CAMECO RESOURCES
CROW BUTTE OPERATION

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P.O. Box 169
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(308) 665-2215
(308) 665-2341 – FAX

October 7, 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

Subject: Source Materials License SUA-1534
Docket No. 40-8943
Monitor Well Excursion – IJ13P

Dear Deputy Director:

On October 4, 2011 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) commercial monitor well IJ13P, the single control limit (SCL) for alkalinity was exceeded. As required by License Condition 11.2 of Source Materials License SUA-1534, a second sample was collected from CM8-8 within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample also exceeded the single control limit for alkalinity.

CBO notified Mr. Ron Burrows by phone of the excursion at 2:00 PM on October 5, 2011 as required in License Condition 9.2. Laboratory results for the sample analysis for IJ13P are attached. In addition, graphs are attached for the three excursion indicator parameters and water levels that cover the period from March 1, 2011 to October 5, 2011. Please note that water level data is not available for this well. IJ13P has been operated as a production well in the effort to restore Mine Unit 3. As a result of the well being in continuous operation, meaningful water level data is not available.

FSME 20

The excursion indicator parameters in IJ13P have been trending upward for several sampling periods. CBO believes the source of the excursion water is an area to the southeast of IJ13P, near the Commercial Plant. CBO is consulting with a hydrogeologist to develop a corrective action plan to adjust the water flow balance to pull water to the south. Additionally, CBO is planning to install an injection well to inject reverse osmosis permeate along the southeastern edge of Mine Unit 3 to protect the wellfield from encroachment of Mine Unit 4 fluids that have not yet been restored.

In accordance with License Condition 11.2, CBO has increased the sampling frequency for IJ13P to weekly until three consecutive weekly samples are below the exceeded UCLs. 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. 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

Larry Teahon

Larry Teahon
SHEQ Manager

Enclosures: As Stated

cc: Mr. Ronald Burrows – Project Manager
CBO - File
ec: CR – Cheyenne Office

WD

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 10/4/2011
Analysis Date 10/4/2011

