



March 4, 2013

CERTIFIED MAIL # 7012 1640 0000 2326 9661

Mr. Robin Jones  
District 1 Supervisor  
Land Quality Division  
Wyoming Department of Environmental Quality  
122 W. 25<sup>th</sup> Street  
Cheyenne, WY 82002

**CAMECO RESOURCES**

Smith Ranch-Highland

Operation

Mail:

P.O. Box 1210

Glenrock, WY

82637 USA

Tel: (307) 358-6541

Fax: (307) 358-4533

[www.cameco.com](http://www.cameco.com)

**February 2013 Excursion Report Summary Update and Response to LQD Review of FM-009 Excursion Control Plan and Compliance Schedule  
Cameco Resources, Smith Ranch-Highland Uranium Project, Permit 603 and 633**

Dear Mr. Jones:

Power Resources, Inc. d/b/a/ Cameco Resources (Cameco) is submitting the monthly Excursion Report Summary for the Smith Ranch-Highland Uranium Project. Also attached to this submittal, as LQD requested in a letter dated February 22, 2013, is Cameco's response to LQD's review of FM-009 Excursion Control Plan and Compliance Schedule.

One (1) new excursion was reported during the month of February 2013, Monitor Well KM-031. The Cameco Excursion Report table is attached. Monitor Wells DM-003, and FM-009 remained on excursion from the previous month.

Monitor Well KM-031 went on excursion February 15, 2013 with the confirmation sample taken on February 19, 2013. Verbal notification was given to LQD on February 20, 2013 with written notification following in a letter dated February 22, 2013. In a letter dated January 24, 2013 Cameco responded to LQD's review of the excursions at this well, discussing the finding from the investigation and explaining that it is unlikely that the elevated concentrations in alkalinity and conductivity are due to an excursion. The water quality in KM-031 is consistent with that of adjacent monitor wells. In response to comment #3 of the January 24, 2013 letter, Cameco requests that the current UCL parameters for KM-031 be changed to match the UCL parameters for all other monitor wells in Mine Unit K.

Concentrations in Monitor Well DM-003 fluctuated slightly in all parameters during the month of February with no significant trend. Cameco is in the process of re-evaluating the excursion



control plan for this well and intends to discuss potential courses of action with LQD staff in a meeting scheduled for March 8, 2013.

Monitor Well FM-009 analytical results indicate very little change in the concentration and the wells trend for the month of February. Cameco has completed the investigation to better understand the circumstances of the water quality in FM-009. During the March 8, 2013 meeting Cameco intends to present finding and discuss recommendations to mitigate the situation. A formal submittal with recommendations will be provided to LQD following the meeting.

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

Please contact me at 307-358-6541, ext. 476 or [Kenneth.Garoutte@cameco.com](mailto: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  
Monitor Well Report and Trend Graphs for FM-009  
Monitor Well Report and Trend Graphs for KM-031  
Response to LQD Review of FM-009 Excursion Control Plan and Compliance Schedule

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 9654  
Document Control Desk, NRC - CERTIFIED MAIL # 7012 1640 0000 2326 9647

cc: Cameco-Cheyenne

RESPONSE TO REVIEW OF FM-009 EXCURSION  
CONTROL PLAN AND COMPLIANCE SCHEDULE  
CAMECO RESOURCES

INTRODUCTION

FM-009 went on excursion July 30, 2012 and was confirmed on August 1, 2012. The Land Quality Division (LQD) was verbally notified on August 1, 2012. Written notification was provided in a letter dated August 6, 2012 with a follow-up provided in the Monthly Excursion Report summary dated August 31, 2012. As a result of the June Inspection of Wellfield F and the subsequent excursion of FM-009, LQD has concerns. A Letter of Conference and Conciliation (LCC) dated October 11, 2012. Cameco responded to the LCC in a letter dated November 1, 2012. That letter also included a Plan and Compliance Schedule for Well FM-009. LQD provided a review of the Plan and Compliance Schedule in a letter dated February 22, 2013, with four (4) comments that needed to be addressed. LQD asked that responses to these comments be provided in the next Monthly Excursion Report. The following provides LQD comments for the February 22, 2013 review and Cameco responses.

COMMENTS

1. *The text states that the cone of depression will have a sufficient gradient to pull the excursion back into the production zone. No technical justification for this statement has been provided in the compliance plan and schedule. Please provide a technical justification for this statement (see LQD's comment to CRs response to Bullet 2 in the review of the responses to the LCC). (SI)*

**Cameco Response:** Technical justification will be presented to LQD in the March 8, 2013 meeting where Cameco intends to present findings and discuss recommendations to mitigate the situation at Monitor Well FM-009.

2. *CR infers the control process will be completed by January 31, 2013, but provides no basis for this statement. Please provide a basis for the January 31, 2013 excursion control.*

**Cameco Response:** The use of "control process" in this statement has created a misunderstanding. It was Cameco's intent to complete the investigation portion of the compliance plan and develop recommendations to be shared with LQD by January 31, 2013. The investigation into the excursion at FM-009 has been completed and Cameco intends to present findings and discuss recommendations to mitigate the situation with LQD staff during a meeting scheduled for March 8, 2013. A formal submittal with recommendations will be provided to LQD following the meeting.

*3. Groundwater levels and groundwater level changes at wells FM-008 and FM-010 and other wells if available should be compared to the water level in well FM-009 to develop a better understanding of the groundwater gradient at FM-009 and the effect of pumping well FP-170. (SI)*

**Cameco Response:** Groundwater levels in surrounding wells have been compared to groundwater levels in well FM-009. Cameco collects data from surrounding wells when evaluating an excursion. The data is used to produce potentiometric maps that better define groundwater movement resulting from excursion control efforts.

*4. The anticipated pumping rate for well FP-170 should be stated in the plan. Please include the anticipated pumping rate to the plan. (SI)*

**Cameco Response:** A revised control plan and compliance schedule will be discussed with LQD addressing the nature of FM-009 excursion on March 8, 2013.



