CAMECO RESOURCES
CROW BUTTE OPERATION

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

(308) 665-2215
(308) 665-2341 – FAX

April 20, 2020

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

Subject: Quarterly Excursion Monitoring Report
Source Materials License No. SUA-1534, Docket No. 40-8943

Dear Sir or Madam:

Enclosed please find one copy of the Excursion Monitoring Report for the Crow Butte Uranium Project. The report is provided in accordance with License Condition 11.1(A) of Source Materials License SUA-1534. This report covers the first quarter of 2020.

If you have any questions concerning the report, please feel free to call me at (308) 665-2215 ext. 117.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Walter D. Nelson

Walter D. Nelson
SHEQ Coordinator

cc: Deputy Director, Division of Decommissioning
Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Mail Stop T5A10
11545 Rockville Pike
Two White Flint North
Rockville, MD 20852-2738

CBO – File

cc: CR – Electronic File

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NMSS

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CROW BUTTE URANIUM PROJECT

EXCURSION MONITORING REPORT

for

FIRST QUARTER, 2020

USNRC Source Materials License SUA 1534

CAMECO RESOURCES
CROW BUTTE OPERATION

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P.O. Box 169 **(308) 665-2215**
Crawford, Nebraska 69339-0169 **(308) 665-2341 – FAX**

Excursion Monitoring and Corrective Actions

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 wellfield. This caused the excursion indicator parameters to rise in a number of shallow monitor wells, particularly those located in the northern portion of the wellfield. A second significant winter storm impacted the area on April 10 and 11, 2019. The region continued to receive above normal springtime precipitation combined with unusually cool temperatures for most of the quarter. In total, seven shallow monitor wells were placed on excursion status due to these conditions (two wells at the end of March, 2019, five during the second quarter). No additional corrective actions were assigned for any of the wells other than placing the affected wells on a weekly sampling frequency. All of these wells were removed from excursion status prior to the fourth quarter of 2019 with the exception of SM6-28.

SM6-28 was placed on excursion status on May 3, 2019, as a result of the wet, cool, springtime conditions. This well has been placed on excursion status six times in the past during similar environmental conditions. The well remained on excursion status at the beginning of the first quarter of 2020. The samples collected on December 23, 30, 31, 2019 and January 7, 14, 21, and 28, 2020, were below the excursion criteria (the extra sample collected in December was to ensure the well was sampled a minimum of every 7 days during the Christmas holiday). The well was removed from excursion status on January 7, 2020, and additional weekly monitoring, in accordance with the NDEQ Class III permit, was completed on January 28, 2020. The well was on excursion status for a period of greater than sixty days. Injection was suspended in the area around the well, and has been resumed since the well has been removed from excursion status. The enclosed laboratory reports include the SM6-28 results for January 7, 14, 21, and 28, 2020.

A summary of the weekly excursion indicator parameters and laboratory reports for SM6-28 are included in Appendix A and Appendix B respectively.

Appendix A

Summary of

Weekly Excursion Indicator Parameter Values

First Quarter, 2020

Submitted by:
Crow Butte Resources, Inc.
P.O. Box 169
Crawford, NE 69339

License No. SUA-153

NRC
Excursion Monitoring Report
Quarter 1 of 2020

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

Well ID	Alkalinity			Conductivity			Chloride		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
BOW96-001	224	227	226	513	532	521	7.7	8	7.8
CM02-005	317	324	320	1932	1945	1938	186	193	188.3
CM02-006	287	297	292	1286	1429	1372	99	119	111.3
CM02-007	273	283	279	1305	1387	1350	102	113	108.2
CM03-005	296	302	298	1933	1956	1945	183	188	185.7
CM03-006	296	302	299	1928	1954	1942	185	187	186.1
CM04-001	307	313	309	1845	1870	1857	177	182	179.5
CM04-002	305	310	308	1844	1876	1861	176	180	178.7
CM04-003	302	307	304	1839	1868	1859	173	180	176.3
CM04-004	298	304	301	1843	1867	1856	174	179	176.7
CM05-001	300	305	302	1712	1731	1723	150	165	157.7
CM05-002	301	306	304	1844	1861	1852	174	181	177.4
CM05-003	304	310	307	1844	1864	1852	176	181	178.3
CM05-004	307	311	310	1856	1870	1862	175	184	179.9
CM05-005	302	308	305	1842	1874	1855	175	182	178
CM05-006	301	309	304	1848	1873	1859	175	180	177.9
CM05-007	301	305	304	1847	1865	1855	177	181	179.1
CM05-008	304	308	306	1868	1886	1876	176	180	178.6
CM05-009	297	302	300	1854	1872	1864	174	180	177
CM05-010	287	292	290	1887	1907	1894	171	176	174.1
CM05-011	304	310	308	1903	1927	1915	177	181	178.9
CM05-012	297	300	299	1887	1905	1896	178	183	179.9
CM05-013	292	296	294	1865	1904	1893	176	181	178.9
CM05-018	297	308	300	1902	1928	1917	182	191	186
CM05-019	308	318	311	1818	1840	1830	167	173	169.1

