CAMECO RESOURCES
CROW BUTTE OPERATION

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P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
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September 3, 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 – SM6-24

Dear Document Control Desk Director:

On August 13, 2015 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM6-24, exceeded the multiple parameter upper control limit (MCL) for conductivity and alkalinity. As required by License Condition 11.5 of Source Materials License SUA-1534, a second sample was collected from SM6-24 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 SM6-24 to weekly. Weekly samples were obtained from August 14, 2015, to September 3, 2015. The samples collected on August 20, 27, and September 3, 2015, were below the excursion criteria from License Condition 11.5. Based on these results, CBO is removing SM6-24 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 January 15, 2015 to September 3, 2015.

NMSS01

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

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 08/20/2015

Analysis Date: 08/20/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM05-012	302	456	380	1891	2982	2485	181	323	269
CM05-013	290	373	311	1870	3149	2624	177	386	322
CM06-001	295	432	360	1887	3168	2640	176	334	278
CM06-002	301	436	364	1921	2822	2352	179	279	233
CM06-003	300	441	367	1916	2808	2340	178	269	224
CM06-004	302	441	367	1934	2837	2364	182	289	241
CM06-005	296	416	347	1966	2923	2436	182	294	245
CM06-006	304	444	370	1937	2894	2412	178	301	251
CM06-007	291	403	336	1939	2822	2352	177	281	234
CM06-008	301	445	371	1929	2923	2436	176	305	254
CM07-010	302	454	378	1886	2877	2398	182	297	247
CM09-012	300	444	370	1804	2866	2388	175	321	268
CM09-013	302	442	368	1810	2707	2256	176	279	233
CM09-014	309	461	384	1826	2923	2436	181	327	272
CM09-015	303	432	360	1816	2736	2280	175	279	233
CM09-016	311	444	370	1839	2678	2232	178	268	223
CM09-017	308	441	367	1835	2678	2232	178	268	223
CM09-018	304	445	371	1819	2794	2328	178	294	245
CM09-019	304	454	378	1835	2952	2460	178	315	263
CM09-020	301	431	359	1854	2779	2316	177	279	233
SM06-001	215	325	271	540	903	752	7.6	47	39
SM06-002	209	291	242	550	1008	840	10	85	71
SM06-003	206	295	246	547	844	703	11	43	36
SM06-004	211	310	258	529	804	670	8.3	32	27
SM06-005	219	314	262	520	770	642	6.7	26	22
SM06-006	227	334	278	479	711	593	3.2	24	20
SM06-007	231	343	286	499	779	649	6.4	39	32
SM06-008	210	311	259	498	770	642	7.4	36	30
SM06-009	227	336	280	499	815	679	6.9	51	42
SM06-010	207	317	264	490	838	698	8.3	35	29
SM06-017	239	353	294	488	798	665	3.9	42	35
SM06-024	254	310	258	583	672	560	11	24	20

WS

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 08/27/2015

Analysis Date: 08/27/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM06-025	305	433	361	1884	2952	2460	177	317	264
CM06-026	310	448	373	1884	2952	2460	178	338	282
CM06-028	320	449	374	1826	2894	2412	172	307	256
CM06-029	312	448	373	1873	3024	2520	175	321	268
CM06-030	317	459	383	1844	2952	2460	172	328	274
CM06-031	317	464	386	1860	2851	2376	173	301	251
CM06-032	322	461	384	1864	2981	2484	173	292	244
CM08-027	319	475	396	1830	2794	2328	168	314	262
CM08-028	322	480	400	1822	2650	2208	170	264	220
SM06-023	253	314	262	538	691	576	7	23	19
SM06-024	252	310	258	573	672	560	11	24	20
SM06-025	219	324	270	547	696	580	12	24	20
SM06-026	208	308	257	466	726	605	7	24	20
SM06-027	228	317	264	505	677	564	7.6	23	20
SM06-028	278	351	293	708	778	648	17	24	20
SM08-026	232	317	264	558	720	600	9.3	24	20
SM08-027	234	353	294	509	706	588	6.4	22	19
SM08-028	250	328	274	605	801	667	7.9	24	20
SM08-029	252	338	282	638	763	636	14	26	22
SM08-030	197	284	236	444	672	560	9.1	38	32
SM08-031	234	350	292	507	750	625	6.7	28	23
SM11-016	147	213	178	300	461	384	1.9	23	19
SM11-017	145	210	175	294	432	360	2.9	21	17
SM11-018	143	207	173	297	475	396	2.6	28	23
SM11-019	144	204	170	314	533	444	2	35	29
SM11-020	163	235	196	401	590	492	5.2	23	19
SM11-022	172	288	240	463	773	644	7.2	32	27
SM11-023	169	246	205	409	662	552	6.8	32	27
SM11-024	159	233	194	399	619	516	3.2	26	21
SM11-025	161	235	196	403	590	492	2.4	21	18
SM11-026	152	228	190	351	547	456	2.5	22	18

