CAMECO RESOURCES
CROW BUTTE OPERATION

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August 11, 2010

Mr. Keith I McConnell, 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
SM6-21 Monitor Well Excursion

Dear Mr. McConnell:

On June 21, 2010 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM6-21, the upper control limits (UCL) for chloride and conductivity 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 UCL for chloride and conductivity.

In accordance with License Condition 11.2, CBO increased the sampling frequency for SM6-21 to weekly. Weekly samples were obtained from June 22, 2010 to August 10, 2010. The samples collected on July 6, 13, 20, and 27, 2010, and August 3 and 10, 2010 were below the excursion criteria as stated in License Condition 11.2. Based on these results, CBO is removing SM6-21 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 18, 2010 to August 10, 2010.

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

Larry Teahon
SHEQ Manager

Enclosures: As Stated

cc: Mr. Ronald Burrows - NRC
Mr. Joe Brister – Cheyenne Office
CBO File

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/6/2010
Analysis Date 7/6/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM5-22	184	278	232	470	773	644	3.9	33	28
SM5-23	182	287	239	470	753	628	3.5	28	24
SM5-24	171	264	220	440	700	583	6	28	24
SM5-25	172	264	220	470	724	604	6.4	31	26
SM6-11	209	318	265	510	691	576	9.2	24	20
SM6-12	235	348	290	520	736	613	7.3	23	19
SM6-13	235	360	300	540	768	640	6	26	21
SM6-14	201	301	251	560	936	780	13	58	48
SM6-15	202	321	268	550	842	702	13	34	28
SM6-16	210	317	264	450	840	700	3.2	31	26
SM6-18	199	305	254	570	837	697	16	33	27
SM6-19	205	297	247	510	698	582	9.2	27	22
SM6-20	219	323	269	710	717	598	27	26	22
SM6-21	215	312	260	620	713	594	20	25	21
SM6-22	207	310	258	470	674	562	5.3	22	18
SM8-1	229	374	312	510	763	636	5.7	25	21
SM8-2	230	353	294	520	778	648	5	24	20
SM8-3	228	331	276	530	720	600	6	24	20
SM8-4	222	323	269	540	819	683	10	25	21
SM8-5	255	346	288	660	749	624	16	23	19
SM8-6	234	328	274	770	734	612	17	23	19

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/13/2010
Analysis Date 7/13/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM10-19	237	369	307	540	778	648	7.1	25	21
SM10-20	240	360	300	560	792	660	10	27	22
SM10-21	242	360	300	580	806	672	15	27	23
SM10-22	238	360	300	550	778	648	8.5	23	20
SM3-1	214	374	312	680	1122	935	15	85	71
SM3-2	180	305	254	450	805	671	4.3	40	34
SM3-3	178	297	247	470	729	607	6.7	30	25
SM4-10A	301	354	295	720	1053	877	12	36	30
SM4-11A	289	554	462	720	1469	1224	12	139	115
SM6-20	216	323	269	670	717	598	24	26	22
SM6-21	214	312	260	610	713	594	19	25	21
SM7-10	169	253	211	440	680	566	4.3	25	21
SM7-11	144	216	180	350	539	449	5.7	27	22
SM7-12	171	223	186	450	619	516	3.5	28	23
SM7-13	150	233	194	380	592	493	7.4	25	21
SM7-14	138	180	150	330	618	515	3.5	65	54
SM7-15	146	200	167	340	495	413	2.5	24	20
SM7-16	141	199	166	330	451	376	2.5	24	20
SM8-5	251	346	288	660	749	624	15	23	19
SM8-6	234	328	274	770	734	612	16	23	19