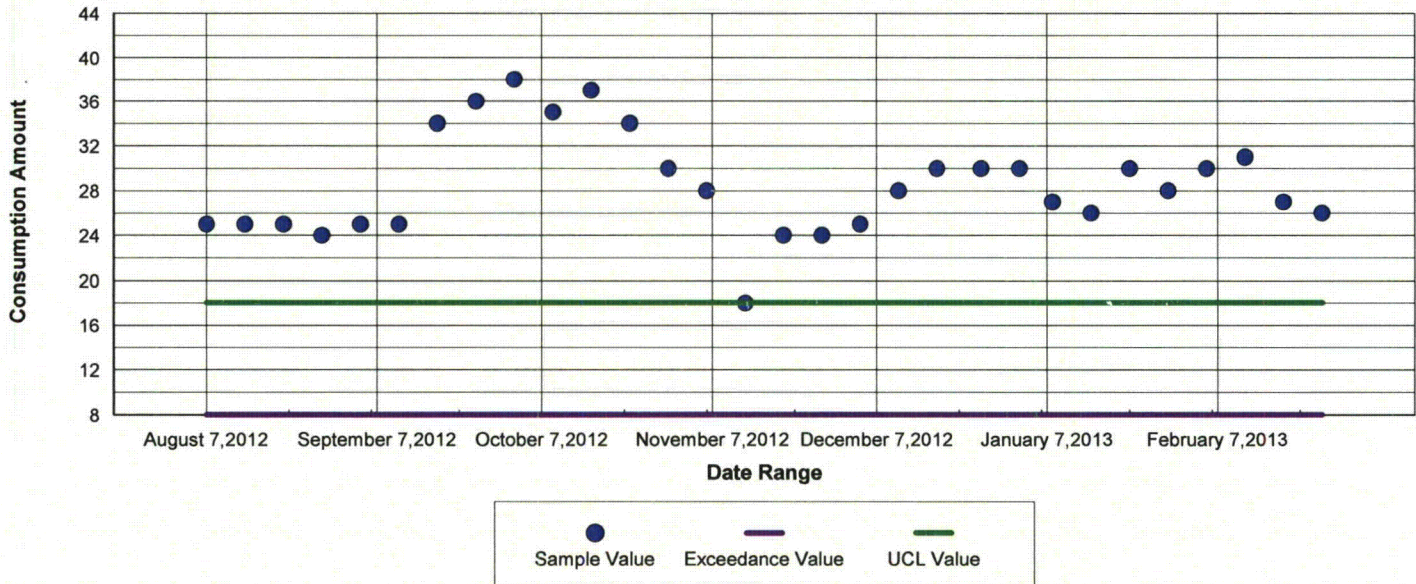
**Cameco Resources Excursion Report**  
**Permit Nos. 603 & 633**  
**(February 2013)**

<b>Well Identification</b>	<b>Initial Sample Date</b>	<b>Confirmation Sample Date</b>	<b>Excursion Status (on/off)</b>	<b>Parameters Exceeded</b>	<b>Verbal Notification Date</b>	<b>Written Notification Date</b>	<b>Excursion Resolution Date</b>	<b>LQD Concurrence Notification Date</b>
DM-003	11/19/2009	11/20/2009	ON	Chloride Alkalinity	11/23/2009	11/25/2009		
FM-009	7/30/2012	7/31/2012	ON	Chloride Alkalinity	8/1/2012	8/6/2012		
KM-031	2/15/2013	2/19/2013	ON	Alkalinity Conductivity	2/20/2013	2/22/2013		



Cameco Resources  
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# Chloride Trending Analysis Well : DM-003