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 09/03/2015

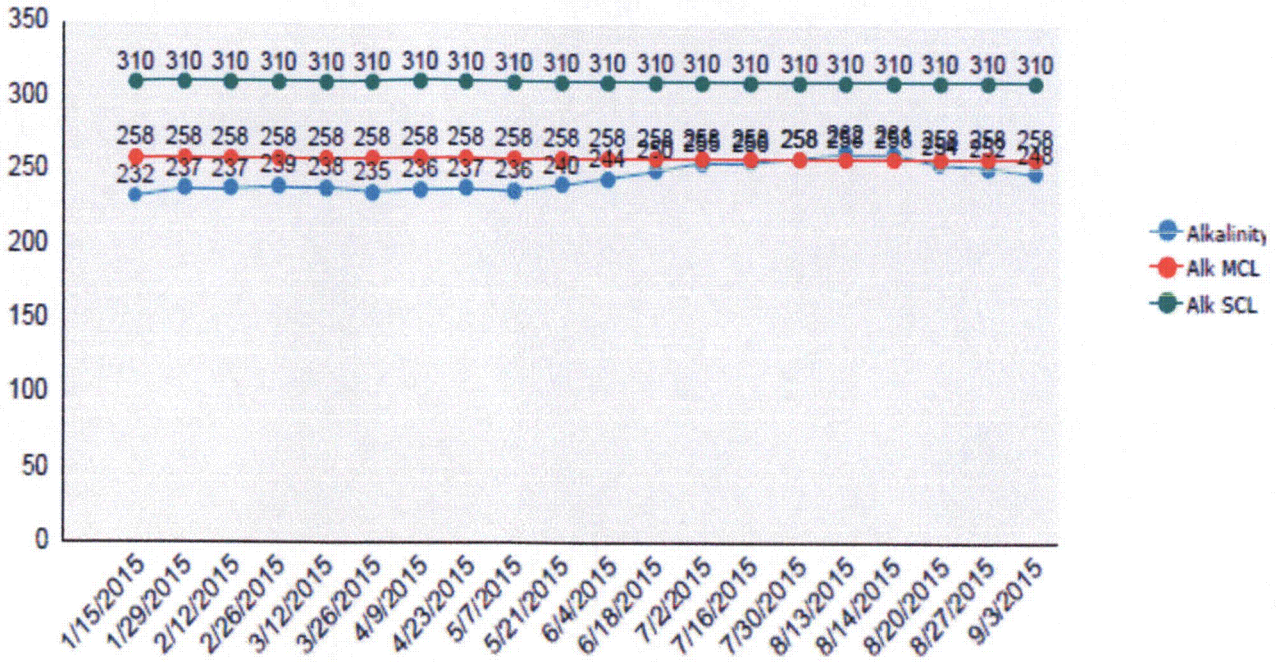
Analysis Date: 09/03/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM05-012	301	456	380	1858	2982	2485	175	323	269
CM05-013	291	373	311	1868	3149	2624	174	386	322
CM06-001	299	432	360	1891	3168	2640	174	334	278
CM06-002	304	436	364	1928	2822	2352	178	279	233
CM06-003	304	441	367	1908	2808	2340	176	269	224
CM06-004	300	441	367	1926	2837	2364	179	289	241
CM06-005	297	416	347	1959	2923	2436	180	294	245
CM06-006	305	444	370	1926	2894	2412	177	301	251
CM06-007	294	403	336	1925	2822	2352	179	281	234
CM06-008	300	445	371	1912	2923	2436	173	305	254
CM07-010	304	454	378	1887	2877	2398	183	297	247
CM09-012	307	444	370	1810	2866	2388	176	321	268
CM09-013	303	442	368	1809	2707	2256	176	279	233
CM09-014	307	461	384	1820	2923	2436	178	327	272
CM09-015	307	432	360	1816	2736	2280	176	279	233
CM09-016	311	444	370	1834	2678	2232	179	268	223
CM09-017	311	441	367	1833	2678	2232	178	268	223
CM09-018	304	445	371	1819	2794	2328	179	294	245
CM09-019	304	454	378	1834	2952	2460	179	315	263
CM09-020	299	431	359	1854	2779	2316	180	279	233
SM06-001	215	325	271	544	903	752	6.1	47	39
SM06-002	212	291	242	549	1008	840	9.3	85	71
SM06-003	208	295	246	546	844	703	9.7	43	36
SM06-004	219	310	258	525	804	670	7.7	32	27
SM06-005	218	314	262	522	770	642	6.2	26	22
SM06-006	230	334	278	484	711	593	2.7	24	20
SM06-007	231	343	286	498	779	649	5.3	39	32
SM06-008	211	311	259	500	770	642	7.3	36	30
SM06-009	227	336	280	497	815	679	6.1	51	42
SM06-010	208	317	264	493	838	698	7.7	35	29
SM06-017	238	353	294	491	798	665	3.5	42	35
SM06-024	248	310	258	572	672	560	11	24	20

