.2	mg/L		0.1		E200.7	11/02/10 15:11 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 04:09 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 15:11 / cp
Copper	0.01	mg/L		0.01		E200.7	11/02/10 15:11 / cp
Iron	0.05	mg/L		0.03		E200.7	11/02/10 15:11 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 04:09 / sml
Manganese	7.00	mg/L		0.01		E200.7	11/02/10 15:11 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 04:09 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 15:11 / cp
Nickel	0.21	mg/L		0.05		E200.7	11/02/10 15:11 / cp
Selenium	0.007	mg/L		0.001		E200.8	11/03/10 04:09 / sml
Uranium	2.04	mg/L		0.0003		E200.8	11/03/10 04:09 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 04:09 / sml
Zinc	0.05	mg/L		0.01		E200.7	11/02/10 15:11 / cp
METALS - TOTAL							
Iron	0.06	mg/L	D	0.04		E200.7	11/09/10 00:25 / cp
Manganese	7.26	mg/L		0.01		E200.7	11/09/10 00:25 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-013
Client Sample ID: MW-10

Report Date: 12/08/10
Collection Date: 10/27/10 11:20
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.17	%				Calculation	11/13/10 11:13 / kbh
Anions	66.3	meq/L				Calculation	11/13/10 11:13 / kbh
Cations	63.4	meq/L				Calculation	11/13/10 11:13 / kbh
Solids, Total Dissolved Calculated	4030	mg/L				Calculation	11/13/10 11:13 / kbh
TDS Balance (0.80 - 1.20)	1.06					Calculation	11/13/10 11:13 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-014
Client Sample ID: MW-12

Report Date: 12/08/10
Collection Date: 10/27/10 12:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	422	mg/L		5		A2320 B	10/29/10 22:59 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 22:59 / jba
Bicarbonate as HCO3	515	mg/L		5		A2320 B	10/29/10 22:59 / jba
Calcium	582	mg/L		1		E200.7	11/02/10 15:24 / cp
Chloride	197	mg/L	D	4		E300.0	11/05/10 14:12 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	11/02/10 10:25 / jba
Magnesium	90	mg/L		1		E200.7	11/02/10 15:24 / cp
Nitrogen, Ammonia as N	0.89	mg/L		0.05		A4500-NH3 G	11/08/10 15:47 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 13:01 / dc
Potassium	27	mg/L		1		E200.7	11/02/10 15:24 / cp
Silica	22.5	mg/L		0.2		E200.7	11/02/10 15:24 / cp
Sodium	228	mg/L		1		E200.7	11/02/10 15:24 / cp
Sulfate	1740	mg/L	D	20		E300.0	11/05/10 14:12 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	3670	umhos/cm		1		A2510 B	11/01/10 10:14 / lr
pH	7.37	s.u.		0.01		A4500-H B	11/01/10 10:14 / lr
Solids, Total Dissolved TDS @ 180 C	3380	mg/L		10		A2540 C	11/01/10 17:13 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 15:24 / cp
Arsenic	0.005	mg/L		0.001		E200.8	11/03/10 04:43 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 15:24 / cp
Boron	0.2	mg/L		0.1		E200.7	11/02/10 15:24 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 04:43 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 15:24 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 15:24 / cp
Iron	0.39	mg/L		0.03		E200.7	11/02/10 15:24 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 04:43 / sml
Manganese	1.06	mg/L		0.01		E200.7	11/02/10 15:24 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 04:43 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 15:24 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 15:24 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 04:43 / sml
Uranium	4.86	mg/L		0.0003		E200.8	11/03/10 04:43 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 04:43 / sml
Zinc	0.03	mg/L		0.01		E200.7	11/02/10 15:24 / cp
METALS - TOTAL							
Iron	1.38	mg/L		0.03		E200.7	11/09/10 00:42 / cp
Manganese	1.15	mg/L		0.01		E200.7	11/09/10 00:42 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-014
Client Sample ID: MW-12

Report Date: 12/08/10
Collection Date: 10/27/10 12:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.31	%				Calculation	11/13/10 11:13 / kbh
Anions	50.3	meq/L				Calculation	11/13/10 11:13 / kbh
Cations	47.1	meq/L				Calculation	11/13/10 11:13 / kbh
Solids, Total Dissolved Calculated	3150	mg/L				Calculation	11/13/10 11:13 / kbh
TDS Balance (0.80 - 1.20)	1.07					Calculation	11/13/10 11:13 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-015
Client Sample ID: MW-3

Report Date: 12/08/10
Collection Date: 10/27/10 13:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	266	mg/L		5		A2320 B	10/29/10 23:08 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 23:08 / jba
Bicarbonate as HCO3	325	mg/L		5		A2320 B	10/29/10 23:08 / jba
Calcium	219	mg/L		1		E200.7	11/29/10 15:17 / cp
Chloride	16	mg/L		1		E300.0	11/09/10 05:22 / ljl
Fluoride	0.3	mg/L		0.1		A4500-F C	11/02/10 10:27 / jba
Magnesium	43	mg/L		1		E200.7	11/29/10 15:17 / cp
Nitrogen, Ammonia as N	0.29	mg/L		0.05		A4500-NH3 G	11/08/10 15:49 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 13:04 / dc
Potassium	18	mg/L		1		E200.7	11/29/10 15:17 / cp
Silica	19.9	mg/L		0.2		E200.7	11/02/10 15:32 / cp
Sodium	101	mg/L		1		E200.7	11/29/10 15:17 / cp
Sulfate	725	mg/L	D	4		E300.0	11/05/10 20:37 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1730	umhos/cm		1		A2510 B	11/01/10 10:16 / lr
pH	7.59	s.u.		0.01		A4500-H B	11/01/10 10:16 / lr
Solids, Total Dissolved TDS @ 180 C	1430	mg/L		10		A2540 C	11/01/10 17:13 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	11/02/10 15:32 / cp
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 04:50 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 15:32 / cp
Boron	0.1	mg/L		0.1		E200.7	11/02/10 15:32 / cp
Cadmium	ND	mg/L		0.005		E200.7	11/02/10 15:32 / cp
Chromium	ND	mg/L		0.05		E200.7	11/02/10 15:32 / cp
Copper	ND	mg/L		0.01		E200.7	11/02/10 15:32 / cp
Iron	ND	mg/L		0.03		E200.7	11/02/10 15:32 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 04:50 / sml
Manganese	0.22	mg/L		0.01		E200.7	11/02/10 15:32 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 04:50 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 15:32 / cp
Nickel	ND	mg/L		0.05		E200.7	11/02/10 15:32 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 04:50 / sml
Uranium	0.0110	mg/L		0.0003		E200.8	11/03/10 04:50 / sml
Vanadium	ND	mg/L		0.1		E200.7	11/02/10 15:32 / cp
Zinc	ND	mg/L		0.01		E200.7	11/02/10 15:32 / cp
METALS - TOTAL							
Iron	0.08	mg/L		0.03		E200.7	11/09/10 00:46 / cp
Manganese	0.23	mg/L		0.01		E200.8	11/06/10 03:38 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-015
Client Sample ID: MW-3