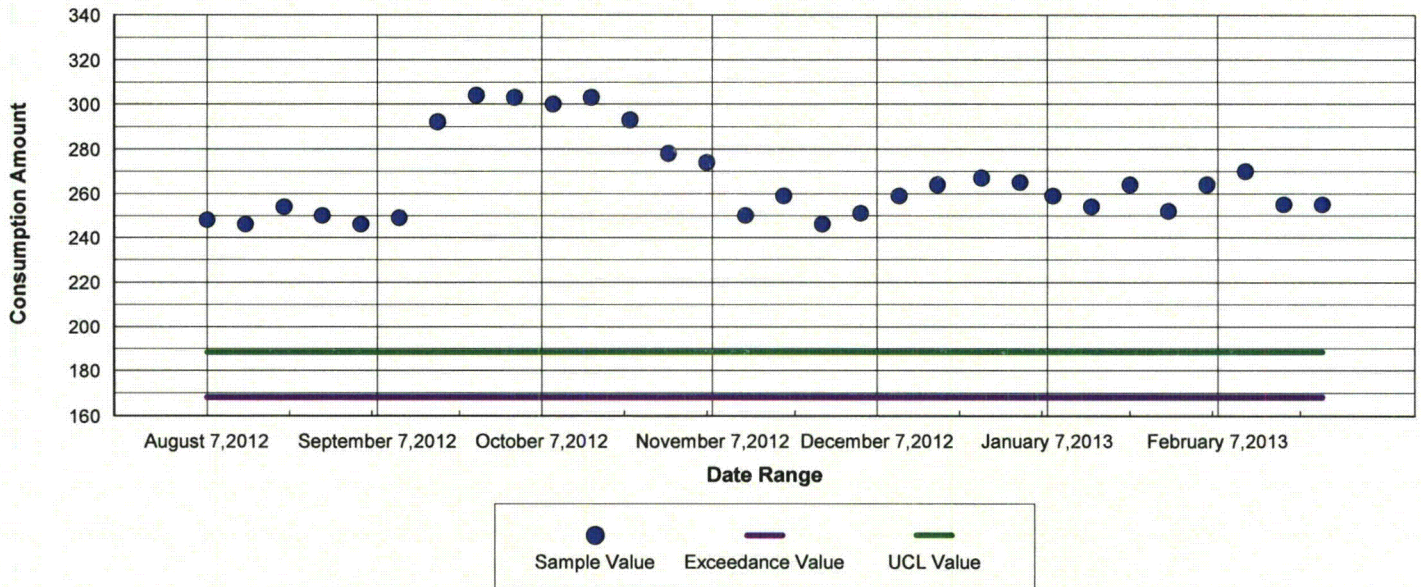






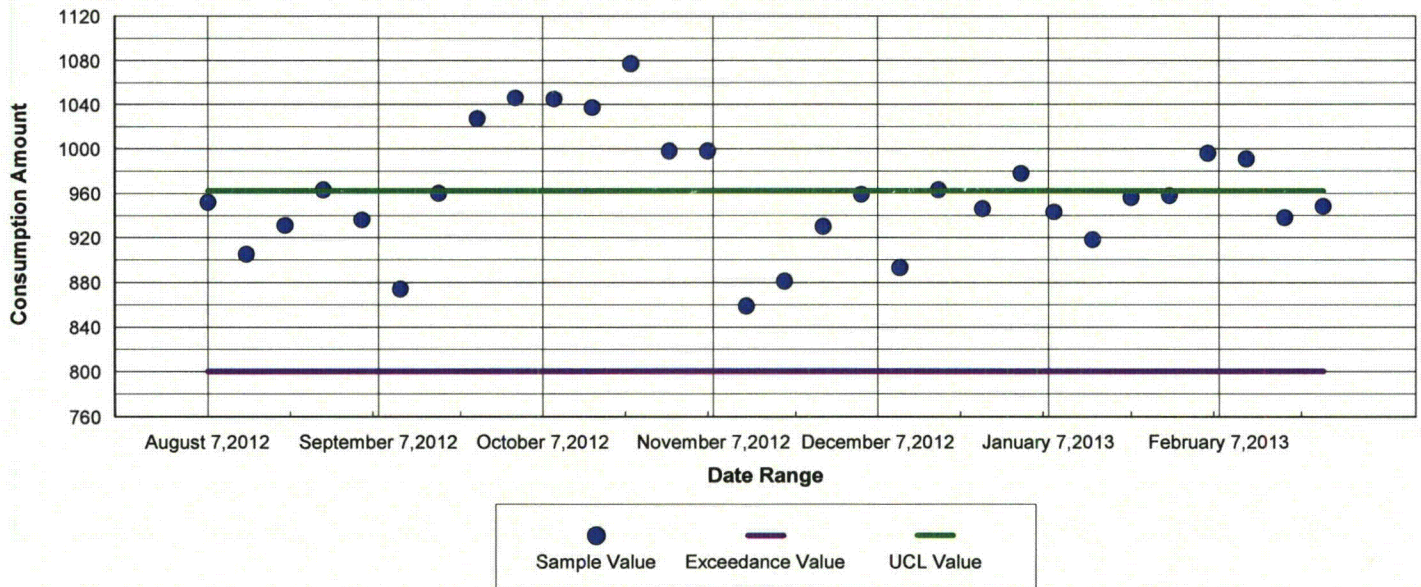
Cameco Resources  
Smith Ranch - Highland

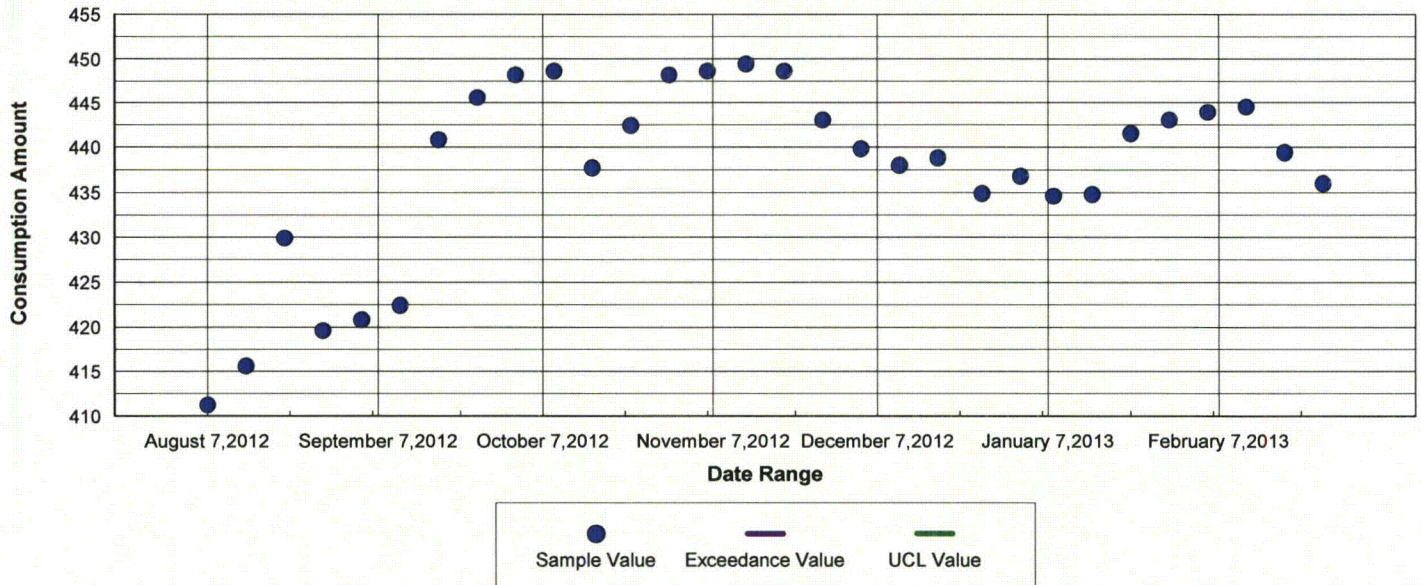
# Alkalinity Trending Analysis Well : DM-003





**Conductivity  
Trending Analysis**  
Well : DM-003









**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

Well ID: DM-003

	<i>Chloride</i> (mg/L)	<i>Alkalinity</i> (mg/L CaCO <sub>3</sub> )	<i>Conductivity</i> (μMhos/cm)	<i>U<sub>3</sub>O<sub>8</sub></i> (mg/L)	<i>Water</i> <i>Elevation</i>	<i>Comment</i>
<i>NRC/WDEQ</i> <i>UCL</i>	18	188	962			
02/26/2013	26	255	948	0	5060.4	
02/19/2013	27	255	938	0	5057.0	
02/12/2013	31	270	991	0	5051.9	
02/05/2013	30	264	996	0	5052.5	
01/29/2013	28	252	958	0	5053.4	
01/22/2013	30	264	956	0	5054.9	
01/15/2013	26	254	918	0	5061.6	
01/08/2013	27	259	943	0	5061.8	
01/02/2013	30	265	978	0	5059.6	
12/26/2012	30	267	946	0	5061.5	
12/18/2012	30	264	963	0	5057.6	
12/11/2012	28	259	893	0	5058.4	
12/04/2012	25	251	959	0	5056.6	
11/27/2012	24	246	930	0	5053.4	
11/20/2012	24	259	881	0	5047.8	
11/13/2012	18	250	859	0	5047.0	
11/06/2012	28	274	998	0	5047.8	
10/30/2012	30	278	998	0	5048.2	
10/23/2012	34	293	1077	0	5054.0	
10/16/2012	37	303	1037	0	5058.7	
10/09/2012	35	300	1045	0	5047.8	
10/02/2012	38	303	1046	0	5048.2	
09/25/2012	36	304	1027	0	5050.8	

