

**CAMECO RESOURCES  
CROW BUTTE OPERATION**



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April 1, 2019

USPS PRIORITY MAIL  
SIGNATURE CONFIRMATION

ATTN: Document Control Desk, Director  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Source Materials License SUA-1534  
Docket No. 40-8943  
Monitor Well Excursion – SM8-25

Attn: Document Control Desk:

On March 27, 2019, during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM8-25, the single parameter upper control limit (SCL) for conductivity was exceeded. As required by License Condition 11.5 of Source Materials License SUA-1534, a second sample was collected within 24 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the single control limit (SCL) for conductivity.

CBO notified Mr. Ron Burrows of the excursion by voicemail on March 28, 2019, as required in License Conditions 11.5 and 11.6. Laboratory results for the sample analysis for SM8-25 are attached. In addition, graphs are attached for the three excursion indicator parameters and water levels that cover the period from July 18, 2018 through March 28, 2019.

The region around the CBO facility was subject to a major winter storm on March 14 and 15, 2019, in which the site received an estimated 18" of snowfall accompanied by up to 90 mph wind gusts. As a result, a significant amount of snowmelt impacted the area around the well. SM8-25 has demonstrated increasing conductivity during periods of high precipitation in the past, however, this is the first time the well has been placed on excursion status.

In accordance with License Condition 11.5, CBO has increased the sampling frequency for SM8-25 to weekly until three consecutive weekly samples are below the exceeded UCLs. CBO will

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**Document Control Desk Director**

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continue weekly sampling for an additional three weeks after this goal has been achieved as required by CBO's NDEQ Class III UIC Permit requirements. If the well has not exceeded the UCLs after these samples, it will be returned to normal status.

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215 ext 117.

Sincerely,  
CAMECO RESOURCES  
CROW BUTTE OPERATION

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

Walt Nelson  
SHEQ Coordinator

Enclosures: As Stated

cc: NRC – Deputy Director  
CBO – File

ec: CR – Electronic File



*Crow Butte Project*

**Monitor Well Laboratory Report**

Sample Date: 03/27/2019

Analysis Date: 03/27/2019

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM05-007	209	323	269	564	932	776	9.9	41	34
SM05-008	206	312	260	555	840	700	12	32	27
SM08-017	240	331	276	569	848	707	9.1	24	20
SM08-018	229	317	264	542	816	680	9.7	25	21
SM08-019	237	340	283	559	827	689	9.9	25	21
SM08-020	225	314	262	544	806	672	8.6	25	21
SM08-021	242	317	264	584	706	588	9.4	25	21
SM08-022	237	324	270	604	829	691	9	25	20
SM08-023	227	317	264	544	808	673	8.5	27	23
SM08-024	225	317	264	540	720	600	8.7	24	20
SM08-025	253	324	270	724	720	600	12	24	20
SM10-030	235	359	299	530	778	648	7.4	25	21
SM10-031	239	340	283	552	734	612	8.1	25	21
SM10-032	239	340	283	542	734	612	7.3	23	20