CM05-020	320	331	324	1879	1943	1907	173	180	177.1
CM05-021	298	304	301	1912	1935	1922	182	186	183.6
CM05-022	296	303	299	1913	1935	1921	179	186	182.4
CM05-023	295	298	296	1910	1926	1918	178	183	180
CM05-024	296	302	299	1920	1947	1933	179	182	180
CM05-025	290	297	294	1930	1953	1943	171	174	172.9
CM05-026	297	302	299	1939	1960	1950	182	185	183.4
CM05-027	295	302	299	1931	1957	1946	181	189	183.9
CM06-001	293	298	295	1867	1888	1881	175	179	177.7
CM06-002	296	302	299	1906	1921	1914	178	181	179.7
CM06-003	294	299	296	1912	1930	1923	178	180	179.1
CM06-004	296	301	298	1914	1931	1926	177	180	178.7
CM06-005	288	294	291	1918	1958	1945	174	181	178.6
CM06-006	296	299	298	1921	1943	1933	175	186	179
CM06-007	277	283	280	1948	1974	1964	176	180	177.7
CM06-008	291	295	293	1918	1941	1930	175	179	177
CM06-009	292	295	294	1911	1929	1922	178	184	182.1
CM06-010	291	296	293	1930	1946	1936	179	183	181
CM06-012	295	301	299	1910	1930	1920	184	189	185.9
CM06-013	297	305	301	1914	1937	1924	183	190	185.1
CM06-014	293	299	296	1896	1930	1915	178	184	181
CM06-015	293	298	296	1913	1940	1926	178	182	180.3
CM06-016A	291	296	293	1912	1934	1923	176	181	178.4
CM06-017	298	305	302	1899	1926	1917	179	183	180.7
CM06-018	300	305	303	1898	1919	1908	180	183	180.9
CM06-019	305	314	309	1890	1911	1899	179	183	180.4
CM06-025	299	305	303	1887	1906	1894	180	191	183.7
CM06-026	302	305	304	1872	1896	1887	178	184	181.2
CM06-028	314	319	317	1821	1837	1829	172	178	175.5
CM06-029	313	317	315	1810	1864	1838	162	171	167.7
CM06-030	311	317	314	1843	1856	1849	174	177	176.3

CM06-031	314	318	316	1857	1873	1866	174	178	176.5
CM06-032	312	317	315	1870	1887	1877	174	180	177.7
CM07-010	295	299	297	1885	1902	1892	184	189	186.4
CM07-011	291	296	293	1902	1913	1907	181	187	184
CM07-012	291	294	293	1900	1914	1907	183	189	185.2
CM07-013	290	295	292	1918	1943	1931	182	185	183.5
CM07-014	291	296	294	1929	1957	1947	181	186	183.5
CM07-015	295	301	299	1930	1952	1944	184	188	185.5
CM07-016	300	304	303	1948	1970	1962	183	187	186
CM08-001	290	295	293	1927	1945	1934	179	181	180
CM08-002	291	297	293	1920	1941	1927	178	183	180.1
CM08-003	296	310	303	1948	1990	1966	185	191	187
CM08-004	294	298	296	1921	1938	1926	180	182	180.9
CM08-005	285	289	287	1896	1914	1904	180	182	180.9
CM08-006	295	303	299	1904	1923	1913	179	182	180.4
CM08-007	320	332	325	1959	2003	1977	188	191	189.6
CM08-008	322	333	328	1965	1996	1977	189	194	191
CM08-009	310	319	313	1856	1877	1863	174	178	175.7
CM08-010	310	315	313	1840	1854	1844	177	183	179
CM08-011	310	315	313	1838	1861	1851	172	179	176.2
CM08-012	318	323	320	1865	1886	1873	175	180	177.3
CM08-019	314	318	317	1825	1840	1830	169	174	172.3
CM08-020	312	321	318	1806	1824	1817	169	174	171.8
CM08-021	316	319	318	1816	1836	1826	171	174	172
CM08-022	318	322	321	1829	1842	1835	169	173	171.5
CM08-026	311	318	315	1824	1834	1828	170	176	172.3
CM08-027	315	320	317	1830	1847	1838	171	175	172.8
CM08-028	315	319	317	1824	1839	1833	172	174	172.8
CM09-008	296	300	298	1799	1824	1809	172	178	174.6
CM09-009	299	305	302	1782	1805	1792	170	178	174.4
CM09-010	297	304	301	1770	1790	1781	176	181	177.3