Report Date: 12/08/10
Collection Date: 10/27/10 13:00
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.86	%				Calculation	12/03/10 07:20 / kbh
Anions	20.9	meq/L				Calculation	12/03/10 07:20 / kbh
Cations	19.3	meq/L				Calculation	12/03/10 07:20 / kbh
Solids, Total Dissolved Calculated	1310	mg/L				Calculation	12/03/10 07:20 / kbh
TDS Balance (0.80 - 1.20)	1.09					Calculation	12/03/10 07:20 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-016
Client Sample ID: MW-4

Report Date: 12/08/10
Collection Date: 10/27/10 13:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	645	mg/L		5		A2320 B	10/29/10 23:33 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 23:33 / jba
Bicarbonate as HCO3	787	mg/L		5		A2320 B	10/29/10 23:33 / jba
Calcium	472	mg/L	D	2		E200.7	11/29/10 15:21 / cp
Chloride	279	mg/L	D	4		E300.0	11/09/10 05:38 / ljl
Fluoride	0.5	mg/L		0.1		A4500-F C	11/02/10 10:31 / jba
Magnesium	286	mg/L		1		E200.7	11/29/10 15:21 / cp
Nitrogen, Ammonia as N	293	mg/L	D	5		A4500-NH3 G	11/08/10 16:11 / dc
Nitrogen, Nitrate+Nitrite as N	3.1	mg/L	D	0.2		E353.2	11/10/10 13:06 / dc
Potassium	28	mg/L		1		E200.7	11/29/10 15:21 / cp
Silica	23.4	mg/L		0.2		E200.7	11/02/10 15:36 / cp
Sodium	338	mg/L	D	3		E200.7	11/29/10 15:21 / cp
Sulfate	3400	mg/L	D	20		E300.0	11/05/10 21:26 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	6880	umhos/cm		1		A2510 B	11/01/10 10:18 / lr
pH	6.25	s.u.		0.01		A4500-H B	11/01/10 10:18 / lr
Solids, Total Dissolved TDS @ 180 C	4830	mg/L	D	20		A2540 C	11/01/10 17:13 / lr
METALS - DISSOLVED							
Aluminum	0.2	mg/L		0.1		E200.8	11/03/10 04:57 / sml
Arsenic	0.003	mg/L		0.001		E200.8	11/03/10 04:57 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 15:36 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 15:36 / cp
Cadmium	0.016	mg/L		0.005		E200.8	11/03/10 04:57 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 15:36 / cp
Copper	0.01	mg/L		0.01		E200.8	11/03/10 04:57 / sml
Iron	15.1	mg/L		0.03		E200.7	11/02/10 15:36 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 04:57 / sml
Manganese	20.4	mg/L		0.01		E200.7	11/02/10 15:36 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 04:57 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 15:36 / cp
Nickel	0.80	mg/L		0.05		E200.7	11/02/10 15:36 / cp
Selenium	0.007	mg/L		0.001		E200.8	11/03/10 04:57 / sml
Uranium	1.83	mg/L		0.0003		E200.8	11/03/10 04:57 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 04:57 / sml
Zinc	0.31	mg/L		0.01		E200.8	11/03/10 04:57 / sml
METALS - TOTAL							
Iron	15.2	mg/L	D	0.04		E200.7	11/09/10 00:50 / cp
Manganese	18.2	mg/L		0.01		E200.7	11/09/10 00:50 / cp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-016
Client Sample ID: MW-4

Report Date: 12/08/10
Collection Date: 10/27/10 13:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.74	%				Calculation	12/01/10 07:57 / kbh
Anions	91.7	meq/L				Calculation	12/01/10 07:57 / kbh
Cations	83.4	meq/L				Calculation	12/01/10 07:57 / kbh
Solids, Total Dissolved Calculated	5230	mg/L				Calculation	12/01/10 07:57 / kbh
TDS Balance (0.80 - 1.20)	0.920					Calculation	12/01/10 07:57 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-017
Client Sample ID: MW-2