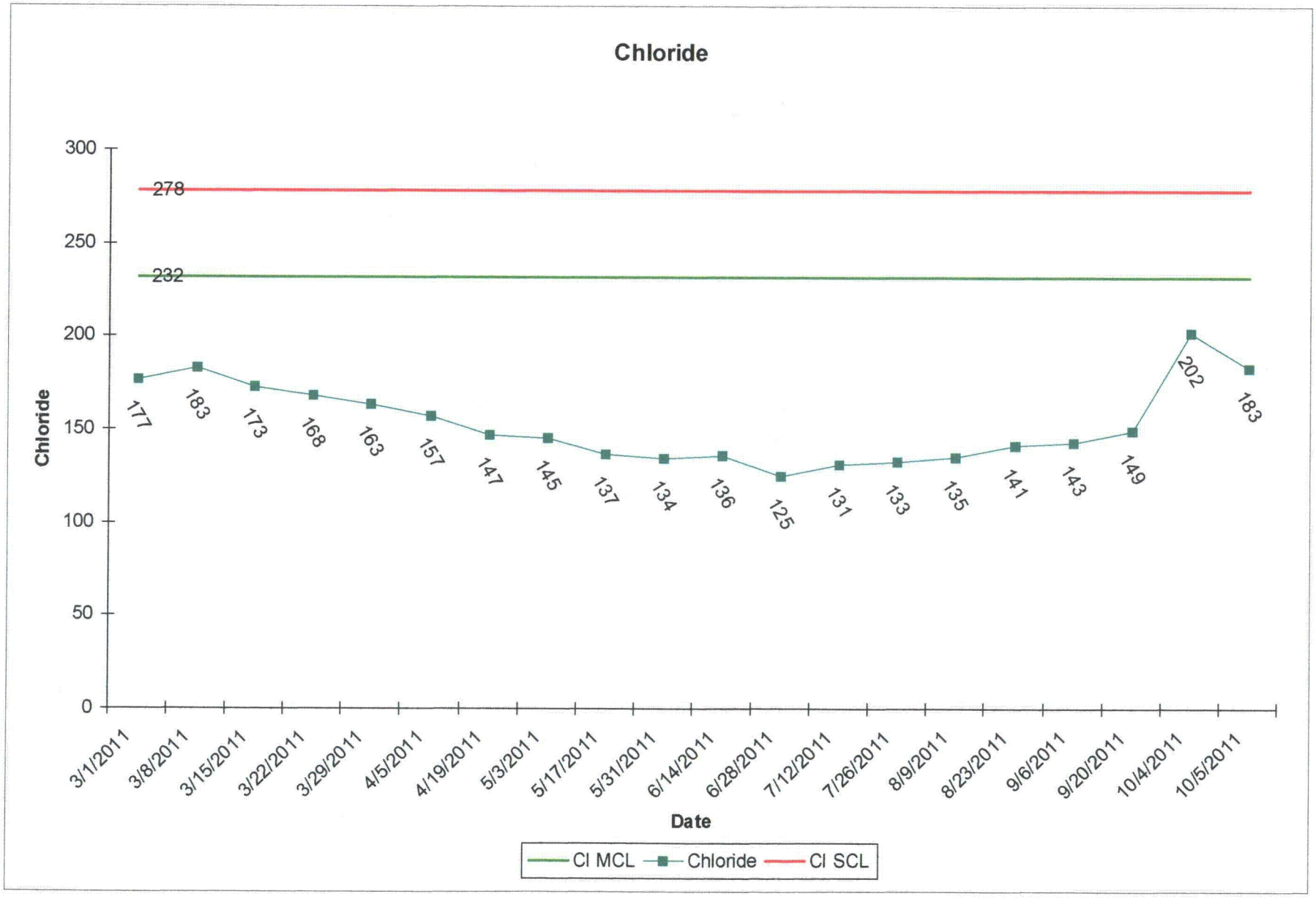
Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
CM10-10	**320**	475	396	**1860**	2736	2280	**186**	275	229
CM10-11	**321**	481	401	**1860**	2808	2340	**177**	288	240
CM10-12	**318**	446	372	**1860**	2923	2436	**179**	327	272
CM10-13	**326**	481	401	**1840**	2779	2316	**176**	287	239
CM10-14	**343**	490	408	**1780**	2578	2148	**172**	251	209
CM10-15	**346**	504	420	**1730**	2491	2076	**172**	253	211
CM10-16	**325**	484	403	**1810**	2650	2208	**170**	253	211
CM10-17	**333**	475	396	**1830**	2664	2220	**171**	248	206
CM10-8	**321**	475	396	**1890**	2707	2256	**186**	265	221
CM10-9	**314**	468	390	**1870**	2693	2244	**186**	269	224
CM7-11	**296**	432	360	**1940**	2817	2347	**194**	281	234
CM7-12	**294**	422	352	**1940**	2794	2328	**193**	289	241
CM7-13	**297**	436	364	**1940**	2841	2368	**194**	287	239
CM7-14	**294**	422	352	**1960**	2772	2310	**193**	274	228
CM7-15	**300**	432	360	**1970**	2822	2352	**196**	284	236
CM7-16	**307**	441	367	**2010**	2831	2359	**200**	281	234
IJ13P	494	415	346	**2210**	2900	2417	**202**	278	232
PR15	436	444	370	**1550**	2792	2327	**101**	268	223
PR8	**170**	484	403	**690**	2866	2388	**50**	282	235
SM10-16	**259**	382	318	**610**	850	708	**13**	28	23
SM10-17	**252**	374	312	**580**	835	696	**11**	28	23
SM10-18	**241**	346	288	**550**	763	636	**8.2**	24	20
SM10-19	**245**	369	307	**560**	778	648	**7.6**	25	21
SM10-20	**245**	360	300	**570**	792	660	**12**	27	22
SM10-21	**248**	360	300	**590**	806	672	**16**	27	23

