

**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 28, 2011

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Attn: Document Control Desk, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
Mailstop T8-F5
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Source Materials License SUA-1534
Docket No. 40-8943
SM6-20 Monitor Well Excursion

Dear Deputy Director:

On May 23, 2011 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM6-20, the single parameter upper control limits (SCL) for conductivity and chloride were exceeded. As required by License Condition 11.2 of Source Materials License SUA-1534, a second sample was collected within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample also exceeded the SCL for conductivity and chloride.

In accordance with License Condition 11.2, CBO increased the sampling frequency for SM6-20 to weekly. Weekly samples were obtained from May 23, 2011 to July 26, 2011. The samples collected on June 21 and 28, and July 5, 12, 19, and 26, 2011, were below the excursion criteria from Section B.1 of the permit. Based on these results, CBO is removing SM6-20 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 January 17, 2011 to July 26, 2011.

TSMEAD

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Deputy Director
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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: Ronald Burrows – NRC
CBO – File
ec: CR – Cheyenne Office

Sample Date 6/21/2011
Analysis Date 6/21/2011

Crow Butte Project Monitor Well Laboratory Report

Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM11-3	148	210	175	340	490	408	1.5	20	17
SM11-4	143	200	167	310	446	372	1.4	20	17
SM11-5	145	204	170	330	475	396	1.8	20	17
SM11-6	144	207	173	330	490	408	3.1	25	21
SM4-1	157	248	206	370	772	643	2.4	52	43
SM4-2	196	513	393	660	1256	1039	13	127	88
SM4-5A	199	367	306	550	1236	1030	11	106	88
SM6-20	225	323	269	640	717	598	19	26	22
SM8-1	234	374	312	520	763	636	6	25	21
SM8-10	233	331	276	620	749	624	10	24	20
SM8-11	225	323	269	560	792	660	8.2	24	20
SM8-12	233	323	269	580	834	695	8.4	25	20
SM8-13	225	328	274	560	880	733	12	31	26
SM8-14	222	325	271	580	720	600	12	24	20
SM8-15	218	305	254	540	789	658	8	35	29
SM8-16	220	331	276	550	828	690	8.1	24	20
SM8-2	237	353	294	530	778	648	5.3	24	20
SM8-3	228	331	276	520	720	600	6.2	24	20
SM8-4	221	323	269	530	819	683	9	25	21
SM8-5	249	346	288	630	749	624	12	23	19
SM8-6	239	328	274	810	734	612	20	23	19
SM8-7	238	348	290	660	763	636	12	23	19
SM8-8	238	340	283	520	864	720	5.1	24	20
SM8-9	237	353	294	520	886	738	5.4	23	19
SM9-1	174	255	212	450	648	540	5.6	31	26

Sample Date 6/28/2011
Analysis Date 6/28/2011

Crow Butte Project Monitor Well Laboratory Report

Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM10-21	250	360	300	590	806	672	15	27	23
SM10-22	245	360	300	560	778	648	8.7	23	20
SM3-1	210	374	312	690	1122	935	15	85	71
SM3-2	181	305	254	460	805	671	3.8	40	34
SM3-3	180	297	247	470	729	607	6.3	30	25
SM4-10A	305	354	295	730	1053	877	12	36	30
SM4-11A	291	554	462	710	1469	1224	11	139	115
SM6-20	225	323	269	630	717	598	18	26	22
SM7-15	148	200	167	340	495	413	1.8	24	20
SM7-16	144	199	166	340	451	376	2	24	20
SM7-17	180	209	174	410	539	449	3.1	30	25
SM7-18	143	217	181	350	513	427	2.9	23	19
SM7-19	146	212	176	360	599	499	4.2	38	31
SM7-20	150	228	190	350	583	486	1.7	28	23
SM7-21	147	216	180	350	534	445	2.2	27	23
SM7-22	148	217	181	350	644	536	2.2	54	45
SM7-23	180	278	232	460	850	708	4	59	50
SM7-24	190	259	216	590	809	674	9.5	45	37
SM7-25	158	202	168	360	645	538	1.8	52	44
SM8-6	244	328	274	870	734	612	21	23	19

