

June 04, 2013

CERTIFIED MAIL # 7012 2210 0002 5617 0253

Mr. Robin Jones District 1 Supervisor Land Quality Division Wyoming Department of Environmental Quality 122 W. 25th Street Cheyenne, WY 82002 CAMECO RESOURCES Smith Ranch-Highland Operation Mail: P.O. Box 1210 Glenrock, WY 82637 USA

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May 2013 Excursion Report Summary Update, Cameco Resources, Smith Ranch-Highland Uranium Project, Permit 603 and 633

Dear Mr. Jones:

Power Resources, Inc. d/b/a/ Cameco Resources (Cameco) is submitting the monthly Excursion Report Summary for the Smith Ranch-Highland Uranium Project. Zero (0) new excursions were reported during the month of May 2013. The Cameco Excursion Report table is attached. Monitor Wells DM-003 and KMO-007 remained on excursion from the previous month.

Chloride and conductivity concentrations in Monitor Well DM-003 for the month of May are showing an upward trend, with alkalinity fluctuating. During the March 18, 2013 meeting with LQD, Cameco reviewed the underground workings treatment plan involving injection of clean water at the upslope of the workings in MU-C. During the report period, Cameco began installation of the infrastructure needed to implement the treatment plan. As previously described to LQD in a phone conversation between Pam Rothwell and Ken Garoutte on April 26, 2013, Cameco has observed that the concentrations in Monitor Well DM-004 have been trending upward and the next sampling, scheduled in June may show the well on excursion.

Chloride and alkalinity concentrations in Monitor Well KMO-007 showed a downward trend, with conductivity continuing to fluctuate. The last sample of the report period showed off excursion. KMO-007 will not be deemed officially off excursion until 3 consecutive samples result in off excursion. Cameco continues to assess possible sources for the elevated concentrations in this well. A Mechanical Integrity Test (MIT) was completed on the well February 27, 2013, when an upward trend in the alkalinity and conductivity concentrations was initially recognized. The well passed MIT. Review of the surrounding KMO water quality continues, together with review of the 30 day Guideline 8 sample results. This sample was

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collected on April 9, 2013, the analytical report is attached. Cameco is also in the process of running a mini stress test on the aquifer to be performed over 4 days, with a sample being taken once daily. The purpose of this mini test is to recognize and evaluate any change in the parameters that may take place. Water Quality results from this will be presented in the next monthly update.

Cameco has conducted numerous test and data reviews to isolate the source of the elevated concentrations in water quality at KMO-007, which may point to natural fluctuations. Cameco would like to schedule a meeting with LQD to confer with their technical specialists regarding this information and the analytical results of the guideline 8 sample.

Copies of the monitor well reports for these wells are attached. Also attached please find graphs tracking alkalinity, chloride, conductivity and water level trends for each well. Please note that the water level graph represents depth of water where the monitor well report data sheet gives water level in elevation.

Please contact me at 307-358-6541, ext. 476 or <u>Kenneth_Garoutte@cameco.com</u> if you have questions.

Respectfully,

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Ken Garoutte Safety, Health, Environment, Quality (SHEQ) Manager

KG/vg

Attachments: Cameco Resources Excursion Report Monitor Well Report and Trend Graphs for DM-003 and KMO-007 30 day Guideline 8 Analytical Report

cc: File HUP 4.3.3.1 File SR 4.3.3.1 Special Volume: Monthly Excursion Reports Summary Updates, Permit 603 and 633 Mr. Doug Mandeville, NRC - CERTIFIED MAIL # 7012 2210 0002 5617 0277 Document Control Desk, NRC - CERTIFIED MAIL # 7012 2210 0002 5617 0260

ec: Cameco-Cheyenne

Cameco Resources Excursion Report Permit Nos. 603 & 633 (May 2013)

Well Identification	Initial Sample Date	Confirmation Sample Date	Excursion Status (on/off)	Parameters Exceeded	Verbal Notification Date	Written Notification Date	Excursion Resolution Date	LQD Concurrence Notification Date
DM-003	11/19/2009	11/20/2009	ON	Chloride Alkalinity	11/23/2009	11/25/2009		
KMO-007	3/8/2013	3/11/2013	ON	Alkalinity Conductivity	3/12/2013	3/19/2013		



