

**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 16, 2013

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Attn: Document Control Desk, Deputy Director
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

Re: Source Materials License SUA-1534
Docket No. 40-8943
Monitor Well Excursion – SM10-18

Dear Deputy Director:

On December 10, 2013 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM10-18, the single parameter upper control limit (SCL) for chloride was exceeded as well as the multiple parameter upper control limit (MCL) for conductivity. As required by License Condition 11.2 of Source Materials License SUA-1534, a second sample was collected within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the SCL for chloride.

CBO notified Mr. Ron Burrows of the excursion by phone at 12:20 p.m. on December 11, 2013. Laboratory results for the sample analysis of SM10-18 are attached. In addition, graphs are attached for the three excursion indicator parameters and water levels that cover the period from March 5, 2013 to December 11, 2013.

Prior to the December 10, 2013 sample, SM10-18 had been sampled on November 26, 2013. Following collection of this sample, the Water Sampler forgot to turn the well off. This was discovered on December 4, 2013, at which time the well was shut-off. During the time period that the well was left on, the water purged from the well collected behind a berm located several

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feet downhill causing the purged water to be trapped around the well. During routine biweekly sampling approximately 500 gallons of water is normally purged from the well and this water does not collect around the well.

The screened interval for this well is fairly shallow, (beginning at 66 feet) and CBO believes that the over saturation of the area around the well impacted the water quality and contributed to the well exceeding the excursion parameters for chloride and conductivity.

CBO has implemented the following corrective actions to ensure that the causal factors leading up to this incident have been remediated. The Environmental Leadership Coordinator, or a designee, will inspect the sampled area each day after sampling is completed to ensure that all wells have been shut-off. All shallow monitor wells will be inspected to identify and address any potential conditions that may contribute to a similar type incident where purge water can collect around a well.

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215 ext 114.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Larry Teahon
SHEQ Manager

Enclosures: As Stated

cc: Mr. Ronald Burrows – NRC
CBO – File
ec: CR – Cheyenne Office



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 12/10/2013

Analysis Date: 12/10/2013

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (μ Mho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM07-023	179	278	232	446	850	708	4.1	59	50
SM07-024	189	259	216	578	809	674	8.8	45	37
SM07-025	157	202	168	357	645	538	2.5	52	44
SM10-016	254	382	318	569	850	708	10	28	23
SM10-017	250	374	312	548	835	696	9	28	23
SM10-018	215	346	288	719	763	636	46	24	20
SM10-019	238	369	307	558	778	648	14	25	21
SM10-020	242	360	300	550	792	660	12	27	22
SM10-021	240	360	300	602	806	672	23	27	23
SM10-022	243	360	300	542	778	648	8.9	23	20



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 12/11/2013

Analysis Date: 12/11/2013

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (μ Mho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM05-007	215	323	269	557	932	776	9.9	41	34
SM05-008	210	312	260	544	840	700	13	32	27
SM08-017	229	331	276	516	848	707	8	24	20
SM08-018	223	317	264	505	816	680	8.4	25	21
SM08-019	228	340	283	502	827	689	7.4	25	21
SM08-020	217	314	262	493	806	672	8	25	21
SM08-021	218	317	264	497	706	588	7.3	25	21
SM08-022	218	324	270	493	829	691	7.1	25	20
SM08-023	219	317	264	497	808	673	7.4	27	23
SM08-024	219	317	264	502	720	600	7.7	24	20
SM08-025	224	324	270	511	720	600	7.7	24	20
SM10-018	227	346	288	615	763	636	28	24	20
SM10-030	231	359	299	504	778	648	7.2	25	21
SM10-031	233	340	283	507	734	612	6.7	25	21
SM10-032	235	340	283	504	734	612	6.5	23	20

SM10-018