Report Date: 12/08/10
Collection Date: 10/27/10 14:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	1280	mg/L		5		A2320 B	10/29/10 23:44 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	10/29/10 23:44 / jba
Bicarbonate as HCO3	1570	mg/L		5		A2320 B	10/29/10 23:44 / jba
Calcium	505	mg/L	D	2		E200.7	11/02/10 15:40 / cp
Chloride	325	mg/L	D	10		E300.0	11/09/10 05:54 / ljl
Fluoride	0.9	mg/L		0.1		A4500-F C	11/02/10 10:34 / jba
Magnesium	436	mg/L		1		E200.7	11/02/10 15:40 / cp
Nitrogen, Ammonia as N	343	mg/L	D	5		A4500-NH3 G	11/08/10 16:13 / dc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	11/10/10 13:09 / dc
Potassium	62	mg/L		1		E200.7	11/02/10 15:40 / cp
Silica	23.2	mg/L		0.2		E200.7	11/02/10 15:40 / cp
Sodium	398	mg/L	D	3		E200.7	11/02/10 15:40 / cp
Sulfate	3470	mg/L	D	40		E300.0	11/05/10 21:42 / ljl
PHYSICAL PROPERTIES							
Conductivity @ 25 C	7860	umhos/cm		1		A2510 B	11/01/10 10:29 / lr
pH	7.19	s.u.		0.01		A4500-H B	11/01/10 10:29 / lr
Solids, Total Dissolved TDS @ 180 C	5790	mg/L	D	20		A2540 C	11/01/10 17:14 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	11/03/10 05:04 / sml
Arsenic	ND	mg/L		0.001		E200.8	11/03/10 05:04 / sml
Barium	ND	mg/L		0.1		E200.7	11/02/10 15:40 / cp
Boron	ND	mg/L		0.1		E200.7	11/02/10 15:40 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/03/10 05:04 / sml
Chromium	ND	mg/L		0.05		E200.7	11/02/10 15:40 / cp
Copper	ND	mg/L		0.01		E200.8	11/03/10 05:04 / sml
Iron	5.81	mg/L		0.03		E200.7	11/02/10 15:40 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/10 05:04 / sml
Manganese	17.5	mg/L		0.01		E200.7	11/02/10 15:40 / cp
Mercury	ND	mg/L		0.001		E200.8	11/03/10 05:04 / sml
Molybdenum	ND	mg/L		0.1		E200.7	11/02/10 15:40 / cp
Nickel	0.88	mg/L		0.05		E200.7	11/02/10 15:40 / cp
Selenium	ND	mg/L		0.001		E200.8	11/03/10 05:04 / sml
Uranium	9.37	mg/L		0.0003		E200.8	11/03/10 05:04 / sml
Vanadium	ND	mg/L		0.1		E200.8	11/03/10 05:04 / sml
Zinc	0.05	mg/L		0.01		E200.8	11/03/10 05:04 / sml
METALS - TOTAL							
Iron	6.78	mg/L	D	0.04		E200.7	11/09/10 00:54 / cp
Manganese	17.7	mg/L		0.01		E200.8	11/06/10 03:51 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: WY DEQ-WQD
Project: ANC
Lab ID: C10101130-017
Client Sample ID: MW-2