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/20/2010
Analysis Date 7/20/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM5-1	234	363	302	620	1032	860	12	57	47
SM5-2	190	287	239	460	714	595	5.8	27	22
SM5-3	227	351	293	600	1048	874	12	81	68
SM5-4	208	327	272	580	973	811	19	66	55
SM5-5	236	367	306	610	1041	868	11	65	54
SM5-6	211	324	270	590	922	768	13	47	39
SM5-7	211	323	269	580	932	776	9.9	41	34
SM5-8	206	312	260	570	840	700	12	32	27
SM6-20	215	323	269	660	717	598	23	26	22
SM6-21	218	312	260	600	713	594	18	25	21
SM8-10	230	331	276	650	749	624	12	24	20
SM8-11	220	323	269	550	792	660	7.4	24	20
SM8-12	230	323	269	580	834	695	8.2	25	20
SM8-13	220	328	274	550	880	733	12	31	26
SM8-14	215	325	271	600	720	600	17	24	20
SM8-15	215	305	254	540	789	658	7.8	35	29
SM8-16	215	331	276	540	828	690	8.9	24	20
SM8-5	250	346	288	640	749	624	15	23	19
SM8-6	235	328	274	760	734	612	16	23	19
SM8-7	235	348	290	670	763	636	12	23	19
SM8-8	235	340	283	510	864	720	5.7	24	20
SM8-9	235	353	294	510	886	738	5	23	19

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/27/2010
Analysis Date 7/27/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM10-19	239	369	307	540	778	648	6.7	25	21
SM10-20	242	360	300	550	792	660	11	27	22
SM10-21	244	360	300	580	806	672	15	27	23
SM10-22	240	360	300	550	778	648	8.5	23	20
SM3-1	210	374	312	690	1122	935	15	85	71
SM3-2	179	305	254	460	805	671	4.3	40	34
SM3-3	178	297	247	460	729	607	6.6	30	25
SM4-10A	300	354	295	720	1053	877	12	36	30
SM4-11A	288	554	462	700	1469	1224	12	139	115
SM6-20	215	323	269	640	717	598	21	26	22
SM6-21	216	312	260	600	713	594	18	25	21
SM7-10	169	253	211	450	680	566	4.3	25	21
SM7-11	144	216	180	350	539	449	5.7	27	22
SM7-12	171	223	186	450	619	516	2.8	28	23
SM7-13	152	233	194	380	592	493	7.1	25	21
SM7-14	140	180	150	330	618	515	3	65	54
SM7-15	148	200	167	340	495	413	2.5	24	20
SM7-16	143	199	166	330	451	376	2.1	24	20
SM8-5	251	346	288	620	749	624	13	23	19
SM8-6	238	328	274	710	734	612	14	23	19

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 8/3/2010
Analysis Date 8/3/2010

