CAMECO RESOURCES
CROW BUTTE OPERATION

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

(308) 665-2215
(308) 665-2341 – FAX

July 29, 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 – SM8-5

Dear Document Control Desk Director:

On June 3, 2015 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM8-5, exceeded the multiple parameter upper control limit (MCL) for conductivity and chloride. As required by License Condition 11.5 of Source Materials License SUA-1534, a second sample was collected from SM8-5 within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample also exceeded the excursion control parameters as described above.

In accordance with License Condition 11.5, CBO increased the sampling frequency for SM8-5 to weekly. Weekly samples were obtained from June 2, 2015, to July 28, 2015. The samples collected on July 14, 21, and 28, 2015, were below the excursion criteria from License Condition 11.5. Based on these results, CBO is removing SM8-5 from excursion status. In accordance with the requirements of Nebraska Department of Environmental Quality (NDEQ) Underground Injection Permit NE0122611, Section B.1, weekly sampling will continue for an additional three weeks. If the excursion monitoring parameters are not exceeded then biweekly sampling will resume. Attached are copies of the analytical data for each of the last three weekly samples and graphs for each parameter covering the period of January13, 2015 to July 28, 2015.

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

NMSS01

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

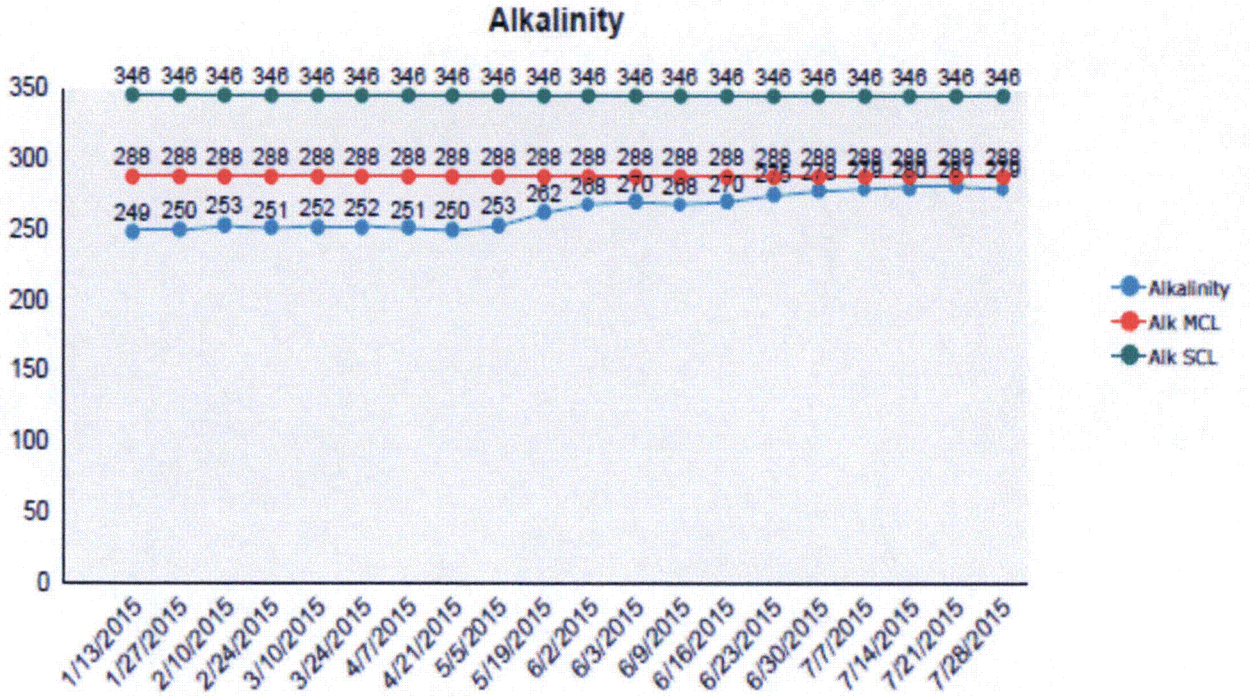
Larry Teahon

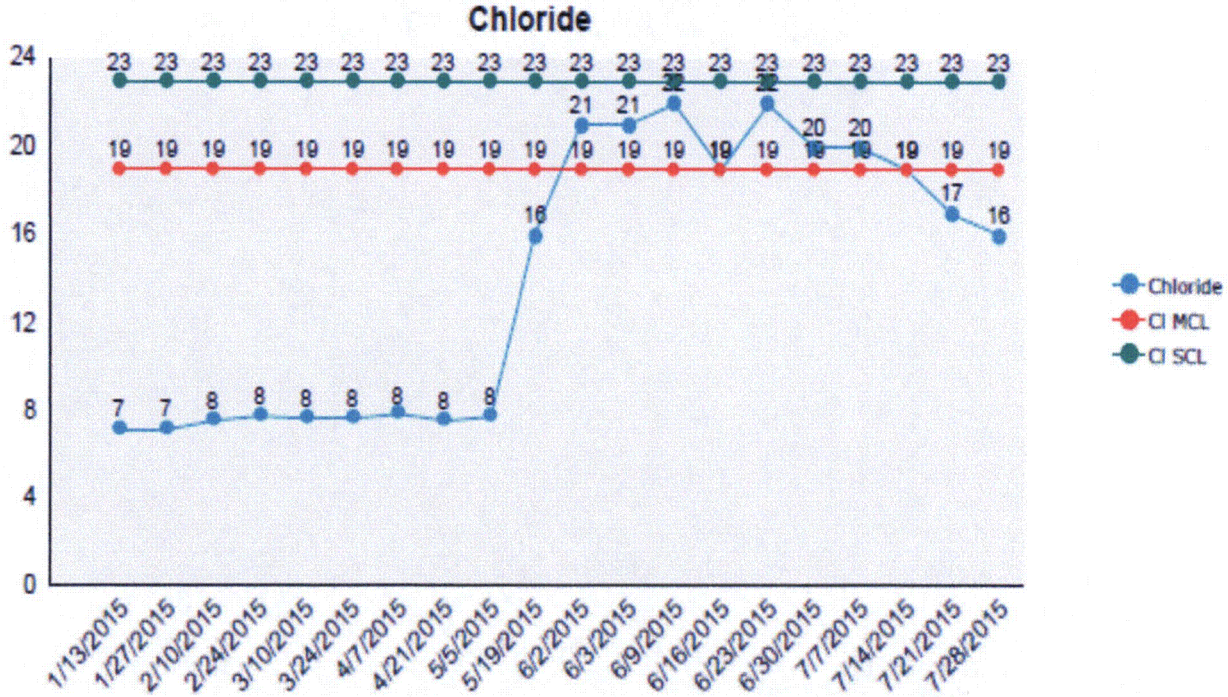
Larry Teahon
SHEQ Manager

Enclosures: As Stated

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