Report Date: 12/08/10
Collection Date: 10/27/10 14:45
DateReceived: 10/28/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.30	%				Calculation	12/01/10 07:58 / kbh
Anions	107	meq/L				Calculation	12/01/10 07:58 / kbh
Cations	104	meq/L				Calculation	12/01/10 07:58 / kbh
Solids, Total Dissolved Calculated	6000	mg/L				Calculation	12/01/10 07:58 / kbh
TDS Balance (0.80 - 1.20)	0.970					Calculation	12/01/10 07:58 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2310 B									Batch: 101102_1_ACID-W	
Sample ID: MBLK-1_101102		Method Blank				Run: ACIDITY_101102A			11/02/10 14:49	
Acidity, Total as CaCO3		ND	mg/L	1						
Sample ID: LCS-1_101102		Laboratory Control Sample				Run: ACIDITY_101102A			11/02/10 14:58	
Acidity, Total as CaCO3		1100	mg/L	5.0	110	80	120			
Sample ID: C10101130-012ADUP		Sample Duplicate				Run: ACIDITY_101102A			11/02/10 15:17	
Acidity, Total as CaCO3		810	mg/L	5.0				1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R139253
Sample ID: MBLK	3	Method Blank				Run: MANTECH_101029B				10/29/10 16:24
Alkalinity, Total as CaCO3		3	mg/L	1						
Carbonate as CO3		ND	mg/L	1						
Bicarbonate as HCO3		4	mg/L	1						
Sample ID: LCS1		Laboratory Control Sample				Run: MANTECH_101029B				10/29/10 16:40
Alkalinity, Total as CaCO3		205	mg/L	5.0	101	90	110			
Sample ID: C10101110-001AMS		Sample Matrix Spike				Run: MANTECH_101029B				10/29/10 19:09
Alkalinity, Total as CaCO3		429	mg/L	5.0	106	80	120			
Sample ID: C10101130-012ADUP	3	Sample Duplicate				Run: MANTECH_101029B				10/29/10 22:37
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Sample ID: C10101130-017ADUP	3	Sample Duplicate				Run: MANTECH_101029B				10/29/10 23:55
Alkalinity, Total as CaCO3		1290	mg/L	5.0				0.2	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		1570	mg/L	5.0				0.2	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B									Analytical Run: ORION555A-2_101101A	
Sample ID: ICV2_101101_1		Initial Calibration Verification Standard							11/01/10 08:53	
Conductivity @ 25 C		1380	umhos/cm	1.0	98	90	110			
Method: A2510 B									Batch: 101101_1_PH-W_555A-2	
Sample ID: MBLK1_101101_1		Method Blank				Run: ORION555A-2_101101A			11/01/10 08:47	
Conductivity @ 25 C		0.4	umhos/cm	0.2						
Sample ID: C10101130-003ADUP		Sample Duplicate				Run: ORION555A-2_101101A			11/01/10 09:20	
Conductivity @ 25 C		3110	umhos/cm	1.0				0.0	10	
Sample ID: C10101130-013ADUP		Sample Duplicate				Run: ORION555A-2_101101A			11/01/10 09:55	
Conductivity @ 25 C		4950	umhos/cm	1.0				0.2	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: 101101_1_SLDS-TDS-W	
Sample ID: MBLK1_101101		Method Blank				Run: BAL-1_101101B			11/01/10 17:03	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	10						
Sample ID: LCS1_101101		Laboratory Control Sample				Run: BAL-1_101101B			11/01/10 17:03	
Solids, Total Dissolved TDS @ 180 C		1020	mg/L	10	102	90	110			
Sample ID: C10101123-001BMS		Sample Matrix Spike				Run: BAL-1_101101B			11/01/10 17:08	
Solids, Total Dissolved TDS @ 180 C		2350	mg/L	10	102	90	110			
Sample ID: C10101123-001BMSD		Sample Matrix Spike Duplicate				Run: BAL-1_101101B			11/01/10 17:08	
Solids, Total Dissolved TDS @ 180 C		2340	mg/L	10	101	90	110	0.6	10	
Sample ID: C10101130-008AMS		Sample Matrix Spike				Run: BAL-1_101101B			11/01/10 17:12	
Solids, Total Dissolved TDS @ 180 C		5120	mg/L	10	104	90	110			
Sample ID: C10101130-008AMSD		Sample Matrix Spike Duplicate				Run: BAL-1_101101B			11/01/10 17:12	
Solids, Total Dissolved TDS @ 180 C		5110	mg/L	10	104	90	110	0.2	10	
Sample ID: C10101139-001AMS		Sample Matrix Spike				Run: BAL-1_101101B			11/01/10 17:14	
Solids, Total Dissolved TDS @ 180 C		7470	mg/L	17	101	90	110			
Sample ID: C10101139-001AMSD		Sample Matrix Spike Duplicate				Run: BAL-1_101101B			11/01/10 17:14	
Solids, Total Dissolved TDS @ 180 C		7510	mg/L	17	102	90	110	0.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-F C										Batch: R139329
Sample ID: MBLK		Method Blank				Run: MANTECH_101102A				11/02/10 08:21
Fluoride		ND	mg/L	0.05						
Sample ID: LCS		Laboratory Control Sample				Run: MANTECH_101102A				11/02/10 08:24
Fluoride		1.04	mg/L	0.10	104	90	110			
Sample ID: C10101130-005AMS		Sample Matrix Spike				Run: MANTECH_101102A				11/02/10 09:40
Fluoride		1.48	mg/L	0.10	102	80	120			
Sample ID: C10101130-005AMSD		Sample Matrix Spike Duplicate				Run: MANTECH_101102A				11/02/10 09:43
Fluoride		1.48	mg/L	0.10	102	80	120	0.0	10	
Sample ID: C10110003-011AMS		Sample Matrix Spike				Run: MANTECH_101102A				11/02/10 10:43
Fluoride		1.12	mg/L	0.10	90	80	120			
Sample ID: C10110003-011AMSD		Sample Matrix Spike Duplicate				Run: MANTECH_101102A				11/02/10 10:47
Fluoride		1.16	mg/L	0.10	94	80	120	3.5	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: ORION555A-2_101101A	
Sample ID: ICV1_101101_1		Initial Calibration Verification Standard							11/01/10 08:49	
pH		6.87	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: 101101_1_PH-W_555A-2	
Sample ID: C10101130-003ADUP		Sample Duplicate				Run: ORION555A-2_101101A			11/01/10 09:20	
pH		7.66	s.u.	0.010				0.4	10	
Sample ID: C10101130-013ADUP		Sample Duplicate				Run: ORION555A-2_101101A			11/01/10 09:55	
pH		6.68	s.u.	0.010				0.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R139601
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_101108A				11/08/10 12:34