Sample Date
Analysis Date

7/5/2011

7/5/2011

Crow Butte Project Monitor Well Laboratory Report

Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM5-15	205	311	259	560	973	811	13	60	50
SM5-16	183	285	238	460	732	610	5.5	30	25
SM5-17	169	264	220	420	694	578	2	27	23
SM5-18	174	259	216	440	707	589	3.1	31	26
SM5-19	184	285	238	490	757	631	4.8	27	22
SM5-20	178	268	223	490	750	625	5.5	32	27
SM5-21	180	284	236	470	755	629	4.7	29	24
SM5-22	185	278	232	480	773	644	3.5	33	28
SM5-23	184	287	239	470	753	628	3.3	28	24
SM5-24	172	264	220	450	700	583	5.4	28	24
SM5-25	172	264	220	470	724	604	6.3	31	26
SM5-9	208	314	262	570	870	726	11	36	30
SM6-11	213	318	265	510	691	576	9.4	24	20
SM6-12	234	348	290	520	736	613	6.1	23	19
SM6-13	240	360	300	550	768	640	6.5	26	21
SM6-14	203	301	251	570	936	780	13	58	48
SM6-15	205	321	268	550	842	702	12	34	28
SM6-16	211	317	264	460	840	700	3.3	31	26
SM6-18	201	305	254	570	837	697	14	33	27
SM6-19	207	297	247	510	698	582	8.1	27	22
SM6-20	221	323	269	620	717	598	17	26	22
SM6-21	220	312	260	610	713	594	17	25	21
SM6-22	212	310	258	480	674	562	5.8	22	18
SM8-6	244	328	274	820	734	612	19	23	19

Crow Butte Project

Monitor Well Laboratory Report

Sample Date 7/12/2011
 Analysis Date 7/12/2011

Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM10-22	243	360	300	550	778	648	8.7	23	20
SM3-1	209	374	312	690	1122	935	14	85	71
SM3-2	179	305	254	460	805	671	3.7	40	34
SM3-3	177	297	247	470	729	607	6.2	30	25
SM4-10A	303	354	295	730	1053	877	13	36	30
SM4-11A	292	554	462	720	1469	1224	11	139	115
SM6-20	221	323	269	610	717	598	16	26	22
SM7-15	146	200	167	340	495	413	1.8	24	20
SM7-16	142	199	166	330	451	376	2	24	20
SM7-17	178	209	174	400	539	449	2.9	30	25
SM7-18	141	217	181	340	513	427	2.9	23	19
SM7-19	144	212	176	360	599	499	4.1	38	31
SM7-20	148	228	190	350	583	486	1.7	28	23
SM7-21	146	216	180	350	534	445	2.2	27	23
SM7-22	147	217	181	350	644	536	2.2	54	45
SM7-23	177	278	232	460	850	708	4	59	50
SM7-24	189	259	216	590	809	674	9.3	45	37
SM7-25	156	202	168	360	645	538	1.8	52	44
SM8-6	243	328	274	780	734	612	17	23	19