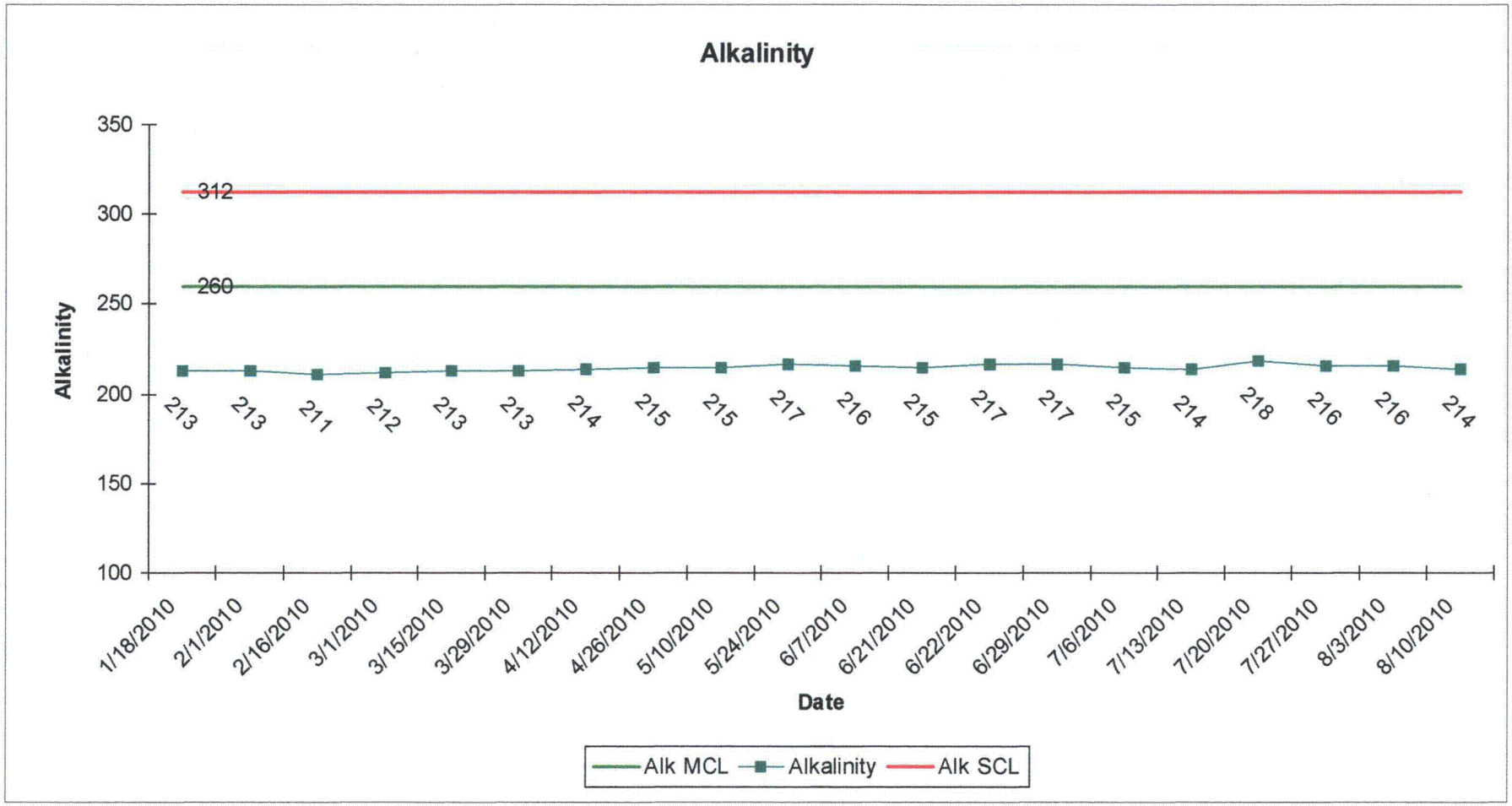
Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM5-2	192	287	239	460	714	595	5.7	27	22
SM5-3	229	351	293	600	1048	874	12	81	68
SM5-4	212	327	272	580	973	811	19	66	55
SM5-5	237	367	306	610	1041	868	11	65	54
SM5-6	216	324	270	590	922	768	13	47	39
SM5-7	215	323	269	580	932	776	9.9	41	34
SM5-8	206	312	260	570	840	700	12	32	27
SM6-20	213	323	269	630	717	598	18	26	22
SM6-21	216	312	260	590	713	594	17	25	21
SM8-10	230	331	276	650	749	624	12	24	20
SM8-11	220	323	269	560	792	660	7.8	24	20
SM8-12	229	323	269	580	834	695	8.5	25	20
SM8-13	221	328	274	560	880	733	13	31	26
SM8-14	219	325	271	610	720	600	17	24	20
SM8-15	214	305	254	530	789	658	7.8	35	29
SM8-16	217	331	276	540	828	690	8.5	24	20
SM8-5	250	346	288	610	749	624	12	23	19
SM8-6	238	328	274	670	734	612	12	23	19
SM8-7	240	348	290	660	763	636	12	23	19
SM8-8	235	340	283	510	864	720	5.1	24	20
SM8-9	234	353	294	510	886	738	4.6	23	19

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 8/10/2010
Analysis Date 8/10/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM10-19	239	369	307	540	778	648	6.7	25	21
SM10-20	241	360	300	560	792	660	10	27	22
SM10-21	243	360	300	580	806	672	15	27	23
SM10-22	241	360	300	550	778	648	8.5	23	20
SM3-1	207	374	312	690	1122	935	15	85	71
SM3-2	179	305	254	460	805	671	3.9	40	34
SM3-3	177	297	247	460	729	607	6.4	30	25
SM4-10A	298	354	295	720	1053	877	12	36	30
SM4-11A	283	554	462	710	1469	1224	12	139	115
SM6-20	212	323	269	610	717	598	17	26	22
SM6-21	214	312	260	590	713	594	16	25	21
SM7-10	167	253	211	450	680	566	4.1	25	21
SM7-11	142	216	180	350	539	449	5.3	27	22
SM7-12	169	223	186	450	619	516	3.2	28	23
SM7-13	150	233	194	380	592	493	7.1	25	21
SM7-14	137	180	150	330	618	515	2.8	65	54
SM7-15	146	200	167	340	495	413	2.5	24	20
SM7-16	142	199	166	330	451	376	2.1	24	20
SM8-6	237	328	274	650	734	612	10	23	19

