CAMECO RESOURCES
CROW BUTTE OPERATION

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June 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 – SM8-5

Attn: Document Control Desk:

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.

CBO notified Mr. Ron Burrows of the excursion by at 10:20 a.m. on June 3, 2015 as required in License Conditions 11.5 and 11.6. Laboratory results for the sample analysis for SM8-5 are attached. In addition, graphs are attached for the three excursion indicator parameters and water levels that cover the period from September 23, 2014, to June 3, 2015.

CBO believes that the apparent excursion is due to increased groundwater levels caused by 5+ inches of rain and 20" inches of snow received during May. This conclusion is supported by the following indications:

1. The water level has increased steadily throughout the spring, with a marked increase during the last two weeks. The well is located in an area of high groundwater near the springs that form the source of English Creek. Groundwater quality in this area is under

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the influence of surface water.

2. While the excursion indicators have increased significantly, the levels still do not approach the levels found in mining solution.

3. Twenty other shallow monitor wells located in Mine Units 6, 8 and 10 are also showing increases in water levels and one or more of the indicator parameters. In the past two weeks, SM6-23, SM6-28, SM8-6, SM8-28, and SM8-21 were placed on excursion status due to the same circumstances. All of these wells are located in close proximity to English Creek. Historical operating data indicates that the excursion parameters are affected by high water levels in the shallow monitor wells located along English Creek.

In accordance with License Condition 11.5, CBO has increased the sampling frequency for SM8-5 to weekly until three consecutive weekly samples are below the exceeded UCLs. Also, per the requirements of License Condition 11.12, CBO will test weekly for natural uranium. CBO will 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 114.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Robert L Tiensvold

Robert Tiensvold
Mine Manager

Enclosures: As Stated

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

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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
CM06-009	285	428	356	1907	2866	2388	171	285	238
CM06-010	302	429	358	1920	2952	2460	178	327	272
CM08-001	291	455	379	1929	3110	2592	176	372	310
CM08-002	302	395	329	1909	3125	2604	177	334	278
CM08-003	304	432	360	1926	3211	2676	182	367	306
CM08-004	297	428	356	1901	3125	2604	178	328	274
CM08-005	301	425	354	1909	3067	2556	178	328	274
CM08-006	300	432	360	1909	3067	2556	178	317	264
CM08-007	306	425	354	1879	3154	2628	178	396	330
CM08-008	308	418	348	1879	3211	2676	176	415	346
CM08-009	315	452	377	1859	3053	2544	174	325	271
CM09-008	299	418	348	1804	2952	2460	175	366	305
CM09-009	303	475	396	1789	2923	2436	169	334	278
CM09-010	303	359	299	1773	2390	1992	171	292	244
CM09-011	304	445	371	1794	2707	2256	173	284	236
CM11-012	300	433	361	1807	2794	2328	175	268	223
CM11-013	301	418	348	1805	2722	2268	175	291	242
CM11-014	313	468	390	1848	3024	2520	180	357	298
CM11-015	302	431	359	1793	2765	2304	169	289	241
CM11-016	304	451	376	1772	2794	2328	172	276	230
CM11-017	304	438	365	1776	2837	2364	170	301	251
CM11-018	314	445	371	1821	2722	2268	174	297	247
CM11-019	305	448	373	1796	2779	2316	174	300	250
SM04-001	161	248	206	371	772	643	2.8	52	43
SM04-002	193	513	393	640	1256	1039	14	127	88
SM04-005A	198	367	306	540	1236	1030	11	106	88
SM08-001	238	374	312	540	763	636	7.2	25	21
SM08-002	238	353	294	531	778	648	5.5	24	20
SM08-003	236	331	276	544	720	600	6.7	24	20
SM08-004	235	323	269	553	819	683	9.6	25	21
SM08-005	268	346	288	685	749	624	21	23	19
SM08-006	250	328	274	766	734	612	23	23	19