02/27/2013





**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

Well ID: DM-003

<b>NRC/WDEQ UCL</b>	<b>Chloride (mg/L)</b>	<b>Alkalinity (mg/L CaCO<sub>3</sub>)</b>	<b>Conductivity (μMhos/cm)</b>	<b>U<sub>3</sub>O<sub>8</sub> (mg/L)</b>	<b>Water Elevation</b>	<b>Comment</b>
	18	188	962			
09/18/2012	34	292	960	0	5055.6	
09/11/2012	25	249	874	0	5074.0	
09/04/2012	25	246	936	0	5075.6	
08/28/2012	24	250	963	0	5076.8	
08/21/2012	25	254	931	0	5066.5	
08/14/2012	25	246	905	0	5080.8	
08/07/2012	25	248	952	0	5085.2	
07/31/2012	24	241	901	0	5085.6	
07/24/2012	24	243	894	0	5078.9	
07/17/2012	24	242	911	0	5080.1	
07/10/2012	24	244	966	0	5079.6	
07/03/2012	25	250	928	0	5078.4	
06/26/2012	25	256	924	0	5072.4	
06/19/2012	26	256	956	0	5069.0	
06/12/2012	26	248	894	0	5076.4	
06/05/2012	25	247	894	0	5076.4	
05/29/2012	26	255	921	0	5077.6	
05/22/2012	26	243	942	0	5079.2	
05/15/2012	23	233	909	0	5074.3	
05/08/2012	25	252	911	0	5080.2	
05/01/2012	25	252	966	0	5080.4	
04/24/2012	25	255	971	0	5080.2	
04/17/2012	24	249	980	0	5078.8	

02/27/2013





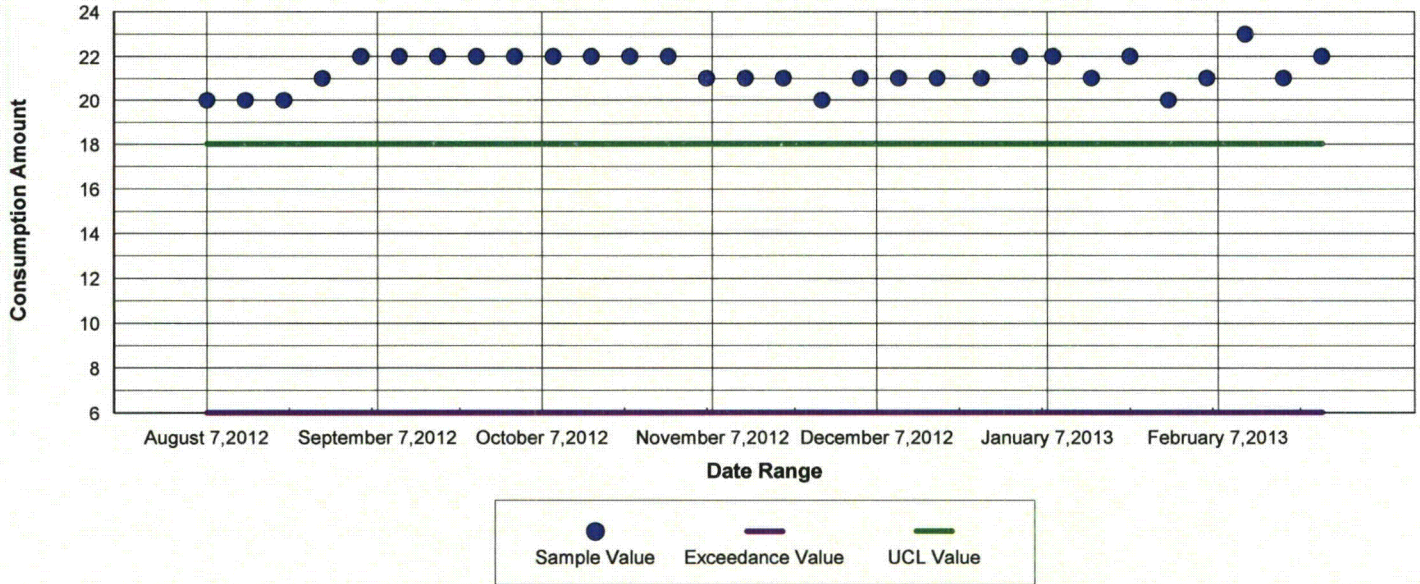
**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

**Well ID: DM-003**

<b>NRC/WDEQ UCL</b>	<b>Chloride (mg/L)</b>	<b>Alkalinity (mg/L CaCO<sub>3</sub>)</b>	<b>Conductivity (μMhos/cm)</b>	<b>U<sub>3</sub>O<sub>8</sub> (mg/L)</b>	<b>Water Elevation</b>	<b>Comment</b>
	18	188	962			
04/10/2012	24	253	943	0	5078.6	
04/03/2012	24	251	943	0	5079.6	
03/27/2012	23	243	943	0	5081.4	
03/20/2012	22	240	927	0	5081.4	
03/13/2012	23	242	919	0	5087.2	
03/06/2012	24	246	929	0	5091.5	
02/28/2012	24	246	931	0	5093.4	
02/21/2012	23	242	961	0	5091.8	
02/14/2012	24	247	903	0	5094.3	
02/07/2012	23	240	890	0	5094.1	
01/31/2012	23	239	921	0	5095.8	
01/24/2012	23	242	921	0	5095.8	
01/17/2012	23	235	954	0	5094.0	
01/10/2012	22	237	942	0	5091.3	
01/03/2012	22	235	893	0	5091.6	

