

CAMECO RESOURCES
CROW BUTTE OPERATION



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June 9, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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 – SM10-18

Dear Document Control Desk Director:

On April 14, 2015 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 11.5 of Source Materials License SUA-1534, a second sample was collected from SM10-18 within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the SCL for chloride and MCL for conductivity.

In accordance with License Condition 11.5, CBO increased the sampling frequency for SM10-18 to weekly until three consecutive weekly samples were below the exceeded UCLs. CBO continued weekly sampling for an additional three weeks after the goal had been achieved as required by CBO's NDEQ Class III UIC Permit requirements

CBO has installed a gas powered pump jack on SM10-18 with a run time of approximately 6-8 hours. CBO believes this control measures will prevent the well from being over pumped in the future.

Weekly samples were obtained from April 21, 2015, to June 2, 2015. The samples collected on April 28, May 5, 12, 19, 26, and June 2, 2015, were below the excursion criteria described in

NMSS01

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Document Control Desk Director
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License Condition 11.5. Based on these results, CBO is removing SM10-18 from excursion status and is returning it to routine biweekly sampling. Attached are copies of the analytical data for each of the last six weekly samples and graphs for each parameter covering the period of November 11, 2014 through June 2, 2015.

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: NRC – Deputy Director
CBO - File
ec: CR – Casper



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 04/28/2015

Analysis Date: 05/12/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM07-023	176	278	232	451	850	708	3.8	59	50
SM07-024	188	259	216	570	809	674	8.4	45	37
SM07-025	155	202	168	362	645	538	2.9	52	44
SM10-016	255	382	318	577	850	708	9.6	28	23
SM10-017	247	374	312	556	835	696	9.6	28	23
SM10-018	232	346	288	595	763	636	19	24	20
SM10-019	242	369	307	573	778	648	13	25	21
SM10-020	238	360	300	573	792	660	19	27	22
SM10-021	231	360	300	606	806	672	26	27	23
SM10-022	240	360	300	550	778	648	10	23	20



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 05/05/2015

Analysis Date: 05/19/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (μ Mho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM08-007	248	348	290	596	763	636	8.8	23	19
SM08-008	239	340	283	505	864	720	5.1	24	20
SM08-009	237	353	294	504	886	738	5.1	23	19
SM08-010	241	331	276	586	749	624	9.1	24	20
SM08-011	230	323	269	532	792	660	7.1	24	20
SM08-012	244	323	269	574	834	695	8.1	25	20
SM08-013	228	328	274	546	880	733	12	31	26
SM08-014	233	325	271	558	720	600	10	24	20
SM08-015	222	305	254	526	789	658	7.5	35	29
SM08-016	225	331	276	535	828	690	7.6	24	20
SM09-001	177	255	212	440	648	540	4.5	31	26
SM09-002	164	230	192	384	665	554	3.3	72	60
SM09-003	162	239	199	381	605	504	3	29	24
SM09-004	148	230	192	375	562	468	6.2	26	22
SM09-005	144	206	172	313	446	372	2.8	22	18
SM10-018	236	346	288	563	763	636	13	24	20
SM11-001	163	240	200	413	605	504	6.3	24	20
SM11-002	143	202	168	331	446	372	4.2	21	17
SM11-003	145	210	175	322	490	408	1.6	20	17
SM11-004	142	200	167	310	446	372	1.1	20	17
SM11-005	141	204	170	321	475	396	2.9	20	17
SM11-006	143	207	173	328	490	408	5.5	25	21



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 05/12/2015

Analysis Date: 05/12/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM07-023	178	278	232	448	850	708	3.7	59	50
SM07-024	190	259	216	558	809	674	8.2	45	37
SM07-025	158	202	168	357	645	538	2.8	52	44
SM10-016	250	382	318	579	850	708	9.7	28	23
SM10-017	248	374	312	552	835	696	9.3	28	23
SM10-018	238	346	288	548	763	636	11	24	20
SM10-019	244	369	307	555	778	648	11	25	21
SM10-020	235	360	300	576	792	660	21	27	22
SM10-021	231	360	300	607	806	672	28	27	23
SM10-022	241	360	300	546	778	648	11	23	20