**Crow Butte Project**  
**Monitor Well Laboratory Report**

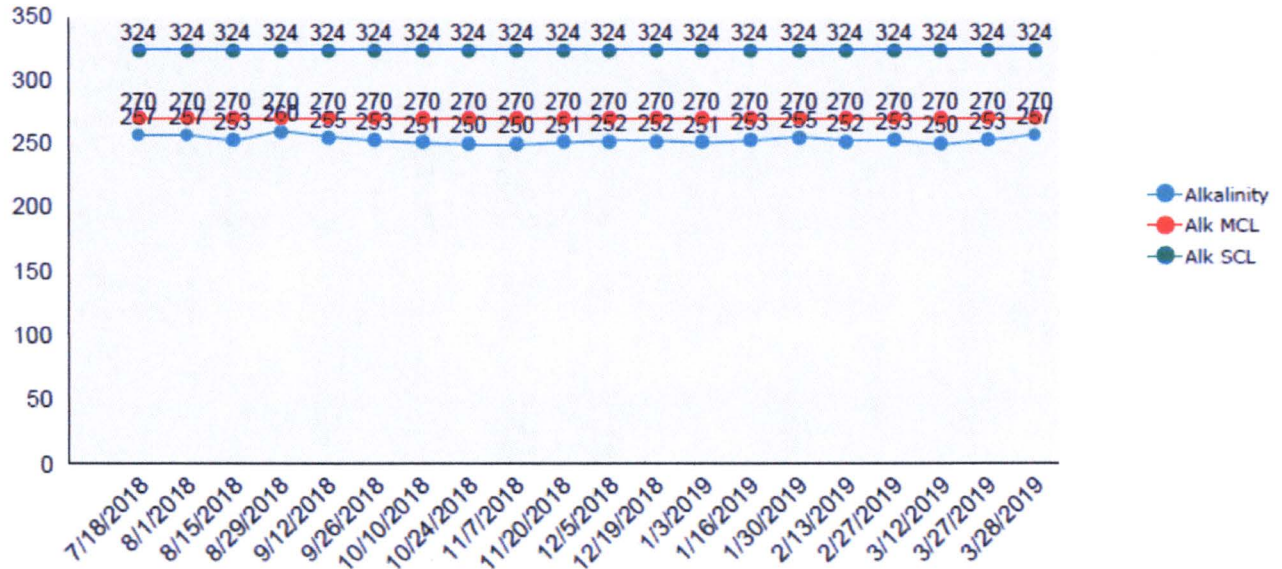
Sample Date: 03/28/2019

Analysis Date: 03/28/2019

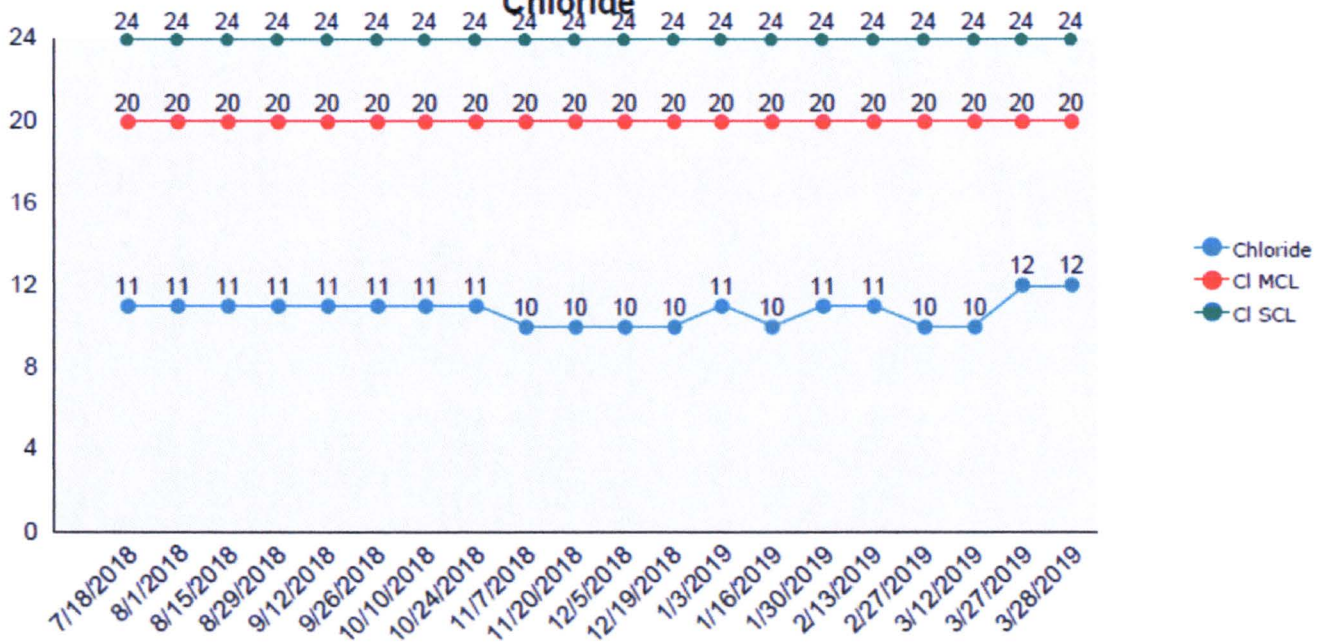
Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	ClSCL	ClMCL
CM05-012	298	456	380	1887	2982	2485	179	323	269
CM05-013	294	373	311	1893	3149	2624	178	386	322
CM06-001	297	432	360	1879	3168	2640	181	334	278
CM06-002	298	436	364	1913	2822	2352	180	279	233
CM06-003	301	441	367	1912	2808	2340	177	269	224
CM06-004	303	441	367	1920	2837	2364	176	289	241
CM06-005	294	416	347	1938	2923	2436	175	294	245
CM06-006	306	444	370	1928	2894	2412	175	301	251
CM06-007	280	403	336	1963	2822	2352	175	281	234
CM06-008	294	445	371	1929	2923	2436	175	305	254
CM07-010	298	454	378	1881	2877	2398	189	297	247
CM09-012	306	444	370	1801	2866	2388	177	321	268
CM09-013	297	442	368	1799	2707	2256	176	279	233
CM09-014	302	461	384	1817	2923	2436	180	327	272
CM09-015	306	432	360	1821	2736	2280	178	279	233
CM09-016	304	444	370	1827	2678	2232	180	268	223
CM09-017	303	441	367	1829	2678	2232	180	268	223
CM09-018	297	445	371	1829	2794	2328	181	294	245
CM09-019	298	454	378	1840	2952	2460	182	315	263
CM09-020	292	431	359	1846	2779	2316	181	279	233
SM06-001	211	325	271	536	903	752	7.4	47	39
SM06-002	205	291	242	541	1008	840	10	85	71
SM06-003	202	295	246	537	844	703	9.8	43	36
SM06-004	206	310	258	522	804	670	8.2	32	27
SM06-005	212	314	262	514	770	642	7	26	22
SM06-006	222	334	278	474	711	593	3.4	24	20
SM06-007	223	343	286	494	779	649	6.9	39	32
SM06-008	207	311	259	493	770	642	9.5	36	30
SM06-009	219	336	280	480	815	679	6.1	51	42
SM06-010	204	317	264	495	838	698	8.6	35	29
SM06-017	233	353	294	484	798	665	4	42	35
SM08-025	257	324	270	737	720	600	12	24	20

