Cameco

CAMECO RESOURCES
Smith Ranch-Highland Operation
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May 1, 2014

CERTIFIED MAIL # 7012 1640 0000 2326 6202

Mr. Miles Bennett, Uranium Coordinator
Land Quality Division, District 3
Wyoming Department of Environmental Quality
2100 West 5th Street
Sheridan, WY 82801

March 2014 Excursion Report Summary Update, Cameco Resources, Smith Ranch-Highland Uranium Project, Permit 633

Dear Mr. Bennett:

Power Resources, Inc. d/b/a/ Cameco Resources (Cameco) is submitting the monthly Excursion Report Summary for the Smith Ranch-Highland Uranium Project. No new excursions were reported during the month of March 2014. The Cameco Excursion Report table is attached. Monitor Wells KMO-007, DM-003, and DM-004 remained on excursion from the previous month.

Monitor Well KMO-007 continued to remain stable though the report period. Cameco and LQD are in agreement that adjusting the UCL for KMO-007 is warranted. An NSR to adjust the UCLs has been prepared and is currently being reviewed internally. Cameco plans to finalize the NSR for submittal in May 2014.

Monitor Well DM-003 and DM-004 showed slight fluctuations in all parameters during the report period. As stated in the previous monthly report, after both wells failed MIT followed by discussions with LQD on February 20, 2014, it was decided that potential replacement wells would be installed and sampled concurrently for no less than one month (4 samples) to allow sample quality comparisons prior to LQD's approval to replace DM-003 or DM-004. Installation of the potential replacement wells for DM-003 (DM-003A) and DM-004 (DM-004A) were completed and sampled for the first time on March 25, 2013. Neither well would be officially replaced, plugged and abandoned, without LQD approval and Cameco's submission of a NSR.

Copies of the monitor well reports for these wells are attached. Also attached please find graphs tracking alkalinity, chloride, conductivity and water level trends for each well. Note that the

FSME20
FSME

water level graph represents depth of water where the monitor well report data sheet gives water level in elevation.

Per Chapter 11 Section 12(d)(iii) "the operator will submit, within 90 days following confirmation of the excursion, a plan and compliance schedule, acceptable to the Department, for bringing the well (or wells) off excursion. The plan and compliance schedule can be submitted as part of the monthly excursion report". March 12, 2014 would indicate 90 days excursion status for DM-004 and fall within the current report period. The following provides Cameco's Plan and Compliance Schedule for Monitor Well DM-004.

Monitor Well DM-004 90 day Plan and Compliance Schedule

During a March 18, 2013 meeting with LQD, Cameco reviewed the Wellfield Restoration Modeling, Mine Unit C, D, and E Report provided to them by Aqui-Ver, Inc. The report provides a treatment plan for the underground workings involving injection of clean water at the upslope of the workings in MU-C, and includes mitigation of the excursion at Monitor Well DM-003. The plan was submitted with the Mine Unit C Restoration Plan dated June 21, 2012. Cameco began installation of the infrastructure needed to start clean up in April 2013, with construction continuing through October 2013. During that time it was noted by Cameco, and communicated to the LQD on April 26, 2013, that concentrations in Monitor Well DM-004 had been trending upward and that the potential that concentration increases in DM-004 would result in an excursion was significant.

Water quality results for the sample collected December 11, 2013 indicated an excursion in Monitor Well DM-004 with a confirmation sample being taken on December 12, 2013. Verbal notification was made to LQD in person December 13, 2013, with written notification following in a letter dated December 17, 2013.

The excursion at Monitor Well DM-004 is being attributed to the underground workings and associated with the excursion at DM-003. Cameco intends to mitigate the excursion, identical to and concurrent with the excursion at DM-003, referencing the Wellfield Restoration Modeling, Mine Unit C, D, and E Report provided to them by Aqui-Ver, Inc.

Please contact me at 307-358-6541, ext. 476 or Kenneth_Garoutte@cameco.com if you have questions.

Respectfully,

Ken Garoutte
Safety, Health, Environment, Quality (SHEQ) Manager

KG/vg

Attachments: Cameco Resources Excursion Report
Monitor Well Report and Trend Graphs for DM-003, DM-004 and KMO-007

cc: File HUP 4.3.3.1 File SR 4.3.3.1
Special Volume: Monthly Excursion Reports Summary Updates, Permit 603 and 633
Mr. Doug Mandeville, NRC - CERTIFIED MAIL # 7012 1640 0000 2326 6219
Document Control Desk, NRC - CERTIFIED MAIL # 7012 1640 0000 2326 6226

ec: Cameco-Cheyenne

xc: Cheyenne LQD Files

Cameco Resources Excursion Report
Permit Nos. 603 & 633
(March 2014)

Well Identification	Initial Sample Date	Confirmation Sample Date	Excursion Status (on/off)	Parameters Exceeded	Verbal Notification Date	Written Notification Date	Excursion Resolution Date	LQD Concurrence Notification Date
DM-003	11/19/2009	11/20/2009	ON	Chloride Alkalinity	11/23/2009	11/25/2009		
KMO-007	3/8/2013	3/11/2013	ON	Alkalinity Conductivity	3/12/2013	3/19/2013		
DM-004	12/11/2013	12/12/2013	ON	Chloride Alkalinity	12/13/2013	12/17/2013		