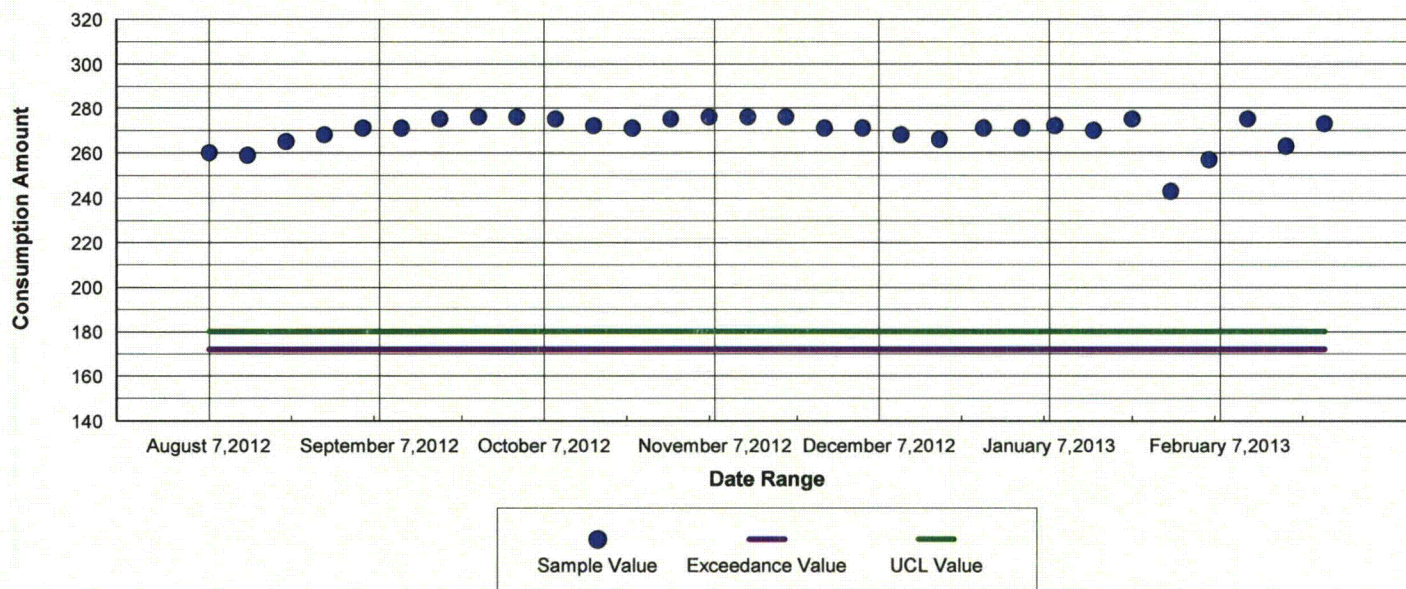
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**Chloride**  
**Trending Analysis**  
 Well : FM-009