Sample Date 7/19/2011
Analysis Date 7/19/2011

Crow Butte Project Monitor Well Laboratory Report

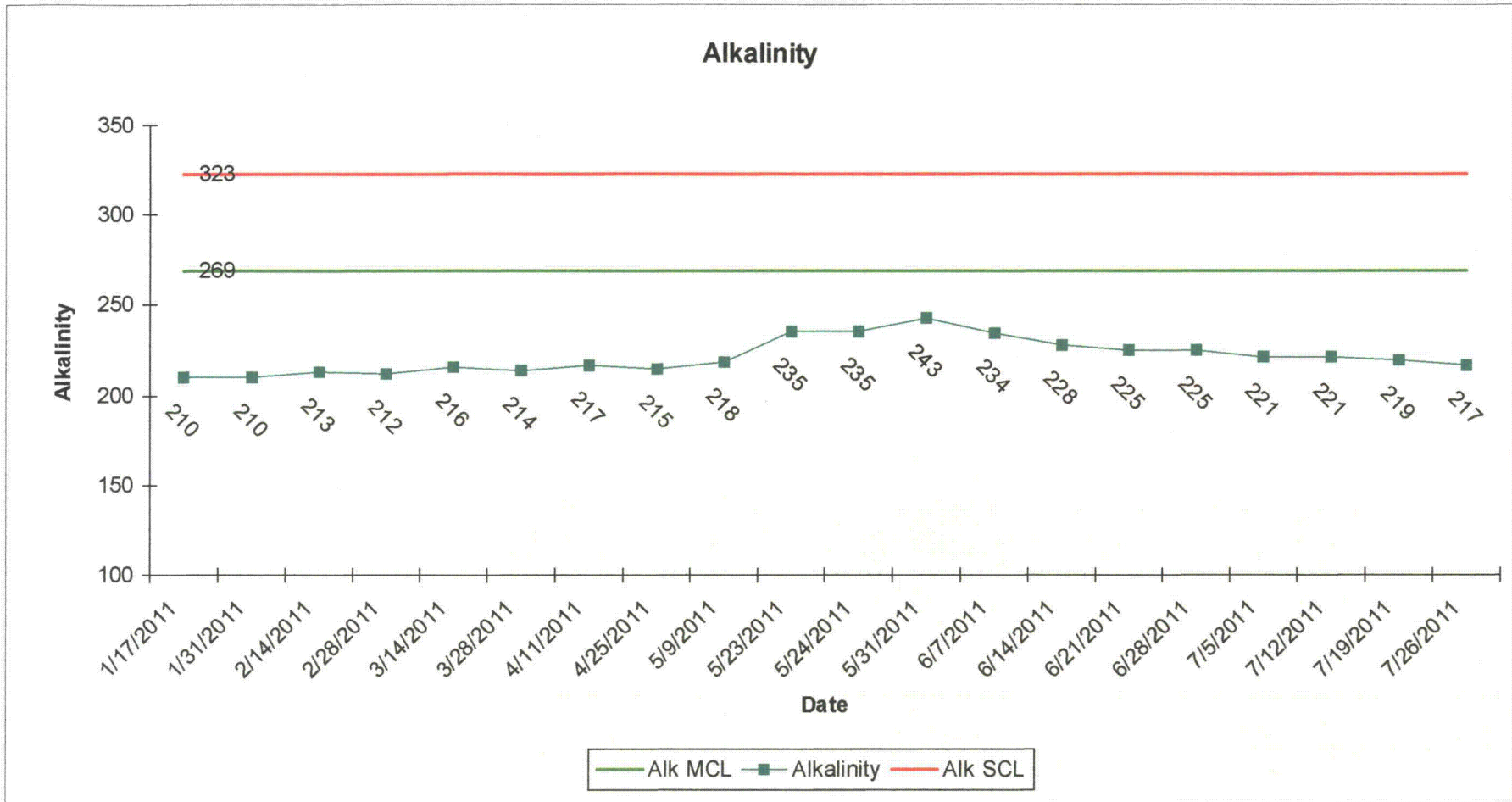
Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM11-3	148	210	175	340	490	408	1.4	20	17
SM11-4	142	200	167	310	446	372	1.3	20	17
SM11-5	146	204	170	330	475	396	1.9	20	17
SM11-6	144	207	173	330	490	408	3.5	25	21
SM4-1	159	248	206	370	772	643	2.4	52	43
SM4-2	197	513	393	660	1256	1039	13	127	88
SM4-5A	199	367	306	550	1236	1030	11	106	88
SM6-20	219	323	269	600	717	598	15	26	22
SM8-1	234	374	312	520	763	636	5.9	25	21
SM8-10	233	331	276	630	749	624	11	24	20
SM8-11	226	323	269	570	792	660	8.4	24	20
SM8-12	234	323	269	590	834	695	8.5	25	20
SM8-13	224	328	274	560	880	733	12	31	26
SM8-14	222	325	271	580	720	600	13	24	20
SM8-15	218	305	254	540	789	658	8.3	35	29
SM8-16	219	331	276	550	828	690	8.2	24	20
SM8-2	235	353	294	530	778	648	5.5	24	20
SM8-3	232	331	276	530	720	600	6.2	24	20
SM8-4	224	323	269	530	819	683	8.4	25	21
SM8-5	252	346	288	610	749	624	11	23	19
SM8-6	242	328	274	730	734	612	15	23	19
SM8-7	241	348	290	650	763	636	12	23	19
SM8-8	239	340	283	520	864	720	5.3	24	20
SM8-9	238	353	294	520	886	738	5.1	23	19
SM9-1	174	255	212	450	648	540	6	31	26