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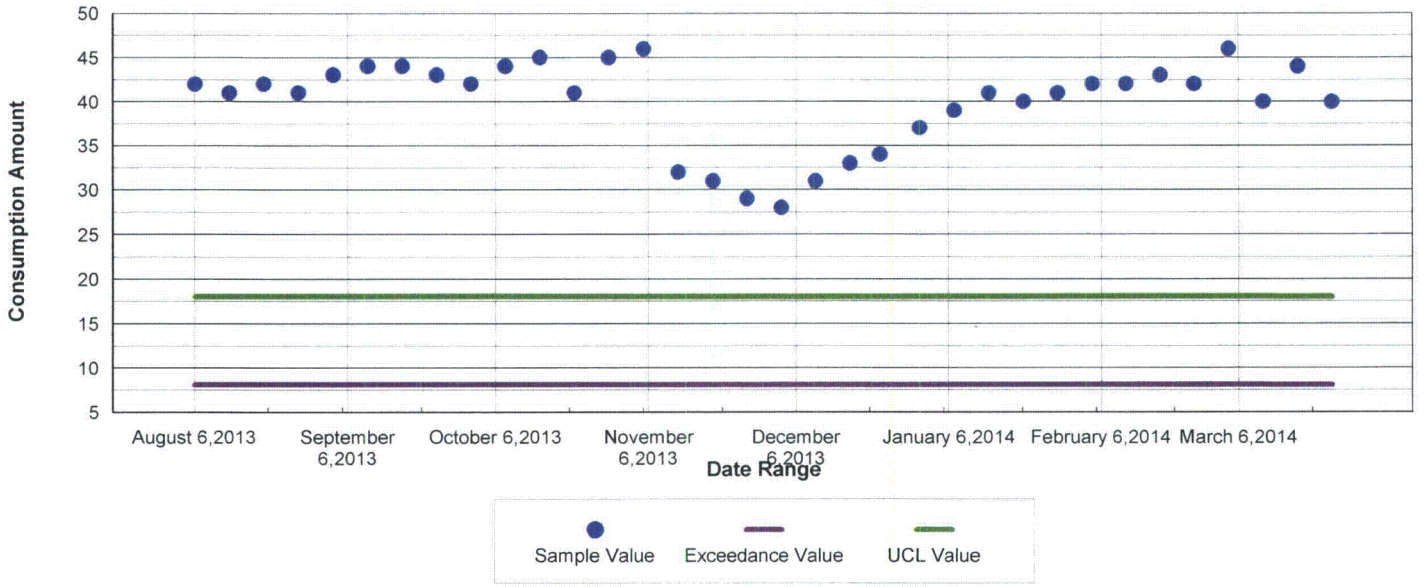
Chloride
Trending Analysis
Well : DM-003



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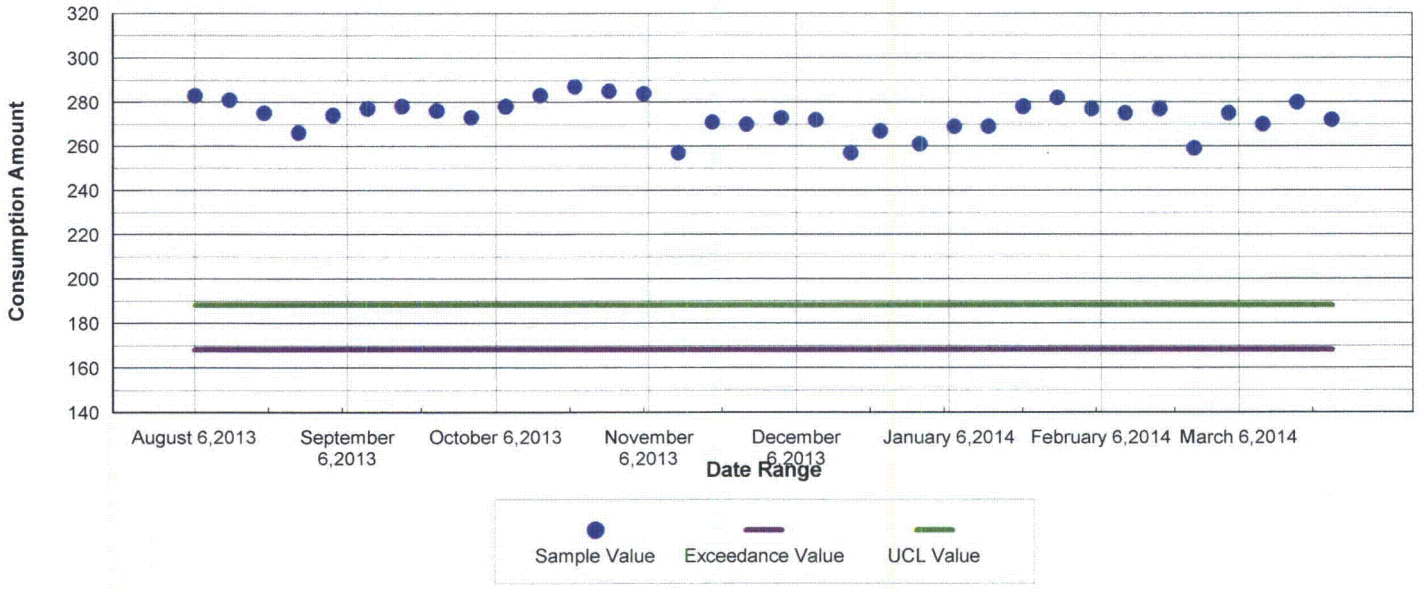
Alkalinity
Trending Analysis
Well : DM-003