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_101108A				11/08/10 12:36
Nitrogen, Ammonia as N		1.89	mg/L	0.050	95	90	110			
Sample ID: C10101130-003DMS		Sample Matrix Spike				Run: TECHNICON_101108A				11/08/10 14:33
Nitrogen, Ammonia as N		2.16	mg/L	0.050	107	80	120			
Sample ID: C10101130-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101108A				11/08/10 14:35
Nitrogen, Ammonia as N		2.22	mg/L	0.050	110	80	120	2.7	10	
Sample ID: C10101130-009DMS		Sample Matrix Spike				Run: TECHNICON_101108A				11/08/10 15:37
Nitrogen, Ammonia as N		2.30	mg/L	0.050	112	80	120			
Sample ID: C10101130-009DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101108A				11/08/10 15:39
Nitrogen, Ammonia as N		2.32	mg/L	0.050	113	80	120	0.9	10	
Sample ID: C10101130-015DMS		Sample Matrix Spike				Run: TECHNICON_101108A				11/08/10 16:05
Nitrogen, Ammonia as N		2.48	mg/L	0.050	110	80	120			
Sample ID: C10101130-015DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101108A				11/08/10 16:07
Nitrogen, Ammonia as N		2.67	mg/L	0.050	120	80	120	7.4	10	
Method: A4500-NH3 G										Batch: R139902
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_101115A				11/15/10 12:24
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_101115A				11/15/10 12:26
Nitrogen, Ammonia as N		1.88	mg/L	0.050	93	90	110			
Sample ID: C10110019-004CMS		Sample Matrix Spike				Run: TECHNICON_101115A				11/15/10 12:38
Nitrogen, Ammonia as N		1.96	mg/L	0.050	98	80	120			
Sample ID: C10110019-004CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101115A				11/15/10 12:40
Nitrogen, Ammonia as N		2.06	mg/L	0.050	103	80	120	5.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R139363
Sample ID: MB-101102A	17	Method Blank				Run: ICP2-C_101102A				11/02/10 10:16
Aluminum		ND	mg/L	0.01						
Barium		ND	mg/L	0.0005						
Boron		ND	mg/L	0.009						
Cadmium		ND	mg/L	0.001						
Calcium		ND	mg/L	0.2						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.002						
Magnesium		ND	mg/L	0.05						
Manganese		ND	mg/L	0.0004						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Potassium		ND	mg/L	0.02						
Silicon		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Vanadium		ND	mg/L	0.03						
Zinc		ND	mg/L	0.001						
Sample ID: LFB-101102A	17	Laboratory Fortified Blank				Run: ICP2-C_101102A				11/02/10 10:20
Aluminum		0.985	mg/L	0.10	99	85	115			
Barium		0.958	mg/L	0.10	96	85	115			
Boron		0.935	mg/L	0.10	94	85	115			
Cadmium		0.979	mg/L	0.010	98	85	115			
Calcium		50.6	mg/L	0.50	101	85	115			
Chromium		0.973	mg/L	0.050	97	85	115			
Copper		0.955	mg/L	0.010	95	85	115			
Iron		0.981	mg/L	0.030	98	85	115			
Magnesium		50.2	mg/L	0.50	100	85	115			
Manganese		0.974	mg/L	0.010	97	85	115			
Molybdenum		0.980	mg/L	0.10	98	85	115			
Nickel		1.02	mg/L	0.050	102	85	115			
Potassium		44.3	mg/L	0.50	89	85	115			
Silicon		0.448	mg/L	0.10	95	85	115			
Sodium		48.6	mg/L	0.50	97	85	115			
Vanadium		0.990	mg/L	0.10	99	85	115			
Zinc		0.979	mg/L	0.010	98	85	115			
Sample ID: C10101130-003BMS2	17	Sample Matrix Spike				Run: ICP2-C_101102A				11/02/10 13:58
Aluminum		4.86	mg/L	0.10	95	70	130			
Barium		4.81	mg/L	0.10	94	70	130			
Boron		5.04	mg/L	0.10	97	70	130			
Cadmium		4.74	mg/L	0.010	93	70	130			
Calcium		672	mg/L	1.1	90	70	130			
Chromium		4.79	mg/L	0.050	94	70	130			
Copper		4.91	mg/L	0.010	96	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R139363
Sample ID: C10101130-003BMS2	17	Sample Matrix Spike				Run: ICP2-C_101102A				11/02/10 13:58
Iron		4.91	mg/L	0.030	96	70	130			
Magnesium		334	mg/L	1.0	94	70	130			
Manganese		4.83	mg/L	0.010	95	70	130			
Molybdenum		4.76	mg/L	0.10	93	70	130			
Nickel		4.83	mg/L	0.050	95	70	130			
Potassium		258	mg/L	1.0	87	70	130			
Silicon		27.7	mg/L	0.10		70	130			A
Sodium		456	mg/L	1.4	99	70	130			
Vanadium		4.88	mg/L	0.15	96	70	130			
Zinc		4.90	mg/L	0.010	95	70	130			
Sample ID: C10101130-003BMSD	17	Sample Matrix Spike Duplicate				Run: ICP2-C_101102A				11/02/10 14:02
Aluminum		4.94	mg/L	0.10	97	70	130	1.6	20	
Barium		4.91	mg/L	0.10	96	70	130	1.9	20	
Boron		5.14	mg/L	0.10	98	70	130	1.9	20	
Cadmium		4.77	mg/L	0.010	94	70	130	0.6	20	
Calcium		680	mg/L	1.1	93	70	130	1.1	20	
Chromium		4.81	mg/L	0.050	94	70	130	0.5	20	
Copper		4.94	mg/L	0.010	97	70	130	0.6	20	
Iron		4.93	mg/L	0.030	97	70	130	0.3	20	
Magnesium		338	mg/L	1.0	96	70	130	1.2	20	
Manganese		4.88	mg/L	0.010	96	70	130	0.8	20	
Molybdenum		4.87	mg/L	0.10	95	70	130	2.2	20	
Nickel		4.85	mg/L	0.050	95	70	130	0.3	20	
Potassium		257	mg/L	1.0	87	70	130	0.2	20	
Silicon		28.2	mg/L	0.10		70	130	1.5	20	A
Sodium		454	mg/L	1.4	98	70	130	0.4	20	
Vanadium		4.93	mg/L	0.15	97	70	130	1.0	20	
Zinc		4.92	mg/L	0.010	96	70	130	0.4	20	
Sample ID: C10101130-013BMS2	17	Sample Matrix Spike				Run: ICP2-C_101102A				11/02/10 15:15
Aluminum		4.65	mg/L	0.10	91	70	130			
Barium		4.70	mg/L	0.10	91	70	130			
Boron		4.87	mg/L	0.10	92	70	130			
Cadmium		4.53	mg/L	0.010	89	70	130			
Calcium		764	mg/L	1.1	87	70	130			
Chromium		4.62	mg/L	0.050	91	70	130			
Copper		4.76	mg/L	0.010	93	70	130			
Iron		4.80	mg/L	0.030	93	70	130			
Magnesium		440	mg/L	1.0	91	70	130			
Manganese		11.5	mg/L	0.010	89	70	130			
Molybdenum		4.60	mg/L	0.10	90	70	130			
Nickel		4.85	mg/L	0.050	91	70	130			
Potassium		254	mg/L	1.0	84	70	130			
Silicon		17.5	mg/L	0.10		70	130			A