Sample Date 7/26/2011
 Analysis Date 7/26/2011

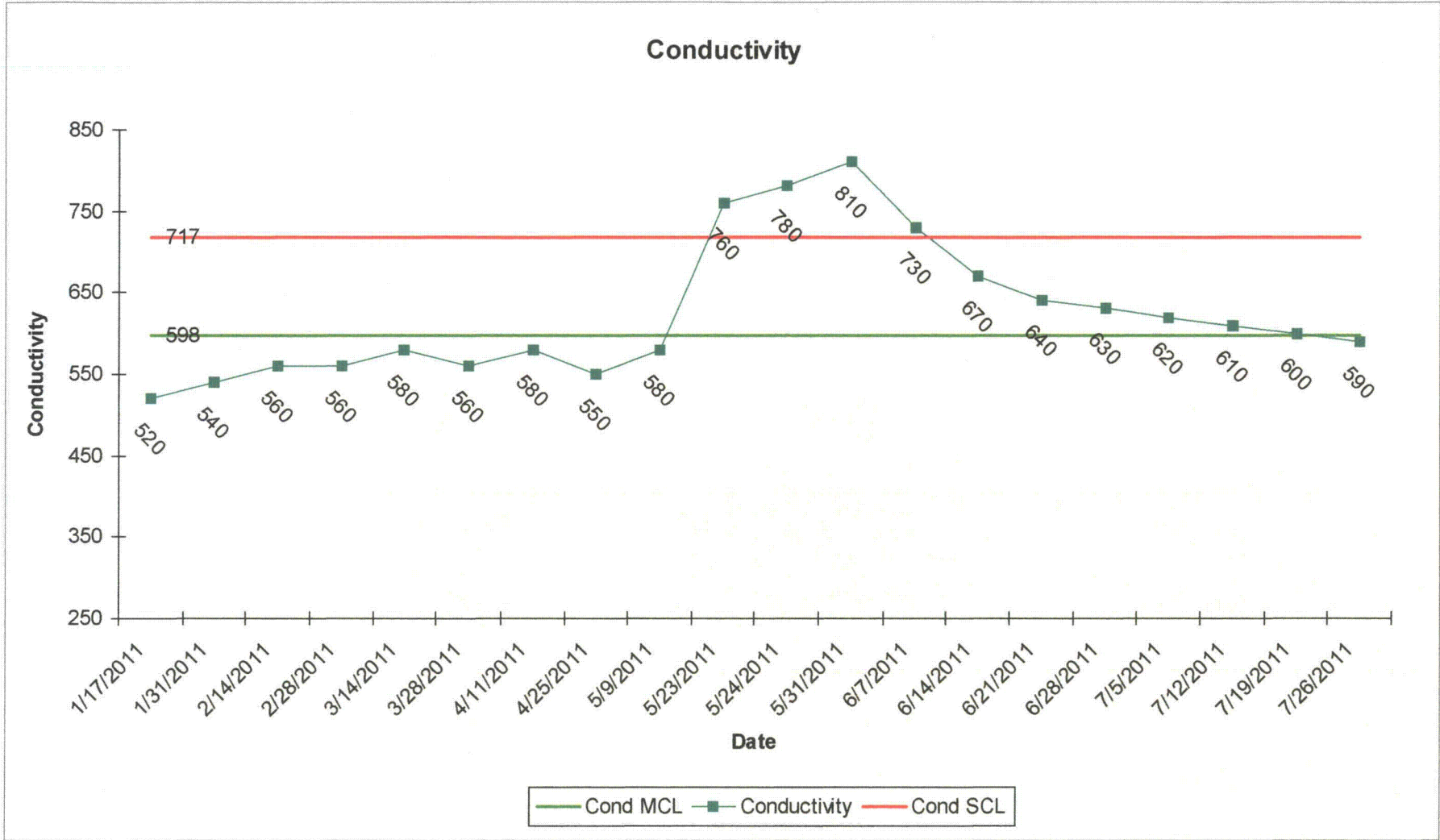
Crow Butte Project Monitor Well Laboratory Report

Well ID	Alkalinity			Conductivity			Chloride		
	(mg/L)	Alk SCL	Alk MCL	(µmho/cm)	Cond SCL	Cond MCL	(mg/L)	Cl SCL	Cl MCL
SM10-22	243	360	300	550	778	648	8.9	23	20
SM3-1	208	374	312	690	1122	935	15	85	71
SM3-2	179	305	254	460	805	671	3.8	40	34
SM3-3	178	297	247	470	729	607	6.3	30	25
SM4-10A	304	354	295	730	1053	877	13	36	30
SM4-11A	297	554	462	720	1469	1224	11	139	115
SM6-20	217	323	269	590	717	598	15	26	22
SM7-15	146	200	167	340	495	413	1.8	24	20
SM7-16	142	199	166	330	451	376	2	24	20
SM7-17	179	209	174	400	539	449	3.1	30	25
SM7-18	141	217	181	340	513	427	2.8	23	19
SM7-19	145	212	176	360	599	499	4.2	38	31
SM7-20	148	228	190	350	583	486	1.7	28	23
SM7-21	145	216	180	350	534	445	2.3	27	23
SM7-22	148	217	181	350	644	536	2.3	54	45
SM7-23	178	278	232	460	850	708	4.1	59	50
SM7-24	189	259	216	590	809	674	9.6	45	37
SM7-25	157	202	168	360	645	538	1.9	52	44
SM8-6	242	328	274	690	734	612	13	23	19