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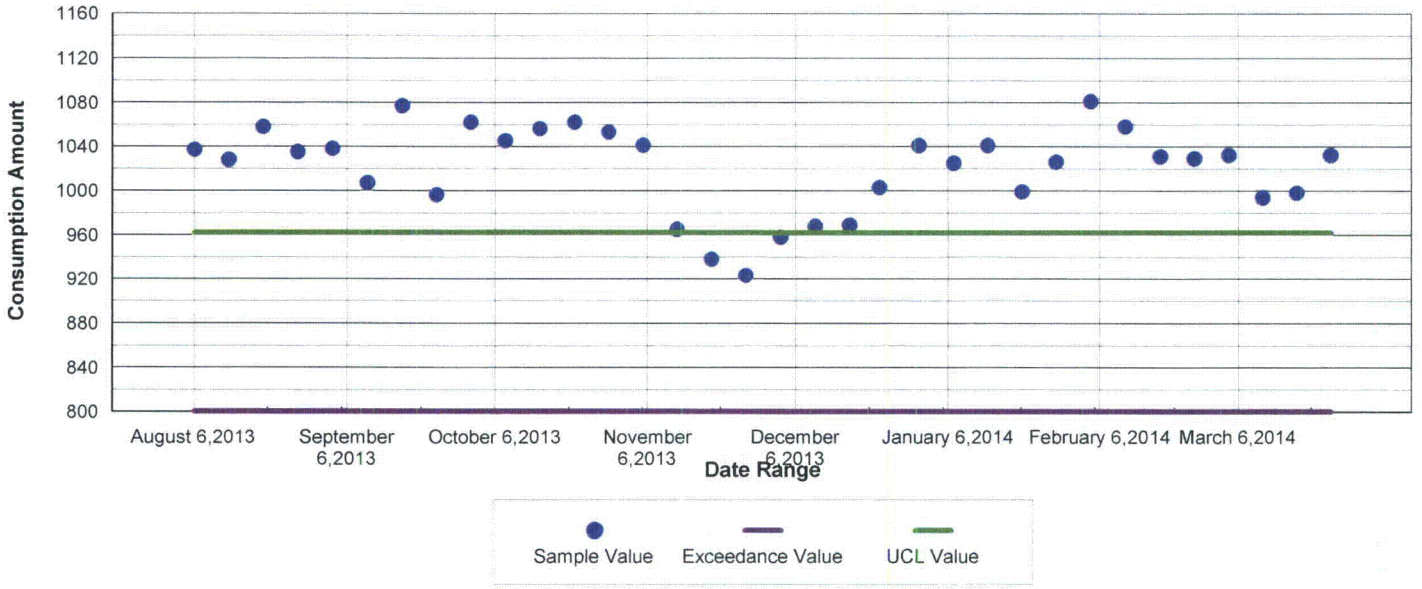
Conductivity Trending Analysis

Well : DM-003



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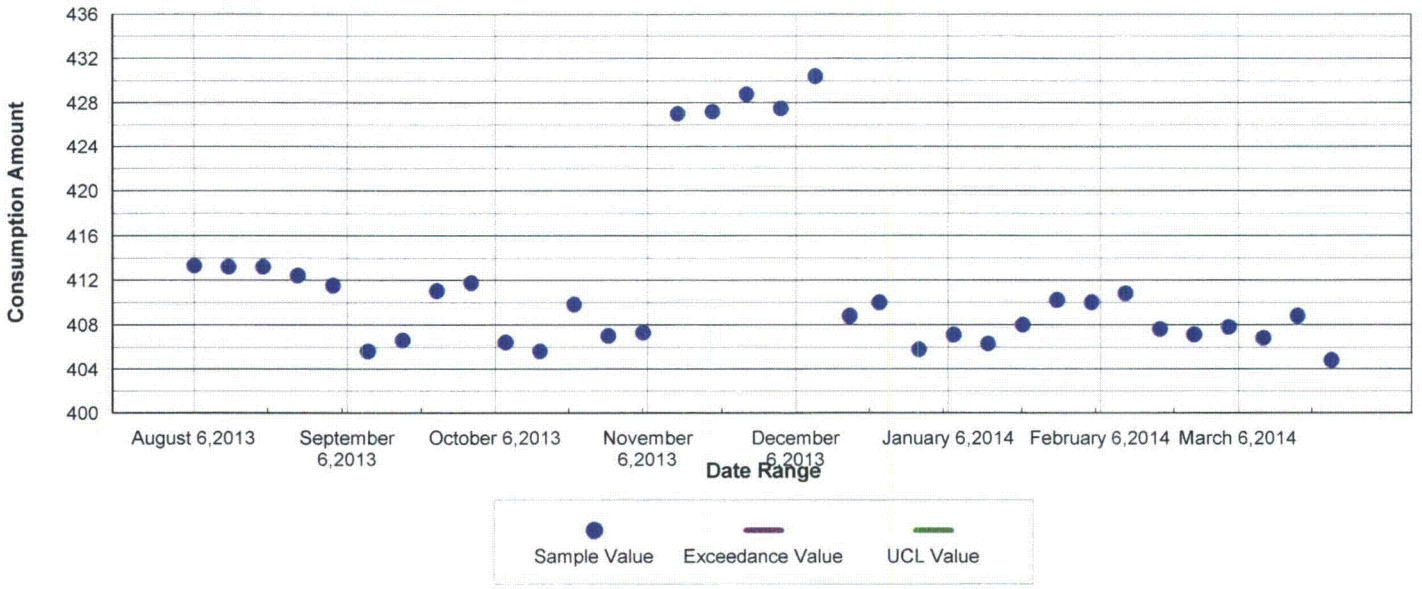
Water Level Trending Analysis

Well : DM-003



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Monitor Well Report

Well ID: DM-003

	Chloride (mg/L)	Alkalinity (mg/L $CaCO_3$)	Conductivity (µMhos/cm)	U_3O_8 (mg/L)	Water Elevation	Comment
NRC/WDEQ UCL	18	188	962			
03/25/2014	40	272	1032	0	5091.6	
03/18/2014	44	280	998	0	5087.6	
03/11/2014	40	270	994	0	5089.6	
03/04/2014	46	275	1032	0	5088.6	
02/25/2014	42	259	1029	0	5089.3	
02/18/2014	43	277	1031	0	5088.8	
02/11/2014	42	275	1058	0	5085.6	
02/04/2014	42	277	1081	0	5086.4	
01/28/2014	41	282	1026	0	5086.2	
01/21/2014	40	278	999	0	5088.4	
01/14/2014	41	269	1041	0	5090.1	
01/07/2014	39	269	1025	0	5089.3	
12/31/2013	37	261	1041	0	5090.6	
12/23/2013	34	267	1003	0	5086.4	
12/17/2013	33	257	969	0	5087.6	
12/10/2013	31	272	968	0	5066.0	
12/03/2013	28	273	958	0	5068.9	
11/26/2013	29	270	923	0	5067.6	
11/19/2013	31	271	938	0	5069.2	
11/12/2013	32	257	965	0	5069.4	
11/05/2013	46	284	1041	0	5089.1	
10/29/2013	45	285	1053	0	5089.4	
10/22/2013	41	287	1062	0	5086.6	

