CAMECO RESOURCES
CROW BUTTE OPERATION

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August 13, 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
SM8-28 Monitor Well Excursion

Dear Mr. McConnell:

On June 16, 2010 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM8-28, the upper control limits (UCL) were exceeded. The single parameter UCL's for chloride and conductivity were exceeded in SM8-28. 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's as described above.

In accordance with License Condition 11.2, CBO increased the sampling frequency for SM8-28 to weekly. Weekly samples were obtained from June 17, 2010 through August 12, 2010. The samples collected on July 8, 15, 22, and 29, 2010, and August 5 and 12, 2010 were below the excursion criteria from License Condition 11.2. Based on these results, CBO is removing SM8-28 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 27, 2010 to August 12, 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

ample Date 7/8/2010
Analysis Date 7/8/2010

Crow Butte Project
Monitor Well Laboratory Report

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM10-3	246	386	322	560	821	684	8.5	24	20
SM10-4	233	346	288	530	778	648	7.1	24	20
SM10-5	243	350	292	540	763	636	6.2	23	19
SM10-6	290	501	418	740	1123	936	13	33	28
SM10-7	265	403	336	680	965	804	12	33	27
SM10-8	252	403	336	610	907	756	11	31	26
SM10-9	245	389	324	560	835	696	9.2	28	23
SM4-1	157	248	206	360	772	643	2.8	52	43
SM4-5A	196	367	306	550	1236	1030	12	106	88
SM5-10	205	324	270	560	901	751	11	36	30
SM5-11	217	341	284	590	942	785	11	41	34
SM5-12	208	327	272	570	920	767	11	43	36
SM5-13	201	314	262	560	880	733	13	39	32
SM5-14	184	304	253	500	854	712	9.6	31	26
SM5-15	204	311	259	560	973	811	13	60	50
SM5-16	182	285	238	460	732	610	5.7	30	25
SM5-9	205	314	262	560	870	726	11	36	30
SM6-23	256	314	262	570	691	576	7.1	23	19
SM6-28	258	351	293	670	778	648	13	24	20
SM8-28	233	328	274	720	801	667	14	24	20

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/15/2010
Analysis Date 7/15/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM6-4	214	310	258	550	804	670	9.2	32	27
SM6-5	212	314	262	520	770	642	7.8	26	22
SM6-6	227	334	278	480	711	593	2.1	24	20
SM6-7	232	343	286	500	779	649	6.2	39	32
SM6-8	209	311	259	490	770	642	6	36	30
SM6-9	227	336	280	500	815	679	6	51	42
SM8-28	236	328	274	700	801	667	12	24	20
SM9-1	171	255	212	440	648	540	4.6	31	26
SM9-2	161	230	192	400	665	554	4.3	72	60
SM9-3	162	239	199	390	605	504	2.8	29	24
SM9-4	149	230	192	370	562	468	2.8	26	22
SM9-5	141	206	172	310	446	372	3.2	22	18
SM9-6	142	216	180	310	461	384	2.1	22	19
SM9-7	165	239	199	410	590	492	3.5	25	21
SM9-8	166	230	192	400	701	584	2.1	106	88
SM9-9	154	235	196	380	634	528	5.3	50	42

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/22/2010
Analysis Date 7/22/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM6-28	257	351	293	640	778	648	13	24	20
SM8-17	230	331	276	530	848	707	7.4	24	20
SM8-18	225	317	264	520	816	680	9.6	25	21
SM8-19	225	340	283	520	827	689	7.4	25	21
SM8-20	216	314	262	520	806	672	7.4	25	21
SM8-21	220	317	264	560	706	588	8.3	25	21
SM8-22	223	324	270	590	829	691	9.6	25	20
SM8-23	218	317	264	550	808	673	8.2	27	23
SM8-24	225	317	264	580	720	600	11	24	20
SM8-25	228	324	270	630	720	600	12	24	20
SM8-28	233	328	274	680	801	667	12	24	20
SM9-10	147	216	180	350	533	444	2.5	24	20
SM9-11	146	230	192	360	518	432	3	21	17
SM9-12	159	238	198	400	605	504	2.8	29	24
SM9-13	141	222	185	340	518	432	2.5	24	20
SM9-14	138	233	194	320	518	432	2.1	21	18
SM9-15	137	225	187	320	490	408	2.5	22	18
SM9-16	141	216	180	310	461	384	1.8	20	17
SM9-17	138	209	174	330	533	444	3.2	31	26
SM9-18	143	210	175	330	490	408	2.1	22	18
SM9-19	134	209	174	310	461	384	2.8	23	19
SM9-20	139	210	175	330	475	396	4.4	22	19