SM6-21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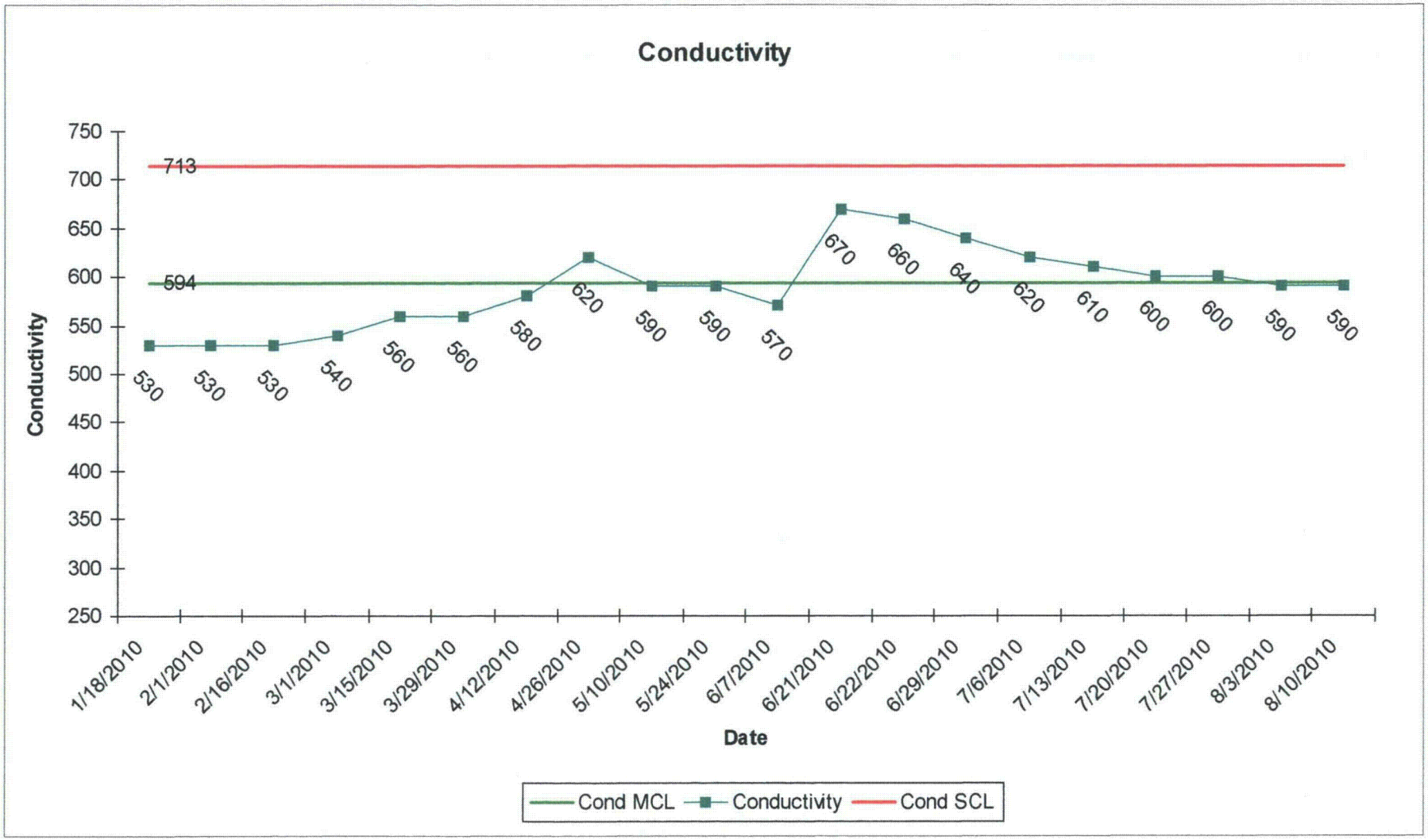
Date
Alk MCL
Alkalinity
Alk SCL