CM09-011	298	303	300	1780	1806	1792	176	183	179
CM09-012	298	303	301	1804	1820	1813	178	185	180.4
CM09-013	294	299	297	1798	1816	1807	177	182	178.7
CM09-014	301	305	303	1816	1830	1823	178	183	180.7
CM09-015	300	306	304	1829	1846	1838	178	183	180.3
CM09-016	299	306	302	1822	1839	1830	178	182	180
CM09-017	298	303	301	1827	1840	1833	178	185	180.7
CM09-018	297	301	300	1827	1843	1833	178	182	180.3
CM09-019	299	304	301	1838	1856	1849	181	184	182.1
CM09-020	294	296	295	1854	1871	1863	181	185	182.7
CM10-001	312	316	314	1842	1862	1852	171	176	174.3
CM10-002	311	317	315	1843	1864	1851	173	176	174
CM10-003	308	313	311	1837	1862	1852	172	177	175
CM10-004	335	341	339	1980	2000	1990	197	201	198.8
CM10-005	332	338	335	1976	2002	1990	195	202	199
CM10-006	314	317	315	1837	1854	1844	170	172	171.3
CM10-007	314	317	316	1832	1852	1841	166	172	169.5
CM10-008	320	325	322	1832	1867	1855	176	180	177.8
CM10-009	317	319	318	1829	1847	1838	169	175	172.5
CM10-010	329	337	332	1860	1889	1877	176	181	178.3
CM10-011	325	330	328	1802	1821	1811	166	170	168.8
CM10-012	345	350	349	1867	1886	1874	176	179	177.3
CM10-013	344	352	348	1745	1769	1759	164	169	166.5
CM10-014	356	364	360	1817	1841	1829	171	176	173.5
CM10-015	326	331	329	1817	1828	1822	162	166	164.3
CM10-016	306	313	311	1845	1862	1854	161	164	162.7
CM10-017	321	327	325	1857	1875	1865	161	167	165.3
CM10-020	338	347	343	1903	1926	1914	179	190	182.2
CM10-021	316	319	318	1814	1834	1826	164	170	166.7
CM10-022	318	324	321	1819	1840	1830	163	169	166.2
CM10-023	320	328	324	1827	1846	1836	164	169	165.7

CM10-024	319	328	324	1833	1849	1841	166	170	167.7
CM10-025	319	325	321	1826	1846	1836	167	173	169.7
CM10-026	317	321	319	1818	1836	1827	167	171	168.7
CM10-027	313	318	315	1823	1846	1833	170	174	171.3
CM10-028	311	318	316	1831	1846	1838	170	172	171
CM10-029	314	319	318	1823	1850	1839	168	173	171
CM10-030	316	322	320	1820	1858	1842	167	173	171
CM10-031	314	319	316	1817	1840	1831	169	171	170.3
CM10-032	313	321	316	1852	1866	1858	160	165	161.7
CM10-033	341	352	346	1777	1797	1788	164	171	166
CM10-034	353	363	358	1869	1876	1873	177	181	179.5
CM11-001	297	302	300	1840	1864	1852	175	179	177.2
CM11-002A	297	301	299	1834	1857	1849	177	180	178.3
CM11-003	301	306	303	1851	1874	1868	176	179	177.7
CM11-004	295	302	299	1831	1846	1839	173	177	175
CM11-005	295	302	298	1815	1833	1825	173	179	176
CM11-006	294	300	297	1816	1835	1827	173	175	174.2
CM11-007	295	299	297	1824	1836	1831	169	176	173.8
CM11-008	300	304	303	1853	1876	1866	172	179	175.7
CM11-009	293	297	295	1812	1832	1825	169	174	171.7
CM11-010	294	299	296	1812	1827	1821	170	176	173.7
CM11-011	312	324	317	1866	1914	1885	176	179	178
CM11-012	295	301	298	1786	1808	1796	170	177	171.9
CM11-013	299	303	301	1789	1802	1795	172	174	172.9
CM11-014	298	305	302	1782	1799	1791	172	175	173.3
CM11-015	294	298	296	1777	1786	1782	170	172	171.3
CM11-016	297	302	300	1768	1784	1778	173	177	174.3
CM11-017	300	305	303	1769	1794	1782	171	174	172.6
CM11-018	302	309	305	1780	1799	1789	173	174	173.9
CM11-019	297	304	301	1776	1801	1788	173	174	173.4
IJ013P	302	307	306	1232	1247	1241	92	95	94