Qualifiers:

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ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R139363
Sample ID: C10101130-013BMS2	17	Sample Matrix Spike				Run: ICP2-C_101102A				11/02/10 15:15
Sodium		554	mg/L	1.4	92	70	130			
Vanadium		4.74	mg/L	0.15	93	70	130			
Zinc		4.74	mg/L	0.010	92	70	130			
Sample ID: C10101130-013BMSD	17	Sample Matrix Spike Duplicate				Run: ICP2-C_101102A				11/02/10 15:20
Aluminum		4.72	mg/L	0.10	93	70	130	1.5	20	
Barium		4.75	mg/L	0.10	93	70	130	1.2	20	
Boron		5.01	mg/L	0.10	95	70	130	2.9	20	
Cadmium		4.61	mg/L	0.010	90	70	130	1.8	20	
Calcium		777	mg/L	1.1	92	70	130	1.7	20	
Chromium		4.68	mg/L	0.050	92	70	130	1.3	20	
Copper		4.83	mg/L	0.010	94	70	130	1.4	20	
Iron		4.87	mg/L	0.030	94	70	130	1.4	20	
Magnesium		443	mg/L	1.0	93	70	130	0.8	20	
Manganese		11.6	mg/L	0.010	89	70	130	0.3	20	
Molybdenum		4.67	mg/L	0.10	92	70	130	1.5	20	
Nickel		4.84	mg/L	0.050	91	70	130	0.1	20	
Potassium		253	mg/L	1.0	84	70	130	0.4	20	
Silicon		17.8	mg/L	0.10		70	130	1.3	20	A
Sodium		563	mg/L	1.4	96	70	130	1.6	20	
Vanadium		4.77	mg/L	0.15	94	70	130	0.5	20	
Zinc		4.80	mg/L	0.010	93	70	130	1.3	20	
Method: E200.7										Batch: 28091
Sample ID: MB-28091	2	Method Blank				Run: ICP2-C_101108A				11/08/10 23:12
Iron		ND	mg/L	0.008						
Manganese		ND	mg/L	0.0008						
Sample ID: LCS3-28091	2	Laboratory Control Sample				Run: ICP2-C_101108A				11/08/10 23:16
Iron		2.61	mg/L	0.030	104	85	115			
Manganese		2.50	mg/L	0.010	100	85	115			
Sample ID: C10110141-003BMS3	2	Sample Matrix Spike				Run: ICP2-C_101108A				11/09/10 01:02
Iron		2.90	mg/L	0.030	113	70	130			
Manganese		2.78	mg/L	0.010	109	70	130			
Sample ID: C10110141-003BMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_101108A				11/09/10 01:06
Iron		2.73	mg/L	0.030	106	70	130	6.0	20	
Manganese		2.61	mg/L	0.010	103	70	130	6.0	20	

Qualifiers:

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QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R140366	
Sample ID: MB-101129A	4	Method Blank				Run: ICP2-C_101124B			11/29/10 11:34	
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-101129A	4	Laboratory Fortified Blank				Run: ICP2-C_101124B			11/29/10 11:38	
Calcium		48.6	mg/L	0.50	97	85	115			
Magnesium		49.0	mg/L	0.50	98	85	115			
Potassium		44.2	mg/L	0.50	88	85	115			
Sodium		47.1	mg/L	0.50	94	85	115			
Sample ID: C10110443-001CMS2	4	Sample Matrix Spike				Run: ICP2-C_101124B			11/29/10 15:46	
Calcium		489	mg/L	2.3	93	70	130			
Magnesium		469	mg/L	1.0	91	70	130			
Potassium		563	mg/L	1.0	83	70	130			
Sodium		3850	mg/L	2.9		70	130			A
Sample ID: C10110443-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_101124B			11/29/10 15:50	
Calcium		491	mg/L	2.3	94	70	130	0.5	20	
Magnesium		478	mg/L	1.0	93	70	130	2.1	20	
Potassium		556	mg/L	1.0	81	70	130	1.3	20	
Sodium		3840	mg/L	2.9		70	130	0.1	20	A

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QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 28091
Sample ID: MB-28091		Method Blank				Run: ICPMS2-C_101105A				11/06/10 00:49
Manganese		ND	mg/L	9E-05						
Sample ID: LCS3-28091		Laboratory Control Sample				Run: ICPMS2-C_101105A				11/06/10 00:55
Manganese		2.41	mg/L	0.010	96	85	115			
Sample ID: C10110141-003BMS3		Sample Matrix Spike				Run: ICPMS2-C_101105A				11/06/10 04:05
Manganese		2.39	mg/L	0.010	94	70	130			
Sample ID: C10110141-003BMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_101105A				11/06/10 04:11
Manganese		2.31	mg/L	0.010	91	70	130	3.4	20	

Qualifiers:

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ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R139366A	
Sample ID: C10101130-009BMS4	11	Sample Matrix Spike				Run: ICPMS4-C_101102B			11/03/10 03:28	
Aluminum		0.0463	mg/L	0.0010	93	70	130			
Arsenic		0.0540	mg/L	0.0010	108	70	130			
Boron		0.0957	mg/L	0.0010	117	70	130			
Cadmium		0.0480	mg/L	0.010	96	70	130			
Copper		0.0506	mg/L	0.010	100	70	130			
Lead		0.0523	mg/L	0.050	105	70	130			
Mercury		0.00515	mg/L	0.0010	102	70	130			
Selenium		0.0535	mg/L	0.0010	104	70	130			
Uranium		0.0749	mg/L	0.00030	107	70	130			
Vanadium		0.0541	mg/L	0.0010	108	70	130			
Zinc		0.0509	mg/L	0.010	95	70	130			
Sample ID: C10101130-009BMSD	11	Sample Matrix Spike Duplicate				Run: ICPMS4-C_101102B			11/03/10 03:35	
Aluminum		0.0456	mg/L	0.0010	91	70	130	1.7	20	
Arsenic		0.0528	mg/L	0.0010	105	70	130	2.3	20	
Boron		0.0967	mg/L	0.0010	119	70	130	1.1	20	
Cadmium		0.0476	mg/L	0.010	95	70	130	0.6	20	
Copper		0.0496	mg/L	0.010	98	70	130	2.0	20	
Lead		0.0520	mg/L	0.050	104	70	130	0.6	20	
Mercury		0.00506	mg/L	0.0010	101	70	130	1.7	20	
Selenium		0.0531	mg/L	0.0010	103	70	130	0.8	20	
Uranium		0.0746	mg/L	0.00030	106	70	130	0.3	20	
Vanadium		0.0534	mg/L	0.0010	107	70	130	1.2	20	
Zinc		0.0500	mg/L	0.010	94	70	130	1.6	20	
Sample ID: C10101137-005BMS4	11	Sample Matrix Spike				Run: ICPMS4-C_101102B			11/03/10 05:31	
Aluminum		0.361	mg/L	0.10		70	130			A
Arsenic		0.0491	mg/L	0.0010	98	70	130			
Boron		1.09	mg/L	0.10		70	130			A
Cadmium		0.0465	mg/L	0.010	93	70	130			
Copper		0.0489	mg/L	0.010	98	70	130			
Lead		0.0512	mg/L	0.050	102	70	130			
Mercury		0.00492	mg/L	0.0010	98	70	130			
Selenium		0.0444	mg/L	0.0010	89	70	130			
Uranium		0.0520	mg/L	0.00030	104	70	130			
Vanadium		0.0532	mg/L	0.0010	106	70	130			
Zinc		0.0497	mg/L	0.010	92	70	130			
Sample ID: C10101137-005BMSD	11	Sample Matrix Spike Duplicate				Run: ICPMS4-C_101102B			11/03/10 05:38	
Aluminum		0.359	mg/L	0.10		70	130	0.5	20	A
Arsenic		0.0495	mg/L	0.0010	99	70	130	0.9	20	
Boron		1.08	mg/L	0.10		70	130	0.6	20	A
Cadmium		0.0470	mg/L	0.010	94	70	130	1.0	20	
Copper		0.0494	mg/L	0.010	99	70	130	1.0	20	
Lead		0.0511	mg/L	0.050	102	70	130	0.1	20	