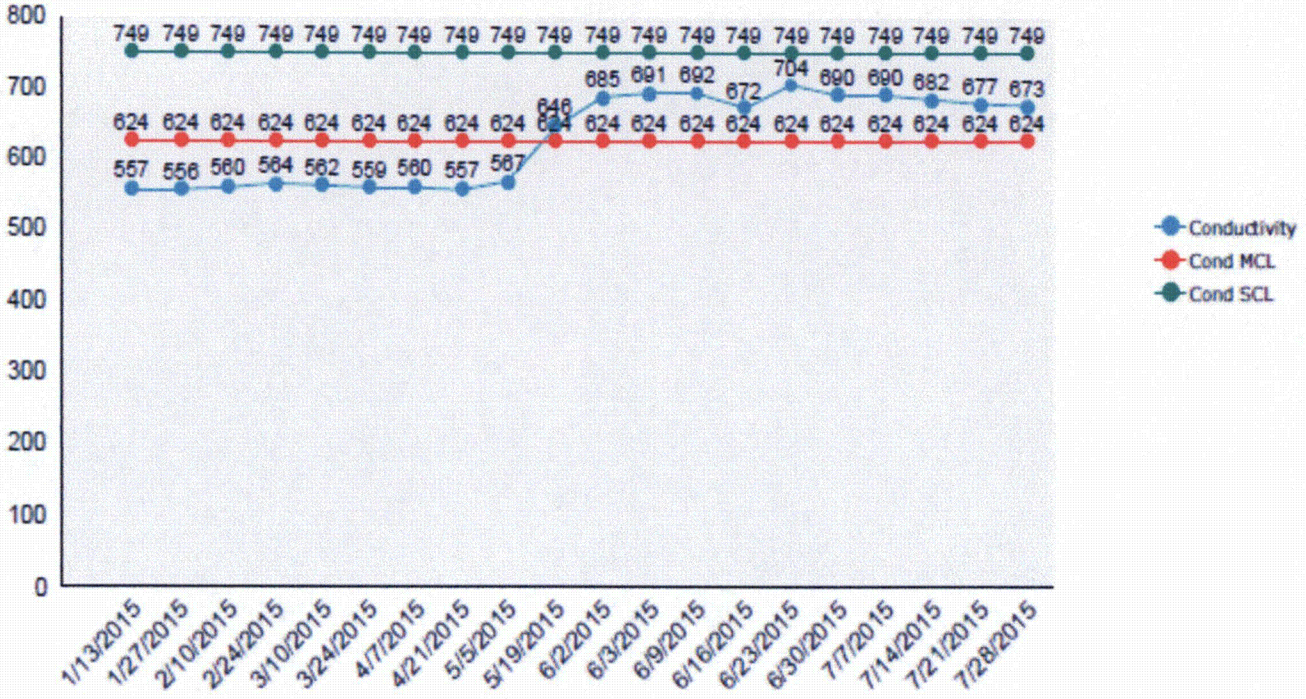
SM08-005


Alkalinity
350
300
250
200
150
100
50
0
346 346 346 346 346 346 346 346 346 346 346 346 346 346 346 346 346 346 346 346
288 288 288 288 288 288 288 288 288 288 288 288 288 288 288 288 288 288 288 288
249 250 253 251 252 252 251 250 253 262 268 270 268 270
1/13/2015
1/27/2015
2/10/2015
2/24/2015
3/10/2015
3/24/2015
4/7/2015
4/21/2015
5/5/2015
5/19/2015
6/2/2015
6/3/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
Alkalinity
Alk MCL
Alk SCL

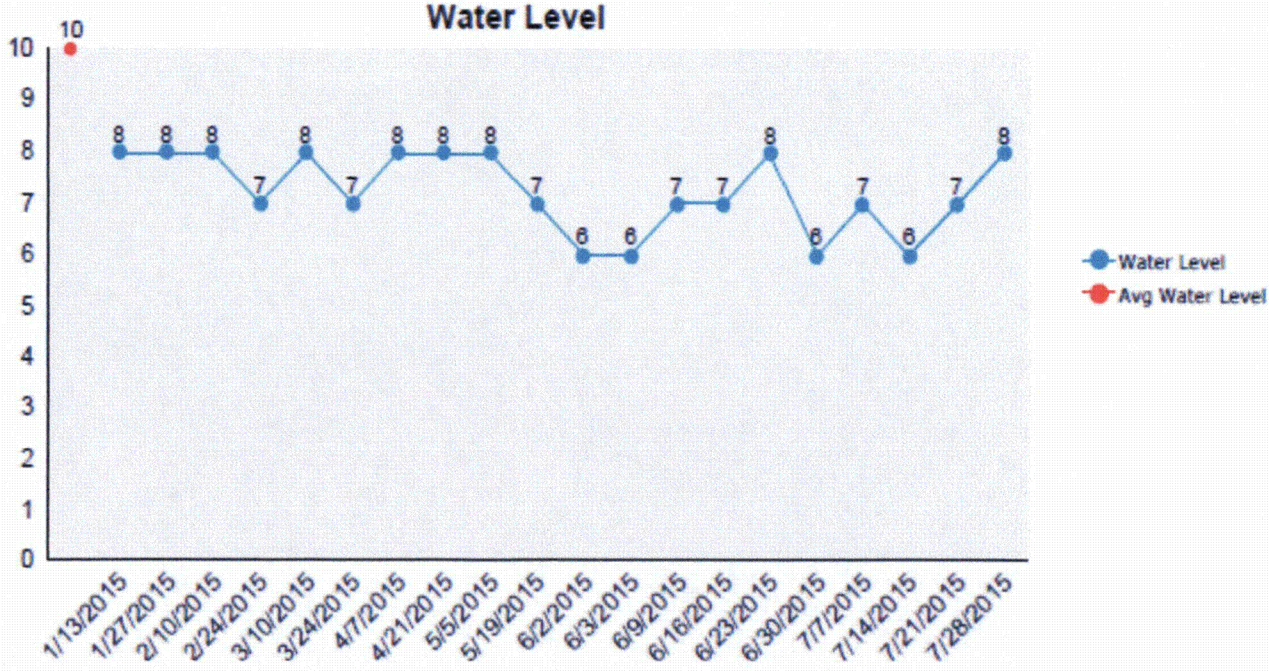

Chloride
24
20
16
12
8
4
0
23 23 23 23 23 23 23 23 23 23 23 23 23 23 23 23 23 23 23 23
19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19
7 7 8 8 8 8 8 8 8 16 21 21 22 19 22 20 20 19 17 16
1/13/2015
1/27/2015
2/10/2015
2/24/2015
3/10/2015
3/24/2015
4/7/2015
4/21/2015
5/5/2015
5/19/2015
6/2/2015
6/3/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
Chloride
Cl MCL
Cl SCL