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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: DM-003

	Chloride (mg/L)	*Alkalinity (mg/L $CaCO_3$)*	*Conductivity (µMhos/cm)*	*U_3O_8 (mg/L)*	*Water Elevation*	*Comment*
NRC/WDEQ UCL	18	188	962			
10/15/2013	45	283	1056	0	5090.8	
10/08/2013	44	278	1045	0	5090.0	
10/01/2013	42	273	1062	0	5084.7	
09/24/2013	43	276	996	0	5085.4	
09/17/2013	44	278	1077	0	5089.8	
09/10/2013	44	277	1007	0	5090.8	
09/03/2013	43	274	1038	0	5084.9	
08/27/2013	41	266	1035	0	5084.0	
08/20/2013	42	275	1058	0	5083.2	
08/13/2013	41	281	1028	0	5083.2	
08/06/2013	42	283	1037	0	5083.1	
07/30/2013	39	279	1006	0	5081.1	
07/23/2013	39	273	1045	0	5081.1	
07/16/2013	39	276	1049	0	5083.6	
07/09/2013	39	276	994	0	5086.7	
07/02/2013	39	274	992	0	5087.0	
06/25/2013	37	273	1003	0	5088.0	
06/18/2013	37	277	1042	0	5088.7	
06/11/2013	37	278	1027	0	5090.4	
06/04/2013	35	267	975	0	5088.4	
05/28/2013	35	265	1017	0	5077.4	
05/22/2013	34	272	994	0	5080.1	
05/14/2013	32	266	987	0	5077.4	

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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: DM-003

	Chloride (mg/L)	Alkalinity (mg/L $CaCO_3$)	Conductivity (µMhos/cm)	U_3O_8 (mg/L)	Water Elevation	Comment
NRC/WDEQ UCL	18	188	962			
05/07/2013	31	263	1009	0	5075.2	
04/30/2013	31	265	983	0	5075.2	
04/23/2013	30	264	996	0	5064.4	
04/16/2013	28	255	941	0	5061.6	
04/09/2013	27	252	988	0	5059.8	
04/02/2013	27	249	941	0	5058.8	
03/26/2013	26	251	940	0	5059.5	
03/19/2013	26	250	910	0	5059.3	
03/12/2013	27	254	951	0	5061.3	
03/05/2013	26	253	891	0	5074.9	

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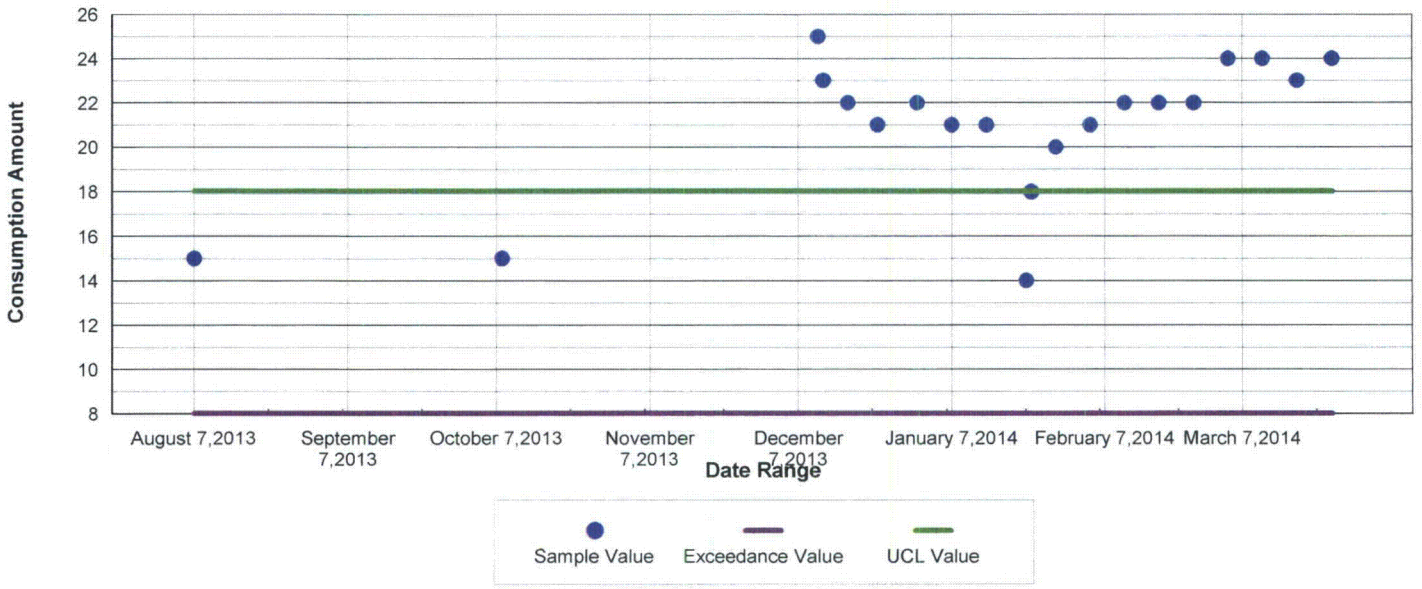
Chloride
Trending Analysis
Well : DM-004