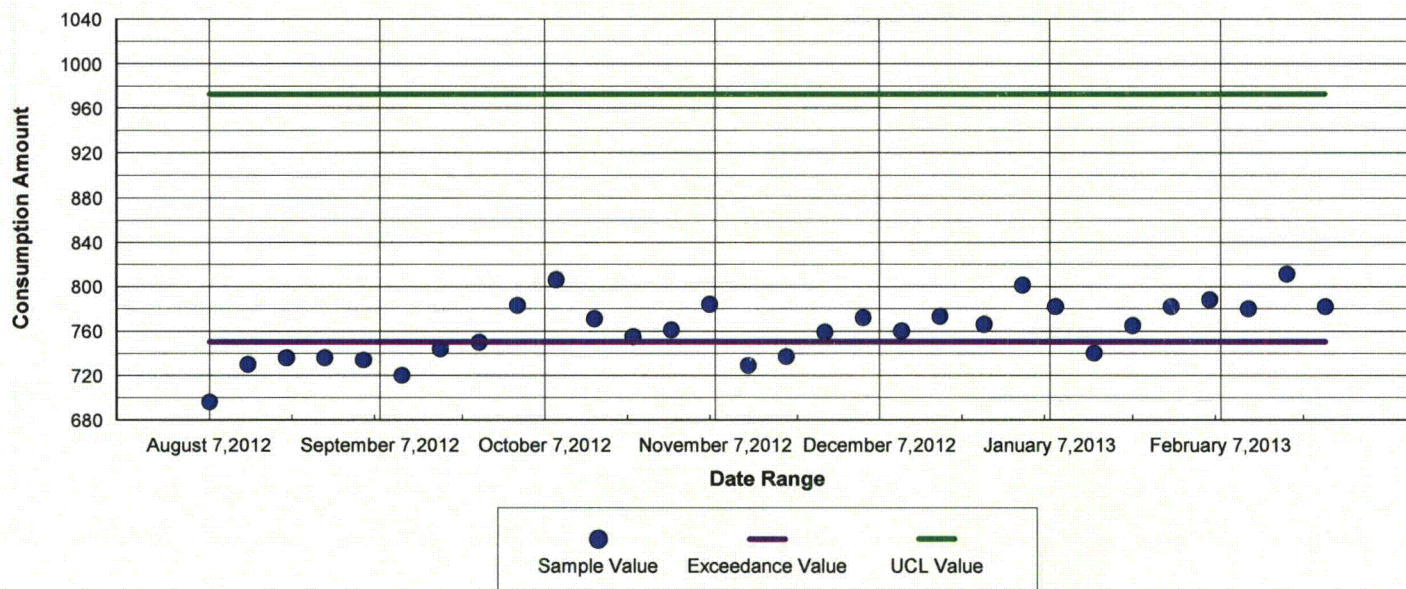




**Alkalinity**  
**Trending Analysis**  
Well : FM-009



**Conductivity  
 Trending Analysis**  
 Well : FM-009



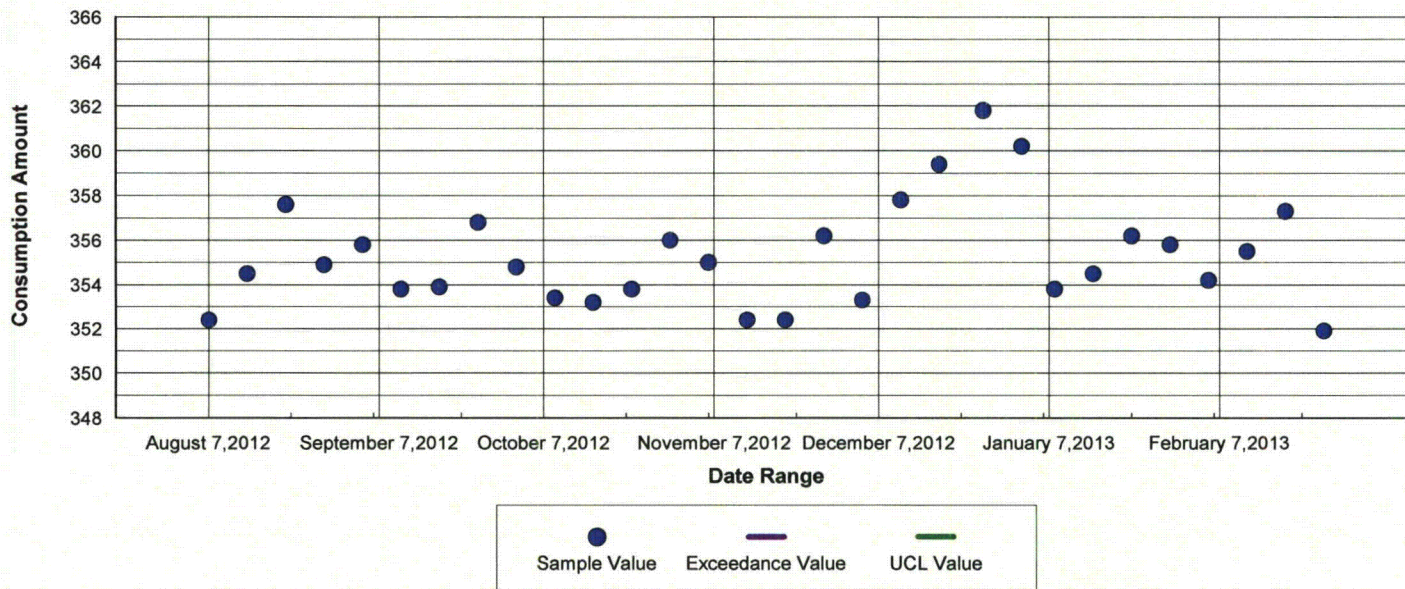




Cameco Resources  
Smith Ranch - Highland

## Water Level Trending Analysis

Well : FM-009







**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

Well ID: FM-009

<i>NRC/WDEQ UCL</i>	<i>Chloride (mg/L)</i>	<i>Alkalinity (mg/L CaCO<sub>3</sub>)</i>	<i>Conductivity (μMhos/cm)</i>	<i>U<sub>3</sub>O<sub>8</sub> (mg/L)</i>	<i>Water Elevation</i>	<i>Comment</i>
	18	180	972			
02/26/2013	22	273	782	0	5136.1	
02/19/2013	21	263	811	0	5130.7	
02/12/2013	23	275	780	0	5132.5	
02/05/2013	21	257	788	0	5133.8	
01/29/2013	20	243	782	0	5132.2	
01/22/2013	22	275	765	0	5131.8	
01/15/2013	21	270	740	0	5133.5	
01/08/2013	22	272	782	0	5134.2	
01/02/2013	22	271	801	0	5127.8	
12/26/2012	21	271	766	0	5126.2	
12/18/2012	21	266	773	0	5128.6	
12/11/2012	21	268	760	0	5130.2	
12/04/2012	21	271	772	0	5134.7	
11/27/2012	20	271	759	0	5131.8	
11/20/2012	21	276	737	0	5135.6	
11/13/2012	21	276	729	0	5135.6	
11/06/2012	21	276	784	0	5133.0	
10/30/2012	22	275	761	0	5132.0	
10/23/2012	22	271	755	0	5134.2	
10/16/2012	22	272	771	0	5134.8	
10/09/2012	22	275	806	0	5134.6	
10/02/2012	22	276	783	0	5133.2	
09/25/2012	22	276	750	0	5131.2	

**02/27/2013**





## Cameco Resources

### Smith Ranch - Highland Operation

#### Monitor Well Report

Well ID: FM-009

<i>NRC/WDEQ UCL</i>	<i>Chloride (mg/L)</i>	<i>Alkalinity (mg/L CaCO<sub>3</sub>)</i>	<i>Conductivity (μMhos/cm)</i>	<i>U<sub>3</sub>O<sub>8</sub> (mg/L)</i>	<i>Water Elevation</i>	<i>Comment</i>
	18	180	972			
09/18/2012	22	275	744	0	5134.1	
09/11/2012	22	271	720	0	5134.2	
09/04/2012	22	271	734	0	5132.2	
08/28/2012	21	268	736	0	5133.1	
08/21/2012	20	265	736	0	5130.4	
08/14/2012	20	259	730	0	5133.5	
08/07/2012	20	260	696	0	5135.6	
07/31/2012	19	255	670		5135.0	
07/30/2012	19	251	674		5135.2	
07/16/2012	17	243	661		5137.0	
07/02/2012	16	251	663		5135.6	
06/20/2012	15	242	633		5135.6	
06/05/2012	14	229	618		5138.3	
05/22/2012	14	233	583		5141.2	
05/09/2012	14	236	610		5138.6	
04/26/2012	14	237	628		5138.4	
04/13/2012	14	237	595		5135.6	
03/29/2012	14	239	623		5136.6	
03/15/2012	15	238	593		5138.6	
02/29/2012	14	234	620		5140.5	
02/16/2012	14	232	584		5138.5	
02/03/2012	13	230	614		5142.2	
01/23/2012	13	229	591		5141.8	

02/27/2013





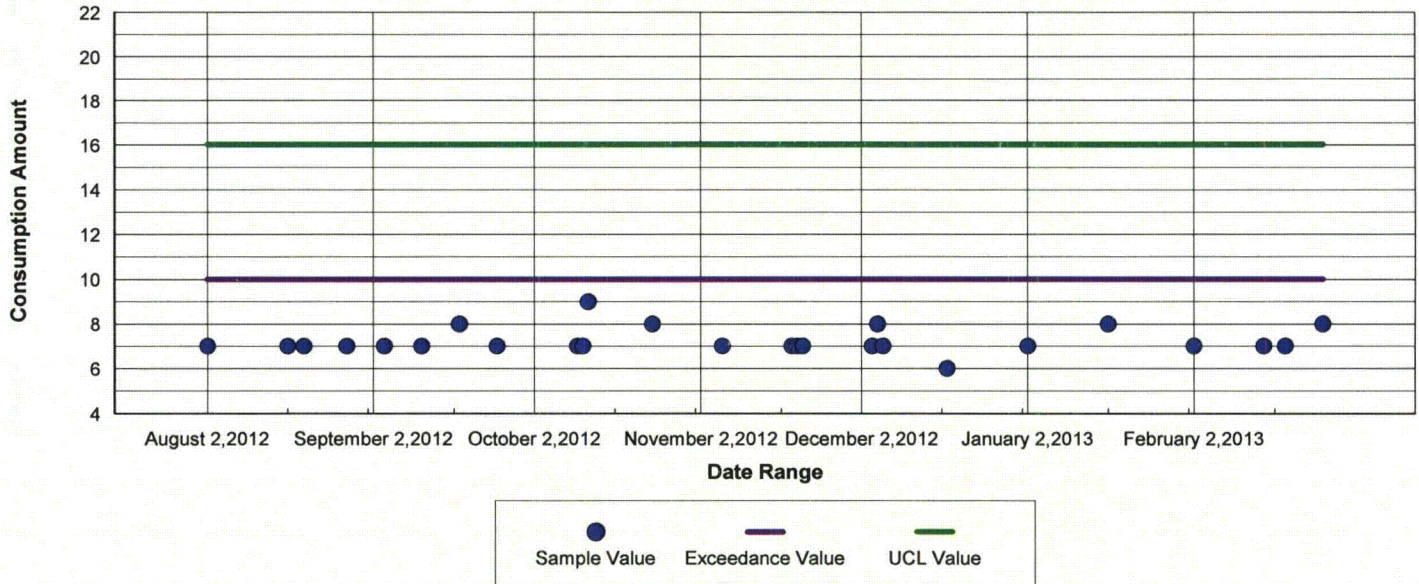
***Cameco Resources***  
***Smith Ranch - Highland Operation***  
***Monitor Well Report***