PR008	327	333	330	1366	1398	1383	102	107	104.2
PR015	269	272	270	1066	1079	1071	78	81	79
SM02-001	188	192	189	521	530	524	14	14	14
SM02-002	167	169	168	453	464	459	11	11	11
SM02-003	196	198	197	536	550	543	15	15	15
SM03-001	205	207	206	655	661	658	12	12	12
SM03-002	177	180	178	439	444	441	3.5	3.7	3.6
SM03-003	176	178	177	448	454	451	5.5	5.8	5.6
SM04-001	152	156	154	358	363	361	2.7	3	2.9
SM04-002	187	190	189	623	631	628	12	13	12.1
SM04-003	183	186	185	606	611	609	12	12	12
SM04-004	207	210	208	617	621	619	13	13	13
SM04-005A	194	199	196	527	533	529	11	12	11.1
SM04-006	266	271	269	644	662	653	13	13	13
SM04-007	173	176	174	496	504	499	17	17	17
SM04-008	289	292	291	678	694	686	11	12	11.1
SM04-009	261	275	269	636	652	646	11	13	12
SM04-010A	291	297	295	694	709	702	11	12	11.7
SM04-011A	286	291	289	685	696	691	11	11	11
SM05-001	229	235	233	587	603	596	12	12	12
SM05-002	194	220	201	444	527	467	5.1	5.8	5.5
SM05-003	223	227	225	573	587	580	12	12	12
SM05-004	208	212	210	547	560	553	15	16	15.6
SM05-005	232	238	235	585	598	592	11	11	11
SM05-006	211	222	215	553	579	567	12	13	12.6
SM05-007	213	228	219	563	587	574	9.5	10	9.7
SM05-008	206	210	208	547	557	551	12	13	12.3
SM05-009	204	207	205	533	544	541	11	11	11
SM05-010	207	211	208	542	548	545	10	10	10
SM05-011	215	219	217	562	567	564	10	11	10.1
SM05-012	207	211	209	544	551	547	10	10	10

SM05-013	199	203	201	540	545	542	12	12	12
SM05-014	180	184	182	478	482	481	8.8	9.3	9
SM05-015	202	205	203	537	541	539	12	12	12
SM05-016	182	185	183	442	446	444	4.9	5.6	5.2
SM05-017	166	169	167	407	411	410	1.9	2.4	2.2
SM05-018	170	172	171	419	422	421	2.6	3.1	2.8
SM05-019	182	184	183	470	475	473	4.3	4.6	4.4
SM05-020	178	182	179	478	484	481	4.9	5.5	5.1
SM05-021	176	180	178	450	454	452	4.6	5.1	4.8
SM05-022	181	185	183	459	462	461	3.6	4.1	3.8
SM05-023	181	185	183	455	460	457	3.4	3.6	3.5
SM05-024	170	173	171	429	431	430	4.8	5	4.9
SM05-025	170	175	172	452	461	457	6.1	6.5	6.3
SM06-001	207	211	209	526	534	530	6.8	7.2	7.0
SM06-002	206	209	207	539	546	541	10	10	10
SM06-003	201	205	203	530	540	535	9.5	10	9.8
SM06-004	205	210	208	516	523	520	8	8.4	8.2
SM06-005	210	215	213	508	515	510	6.8	7.2	6.9
SM06-006	222	227	224	472	476	473	3.3	3.5	3.4
SM06-007	222	228	225	491	496	493	6.7	6.9	6.8
SM06-008	206	209	208	493	499	496	9.3	9.9	9.5
SM06-009	220	224	222	477	485	482	5.9	6.4	6.2
SM06-010	202	205	204	483	495	489	8.2	8.8	8.4
SM06-011	213	218	215	531	536	534	14	14	14
SM06-012	233	237	234	523	527	524	8.9	9.3	9.2
SM06-013	244	248	245	526	540	532	6.7	7	6.9
SM06-014	204	207	206	540	544	542	12	12	12
SM06-015	205	209	207	527	531	529	10	11	10.9
SM06-016	209	212	210	442	446	444	4	4.3	4.1
SM06-017	233	236	235	480	485	481	3.8	3.9	3.8
SM06-018	199	204	200	546	558	548	16	16	16