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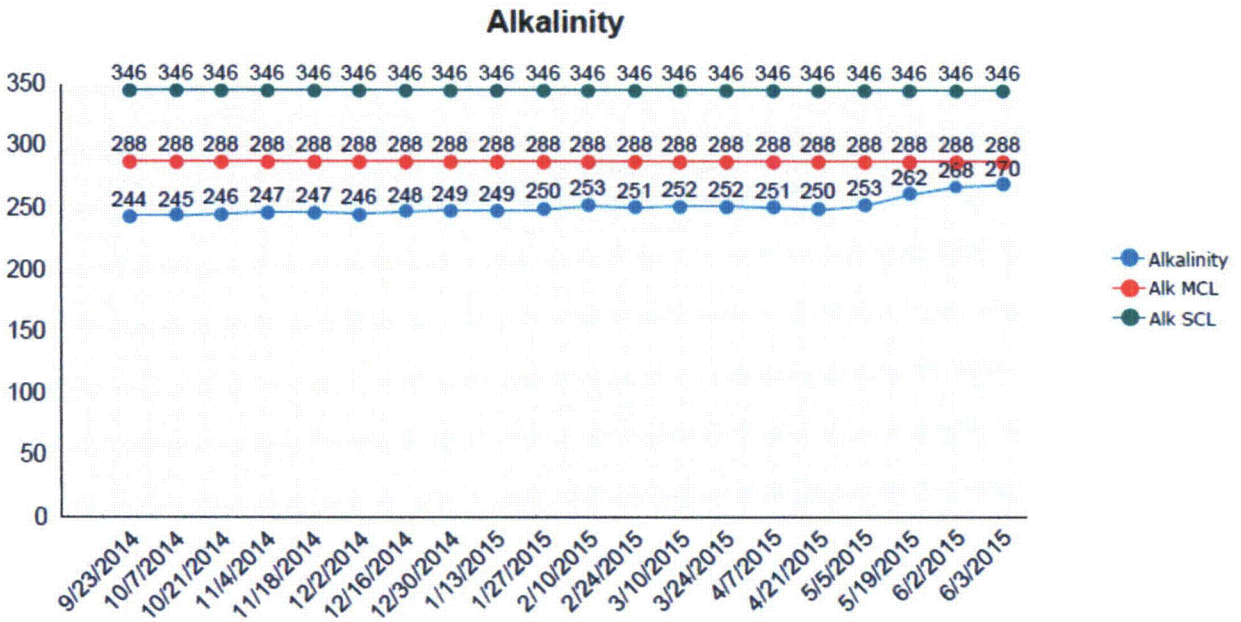
Monitor Well Laboratory Report