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 05/19/2015

Analysis Date: 05/19/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM08-007	248	348	290	598	763	636	8.9	23	19
SM08-008	238	340	283	506	864	720	5.2	24	20
SM08-009	238	353	294	505	886	738	5.4	23	19
SM08-010	242	331	276	589	749	624	9.1	24	20
SM08-011	230	323	269	535	792	660	7.3	24	20
SM08-012	248	323	269	586	834	695	8.6	25	20
SM08-013	228	328	274	547	880	733	12	31	26
SM08-014	232	325	271	559	720	600	11	24	20
SM08-015	222	305	254	528	789	658	7.7	35	29
SM08-016	225	331	276	536	828	690	7.5	24	20
SM09-001	175	255	212	428	648	540	4.2	31	26
SM09-002	164	230	192	384	665	554	3.4	72	60
SM09-003	160	239	199	375	605	504	2.8	29	24
SM09-004	147	230	192	370	562	468	6	26	22
SM09-005	143	206	172	307	446	372	2.7	22	18
SM10-018	238	346	288	529	763	636	8	24	20
SM11-001	163	240	200	409	605	504	6.4	24	20
SM11-002	141	202	168	322	446	372	4.3	21	17
SM11-003	144	210	175	317	490	408	1.9	20	17
SM11-004	141	200	167	306	446	372	1.9	20	17
SM11-005	141	204	170	317	475	396	2.8	20	17
SM11-006	141	207	173	324	490	408	5.3	25	21



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 05/26/2015

Analysis Date: 05/26/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM07-003	173	256	214	443	700	583	5.2	35	29
SM07-004	165	255	212	399	671	559	3.6	33	28
SM07-005	170	248	206	421	648	540	3.4	26	22
SM07-006	155	209	174	369	636	530	4.7	41	34
SM07-007	171	253	211	432	648	540	4.7	23	19
SM07-008	169	238	198	481	802	668	8.1	50	42
SM07-009	169	262	218	418	660	550	4.1	29	24
SM07-010	169	253	211	435	680	566	4	25	21
SM07-011	145	216	180	343	539	449	3.9	27	22
SM07-012	168	223	186	437	619	516	4.4	28	23
SM07-013	154	233	194	386	592	493	7	25	21
SM07-014	137	180	150	328	618	515	2.6	65	54
SM08-006	248	328	274	815	734	612	27	23	19
SM08-028	255	328	274	938	801	667	13	24	20
SM10-016	0	382	318	0	850	708	0	28	23
SM10-017	0	374	312	0	835	696	0	28	23
SM10-018	238	346	288	541	763	636	8.3	24	20
SM10-019	0	369	307	0	778	648	0	25	21
SM10-020	0	360	300	0	792	660	0	27	22
SM10-021	0	360	300	0	806	672	0	27	23
SM10-022	0	360	300	0	778	648	0	23	20
SM10-023	234	360	300	560	792	660	16	28	23
SM10-024	231	346	288	532	778	648	10	25	21
SM10-025	228	331	276	527	792	660	10	27	23
SM10-026	245	360	300	574	821	684	14	29	24
SM10-027	246	403	336	544	878	732	8.2	25	21
SM10-028A	216	360	300	619	893	744	32	43	36
SM10-029A	269	360	300	605	864	720	12	31	26