SM06-019	207	211	209	496	501	498	10	11	10.9
SM06-020	212	215	214	525	538	529	12	13	12.6
SM06-021	220	222	221	542	555	547	13	14	13.1
SM06-022	208	213	210	473	476	475	7.6	8.1	7.9
SM06-023	261	273	267	558	577	567	7.9	8.3	8.0
SM06-024	242	255	246	544	568	549	8.2	8.9	8.4
SM06-025	219	221	220	545	565	550	13	14	13.2
SM06-026	205	207	206	470	476	474	8.1	8.4	8.3
SM06-027	238	247	242	523	537	529	7.8	8	7.9
SM06-028	286	290	288	662	669	666	11	11	11
SM07-001	172	188	182	420	475	450	3.9	5.8	4.7
SM07-002	165	167	166	399	402	400	3.2	3.6	3.4
SM07-003	168	172	170	425	430	427	3.9	4.2	4.0
SM07-004	164	167	166	392	396	394	3	3.3	3.2
SM07-005	167	171	169	419	423	421	4	4.3	4.1
SM07-006	154	158	156	360	363	362	2.7	3	2.9
SM07-007	168	171	170	424	429	427	4.3	4.6	4.5
SM07-008	167	171	169	463	468	464	7.8	8.1	8.0
SM07-009	168	170	170	415	421	417	4.2	4.5	4.3
SM07-010	165	170	168	428	432	430	3.7	3.9	3.8
SM07-011	142	146	144	338	341	340	3.1	3.2	3.1
SM07-012	165	168	167	439	455	444	3.4	3.6	3.5
SM07-013	150	154	152	363	368	364	4.2	4.5	4.4
SM07-014	135	138	137	331	334	332	3.9	4.1	4
SM07-015	142	144	143	321	327	324	2.9	3.3	3.1
SM07-016	138	140	139	324	328	326	3.1	3.3	3.1
SM07-017	176	183	180	400	413	408	3.9	4.2	4.0
SM07-018	138	141	139	328	332	330	2.7	3	2.8
SM07-019	142	145	143	343	349	346	3.6	3.8	3.7
SM07-020	146	149	147	334	338	336	1.3	2	1.8
SM07-021	143	146	144	334	339	336	2.4	2.8	2.6

SM07-022	146	148	147	334	340	337	2.4	2.6	2.5
SM07-023	177	180	178	456	461	458	4.1	4.2	4.1
SM07-024	185	188	187	570	577	575	7.6	7.9	7.8
SM07-025	154	158	156	356	361	358	3.4	3.8	3.5
SM08-001	233	236	235	507	514	511	7	7.5	7.2
SM08-002	239	244	241	515	519	517	6.1	6.3	6.2
SM08-003	228	231	229	502	512	508	7.7	8.1	7.8
SM08-004	223	226	224	518	526	522	10	11	10.4
SM08-005	251	255	253	568	583	575	9.4	11	9.9
SM08-006	248	252	250	582	593	586	10	11	10.4
SM08-007	250	254	252	576	583	579	9.6	10	9.8
SM08-008	238	243	241	510	527	514	6.2	7.9	6.5
SM08-009	237	242	239	505	515	512	6.6	6.7	6.6
SM08-010	247	253	249	566	574	569	9.4	9.6	9.5
SM08-011	234	238	236	540	545	542	8.7	8.9	8.8
SM08-012	243	249	247	564	575	568	9.3	9.4	9.3
SM08-013	230	234	232	538	547	542	11	11	11
SM08-014	234	241	238	549	562	554	9.5	10	9.7
SM08-015	226	230	228	534	544	539	8.4	8.7	8.6
SM08-016	230	236	234	563	574	569	8.8	9	8.9
SM08-017	242	246	245	570	578	574	9.2	9.5	9.3
SM08-018	235	239	238	558	565	561	10	11	10.8
SM08-019	238	243	241	560	566	563	9.3	9.5	9.4
SM08-020	227	231	229	554	563	559	8.8	9.3	9.0
SM08-021	229	234	232	549	567	556	9	9.2	9.1
SM08-022	247	252	250	619	634	625	9.5	9.8	9.6
SM08-023	228	232	230	547	554	550	8.8	9.1	8.9
SM08-024	231	234	233	556	569	562	9.3	9.6	9.5
SM08-025	260	265	263	662	679	669	11	12	11.2
SM08-026	233	235	234	539	560	545	9.3	9.4	9.4
SM08-027	241	244	242	523	530	527	7.3	7.5	7.4