7/30/10

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 7/29/2010
Analysis Date 7/29/2010

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM6-3	**203**	295	246	**550**	844	703	**11**	43	36
SM6-4	**209**	310	258	**540**	804	670	**9.2**	32	27
SM6-5	**211**	314	262	**520**	770	642	**7.8**	26	22
SM6-6	**226**	334	278	**480**	711	593	**2.1**	24	20
SM6-7	**231**	343	286	**500**	779	649	**6.4**	39	32
SM6-8	**209**	311	259	**480**	770	642	**6**	36	30
SM6-9	**228**	336	280	**490**	815	679	**5.7**	51	42
SM8-28	**234**	328	274	**650**	801	667	**11**	24	20
SM9-1	**171**	255	212	**440**	648	540	**5.3**	31	26
SM9-2	**162**	230	192	**400**	665	554	**4.3**	72	60
SM9-3	**162**	239	199	**390**	605	504	**2.8**	29	24
SM9-4	**148**	230	192	**370**	562	468	**2.5**	26	22
SM9-5	**141**	206	172	**310**	446	372	**3**	22	18
SM9-6	**140**	216	180	**310**	461	384	**2.1**	22	19
SM9-7	**164**	239	199	**410**	590	492	**3.5**	25	21
SM9-8	**163**	230	192	**400**	701	584	**2.5**	106	88
SM9-9	**152**	235	196	**380**	634	528	**5.3**	50	42

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 8/5/2010
Analysis Date 8/5/2010