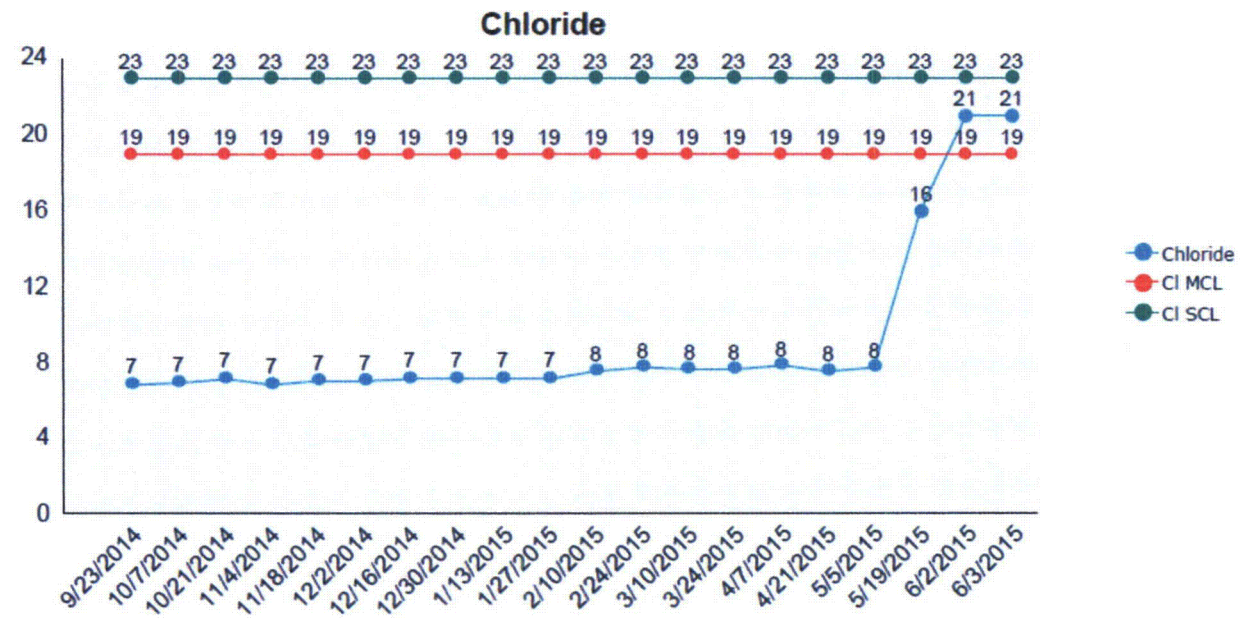
Sample Date: 06/03/2015

Analysis Date: 06/03/2015

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µMho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM08-010	315	441	367	1833	3038	2532	174	315	263
CM08-011	318	446	372	1830	3053	2544	174	325	271
CM08-012	324	461	384	1859	3038	2532	173	305	254
CM10-001	328	469	391	1868	2822	2352	175	305	254
CM10-002	325	474	395	1861	2707	2256	173	262	218
CM10-003	318	474	395	1863	2736	2280	176	266	222
CM10-004	321	468	390	1849	2794	2328	174	288	240
CM10-005	342	464	386	1963	3082	2568	190	389	324
CM10-006	320	482	402	1839	2750	2292	170	281	234
CM10-007	321	482	402	1838	2765	2304	170	278	232
CM11-001	0	438	365	0	2808	2340	0	297	247
CM11-002A	0	442	368	0	2794	2328	0	285	238
CM11-003	0	439	366	0	2693	2244	0	272	227
CM11-004	0	464	386	0	2678	2232	0	268	223
CM11-005	0	451	376	0	2664	2220	0	274	228
CM11-006	0	436	364	0	2707	2256	0	269	224
CM11-007	0	432	360	0	2707	2256	0	272	227
CM11-008	0	462	385	0	2678	2232	0	274	228
CM11-009	0	439	366	0	2765	2304	0	276	230
CM11-010	0	436	364	0	2707	2256	0	284	236
CM11-011	0	433	361	0	2736	2280	0	278	232
SM04-003	0	361	301	0	1251	1043	0	38	32
SM04-004	0	266	222	0	1099	916	0	62	52
SM08-005	270	346	288	691	749	624	21	23	19
SM08-021	260	317	264	661	706	588	11	25	21
SM10-001	290	469	391	707	994	828	14	37	31
SM10-002	232	338	282	537	763	636	8.5	24	20
SM10-003	248	386	322	559	821	684	9.2	24	20
SM10-004	245	346	288	535	778	648	6.8	24	20
SM10-005	242	350	292	531	763	636	6.8	23	19
SM10-006	313	501	418	759	1123	936	14	33	28
SM10-007	295	403	336	716	965	804	14	33	27