SM08-028	260	267	263	594	610	603	7.7	7.9	7.9
SM08-029	269	274	272	680	685	682	12	13	12.8
SM08-030	209	213	211	477	484	480	9.1	9.4	9.3
SM08-031	233	236	235	505	515	511	6.4	6.9	6.7
SM09-001	166	169	167	407	412	409	3.6	3.8	3.7
SM09-002	159	162	161	374	377	376	2.9	3.3	3.1
SM09-003	159	164	161	375	381	378	3.4	3.7	3.5
SM09-004	146	149	147	357	362	359	3.8	4.1	4.0
SM09-005	139	145	143	307	318	314	2.6	3.1	2.9
SM09-006	138	141	140	298	304	300	1.6	2.4	1.8
SM09-007	160	164	162	390	395	391	3.3	3.6	3.4
SM09-008	160	164	162	385	390	387	2.7	2.9	2.8
SM09-009	151	154	152	359	365	362	2.9	3.1	3.0
SM09-010	144	147	146	339	344	341	2.7	3.1	3.0
SM09-011	147	149	148	346	352	349	2.6	2.9	2.7
SM09-012	157	163	161	383	389	386	2.3	2.7	2.5
SM09-013	143	146	144	330	335	331	3.1	3.3	3.2
SM09-014	139	142	140	312	318	315	1.3	2	1.7
SM09-015	139	142	140	312	318	314	1.6	2.4	1.9
SM09-016	141	143	142	296	302	298	1.1	1.7	1.4
SM09-017	139	143	141	315	319	316	2.7	3	2.9
SM09-018	142	145	143	317	320	318	1.3	2	1.6
SM09-019	135	138	136	305	309	306	2.8	3.1	2.9
SM09-020	138	141	140	306	311	308	1.5	2.2	2.0
SM10-001	310	316	314	722	727	725	14	14	14
SM10-002	232	235	233	537	539	537	8.5	8.7	8.6
SM10-003	247	251	249	548	553	551	7.6	8.1	7.7
SM10-004	239	246	241	528	537	531	7	7.4	7.2
SM10-005	240	243	241	524	527	526	6.8	7.1	6.9
SM10-006	314	342	333	715	763	746	13	13	13
SM10-007	312	318	316	714	721	718	14	14	14

SM10-008	291	315	298	679	740	698	15	18	15.7
SM10-009	245	250	247	546	560	555	8.5	9.3	9.1
SM10-010	237	240	238	532	535	533	8	8.2	8.1
SM10-011	250	257	255	584	595	592	9.9	10	10.0
SM10-012	264	271	268	615	626	619	11	11	11
SM10-013	237	244	239	542	555	546	9	9.7	9.2
SM10-014A	246	249	247	569	573	571	9.8	10	9.9
SM10-015	241	254	245	546	576	553	9.2	10	9.4
SM10-016	255	258	257	596	602	600	13	13	13
SM10-017	245	247	246	562	569	566	12	12	12
SM10-018	240	242	241	528	536	533	8	8.2	8.1
SM10-019	254	258	256	572	582	577	10	10	10
SM10-020	233	237	235	567	577	571	18	19	18.7
SM10-021	239	242	241	586	596	592	18	19	18.2
SM10-022	243	246	244	558	565	561	12	12	12
SM10-023	232	237	235	554	563	559	15	15	15
SM10-024	230	232	231	535	541	539	11	12	11.3
SM10-025	223	230	228	531	538	535	11	12	11.5
SM10-026	243	248	245	582	588	586	16	16	16
SM10-027	248	256	252	554	567	563	9.7	10	9.8
SM10-028A	226	229	228	588	604	597	26	28	26.8
SM10-029A	257	265	261	591	605	596	13	14	13.2
SM10-030	238	242	241	530	535	532	7	7.2	7.1
SM10-031	240	243	242	553	558	555	8	8.4	8.2
SM10-032	240	243	242	531	536	534	7	7.2	7.1
SM11-001	161	164	163	399	405	403	4.9	5.2	5.0
SM11-002	138	141	140	314	317	315	3.2	3.4	3.3
SM11-003	142	145	143	321	328	324	1.7	2.2	2.0
SM11-004	139	142	140	301	305	303	1.7	2	1.8
SM11-005	137	141	139	315	318	317	3.8	3.9	3.9
SM11-006	138	142	140	303	315	310	2.8	3.3	3.0

SM11-007	142	145	143	302	306	305	2.7	3.1	2.9
SM11-009	150	155	152	303	304	304	1	1.6	1.2
SM11-010	155	157	156	315	316	315	1.6	2.2	1.9
SM11-011	143	146	144	340	344	343	3.2	3.6	3.4
SM11-012	143	146	144	326	329	328	3.1	3.3	3.2
SM11-013	140	143	141	291	293	292	1	2.1	1.5
SM11-014	136	138	137	287	289	288	1.2	1.7	1.5
SM11-015	136	139	137	301	304	302	2	2.6	2.2
SM11-016	142	148	144	297	303	299	2.4	2.7	2.6
SM11-017	140	143	142	289	293	291	2.1	2.7	2.5
SM11-018	139	142	140	299	305	301	3.8	4	3.9
SM11-019	140	143	141	307	312	309	1.2	1.6	1.4
SM11-020	161	164	162	400	406	403	5.4	5.9	5.7
SM11-022	166	167	166	449	459	454	7.1	7.5	7.3
SM11-023	166	168	167	391	397	393	3.8	3.9	3.9
SM11-024	155	158	157	394	404	400	4.5	4.9	4.7
SM11-025	160	162	161	403	411	407	3	3.5	3.2
SM11-026	147	151	149	340	347	344	2.4	3	2.7