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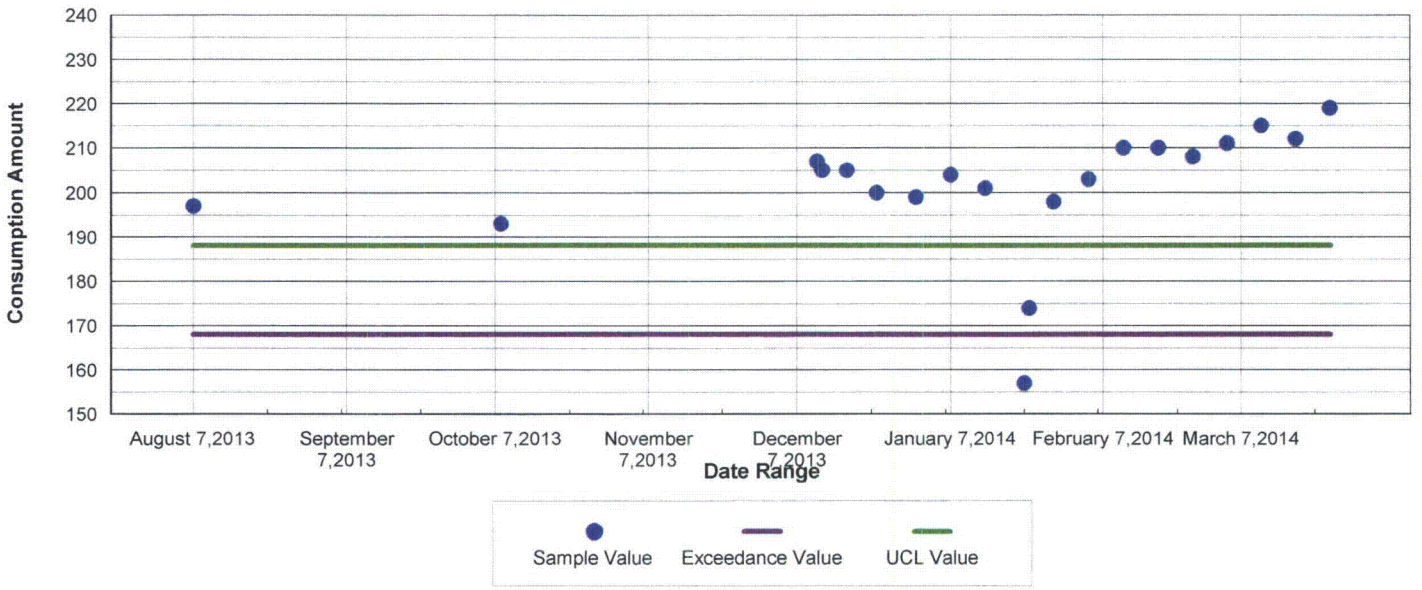
Alkalinity
Trending Analysis
Well : DM-004



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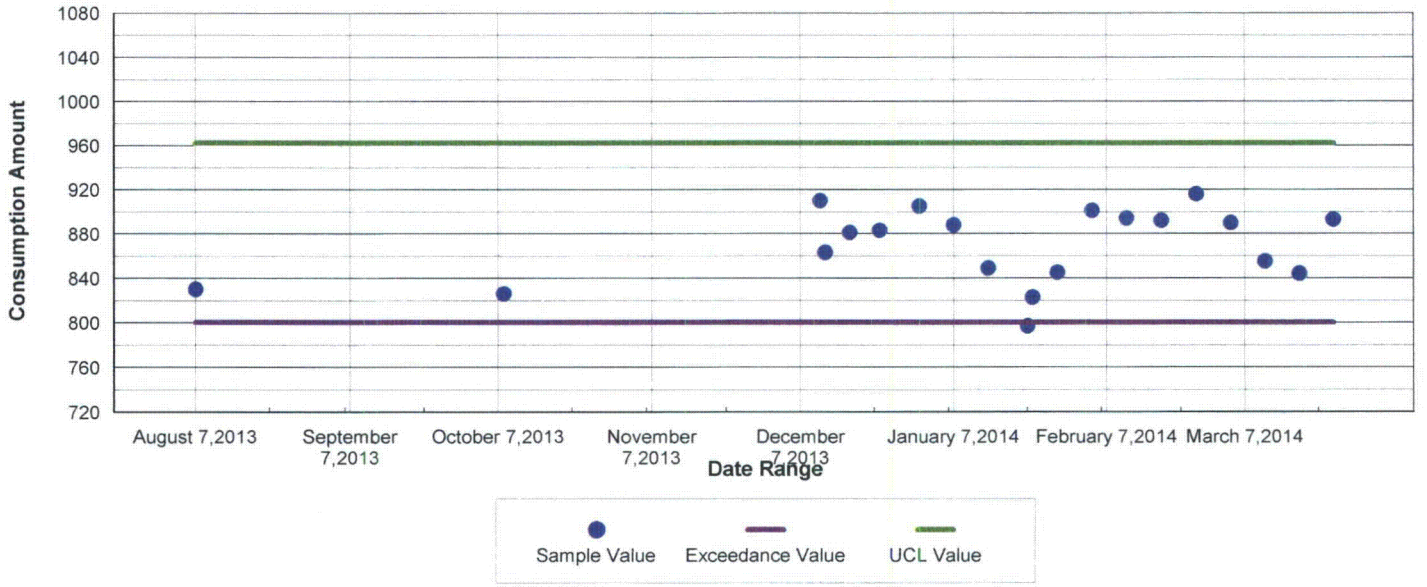
Conductivity Trending Analysis