***Well ID: FM-009***

<b><i>NRC/WDEQ UCL</i></b>	<b><i>Chloride (mg/L)</i></b>	<b><i>Alkalinity (mg/L CaCO<sub>3</sub>)</i></b>	<b><i>Conductivity (μMhos/cm)</i></b>	<b><i>U<sub>3</sub>O<sub>8</sub> (mg/L)</i></b>	<b><i>Water Elevation</i></b>	<b><i>Comment</i></b>
	18	180	972			
01/10/2012	12	224	596		5141.3	

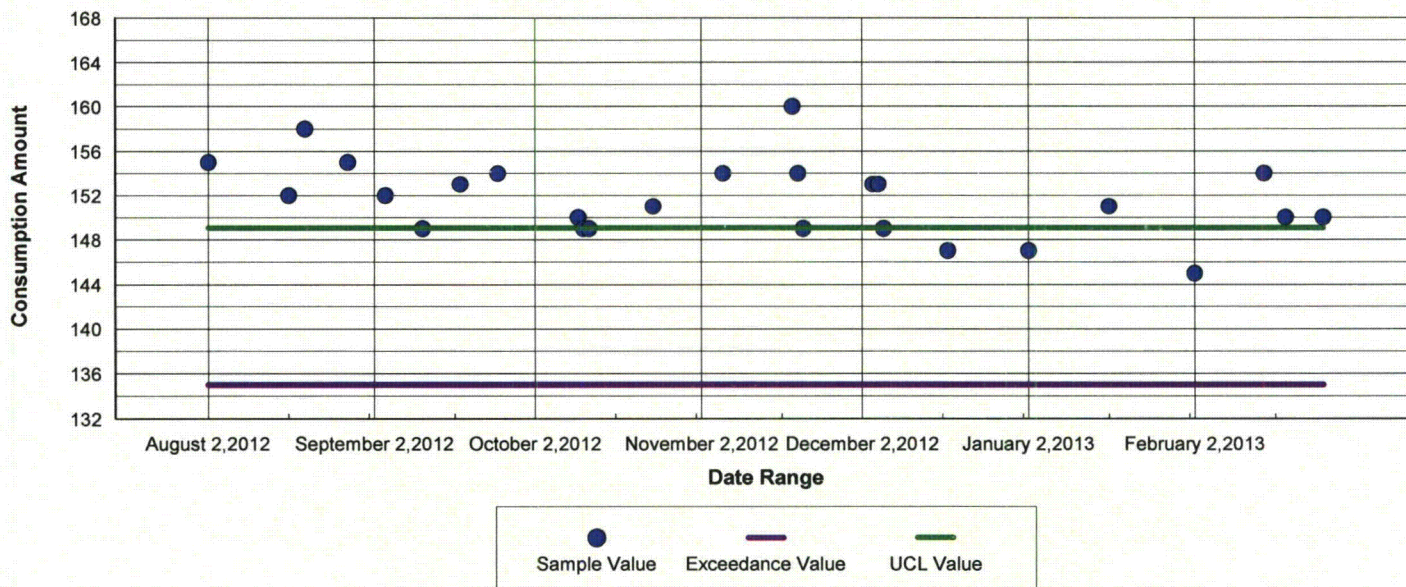
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**Chloride**  
**Trending Analysis**  
Well : KM-031





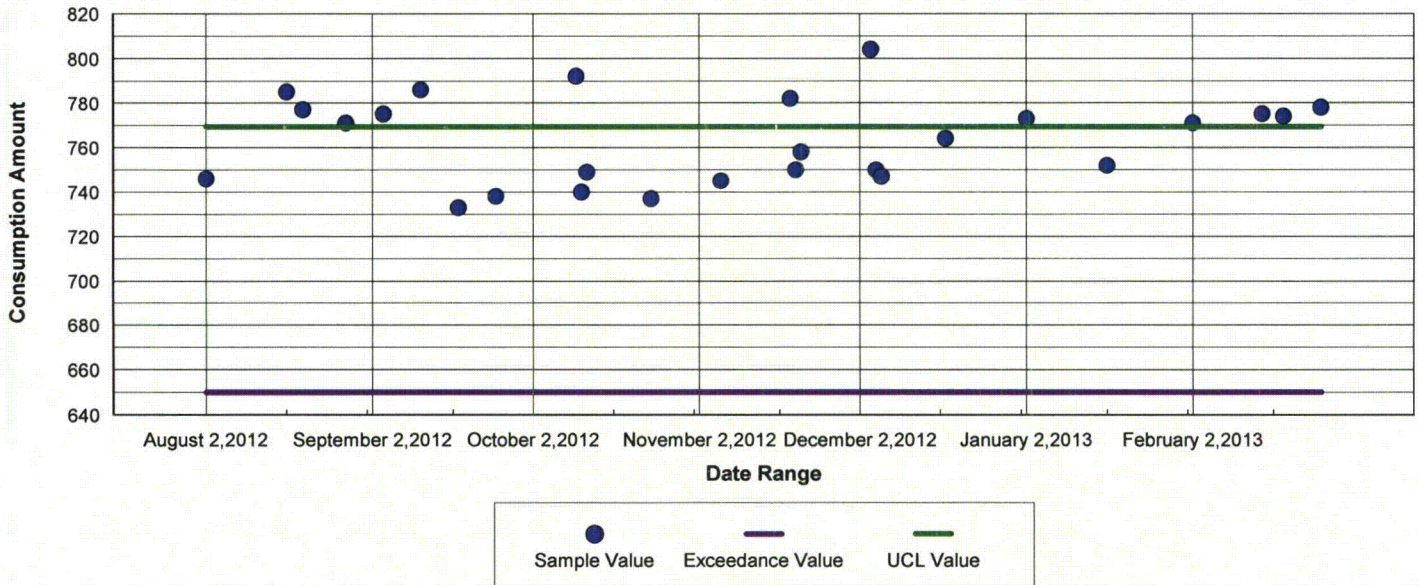
**Alkalinity**  
**Trending Analysis**  
 Well : KM-031