Chloride Trending Analysis Well : DM-003





Alkalinity Trending Analysis Well : DM-003





Conductivity Trending Analysis Well : DM-003





Date Range

Sample Value Exceedance Value UCL Value

Report Generation Date : May 30, 2013



Cameco Resources Smith Ranch - Highland Operation Monitor Well Report

Well ID: DM-003

	Chloride (mg/L)	Alkalinity (mg/L CaCO ₃)	Conductivity (µMhos/cm)	U ₃ O ₈ (mg/L)	Water Elevation	Comment
NRC/WDEQ UCL	18	188	962			
05/28/2013	35	265	1017	0	5077.4	
05/22/2013	34	272	994	0	5080.1	
05/14/2013	32	266	987	0	5077.4	
05/07/2013	31	263	1009	0	5075.2	
04/30/2013	31	265	983	0	5075.2	
04/23/2013	30	264	996	0	5064.4	
04/16/2013	28	255	941	0	5061.6	
04/09/2013	27	252	988	0	5059.8	
04/02/2013	27	249	941	0	5058.8	
03/26/2013	26	251	940	0	5059.5	
03/19/2013	26	250	910	0	5059.3	
03/12/2013	27	254	951	0	5061.3	
03/05/2013	26	253	891	0	5074.9	
02/26/2013	26	255	948	0	5060.4	
02/19/2013	27	255	938	0	5057.0	
02/12/2013	31	270	991	0	5051.9	
02/05/2013	30	264	996	0	5052.5	
01/29/2013	28	252	958	0	5053.4	
01/22/2013	30	264	956	0	5054.9	
01/15/2013	26	254	918	0	5061.6	
01/08/2013	27	259	943	0	5061.8	
01/02/2013	30	265	978	0	5059.6	
12/26/2012	30	267	946	0	5061.5	



Cameco Resources Smith Ranch - Highland Operation Monitor Well Report

Well ID: DM-003

NRCAUDEO	Chloride (mg/L)	Alkalinity (mg/L CaCO ₃)	Conductivity (µMhos/cm)	U ₃ O ₈ (mg/L)	Water Elevation	Comment
UCL	18	188	962			
12/18/2012	30	264	963	0	5057.6	
12/11/2012	28	259	893	0	5058.4	
12/04/2012	25	251	959	0	5056.6	
11/27/2012	24	246	930	0	5053.4	
11/20/2012	24	259	881	0	5047.8	
11/13/2012	18	250	859	0	5047.0	
11/06/2012	28	274	998	0	5047.8	
10/30/2012	30	278	998	0	5048.2	
10/23/2012	34	293	1077	0	5054.0	
10/16/2012	37	303	1037	0	5058.7	
10/09/2012	35	300	1045	0	5047.8	
10/02/2012	38	303	1046	0	5048.2	



Alkalinity Trending Analysis _{Well} : KMO-007







Conductivity Trending Analysis Well : KMO-007



Report Generation Date : May 30, 2013







Cameco Resources Smith Ranch - Highland Operation Monitor Well Report

Well ID: KMO-007

NRCHUREO	Chloride (mg/L)	Alkalinity (mg/L CaCO ₃)	Conductivity (µMhos/cm)	U ₃ O ₈ (mg/L)	Water Elevation	Comment
UCL	18	218	684			
05/28/2013	8	218	688	0	5213.0	
05/21/2013	8	220	692	0	5212.8	
05/14/2013	9	222	686	0	5213.6	
05/07/2013	10	227	707	0	5212.5	
04/30/2013	9	224	688	0	5212.6	
04/23/2013	9	225	668	0	5213.2	
04/16/2013	10	223	698	0	5215.0	
04/09/2013	10	212	680	0	5213.4	
04/02/2013	10	219	688	0	5216.2	
03/26/2013	10	215	678	0	5218.0	
03/19/2013	10	224	682	0	5219.6	
03/11/2013	10	222	706		5219.9	
03/08/2013	12	229	718		5220.8	
02/22/2013	9	223	680		5223.7	
02/08/2013	8	217	681		5228.0	
01/25/2013	7	196	651		5254.2	
01/11/2013	7	206	643		5233.2	
12/26/2012	8	209	652		5237.0	
12/11/2012	8	208	658		5237.6	
11/19/2012	8	218	660		5235.8	
11/06/2012	8	212	631		5234.0	
10/23/2012	7	213	638		5233.8	
10/08/2012	6	206	609		5234.8	



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client:	Power Resources dba Came	co Resources	
Project:	SR-HUP		
Lab ID:	C13040378-001		
Client Sample ID	KMO-007		

