

**CAMECO RESOURCES,  
CROW BUTTE OPERATION**



**86 Crow Butte Road  
P.O. Box 169  
Crawford, Nebraska 69339-0169**

**(308) 665-2215  
(308) 665-2341 – FAX**

December 21, 2011

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Mr. Michael Linder, Director  
Nebraska Department of Environmental Quality  
PO Box 98922  
Lincoln, Nebraska 68509-8922

Subject: Nonconformance of Class I UIC Permit NE0210825 Part II (C)  
Deep Disposal Well #2 Monthly Composite Sampling

Dear Mr. Linder:

Part II (C) of the referenced Class I UIC permit requires that Crow Butte Operation (CBO) collect a monthly composite sample of the chemical parameters listed in the table. On November 29, 2011, CBO began the initial startup of Deep Disposal Well #2. Water samples were collected on November 29 and 30, 2011 and submitted to the onsite laboratory for Calcium, Chloride, Sulfate, Sodium, Alkalinity, and pH testing. Results of these tests are included in the November 2011 monthly report. During preparation of this report on December 20, 2011, it was discovered that the composite sample (collected on the first full day of operation – November 30, 2011) for off-site testing of Radium, Uranium, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver had been collected and put into the December composite sample for this well. The results of which will be reported in the December 2011 monthly report.

As a safety precaution, CBO was using injection water to test the startup of Deep Disposal Well #2. The most recent lab sample for injection water is attached to this report.

This incident will be investigated through the CBO corrective action process and corrective actions will be taken as appropriate.

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Mr. Michael Linder  
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Page 2

Title 122 Chapter 21 Section 001.06 requires 24 hour telephone notification of a noncompliance with the permit conditions, followed by a written report in five days. SHEQ Manager Larry Teahon notified Mrs. Jennifer Coughlin of the sampling nonconformance on December 21, 2011. Mr. Bill von Till, Branch Chief, for the Nuclear Regulatory Commission was also notified by voicemail on December 21, 2011.

If you have any questions, please do not hesitate to call me at (308) 665-2215 ext 111.

Sincerely,  
CAMECO RESOURCES  
CROW BUTTE OPERATION

A handwritten signature in black ink, appearing to read "Jim Stokey". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jim Stokey  
General Manager

Attachments

cc: U.S. Nuclear Regulatory Commission  
Mr. Ron Burrows - ADDRESSEE ONLY  
Fuel Cycle Licensing Branch  
Mailstop T8-F5  
Washington, DC 20555

Ms. Lindsay Phillips, NDEQ, Chadron Field Office

CBO-File

Ec: CR-Cheyenne

LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources  
 Subject: MU 6 Injection Water (WH 26)  
 Lab ID: C10101139-001  
 Client Sample ID: Wellhouse 26 Injection

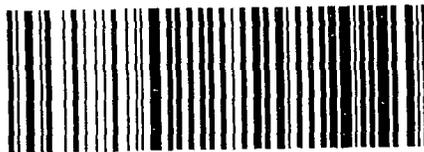
Report Date: 11/18/10  
 Collection Date: 10/27/10  
 Date Received: 10/29/10  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Alkalinity, Total as CaCO3	1740	mg/L		5		A2320 B	11/01/10 17:12 / jba
Carbonate as CO3	ND	mg/L		5		A2320 B	11/01/10 17:12 / jba
Bicarbonate as HCO3	2120	mg/L		5		A2320 B	11/01/10 17:12 / jba
Calcium	73	mg/L	D	2		E200.7	11/09/10 17:49 / cp
Chloride	714	mg/L	D	4		E300.0	11/06/10 12:46 / ljl
Fluoride	0.5	mg/L		0.1		A4500-F C	11/02/10 10:37 / jba
Magnesium	23	mg/L		1		E200.7	11/09/10 17:49 / cp
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	11/15/10 16:07 / dc
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	11/10/10 15:04 / dc
Potassium	32	mg/L		1		E200.7	11/09/10 17:49 / cp
Silica	24.1	mg/L		0.2		E200.7	11/09/10 17:49 / cp
Sodium	1460	mg/L	D	3		E200.7	11/09/10 17:49 / cp
Sulfate	708	mg/L	D	20		E300.0	11/06/10 12:46 / ljl
<b>PHYSICAL PROPERTIES</b>							
Conductivity @ 25 C	5930	umhos/cm		1		A2510 B	11/02/10 09:07 / lr
pH	7.99	s.u.		0.01		A4500-H B	11/02/10 09:07 / lr
Solids, Total Dissolved TDS @ 180 C	4110	mg/L	D	16		A2540 C	11/01/10 17:14 / lr
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	11/01/10 19:51 / sml
Arsenic	0.049	mg/L		0.001		E200.8	11/01/10 19:51 / sml
Barium	ND	mg/L		0.1		E200.8	11/01/10 19:51 / sml
Boron	1.3	mg/L		0.1		E200.7	11/09/10 17:49 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/01/10 19:51 / sml
Chromium	ND	mg/L		0.05		E200.8	11/01/10 19:51 / sml
Copper	0.02	mg/L		0.01		E200.8	11/01/10 19:51 / sml
Iron	ND	mg/L		0.03		E200.7	11/09/10 17:49 / cp
Lead	ND	mg/L		0.001		E200.8	11/01/10 19:51 / sml
Manganese	0.03	mg/L		0.01		E200.8	11/01/10 19:51 / sml
Mercury	ND	mg/L		0.001		E200.8	11/01/10 19:51 / sml
Molybdenum	0.4	mg/L		0.1		E200.8	11/01/10 19:51 / sml
Nickel	ND	mg/L		0.05		E200.8	11/01/10 19:51 / sml
Selenium	0.128	mg/L		0.001		E200.8	11/01/10 19:51 / sml
Uranium	0.951	mg/L		0.0003		E200.8	11/01/10 19:51 / sml
Uranium, Activity	6.4E-07	uCi/mL		2.0E-10		E200.8	11/01/10 19:51 / sml
Vanadium	0.8	mg/L		0.1		E200.8	11/01/10 19:51 / sml
Zinc	0.01	mg/L		0.01		E200.8	11/01/10 19:51 / sml
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	1150	pCi/L		0.18		E903.0	11/10/10 12:07 / jb
Radium 226 precision (±)	7.0	pCi/L				E903.0	11/10/10 12:07 / jb
Radium 226 MDC	0.18	pCi/L				E903.0	11/10/10 12:07 / jb

RL - Analyte reporting limit.  
 QCL - Quality control limit.  
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.  
 D - RL increased due to sample matrix.

**CERTIFIED MAIL™**



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REQUESTED**



**Cameco**

**CAMECO RESOURCES**

Crow Butte Operation  
86 Crow Butte Road  
P.O. Box 169  
Crawford, NE  
69339 USA

Mr. Ron Burrows, Project Manager  
Decommissioning and Uranium Recovery Licensing  
Directorate  
Division of Waste Management and Environmental  
Protection  
Office of Federal and State Materials and  
Environmental Management Programs  
Mailstop T8-F5  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

*Addressee Only*