Qualifiers:

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QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R139366A
Sample ID: C10101137-005BMSD	11	Sample Matrix Spike Duplicate				Run: ICPMS4-C_101102B				11/03/10 05:38
Mercury		0.00520	mg/L	0.0010	104	70	130	5.6	20	
Selenium		0.0448	mg/L	0.0010	90	70	130	0.7	20	
Uranium		0.0513	mg/L	0.00030	102	70	130	1.3	20	
Vanadium		0.0536	mg/L	0.0010	106	70	130	0.7	20	
Zinc		0.0498	mg/L	0.010	92	70	130	0.1	20	
Sample ID: LRB	11	Method Blank				Run: ICPMS4-C_101102B				11/02/10 19:14
Aluminum		ND	mg/L	8E-05						
Arsenic		ND	mg/L	4E-05						
Boron		0.0001	mg/L							
Cadmium		ND	mg/L	7E-05						
Copper		ND	mg/L	6E-05						
Lead		ND	mg/L	2E-05						
Mercury		5E-05	mg/L	2E-05						
Selenium		ND	mg/L	5E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		ND	mg/L	1E-05						
Zinc		ND	mg/L	0.0001						
Sample ID: LFB	11	Laboratory Fortified Blank				Run: ICPMS4-C_101102B				11/02/10 19:21
Aluminum		0.0522	mg/L	0.0010	104	85	115			
Arsenic		0.0514	mg/L	0.0010	103	85	115			
Boron		0.0521	mg/L	0.0010	104	85	115			
Cadmium		0.0519	mg/L	0.0010	104	85	115			
Copper		0.0514	mg/L	0.0010	103	85	115			
Lead		0.0509	mg/L	0.0010	102	85	115			
Mercury		0.00518	mg/L	0.0010	103	85	115			
Selenium		0.0525	mg/L	0.0010	105	85	115			
Uranium		0.0511	mg/L	0.00030	102	85	115			
Vanadium		0.0510	mg/L	0.0010	102	85	115			
Zinc		0.0577	mg/L	0.0010	115	85	115			

Qualifiers:

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QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										Batch: R139498
Sample ID: LCS	2	Laboratory Control Sample				Run: IC1-C_101104A				11/04/10 17:34
Chloride		9.38	mg/L	1.0	94	90	110			
Sulfate		37.2	mg/L	1.0	93	90	110			
Sample ID: MBLK	2	Method Blank				Run: IC1-C_101104A				11/04/10 17:50
Chloride		ND	mg/L	0.01						
Sulfate		ND	mg/L	0.06						
Sample ID: C10101122-002AMS	2	Sample Matrix Spike				Run: IC1-C_101104A				11/05/10 02:35
Chloride		11.6	mg/L	1.0	104	80	120			
Sulfate		135	mg/L	1.0	101	80	120			
Sample ID: C10101122-002AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_101104A				11/05/10 02:52
Chloride		12.2	mg/L	1.0	110	80	120	5.0	20	
Sulfate		137	mg/L	1.0	106	80	120	1.3	20	
Method: E300.0										Batch: R139588
Sample ID: LCS	2	Laboratory Control Sample				Run: IC2-C_101103A				11/03/10 18:41
Chloride		9.42	mg/L	1.0	94	90	110			
Sulfate		37.8	mg/L	1.0	95	90	110			
Sample ID: MBLK	2	Method Blank				Run: IC2-C_101103A				11/03/10 18:57
Chloride		ND	mg/L	0.06						
Sulfate		ND	mg/L	0.2						
Sample ID: C10101130-005AMS	2	Sample Matrix Spike				Run: IC2-C_101103A				11/05/10 11:28
Chloride		57.5	mg/L	1.0	96	80	120			
Sulfate		746	mg/L	4.0	97	80	120			
Sample ID: C10101130-005AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_101103A				11/05/10 11:44
Chloride		60.0	mg/L	1.0	101	80	120	4.1	10	
Sulfate		739	mg/L	4.0	93	80	120	0.9	10	
Sample ID: C10100381-003AMS	2	Sample Matrix Spike				Run: IC2-C_101103A				11/05/10 15:18
Chloride		61.4	mg/L	1.0	102	80	120			
Sulfate		514	mg/L	4.0	103	80	120			
Sample ID: C10100381-003AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_101103A				11/05/10 15:34
Chloride		61.5	mg/L	1.0	102	80	120	0.2	10	
Sulfate		516	mg/L	4.0	104	80	120	0.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										Batch: R139705
Sample ID: LCS	2	Laboratory Control Sample				Run: IC2-C_101108A				11/08/10 22:48
Chloride		9.34	mg/L	1.0	93	90	110			
Sulfate		37.5	mg/L	1.0	94	90	110			
Sample ID: MBLK	2	Method Blank				Run: IC2-C_101108A				11/08/10 23:04
Chloride		ND	mg/L	0.06						
Sulfate		ND	mg/L	0.2						
Sample ID: C10101130-009AMS	2	Sample Matrix Spike				Run: IC2-C_101108A				11/09/10 04:49
Chloride		231	mg/L	2.0	105	80	120			
Sulfate		1520	mg/L	8.0	92	80	120			
Sample ID: C10101130-009AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_101108A				11/09/10 05:05
Chloride		231	mg/L	2.0	104	80	120	0.3	10	
Sulfate		1510	mg/L	8.0	91	80	120	0.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: WY DEQ-WQD
Project: ANC