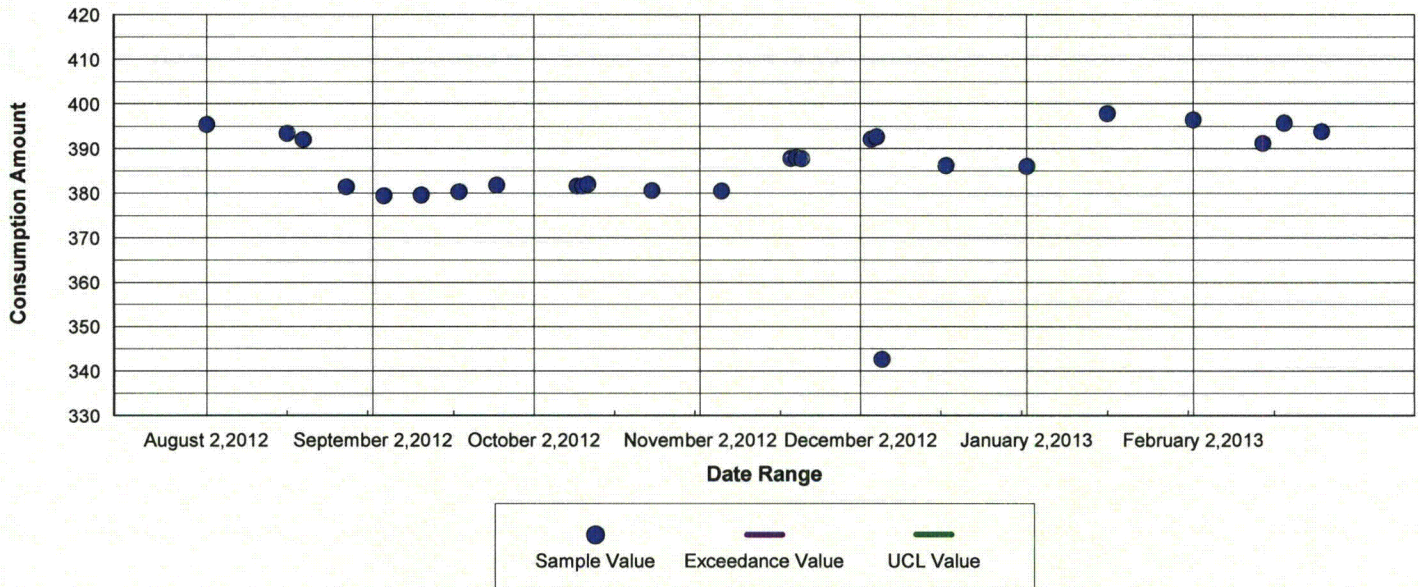
Cameco Resources  
Smith Ranch - Highland

## Conductivity Trending Analysis Well : KM-031





**Water Level  
Trending Analysis**  
Well : KM-031





**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

Well ID: KM-031

<i>NRC/WDEQ UCL</i>	<i>Chloride (mg/L)</i>	<i>Alkalinity (mg/L CaCO<sub>3</sub>)</i>	<i>Conductivity (μMhos/cm)</i>	<i>U<sub>3</sub>O<sub>8</sub> (mg/L)</i>	<i>Water Elevation</i>	<i>Comment</i>
	16	149	769			
02/26/2013	8	150	778	0	5198.3	
02/19/2013	7	150	774		5196.4	
02/15/2013	7	154	775		5200.9	
02/02/2013	7	145	771		5195.7	
01/17/2013	8	151	752		5194.3	
01/02/2013	7	147	773		5206.1	
12/18/2012	6	147	764		5205.9	
12/06/2012	7	149	747		5249.5	
12/05/2012	8	153	750		5199.5	
12/04/2012	7	153	804		5200.0	
11/21/2012	7	149	758		5204.4	
11/20/2012	7	154	750		5204.1	
11/19/2012	7	160	782		5204.3	
11/06/2012	7	154	745		5211.6	
10/24/2012	8	151	737		5211.5	
10/12/2012	9	149	749		5210.1	
10/11/2012	7	149	740	0	5210.5	
10/10/2012	7	150	792		5210.5	
09/25/2012	7	154	738	0	5210.3	
09/18/2012	8	153	733	0	5211.8	
09/11/2012	7	149	786	0	5212.5	
09/04/2012	7	152	775	0	5212.7	
08/28/2012	7	155	771	0	5210.7	

**02/27/2013**





**Cameco Resources**  
**Smith Ranch - Highland Operation**  
**Monitor Well Report**

Well ID: KM-031

	<i>Chloride</i> <i>(mg/L)</i>	<i>Alkalinity</i> <i>(mg/L CaCO<sub>3</sub>)</i>	<i>Conductivity</i> <i>(μMhos/cm)</i>	<i>U<sub>3</sub>O<sub>8</sub></i> <i>(mg/L)</i>	<i>Water</i> <i>Elevation</i>	<i>Comment</i>
<b>NRC/WDEQ</b> <b>UCL</b>	16	149	769			
08/20/2012	7	158	777		5200.1	
08/17/2012	7	152	785		5198.7	
08/02/2012	7	155	746		5196.7	
07/17/2012	7	149	781		5194.9	
07/05/2012	7	149	782		5194.5	
07/03/2012	8	154	758	0	5191.1	
07/02/2012	7	157	795		5192.7	
06/15/2012	7	149	786		5198.7	
06/01/2012	7	148	785		5198.2	
05/17/2012	7	154	757		5195.9	
05/03/2012	7	154	749		5192.0	
04/19/2012	7	154	745		5196.3	
04/05/2012	7	148	778		5200.7	
03/16/2012	7	147	782		5200.9	
03/02/2012	7	153	756		5195.7	
02/17/2012	7	147	780		5196.3	
02/06/2012	8	152	737		5193.4	
01/26/2012	7	148	768	0	5199.4	
01/25/2012	7	151	767	0	5159.5	
01/24/2012	7	151	793		5198.5	
01/09/2012	8	153	741		5200.7	

02/27/2013