Well : DM-004



Report Generation Date : April 02, 2014

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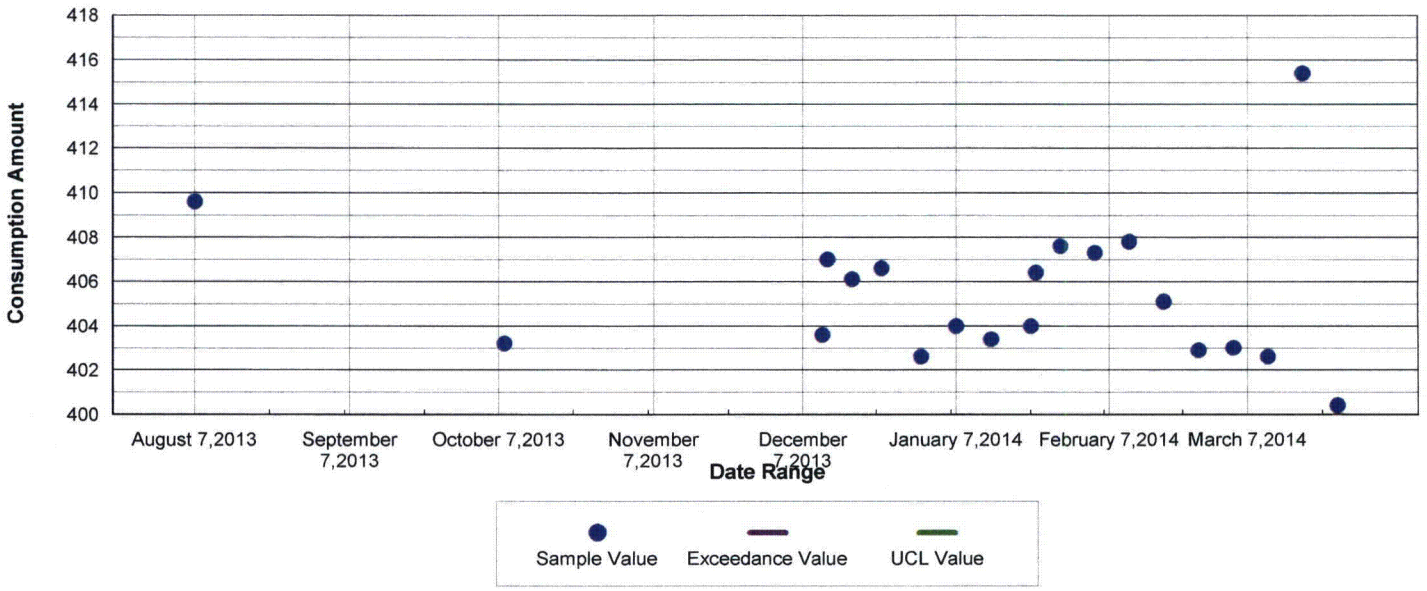
Water Level Trending Analysis

Well : DM-004



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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: DM-004

	Chloride (mg/L)	Alkalinity (mg/L $CaCO_3$)	Conductivity (µMhos/cm)	U_3O_8 (mg/L)	Water Elevation	Comment
NRC/WDEQ UCL	18	188	962			
03/25/2014	24	219	893	0	5092.4	
03/18/2014	23	212	844	0	5077.4	
03/11/2014	24	215	855	0	5090.2	
03/04/2014	24	211	890	0	5089.8	
02/25/2014	22	208	916	0	5089.9	
02/18/2014	22	210	892	0	5087.7	
02/11/2014	22	210	894	0	5085.0	
02/04/2014	21	203	901	0	5085.5	
01/28/2014	20	198	845	0	5085.2	
01/23/2014	18	174	823	0	5086.4	
01/22/2014	14	157	797		5088.8	
01/14/2014	21	201	849	0	5089.4	
01/07/2014	21	204	888	0	5088.8	
12/31/2013	22	199	905	0	5090.2	
12/23/2013	21	200	883	0	5086.2	
12/17/2013	22	205	881	0	5086.7	
12/12/2013	23	205	863	0	5085.8	
12/11/2013	25	207	910		5089.2	
10/08/2013	15	193	826		5089.6	
08/07/2013	15	197	830		5083.2	
06/05/2013	17	195	838		5087.6	
04/08/2013	18	206	888		5060.0	

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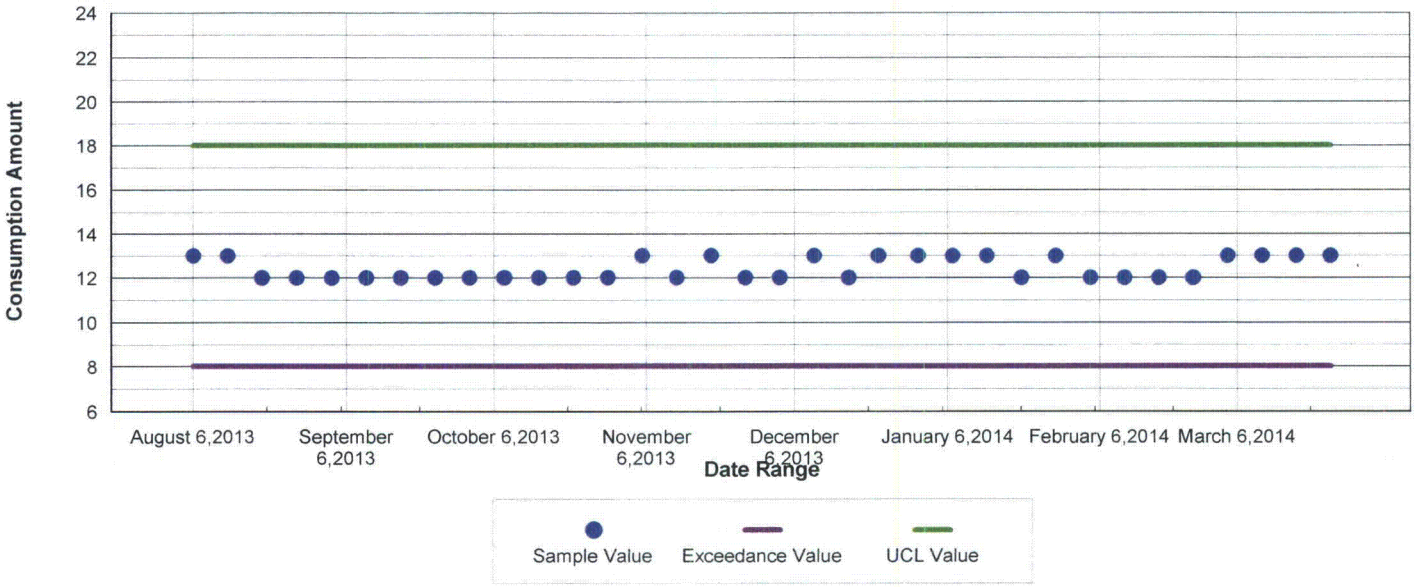
Chloride
Trending Analysis
Well : KMO-007