Report Date: 12/08/10
Work Order: C10101130

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R139718
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_101110A				11/10/10 11:59
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.04						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_101110A				11/10/10 12:01
Nitrogen, Nitrate+Nitrite as N		2.43	mg/L	0.10	97	90	110			
Sample ID: C10101111-001DMS		Sample Matrix Spike				Run: TECHNICON_101110A				11/10/10 12:16
Nitrogen, Nitrate+Nitrite as N		2.05	mg/L	0.10	102	90	110			
Sample ID: C10101111-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101110A				11/10/10 12:19
Nitrogen, Nitrate+Nitrite as N		2.17	mg/L	0.10	108	90	110	5.7	10	
Sample ID: C10101130-011DMS		Sample Matrix Spike				Run: TECHNICON_101110A				11/10/10 12:54
Nitrogen, Nitrate+Nitrite as N		2.11	mg/L	0.10	101	90	110			
Sample ID: C10101130-011DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_101110A				11/10/10 12:56
Nitrogen, Nitrate+Nitrite as N		2.18	mg/L	0.10	105	90	110	3.3	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Energy Laboratories Inc
Workorder Receipt Checklist

C10101130

WY DEQ-WQD

Login completed by: Halley Ackerman
Date Received: 10/28/2010

Reviewed by: BL2000\tedwards
Received by: tae

Reviewed Date: 11/10/2010
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature:	3°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

Per phone conversation with client, please run samples that are out of hold.

Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
WDEQ - LQD	ANC	State: WY	Yes ☑ No ☐

Report Mail Address:	Contact Name:	Phone/Fax:	Email:	Sampler: (Please Print)
510 Meadowview Dr. Lander, WY 82520	Mark Moxley	(307) 332-3047	mmoxle@wyo.gov	Mark Moxley

Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:
Herschler Bldg. 122 W. 25th St. Cheyenne, WY 82002	Steve Toalson (307) 777-5933		

Special Report/Formats – ELI must be notified prior to sample submittal for the following:

☐ DW ☐ A2LA
☐ GSA ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: _____
☐ State: _____ ☐ LEVEL IV
☐ Other: _____ ☐ NELAC

Number of Containers
Sample Type: A W S V B O
Air Water Soils/Solids Vegetation Bioassay Other

ANALYSIS REQUESTED

SEE ATTACHED

Normal Turnaround (TAT)

RUSH

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand Del

Cooler ID(s): 3069 2555, 3024 2486

Receipt Temp: 3 °C

On Ice: (Yes) No

Custody Seal Y (N)

Bottles/Coolers B C

Intact Y N

Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	DEQ-LQD Guideline #8	No Radionuclides
1	MW-16	10/21/10	9:45Am	W	X	
2	Willow Spring North	"	10:00Am	"	X	
3	MW-15	"	10:30Am	"	X	
4	Willow Spring	"	10:45Am	"	X	
5	MW-17	"	11:30Am	"	X	
6	MW-9	"	12:15PM	"	X	
7	MW-6	"	12:45PM	"	X	
8	MW-7	"	1:30Pm	"	X	
9	MW-11	"	2:00Pm	"	X	
10	MW-13	"	2:45Pm	"	X	

LABORATORY USE ONLY

Ccal130

Custody Record MUST be Signed

	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
1	Mark Moxley	10/28/10 13:30				
2	Mark Moxley					

Sample Disposal: Return to Client: _____ Lab Disposal: _____

Received by Laboratory: Date/Time: 10/28/10 13:30 Signature: Gabriella Eduardo

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
WDEQ-LQD	ANC	State: WY	Yes ☑ No ☐

Report Mail Address:	Contact Name:	Phone/Fax:	Email:	Sampler: (Please Print)
510 Meadowview Dr. Lander, WY 82520	Mark Moxley	(307) 332-3047	MMOXLE@WyoSov	Mark Moxley

Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:
Herschler Bldg. 122 W. 25th St. Cheyenne, WY 82002	Steve Taalson (307) 777-5933		

Special Report/Formats – ELI must be notified prior to sample submittal for the following:

☐ DW ☐ A2LA
☐ GSA ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: _____
☐ State: _____ ☐ LEVEL IV
☐ Other: _____ ☐ NELAC

Number of Containers
Sample Type: A W S V B O
Air Water Soils/Solids Vegetation Bioassay Other

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	DEQ-LQD Guideline #5	No Radionuclides								SEE ATTACHED	Normal Turnaround (TAT)
1 MW-14A	10/27/10	10:00 AM	W	X										
2 R-4	"	10:30 AM	"	X										
3 MW-10	"	11:30 AM	"	X										
4 MW-12	"	12:30 Noon	"	X										
5 MW-3	"	1:00 PM	"	X										
6 MW-4	"	1:45 PM	"	X										
7 MW-2	"	2:45 PM	"	X										
8														
9														
10														

RUSH

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by:

Cooler ID(s):

Receipt Temp _____ °C

On Ice: Yes No

Custody Seal	Y	N
Bottles/ Coolers	B	C
Intact	Y	N
Signature Match	Y	N

LABORATORY USE ONLY

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Mark Moxley	10/28/10	13:30			
Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
			Received by Laboratory:	Date/Time: 10/28/10 13:30	Signature: Lorinda Edwards

Sample Disposal: Return to Client: _____ Lab Disposal: _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.