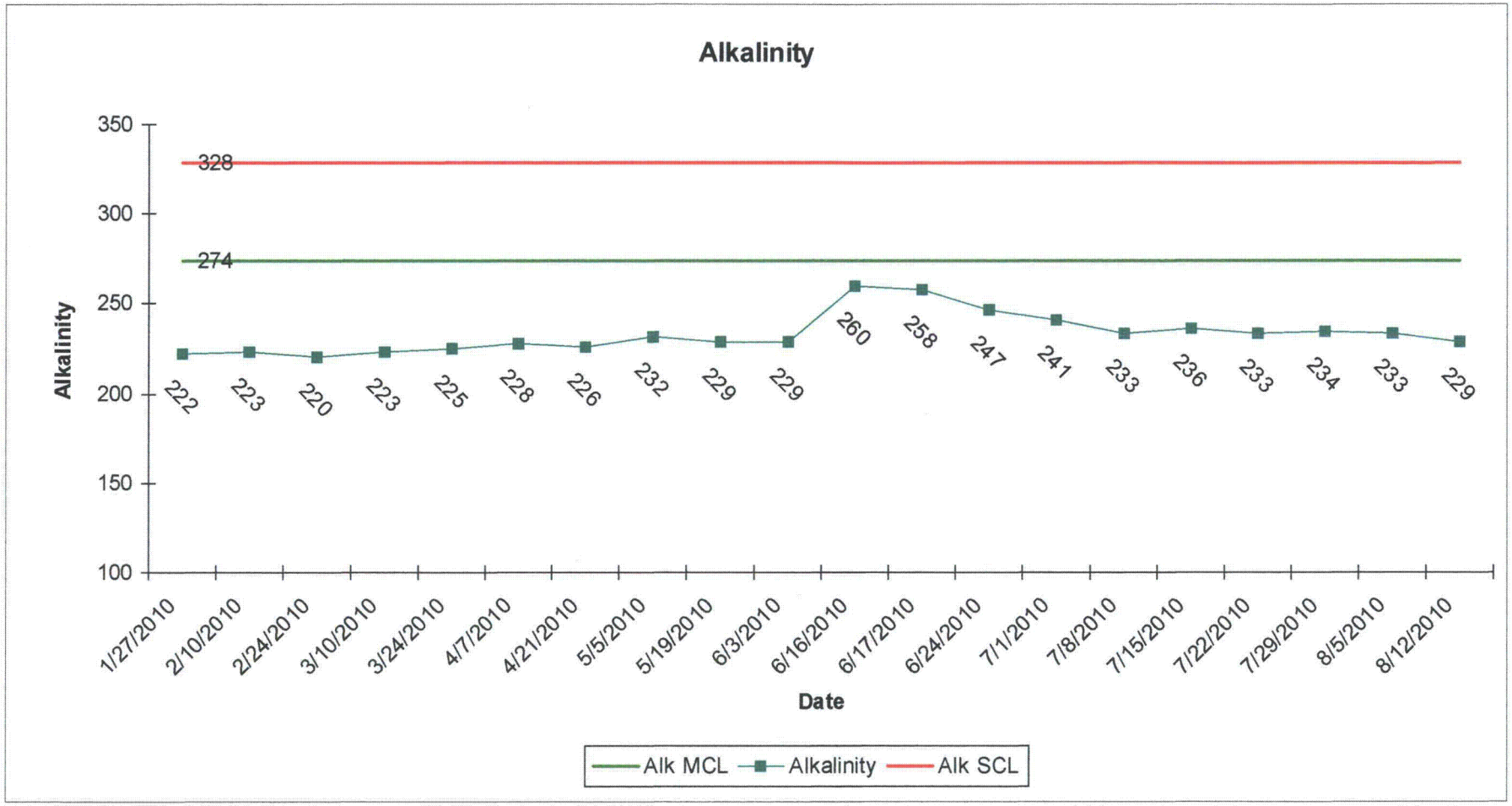
Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM8-18	227	317	264	520	816	680	9.2	25	21
SM8-19	227	340	283	520	827	689	7.4	25	21
SM8-20	218	314	262	520	806	672	7.4	25	21
SM8-21	221	317	264	560	706	588	8.3	25	21
SM8-22	225	324	270	590	829	691	9.6	25	20
SM8-23	219	317	264	550	808	673	8.3	27	23
SM8-24	225	317	264	570	720	600	11	24	20
SM8-25	227	324	270	610	720	600	12	24	20
SM8-28	233	328	274	630	801	667	12	24	20
SM9-10	147	216	180	350	533	444	2.8	24	20
SM9-11	148	230	192	360	518	432	2.8	21	17
SM9-12	162	238	198	400	605	504	2.8	29	24
SM9-13	144	222	185	340	518	432	2.8	24	20
SM9-14	140	233	194	320	518	432	1.8	21	18
SM9-15	139	225	187	320	490	408	2.4	22	18
SM9-16	143	216	180	310	461	384	1.8	20	17
SM9-17	139	209	174	330	533	444	3.2	31	26
SM9-18	145	210	175	330	490	408	1.6	22	18
SM9-19	138	209	174	310	461	384	3.2	23	19
SM9-20	141	210	175	330	475	396	4.1	22	19

Sample Date	8/12/2010
Analysis Date	8/12/2010

Crow Butte Project
Monitor Well Laboratory Report

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
SM6-5	210	314	262	530	770	642	8.2	26	22
SM6-6	223	334	278	480	711	593	3.2	24	20
SM6-7	227	343	286	500	779	649	6.9	39	32
SM6-8	206	311	259	480	770	642	6.6	36	30
SM6-9	224	336	280	500	815	679	5.8	51	42
SM8-28	229	328	274	610	801	667	11	24	20
SM9-1	172	255	212	440	648	540	5.5	31	26
SM9-2	164	230	192	400	665	554	4.3	72	60
SM9-3	163	239	199	390	605	504	3.6	29	24
SM9-4	150	230	192	370	562	468	3.2	26	22
SM9-5	142	206	172	310	446	372	3.7	22	18
SM9-6	144	216	180	310	461	384	2.3	22	19
SM9-7	166	239	199	410	590	492	4.1	25	21
SM9-8	166	230	192	400	701	584	2.6	106	88
SM9-9	155	235	196	380	634	528	6.1	50	42