 Report Date:
 05/07/13

 Collection Date:
 04/09/13 11:29

 DateReceived:
 04/10/13

 Matrix:
 Aqueous

				MCL/				
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By	
MAJOR IONS								
Alkalinity Total as CaCO3	220	ma/l		1		42320 B	04/11/13 16:22 / iba	
Carbonate as CO3	ND	mg/L		5		A2320 B	04/11/13 16:22 / jba	
Ricarbonate as UCO3	270	mg/L		5		A2320 B	04/11/13 16:22 / jba	
Calcium	219	mg/L		1		F200 7	04/11/13 10:227 jba	
Chlorida	31	mg/L				E200.7	04/12/13 14:42 / WC	
Elugrido	9	mg/L		01		A4500 E C	04/17/13 14:42 / WC	
Magnasium	10	mg/L		1		E200 7	04/12/13 19:04 / sf	
Nitragen Ammenia en N	19	mg/L		0.05		6.4500 NH2 C	04/12/13 19:44 / 51	
Nitrogen, Ammonia as N	ND	mg/L		0.05		E252 0	04/12/13 12:30 / 11	
Nitrogen, Nitrate as N	ND	mg/L		0.1		E353.2	04/16/13 14.22 / Smm	
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/15 11.21 / IF	
Nitrogen, Nitrite as N	ND	mg/L		0.1		A4500-NO2 B	04/11/13 08:13 / WC	
Potassium	9	mg/L				E200.7	04/12/13 19:44 / st	
Silica	18.5	mg/L		0.2		E200.7	04/12/13 19:44 / st	
Sodium	26	mg/L		1		E200.7	04/12/13 19:44 / st	
Sulfate	127	mg/L	D	2		E300.0	04/17/13 14:42 / wc	
PHYSICAL PROPERTIES								
Conductivity @ 25 C	683	umhos/cm		1		A2510 B	04/11/13 11:13 / ab	
рН	7.60	s.u.	н	0.01		A4500-H B	04/11/13 11:13 / ab	
Solids, Total Dissolved TDS @ 180 C	447	mg/L		10		A2540 C	04/12/13 15:54 / ab	
METALS - DISSOLVED								
Aluminum	ND	ma/l		01		E200.7	04/12/13 19:44 / sf	
Antimony	ND	mg/L		0.001		E200.8	04/16/13 16:44 / clm	
Areanic	0.002	mg/L		0.001		E200.8	04/16/13 16:44 / clm	
Barium	ND	mg/L		0.1		E200.7	04/12/13 19:44 / sf	
Bandin Bandium	ND	mg/L		0.001		E200.7	04/12/13 19:44 / sf	
Boron	ND	mg/L		0.1		E200.7	04/12/13 10:44 / sf	
Codmium		mg/L		0.005		E200.7	04/12/13 10:44 / ST	
Chromium	ND	mg/L		0.005		E200.7	04/12/13 19:44 / Si	
Conner	ND	mg/L		0.03		E200.7	04/12/13 19:44 / SI	
Copper	0.19	mg/L		0.01		E200.7	04/12/13 19:44 / 51	
lion	0.18	mg/L		0.03		E200.7	04/12/13 19:44 / 51	
Lead	0.03	mg/L		0.001		E.200.0	04/10/13 10:44 / 0111	
Manganese	0.03	mg/L		0.01		E200.7	04/12/13 19:44 / 51	
Mercury	ND	mg/L		0.001		E.200.8	04/16/13 16:44 / clm	
Molypdenum	ND	mg/L		0.1		E200.7	04/12/13 19:44 / st	
NICKEI	ND	mg/L		0.05		E200.7	04/12/13 19:44 / st	
Selenium	ND	mg/L		0.001		E200.8	04/16/13 16:44 / clm	
Ihallium	ND	mg/L		0.001		E200.8	04/16/13 16:44 / clm	
Uranium	0.0154	mg/L		0.0003		E200.8	04/16/13 16:44 / clm	
Vanadium	ND	mg/L		0.1		E200.7	04/12/13 19:44 / sf	
Zinc	ND	mg/L		0.01		E200.7	04/12/13 19:44 / sf	

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client:	Power Resources dba Ca	meco Resources	Report Date:	05/07/13
Project:	SR-HUP		Collection Date:	04/09/13 11:29
Lab ID:	C13040378-001		DateReceived:	04/10/13
Client Sample ID	KMO-007		Matrix:	Aqueous

	MCL/								
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By		
METALS - TOTAL									
Iron	0.35	mg/L		0.03		E200.7	04/18/13 16:40 / sf		
Manganese	0.03	mg/L		0.01		E200.7	04/18/13 16:40 / sf		
RADIONUCLIDES - DISSOLVED									
Gross Alpha	25.4	pCi/L				E900.0	04/29/13 17:34 / lbb		
Gross Alpha precision (±)	2.4	pCi/L				E900.0	04/29/13 17:34 / lbb		
Gross Alpha MDC	1.9	pCi/L				E900.0	04/29/13 17:34 / lbb		
Gross Alpha - Adjusted	14.7	pCi/L				E900.0	05/03/13 13:22 / res		
Gross Beta	13.5	pCi/L				E900.0	04/29/13 17:34 / lbb		
Gross Beta precision (±)	2.2	pCi/L				E900.0	04/29/13 17:34 / lbb		
Gross Beta MDC	3.2	pCi/L				E900.0	04/29/13 17:34 / lbb		
Radium 226	4.3	pCi/L				E903.0	04/29/13 15:24 / Imc		
Radium 226 precision (±)	0.44	pCi/L				E903.0	04/29/13 15:24 / Imc		
Radium 226 MDC	0.18	pCi/L				E903.0	04/29/13 15:24 / Imc		
Radium 228	2.4	pCi/L				RA-05	04/23/13 21:38 / gb		
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/23/13 21:38 / gb		
Radium 228 MDC	2.0	pCi/L				RA-05	04/23/13 21:38 / gb		
DATA QUALITY									
A/C Balance (± 5)	-0.103	%				A1030 E	04/22/13 07:27 / kbh		
Anions	7.49	meq/L				A1030 E	04/22/13 07:27 / kbh		
Cations	7.48	meq/L				A1030 E	04/22/13 07:27 / kbh		
Solids, Total Dissolved Calculated	440	mg/L				A1030 E	04/22/13 07:27 / kbh		
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/22/13 07:27 / kbh		

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