SM6-21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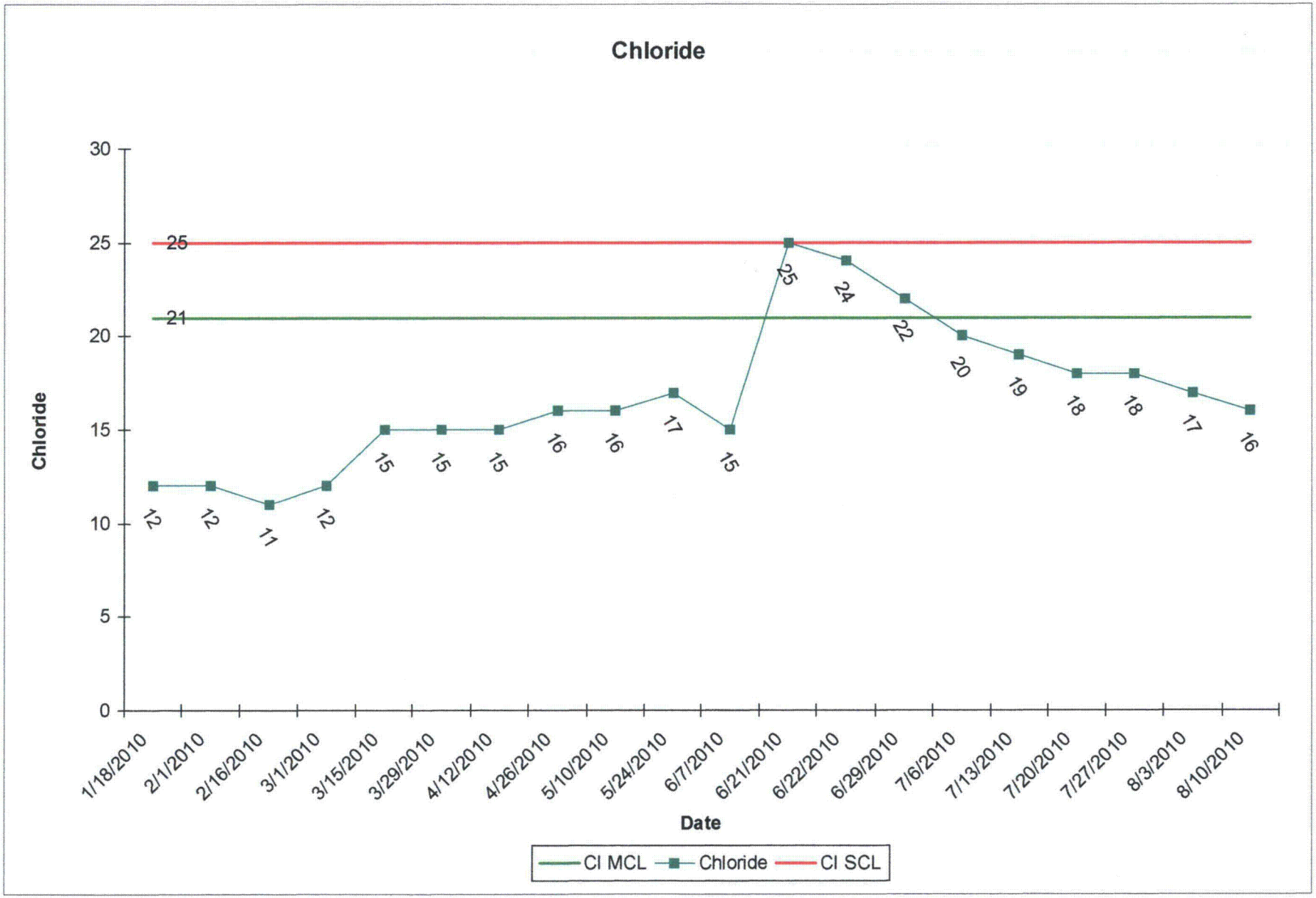
Conductivity
Cond SCL