SM08-025

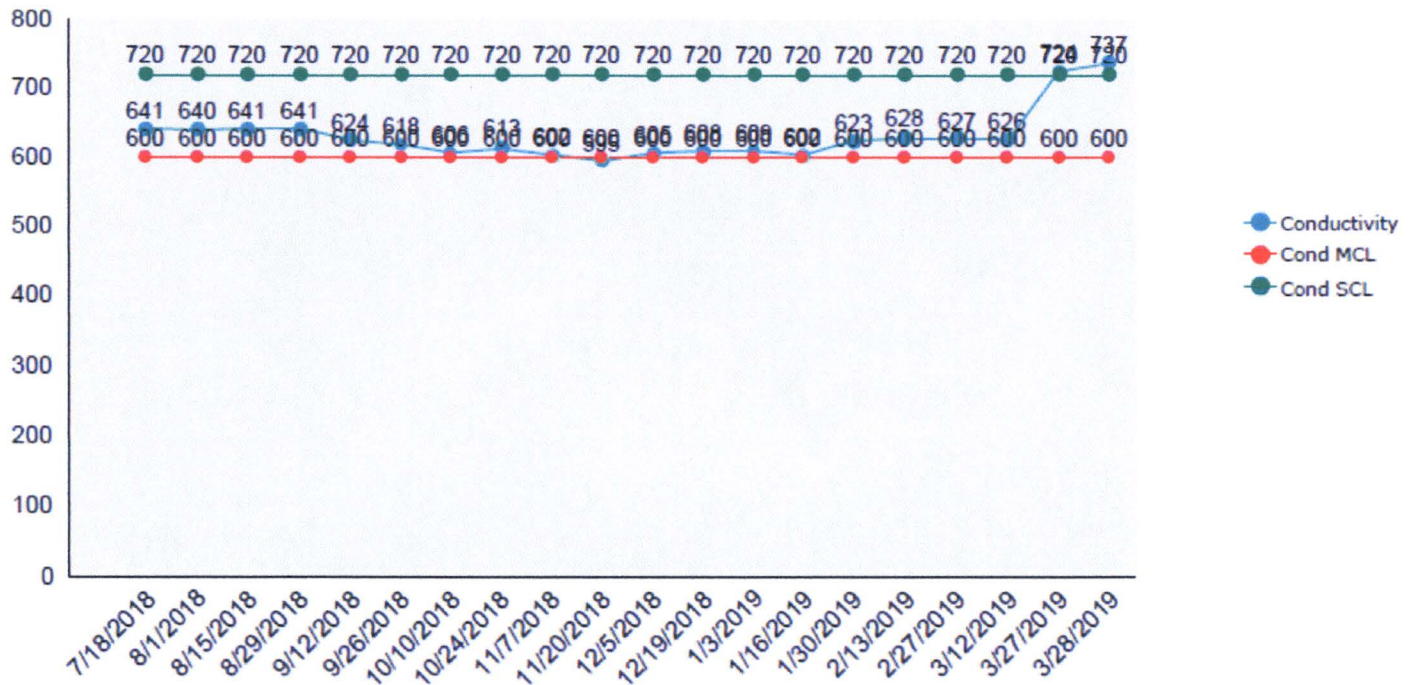
### Alkalinity



### Chloride



### Conductivity



### Water Level