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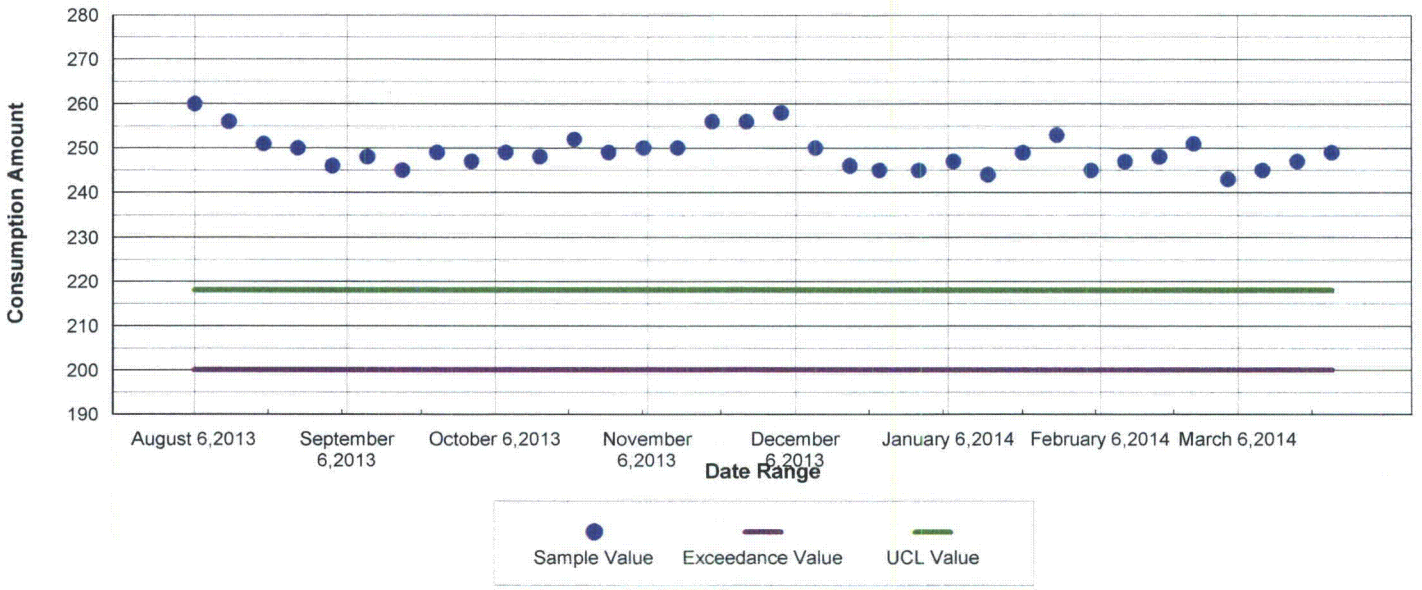
Alkalinity
Trending Analysis
Well : KMO-007



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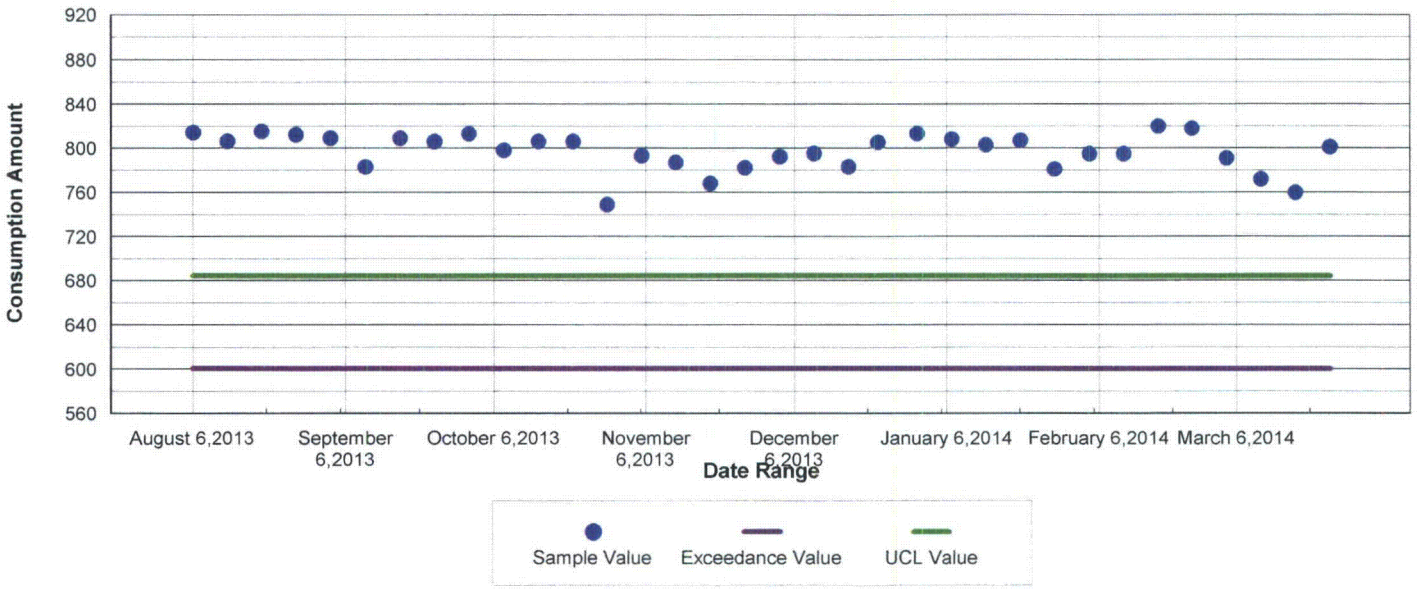
Smith Ranch - Highland