Crow Butte Resources
SM8-5





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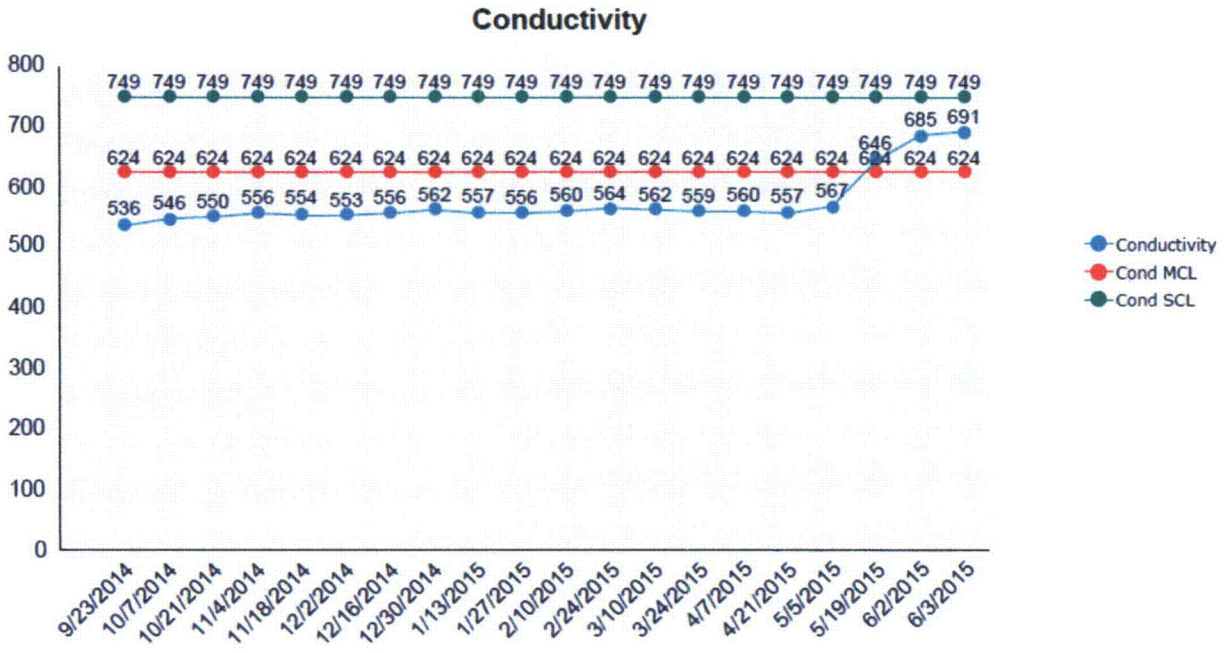
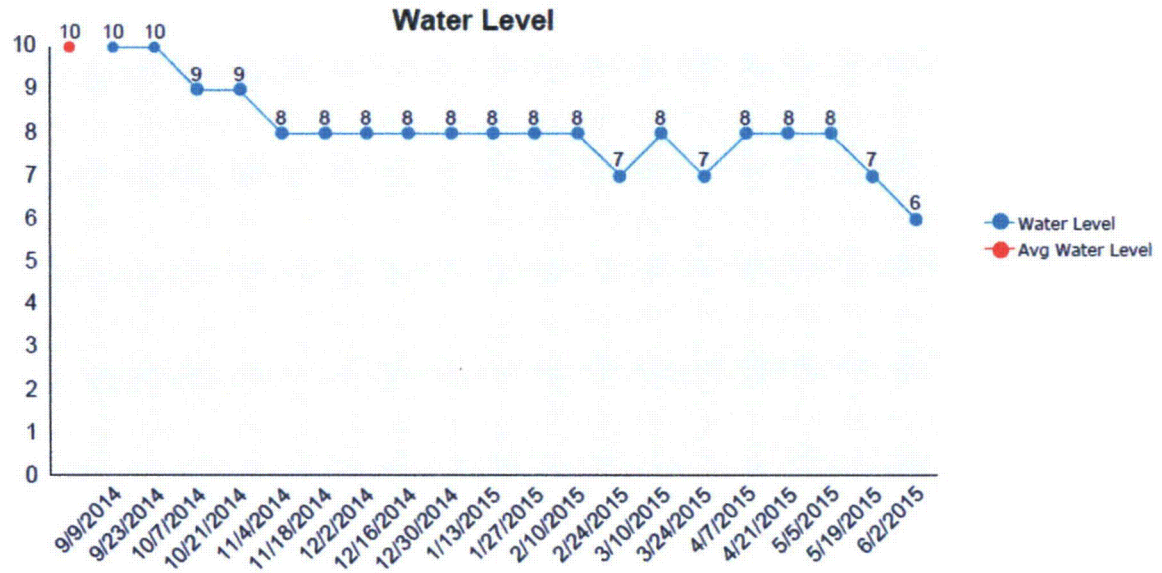
Crow Butte Resources
SM8-5





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