Appendix B

Monitor Well Laboratory Reports

First Quarter, 2020

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 01/07/2020

Analysis Date: 01/07/2020

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	293	428	356	1922	2866	2388	181	285	238
CM06-010	291	429	358	1934	2952	2460	183	327	272
CM08-001	291	455	379	1935	3110	2592	180	372	310
CM08-002	291	395	329	1926	3125	2604	179	334	278
CM08-003	299	432	360	1964	3211	2676	187	367	306
CM08-004	294	428	356	1922	3125	2604	181	328	274
CM08-005	287	425	354	1900	3067	2556	180	328	274
CM08-006	295	432	360	1909	3067	2556	179	317	264
CM08-007	320	425	354	1963	3154	2628	189	396	330
CM08-008	322	418	348	1965	3211	2676	190	415	346
CM08-009	310	452	377	1859	3053	2544	174	325	271
CM09-008	296	418	348	1816	2952	2460	173	366	305
CM09-009	302	475	396	1805	2923	2436	177	334	278
CM09-010	303	359	299	1789	2390	1992	181	292	244
CM09-011	300	445	371	1790	2707	2256	183	284	236
CM11-012	297	433	361	1792	2794	2328	170	268	223
CM11-013	301	418	348	1791	2722	2268	172	291	242
CM11-014	299	468	390	1782	3024	2520	172	357	298
CM11-015	295	431	359	1785	2765	2304	171	289	241
CM11-016	299	451	376	1784	2794	2328	176	276	230
CM11-017	303	438	365	1784	2837	2364	173	301	251
CM11-018	304	445	371	1793	2722	2268	174	297	247
CM11-019	300	448	373	1798	2779	2316	173	300	250
SM04-001	154	248	206	362	772	643	2.8	52	43
SM04-002	189	513	393	626	1256	1039	12	127	88
SM04-005A	196	367	306	528	1236	1030	11	106	88
SM06-028	287	351	293	669	778	648	11	24	20
SM08-001	236	374	312	507	763	636	7.2	25	21
SM08-002	241	353	294	516	778	648	6.3	24	20
SM08-003	229	331	276	502	720	600	7.9	24	20
SM08-004	223	323	269	519	819	683	11	25	21
SM08-005	253	346	288	572	749	624	9.4	23	19

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 01/07/2020

Analysis Date: 01/07/2020

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	293	428	356	1922	2866	2388	181	285	238
CM06-010	291	429	358	1934	2952	2460	183	327	272
CM08-001	291	455	379	1935	3110	2592	180	372	310
CM08-002	291	395	329	1926	3125	2604	179	334	278
CM08-003	299	432	360	1964	3211	2676	187	367	306
CM08-004	294	428	356	1922	3125	2604	181	328	274
CM08-005	287	425	354	1900	3067	2556	180	328	274
CM08-006	295	432	360	1909	3067	2556	179	317	264
CM08-007	320	425	354	1963	3154	2628	189	396	330
CM08-008	322	418	348	1965	3211	2676	190	415	346
CM08-009	310	452	377	1859	3053	2544	174	325	271
CM09-008	296	418	348	1816	2952	2460	173	366	305
CM09-009	302	475	396	1805	2923	2436	177	334	278
CM09-010	303	359	299	1789	2390	1992	181	292	244
CM09-011	300	445	371	1790	2707	2256	183	284	236
CM11-012	297	433	361	1792	2794	2328	170	268	223
CM11-013	301	418	348	1791	2722	2268	172	291	242
CM11-014	299	468	390	1782	3024	2520	172	357	298
CM11-015	295	431	359	1785	2765	2304	171	289	241
CM11-016	299	451	376	1784	2794	2328	176	276	230
CM11-017	303	438	365	1784	2837	2364	173	301	251
CM11-018	304	445	371	1793	2722	2268	174	297	247
CM11-019	300	448	373	1798	2779	2316	173	300	250
SM04-001	154	248	206	362	772	643	2.8	52	43
SM04-002	189	513	393	626	1256	1039	12	127	88
SM04-005A	196	367	306	528	1236	1030	11	106	88
SM06-028	287	351	293	669	778	648	11	24	20
SM08-001	236	374	312	507	763	636	7.2	25	21
SM08-002	241	353	294	516	778	648	6.3	24	20
SM08-003	229	331	276	502	720	600	7.9	24	20
SM08-004	223	323	269	519	819	683	11	25	21
SM08-005	253	346	288	572	749	624	9.4	23	19