SM8-28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241
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236
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229
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2/10/2010
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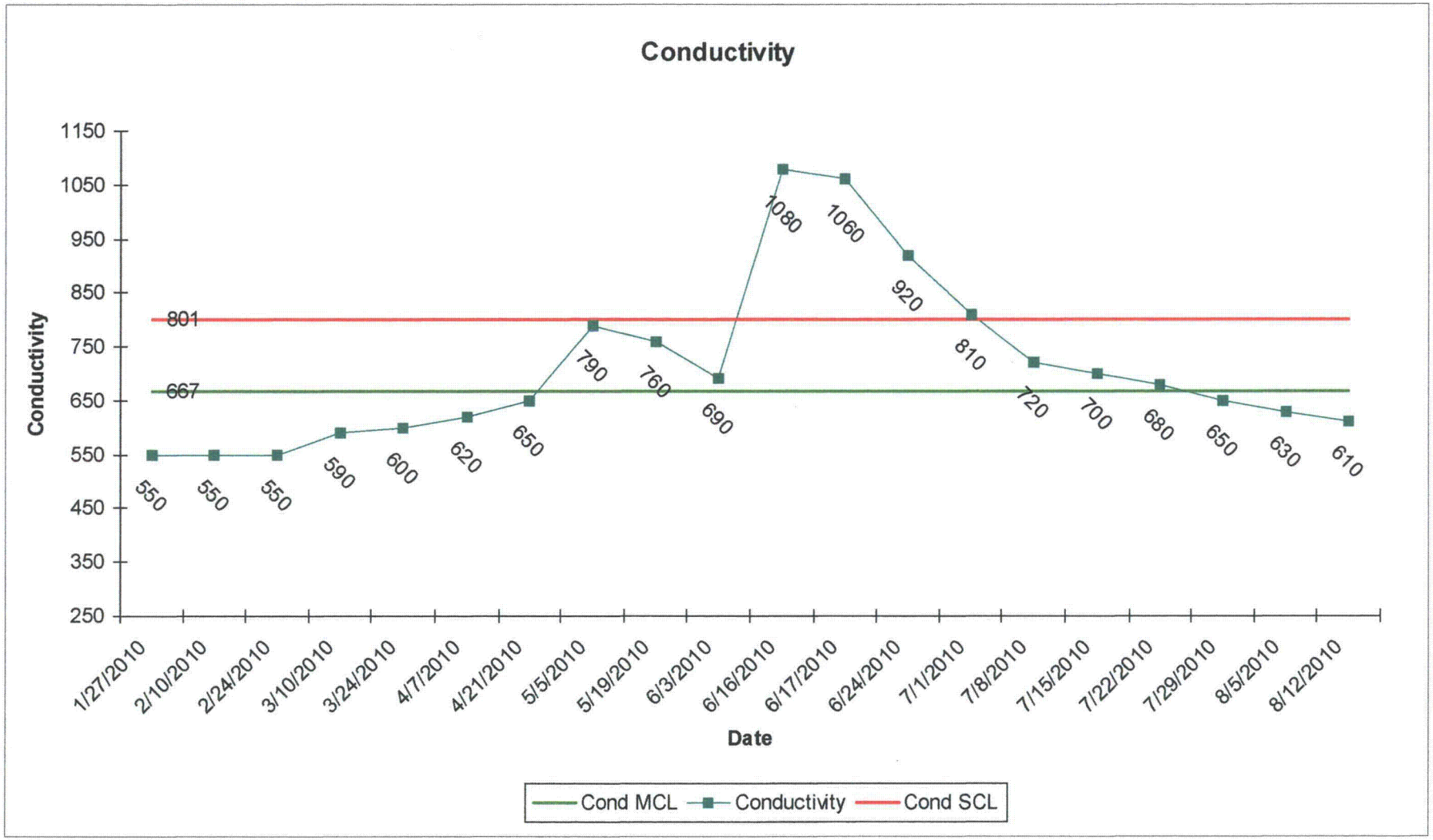
Date
Alk MCL
Alkalinity
Alk SCL