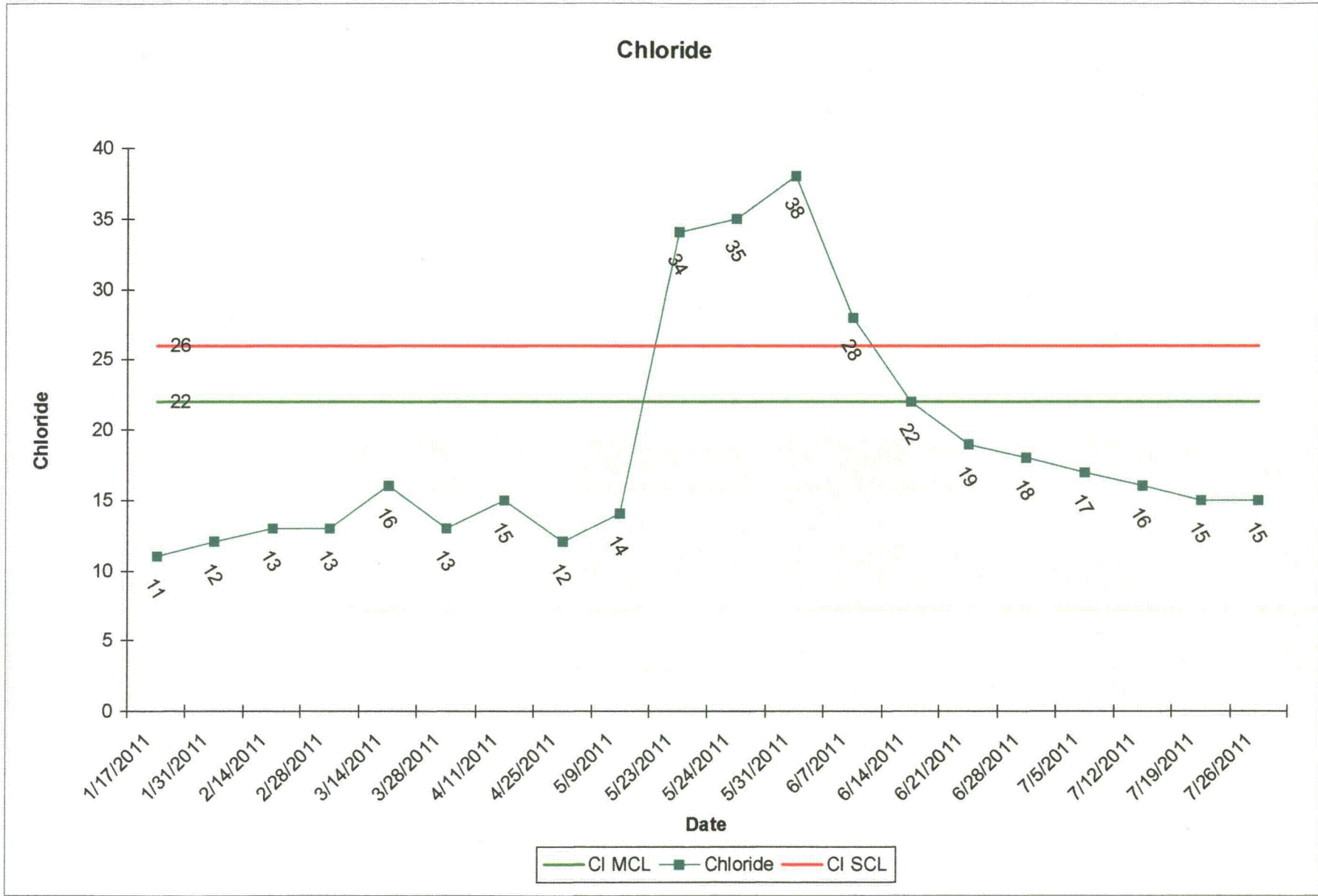
SM6-20



SM6-20



SM6-20



SM6-20