SM6-21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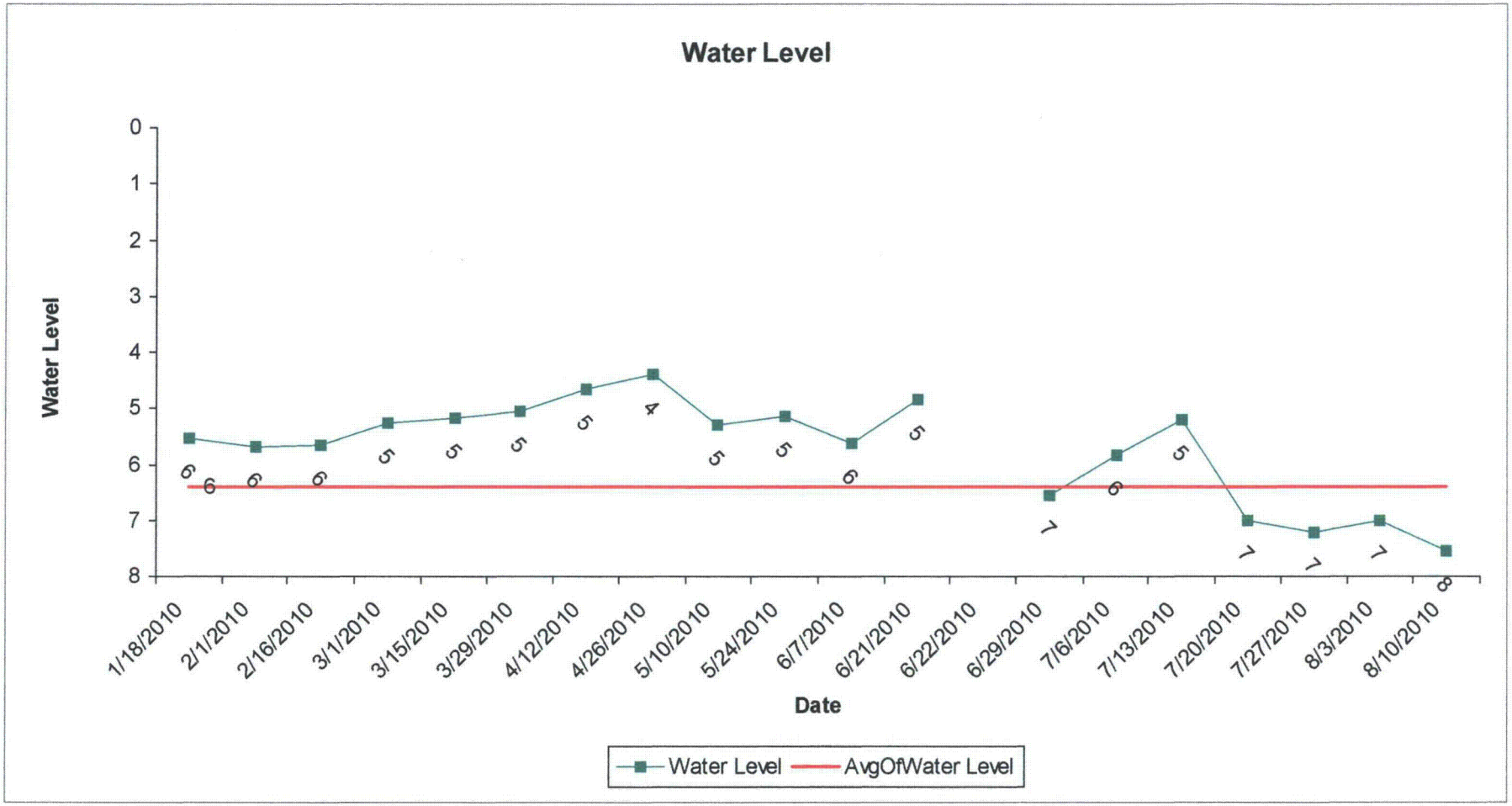
8/10/2010
Date
Cl MCL
Chloride
Cl SCL

SM6-21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8/3/2010
8/10/2010
Date
Water Level
AvgOfWater Level