SM8-28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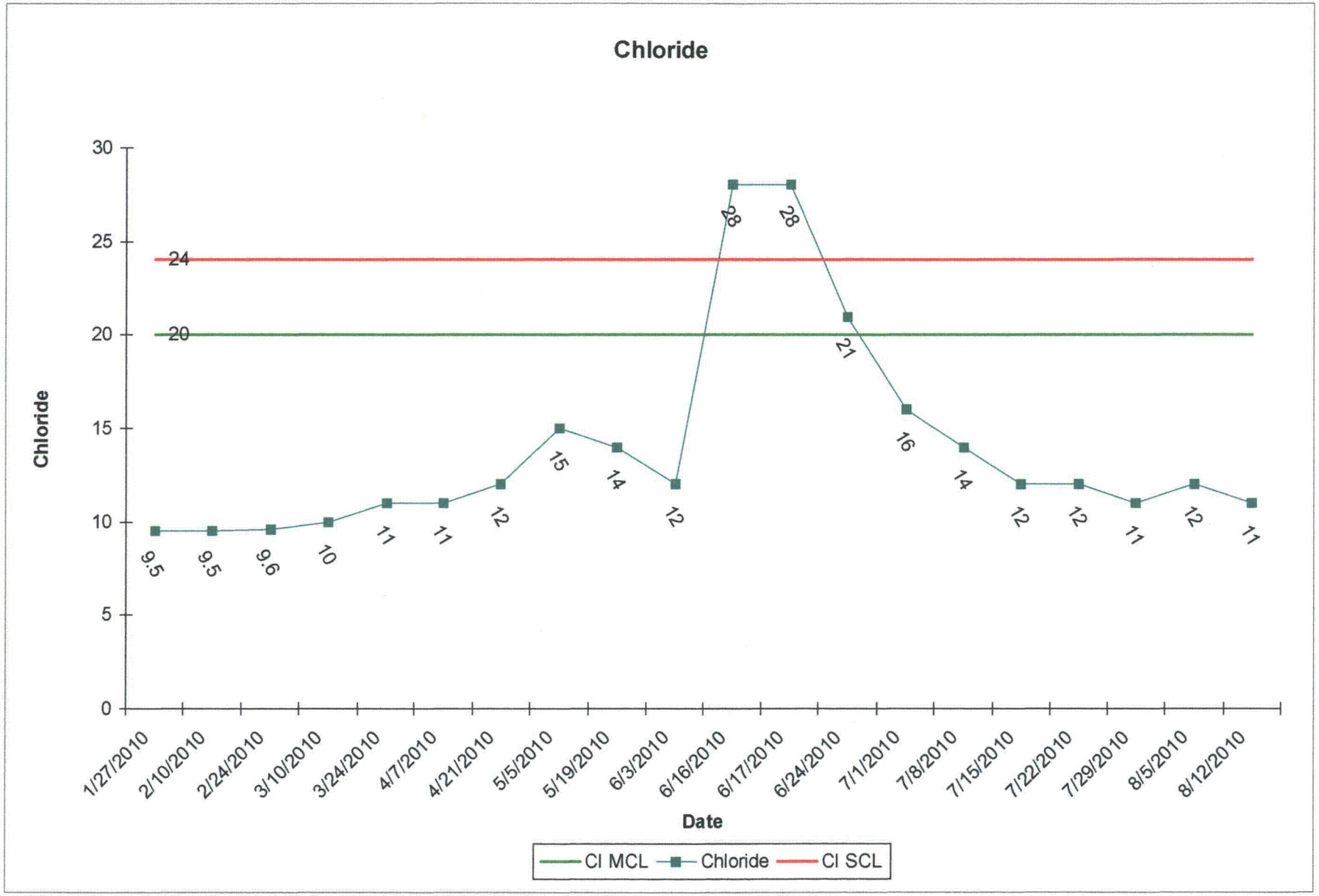
8/12/2010
Date
Cond MCL
Conductivity
Cond SCL