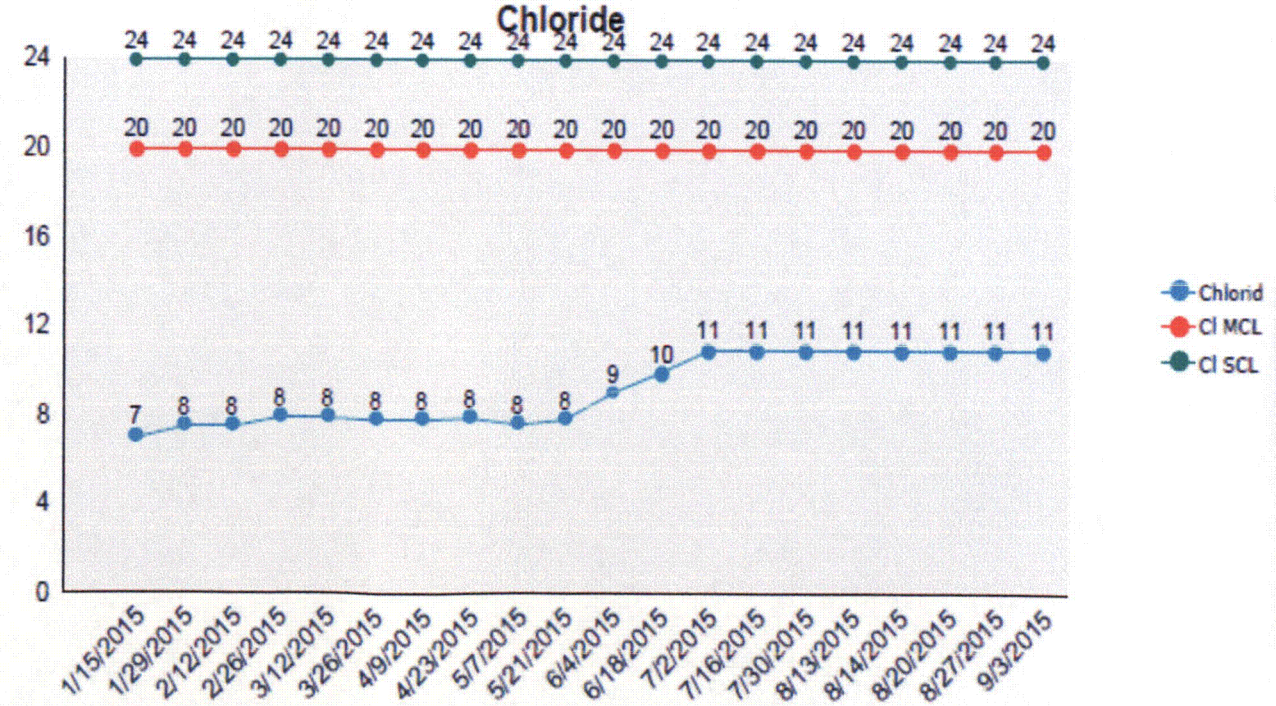
SM6-24
9/3/15

SM06-024

Alkalinity



Chloride



SM6-24
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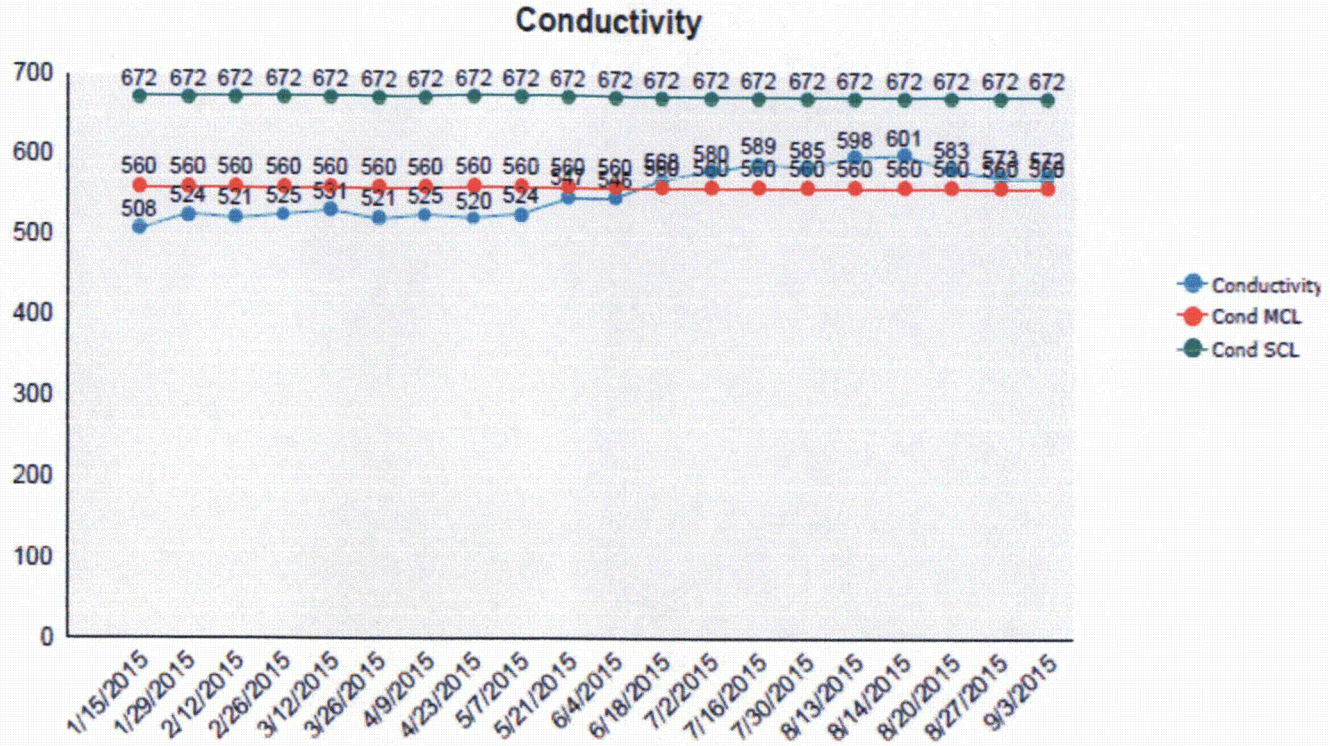
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1/15/2015