SM8-5
7/29/15

Conductivity



Water Level



WJ

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 07/14/2015

Analysis Date: 07/14/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM06-009	288	428	356	1906	2866	2388	172	285	238
CM06-010	298	429	358	1908	2952	2460	178	327	272
CM08-001	297	455	379	1922	3110	2592	179	372	310
CM08-002	303	395	329	1903	3125	2604	180	334	278
CM08-003	301	432	360	1906	3211	2676	180	367	306
CM08-004	299	428	356	1903	3125	2604	178	328	274
CM08-005	292	425	354	1897	3067	2556	180	328	274
CM08-006	300	432	360	1891	3067	2556	178	317	264
CM08-007	307	425	354	1880	3154	2628	178	396	330
CM08-008	309	418	348	1879	3211	2676	178	415	346
CM08-009	318	452	377	1857	3053	2544	176	325	271
CM09-008	300	418	348	1816	2952	2460	171	366	305
CM09-009	306	475	396	1792	2923	2436	174	334	278
CM09-010	305	359	299	1770	2390	1992	175	292	244
CM09-011	306	445	371	1789	2707	2256	175	284	236
CM11-012	303	433	361	1795	2794	2328	166	268	223
CM11-013	304	418	348	1801	2722	2268	175	291	242
CM11-014	318	468	390	1854	3024	2520	180	357	298
CM11-015	305	431	359	1776	2765	2304	172	289	241
CM11-016	305	451	376	1766	2794	2328	174	276	230
CM11-017	304	438	365	1769	2837	2364	174	301	251
CM11-018	320	445	371	1840	2722	2268	178	297	247
CM11-019	308	448	373	1794	2779	2316	176	300	250
SM04-001	159	248	206	371	772	643	2.6	52	43
SM04-002	193	513	393	640	1256	1039	14	127	88
SM04-005A	199	367	306	539	1236	1030	11	106	88
SM08-001	238	374	312	530	763	636	7.5	25	21
SM08-002	240	353	294	542	778	648	6.3	24	20
SM08-003	239	331	276	547	720	600	7.2	24	20
SM08-004	236	323	269	557	819	683	11	25	21
SM08-005	280	346	288	682	749	624	19	23	19
SM08-006	259	328	274	694	734	612	18	23	19

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 07/21/2015

Analysis Date: 07/21/2015

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	179	278	232	453	850	708	3.9	59	50
SM07-024	190	259	216	574	809	674	8.4	45	37
SM07-025	159	202	168	364	645	538	2.9	52	44
SM08-005	281	346	288	677	749	624	17	23	19
SM08-006	259	328	274	681	734	612	17	23	19
SM10-016	256	382	318	581	850	708	10	28	23
SM10-017	248	374	312	562	835	696	10	28	23
SM10-018	241	346	288	536	763	636	8.6	24	20
SM10-019	241	369	307	560	778	648	11	25	21
SM10-020	236	360	300	589	792	660	23	27	22
SM10-022	241	360	300	552	778	648	11	23	20

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 07/28/2015

Analysis Date: 07/28/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM06-009	287	428	356	1906	2866	2388	171	285	238
CM06-010	297	429	358	1922	2952	2460	179	327	272
CM08-001	294	455	379	1927	3110	2592	176	372	310
CM08-002	303	395	329	1914	3125	2604	180	334	278
CM08-003	297	432	360	1914	3211	2676	180	367	306
CM08-004	298	428	356	1908	3125	2604	183	328	274
CM08-005	291	425	354	1896	3067	2556	179	328	274
CM08-006	301	432	360	1901	3067	2556	179	317	264
CM08-007	306	425	354	1893	3154	2628	178	396	330
CM08-008	312	418	348	1894	3211	2676	180	415	346
CM08-009	321	452	377	1869	3053	2544	177	325	271
CM09-008	299	418	348	1809	2952	2460	173	366	305
CM09-009	304	475	396	1794	2923	2436	175	334	278
CM09-010	305	359	299	1776	2390	1992	171	292	244
CM09-011	306	445	371	1798	2707	2256	178	284	236
CM11-012	302	433	361	1801	2794	2328	172	268	223
CM11-013	302	418	348	1801	2722	2268	176	291	242
CM11-014	319	468	390	1859	3024	2520	179	357	298
CM11-015	303	431	359	1782	2765	2304	172	289	241
CM11-016	305	451	376	1771	2794	2328	173	276	230
CM11-017	305	438	365	1770	2837	2364	173	301	251
CM11-018	321	445	371	1839	2722	2268	178	297	247
CM11-019	306	448	373	1791	2779	2316	178	300	250
SM04-001	161	248	206	367	772	643	2.7	52	43
SM04-002	195	513	393	635	1256	1039	15	127	88
SM04-005A	199	367	306	538	1236	1030	11	106	88
SM08-001	238	374	312	519	763	636	7.1	25	21
SM08-002	243	353	294	540	778	648	6.4	24	20
SM08-003	240	331	276	541	720	600	7.3	24	20
SM08-004	235	323	269	551	819	683	11	25	21
SM08-005	279	346	288	673	749	624	16	23	19
SM08-006	260	328	274	667	734	612	15	23	19