SM8-28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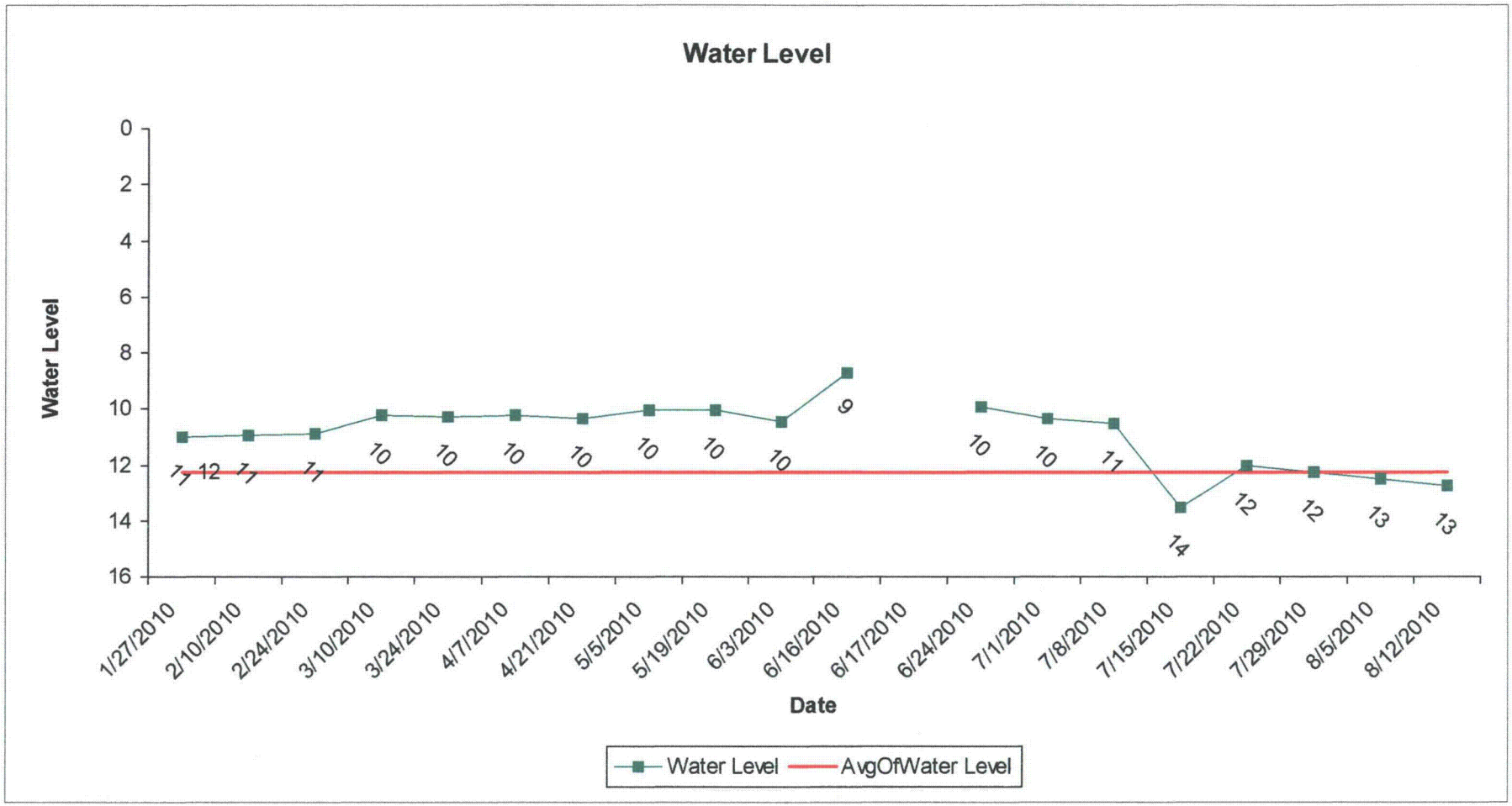
7/22/2010
7/29/2010
8/5/2010
8/12/2010
Date
Cl MCL
Chloride
Cl SCL

SM8-28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7/8/2010
7/15/2010
7/22/2010
7/29/2010
8/5/2010
8/12/2010
Date
Water Level
AvgOfWater Level