Conductivity Trending Analysis

Well : KMO-007



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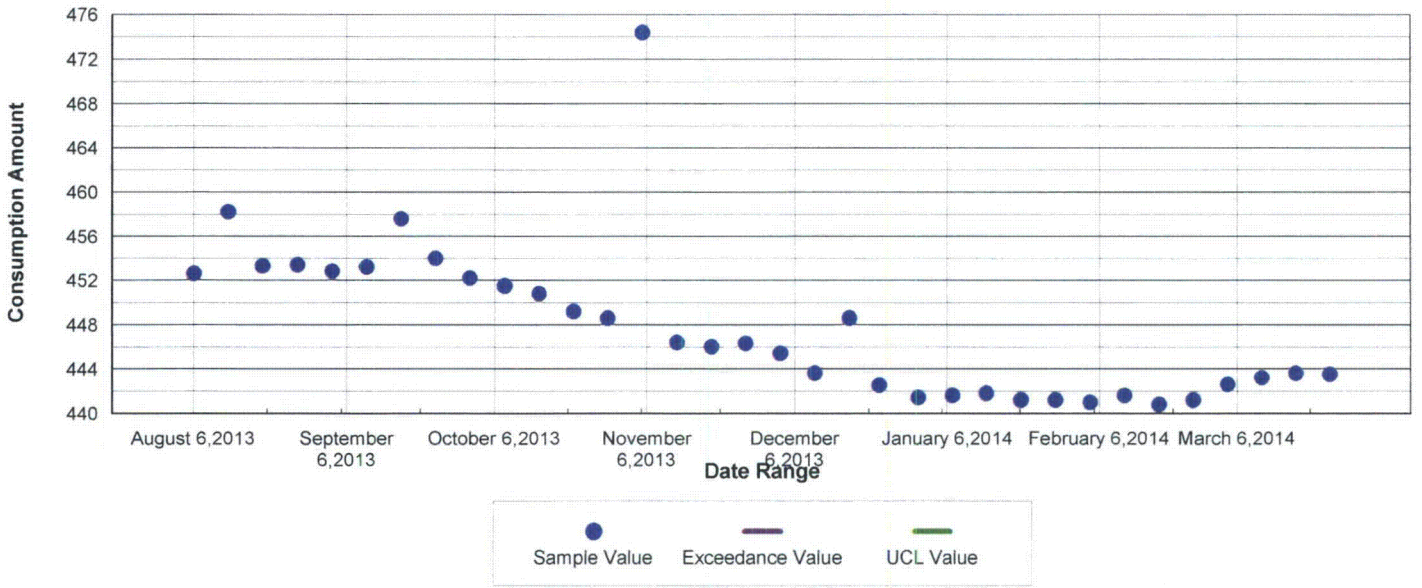
Smith Ranch - Highland

Water Level
Trending Analysis
Well : KMO-007



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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: KMO-007

	Chloride (mg/L)	*Alkalinity (mg/L $CaCO_3$)*	*Conductivity (µMhos/cm)*	*U_3O_8 (mg/L)*	*Water Elevation*	*Comment*
NRC/WDEQ UCL	18	218	684			
03/25/2014	13	249	801	0	5217.3	
03/18/2014	13	247	760	0	5217.2	
03/11/2014	13	245	772	0	5217.6	
03/04/2014	13	243	791	0	5218.2	
02/25/2014	12	251	818	0	5219.6	
02/18/2014	12	248	820	0	5220.0	
02/11/2014	12	247	795	0	5219.2	
02/04/2014	12	245	795	0	5219.8	
01/28/2014	13	253	781	0	5219.6	
01/21/2014	12	249	807	0	5219.6	
01/14/2014	13	244	803	0	5219.0	
01/07/2014	13	247	808	0	5219.2	
12/31/2013	13	245	813	0	5219.4	
12/23/2013	13	245	805	0	5218.3	
12/17/2013	12	246	783	0	5212.2	
12/10/2013	13	250	795	0	5217.2	
12/03/2013	12	258	792	0	5215.4	
11/26/2013	12	256	782	0	5214.5	
11/19/2013	13	256	768	0	5214.8	
11/12/2013	12	250	787	0	5214.4	
11/05/2013	13	250	793	0	5186.4	
10/29/2013	12	249	749	0	5212.2	
10/22/2013	12	252	806	0	5211.6	

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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: KMO-007

	Chloride (mg/L)	*Alkalinity (mg/L $CaCO_3$)*	*Conductivity (µMhos/cm)*	*U_3O_8 (mg/L)*	*Water Elevation*	*Comment*
NRC/WDEQ UCL	18	218	684			
10/15/2013	12	248	806	0	5210.0	
10/08/2013	12	249	798	0	5209.3	
10/01/2013	12	247	813	0	5208.6	
09/24/2013	12	249	806	0	5206.8	
09/17/2013	12	245	809	0	5203.2	
09/10/2013	12	248	783	0	5207.6	
09/03/2013	12	246	809	0	5208.0	
08/27/2013	12	250	812	0	5207.4	
08/20/2013	12	251	815	0	5207.5	
08/13/2013	13	256	806	0	5202.6	
08/06/2013	13	260	814	0	5208.2	
07/30/2013	12	256	788	0	5207.5	
07/23/2013	13	255	813	0	5207.8	
07/16/2013	12	251	819	0	5208.3	
07/09/2013	12	252	779	0	5209.0	
07/02/2013	12	249	785	0	5210.2	
06/25/2013	12	250	782	0	5209.8	
06/18/2013	12	254	804	0	5210.0	
06/11/2013	11	256	800	0	5210.6	
06/04/2013	12	248	773	0	5210.4	
05/28/2013	8	218	688	0	5213.0	
05/21/2013	8	220	692	0	5212.8	
05/14/2013	9	222	686	0	5213.6	

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Smith Ranch - Highland Operation

Monitor Well Report

Well ID: KMO-007

	Chloride (mg/L)	Alkalinity (mg/L $CaCO_3$)	Conductivity (µMhos/cm)	U_3O_8 (mg/L)	Water Elevation	Comment
NRC/WDEQ UCL	18	218	684			
05/07/2013	10	227	707	0	5212.5	
04/30/2013	9	224	688	0	5212.6	
04/23/2013	9	225	668	0	5213.2	
04/16/2013	10	223	698	0	5215.0	
04/09/2013	10	212	680	0	5213.4	
04/02/2013	10	219	688	0	5216.2	
03/26/2013	10	215	678	0	5218.0	
03/19/2013	10	224	682	0	5219.6	
03/11/2013	10	222	706		5219.9	
03/08/2013	12	229	718		5220.8	