Crow Butte Project
Monitor Well Laboratory Report

Sample Date 10/5/2011
Analysis Date 10/5/2011

Well ID	Alkalinity (mg/L)	Alk SCL	Alk MCL	Conductivity (µmho/cm)	Cond SCL	Cond MCL	Chloride (mg/L)	Cl SCL	Cl MCL
BOW96-1	**224**	314	262	**510**	791	659	**7.5**	24	20
CM10-28	**320**	461	384	**1860**	2736	2280	**184**	265	221
CM10-29	**318**	461	384	**1850**	2808	2340	**183**	281	234
CM10-30	**321**	454	378	**1860**	2678	2232	**181**	253	211
CM10-31	**318**	446	372	**1850**	2678	2232	**179**	253	211
CM5-1	**309**	462	385	**1900**	2884	2404	**189**	304	253
CM5-10	**288**	403	336	**1930**	2943	2453	**184**	333	277
CM5-11	**319**	438	365	**2050**	2897	2414	**205**	307	256
CM5-2	**305**	448	373	**1890**	2860	2383	**187**	297	247
CM5-3	**308**	449	374	**1890**	2949	2458	**189**	324	270
CM5-4	**312**	454	378	**1900**	2896	2413	**189**	305	254
CM5-5	**311**	455	379	**1890**	2880	2400	**189**	297	247
CM5-6	**303**	458	382	**1880**	2844	2370	**189**	292	244
CM5-7	**306**	433	361	**1880**	2870	2392	**187**	288	240
CM5-8	**358**	448	373	**2180**	2876	2396	**219**	289	241
CM5-9	**301**	433	361	**1900**	2864	2387	**186**	289	241
CM8-19	**319**	461	384	**1840**	2909	2424	**180**	278	232
CM8-20	**324**	467	389	**1870**	3038	2532	**183**	305	254
CM8-21	**316**	449	374	**1860**	2952	2460	**178**	261	217
CM8-22	**321**	461	384	**1860**	2966	2472	**178**	266	222
CM8-23	**322**	455	379	**1860**	2938	2448	**180**	258	215
IJ13P	451	415	346	**2030**	2900	2417	**183**	278	232
SM10-30	**238**	359	299	**530**	778	648	**7.3**	25	21
SM10-31	**234**	340	283	**530**	734	612	**6.8**	25	21
SM10-32	**238**	340	283	**530**	734	612	**6**	23	20