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2/12/2015
2/26/2015
3/12/2015
3/26/2015
4/9/2015
4/23/2015
5/7/2015
5/21/2015
6/4/2015
6/18/2015
7/2/2015
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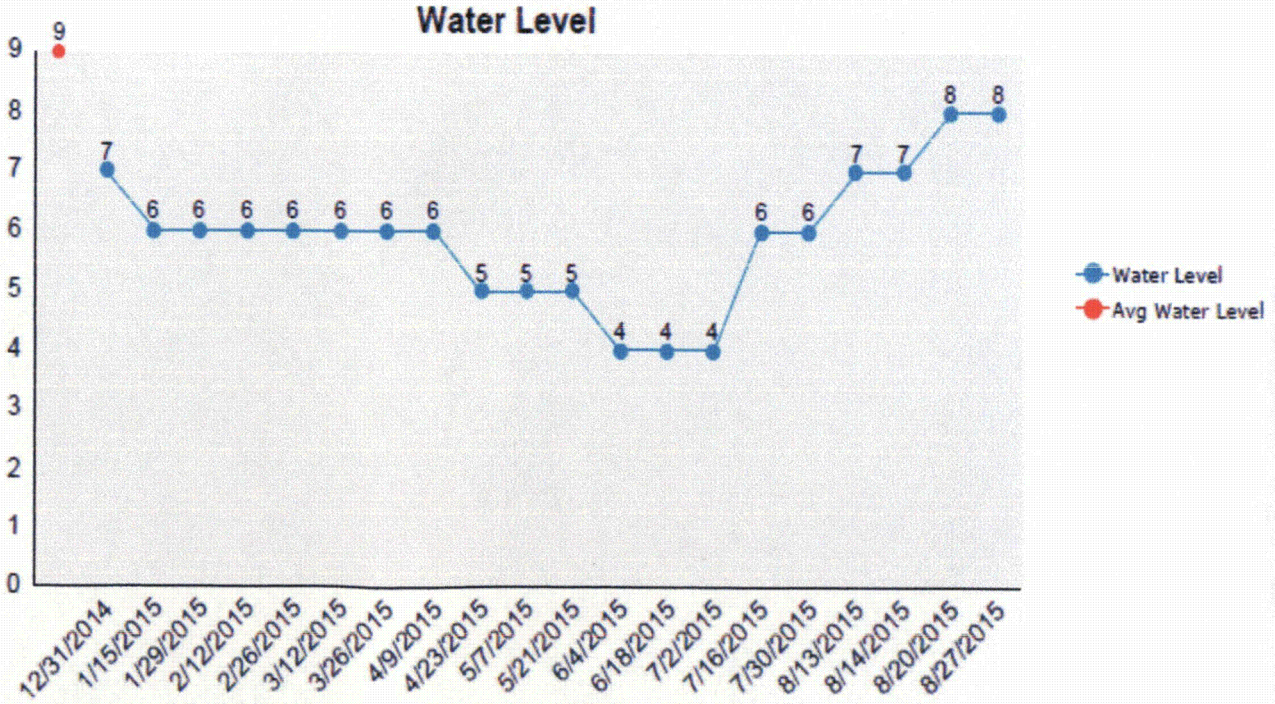
9/3/2015
Conductivity
Cond MCL
Cond SCL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1/15/2015
1/29/2015
2/12/2015
2/26/2015
3/12/2015
3/26/2015
4/9/2015
4/23/2015
5/7/2015
5/21/2015
6/4/2015
6/18/2015
7/2/2015
7/16/2015
7/30/2015
8/13/2015
8/14/2015
8/20/2015
8/27/2015
Water Level
Avg Water Level