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 01/07/2020

Analysis Date: 01/07/2020

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	293	428	356	1922	2866	2388	181	285	238
CM06-010	291	429	358	1934	2952	2460	183	327	272
CM08-001	291	455	379	1935	3110	2592	180	372	310
CM08-002	291	395	329	1926	3125	2604	179	334	278
CM08-003	299	432	360	1964	3211	2676	187	367	306
CM08-004	294	428	356	1922	3125	2604	181	328	274
CM08-005	287	425	354	1900	3067	2556	180	328	274
CM08-006	295	432	360	1909	3067	2556	179	317	264
CM08-007	320	425	354	1963	3154	2628	189	396	330
CM08-008	322	418	348	1965	3211	2676	190	415	346
CM08-009	310	452	377	1859	3053	2544	174	325	271
CM09-008	296	418	348	1816	2952	2460	173	366	305
CM09-009	302	475	396	1805	2923	2436	177	334	278
CM09-010	303	359	299	1789	2390	1992	181	292	244
CM09-011	300	445	371	1790	2707	2256	183	284	236
CM11-012	297	433	361	1792	2794	2328	170	268	223
CM11-013	301	418	348	1791	2722	2268	172	291	242
CM11-014	299	468	390	1782	3024	2520	172	357	298
CM11-015	295	431	359	1785	2765	2304	171	289	241
CM11-016	299	451	376	1784	2794	2328	176	276	230
CM11-017	303	438	365	1784	2837	2364	173	301	251
CM11-018	304	445	371	1793	2722	2268	174	297	247
CM11-019	300	448	373	1798	2779	2316	173	300	250
SM04-001	154	248	206	362	772	643	2.8	52	43
SM04-002	189	513	393	626	1256	1039	12	127	88
SM04-005A	196	367	306	528	1236	1030	11	106	88
SM06-028	287	351	293	669	778	648	11	24	20
SM08-001	236	374	312	507	763	636	7.2	25	21
SM08-002	241	353	294	516	778	648	6.3	24	20
SM08-003	229	331	276	502	720	600	7.9	24	20
SM08-004	223	323	269	519	819	683	11	25	21
SM08-005	253	346	288	572	749	624	9.4	23	19

Cameco

Crow Butte Project

Monitor Well Laboratory Report

Sample Date: 01/07/2020

Analysis Date: 01/07/2020

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	293	428	356	1922	2866	2388	181	285	238
CM06-010	291	429	358	1934	2952	2460	183	327	272
CM08-001	291	455	379	1935	3110	2592	180	372	310
CM08-002	291	395	329	1926	3125	2604	179	334	278
CM08-003	299	432	360	1964	3211	2676	187	367	306
CM08-004	294	428	356	1922	3125	2604	181	328	274
CM08-005	287	425	354	1900	3067	2556	180	328	274
CM08-006	295	432	360	1909	3067	2556	179	317	264
CM08-007	320	425	354	1963	3154	2628	189	396	330
CM08-008	322	418	348	1965	3211	2676	190	415	346
CM08-009	310	452	377	1859	3053	2544	174	325	271
CM09-008	296	418	348	1816	2952	2460	173	366	305
CM09-009	302	475	396	1805	2923	2436	177	334	278
CM09-010	303	359	299	1789	2390	1992	181	292	244
CM09-011	300	445	371	1790	2707	2256	183	284	236
CM11-012	297	433	361	1792	2794	2328	170	268	223
CM11-013	301	418	348	1791	2722	2268	172	291	242
CM11-014	299	468	390	1782	3024	2520	172	357	298
CM11-015	295	431	359	1785	2765	2304	171	289	241
CM11-016	299	451	376	1784	2794	2328	176	276	230
CM11-017	303	438	365	1784	2837	2364	173	301	251
CM11-018	304	445	371	1793	2722	2268	174	297	247
CM11-019	300	448	373	1798	2779	2316	173	300	250
SM04-001	154	248	206	362	772	643	2.8	52	43
SM04-002	189	513	393	626	1256	1039	12	127	88
SM04-005A	196	367	306	528	1236	1030	11	106	88
SM06-028	287	351	293	669	778	648	11	24	20
SM08-001	236	374	312	507	763	636	7.2	25	21
SM08-002	241	353	294	516	778	648	6.3	24	20
SM08-003	229	331	276	502	720	600	7.9	24	20
SM08-004	223	323	269	519	819	683	11	25	21
SM08-005	253	346	288	572	749	624	9.4	23	19