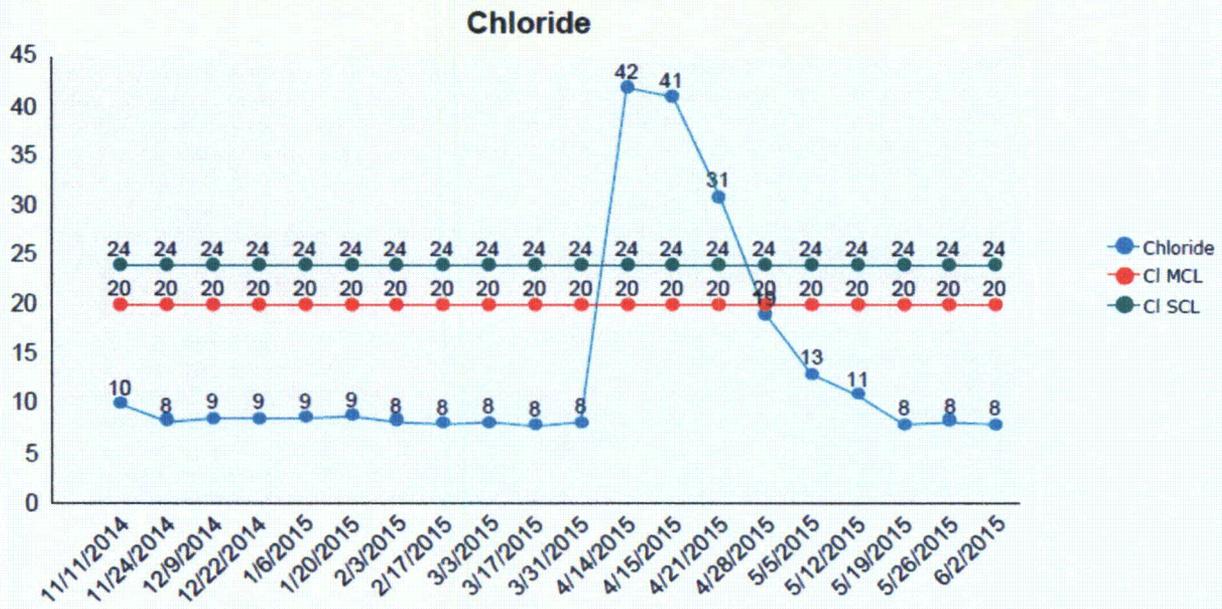
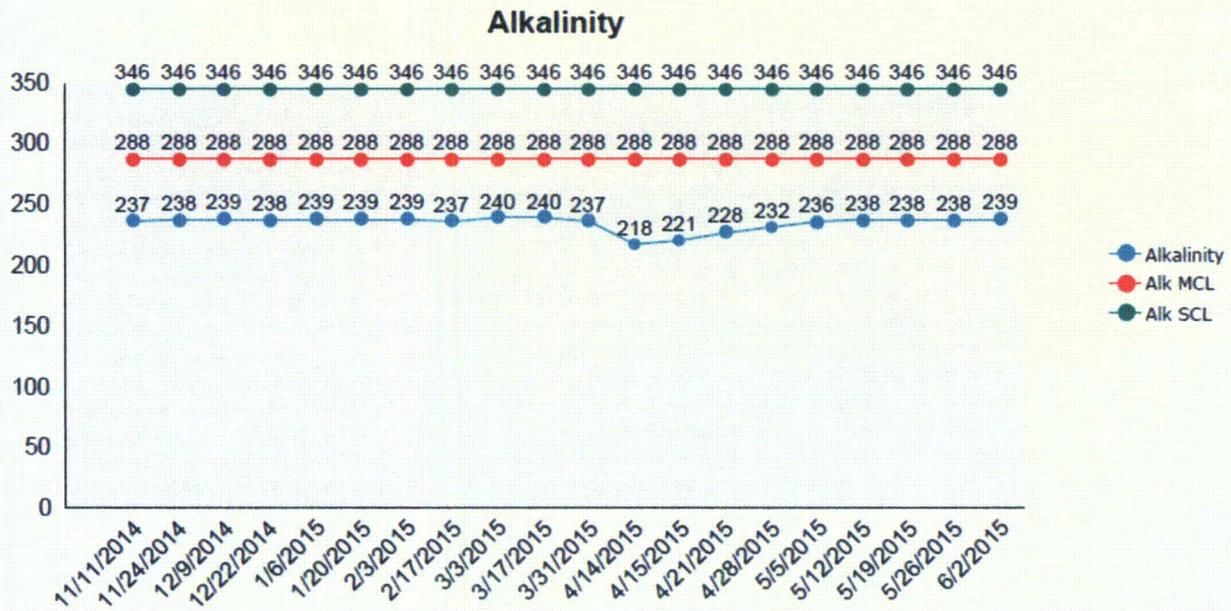
Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 06/02/2015

Analysis Date: 06/02/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM08-007	248	348	290	636	763	636	13	23	19
SM08-008	240	340	283	510	864	720	5	24	20
SM08-009	239	353	294	509	886	738	5.2	23	19
SM08-010	241	331	276	609	749	624	11	24	20
SM08-011	230	323	269	537	792	660	7.6	24	20
SM08-012	243	323	269	582	834	695	8.8	25	20
SM08-013	229	328	274	550	880	733	12	31	26
SM08-014	230	325	271	571	720	600	12	24	20
SM08-015	223	305	254	535	789	658	7.8	35	29
SM08-016	228	331	276	557	828	690	7.8	24	20
SM08-028	262	328	274	923	801	667	14	24	20
SM09-001	175	255	212	436	648	540	4.2	31	26
SM09-002	164	230	192	388	665	554	3.5	72	60
SM09-003	162	239	199	369	605	504	2.9	29	24
SM09-004	148	230	192	375	562	468	6.4	26	22
SM09-005	143	206	172	311	446	372	2.8	22	18
SM10-018	239	346	288	531	763	636	8	24	20
SM11-001	163	240	200	413	605	504	6.4	24	20
SM11-002	143	202	168	328	446	372	4.1	21	17
SM11-003	144	210	175	322	490	408	1.9	20	17
SM11-004	142	200	167	311	446	372	2.2	20	17
SM11-005	141	204	170	321	475	396	2.9	20	17
SM11-006	142	207	173	327	490	408	5.4	25	21

Crow Butte Operations
SM10-18



Crow Butte Operations
SM10-18