IJ13P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Cl MCL
Chloride
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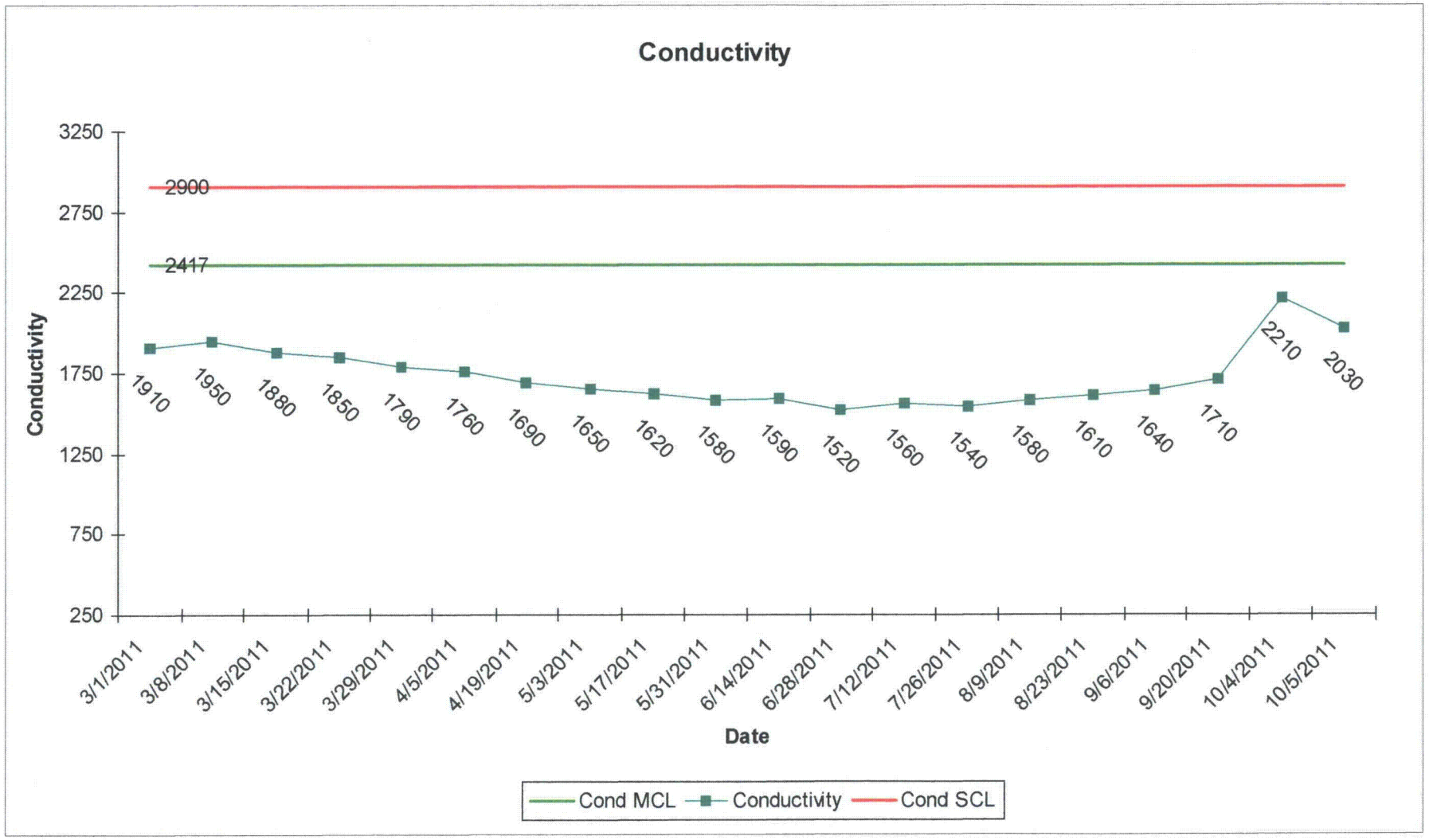
IJ13P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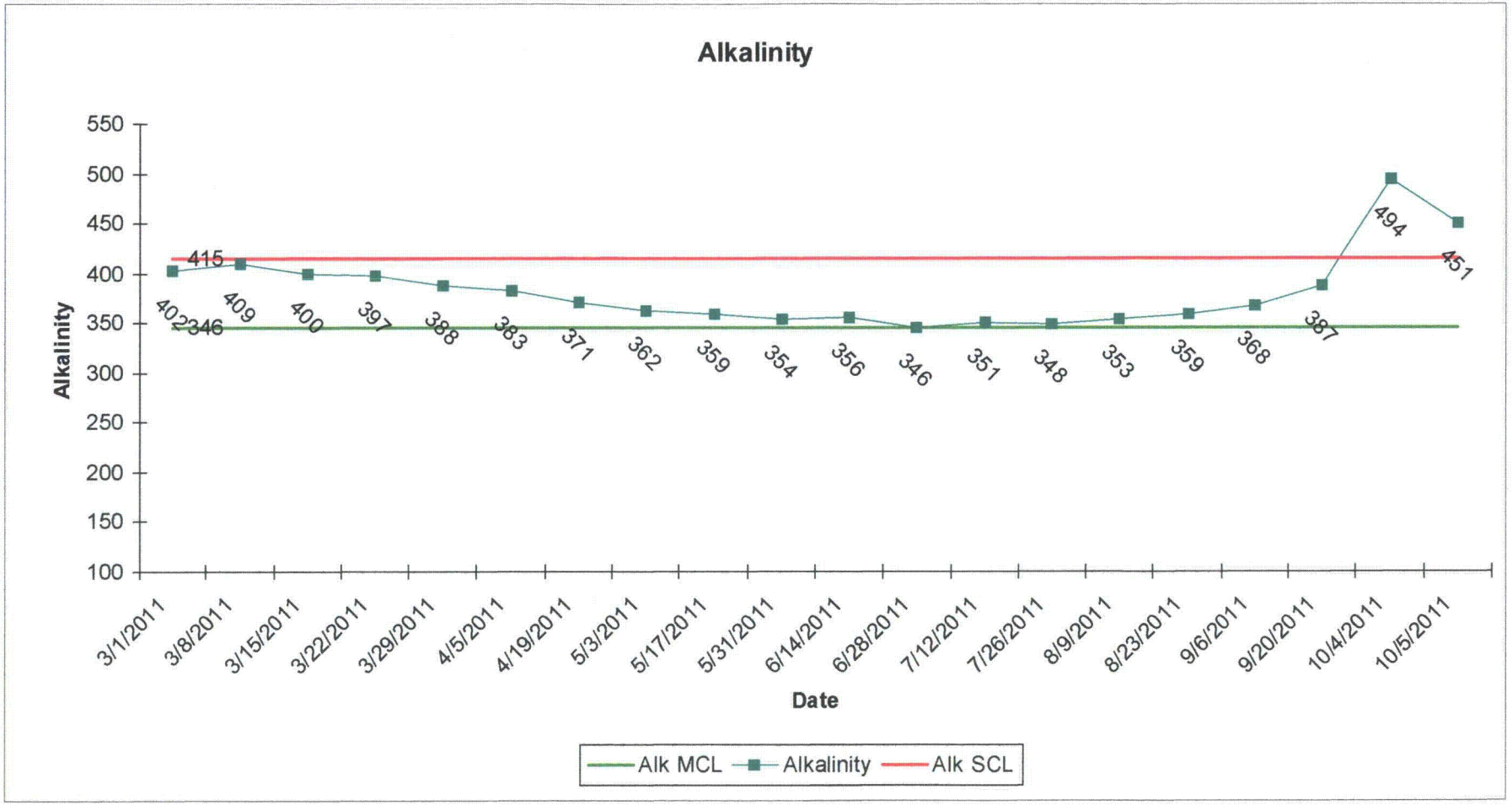
IJ13P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