




United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of: CROW BUTTE RESOURCES, INC. (Marsland Expansion Area)	
	<b>ASLBP #:</b> 13-926-01-MLA-BD01
	<b>Docket #:</b> 04008943
	<b>Exhibit #:</b> CBR023-00-BD01
	<b>Admitted:</b> 10/30/2018
	<b>Rejected:</b>
	<b>Other:</b>
	<b>Identified:</b> 10/30/2018 <b>Withdrawn:</b> <b>Stricken:</b>

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CROW BUTTE RESOURCES, INC.

(Marsland Expansion Area)

Docket No. 40-8943-MLA-2

ASLBP No. 13-926-01-MLA-BD01

Hearing Exhibit

Exhibit Number:

Exhibit Title:



**WorleyParsons**

resources & energy

Infrastructure and Environment

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Mr. Lee Snowwhite  
Cameco Resources  
Crow Butte Operation  
P.O. Box 169  
Crawford, NE 69339

March 16, 2011

**Re: Changes to Marsland Pumping Test Plan**

Mr. Snowwhite:

This letter details proposed changes to the original Pumping Test Plan for the Marsland, Nebraska property. The proposed changes are twofold. First, we propose to modify the most distant well locations and drawdown target for the test. Second, we propose to abandon and replace existing pumping well CPW-1. The attached table includes revisions described in this letter.

We propose to change the most distant monitoring well locations for the test due to the unexpected high transmissivity of the Basal Chadron Sand, which results in less drawdown (but influencing a larger area) than originally anticipated. Therefore, we propose to use Monitor-6 and Monitor-7 as the most distant monitor well locations for the test, located approximately 4,790 and 5,740 feet from the pumped well location, respectively (Table 1). We propose to monitor and analyze data from wells Monitor-2 and Monitor-8 as originally planned, but these wells will no longer be part of the formal monitoring network used to estimate the radius of influence.

We propose to change our drawdown target at the most distant monitor well locations (Monitor-6 and Monitor-7) to 0.5 feet after 3-7 days of pumping, also due to the unexpected high transmissivity of the Basal Chadron Sandstone.

Finally, we propose to replace former pumping well CPW-1 due to observed problems with drawdown and recovery data associated with excessive well inefficiency that could not be rectified. Replacement well CPW-1A will be located approximately 100 feet west-southwest of former pumping well CPW-1. CPW-1 will be abandoned in place prior to the pumping test.

If you have any questions concerning these modifications, please contact me directly at 720.242.9510 ext 1.

Best Regards,  
**WorleyParsons**

Robert Lewis, PG  
Project Manager



Pumping Test Workplan (Revised 3/11/2011)  
Cameco Resources Marsland Property

TABLE 1  
WELL COMPLETION DETAILS

Well ID	Distance to Pumping Well	Easting	Northing	Section	Twp/Rng	TOC Elevation (feet amsl)	Ground Surface Elevation (feet amsl)	Total Depth (feet bgs)	Well Diameter (OD) (Inches)	Screen Slot Size (inches)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Screen Intervals (feet bgs)
Basal Chadron Pumping Well													
Marsland CPW-1A (Replacement)	0	1121465 (Est)	446180 (Est)	1	T29N/R51W	TBD	4260 (Est)	1,055	4.95	0.015	1022	1052	1022-1052
Basal Chadron Observation Wells													
Marsland Monitor-2*	8,356	1126362	439432	18	T29N/R50W	4198.40	4,190	1,027	4.95	0.020	970	1010	970-1010
Marsland Monitor-3	40	1121542	446298	1	T29N/R51W	4261.30	4,260	1,069	4.95	0.020	1016	1043	1016-1043
Marsland Monitor-4	3,824	1121292	450074	1	T29N/R51W	4332.10	4,320	1,134	4.95	0.020	1088	1110	1088-1110
Marsland Monitor-5	2,372	1119574	447583	1	T29N/R51W	4339.50	4,320	1,120	4.95	0.020	1070	1120	1070-1120
Marsland Monitor-6	4,792	1124639	442601	12	T29N/R51W	4215.00	4,220	1,050	4.95	0.020	990	1023	990-1023
Marsland Monitor-7	5,739	1120114	440700	12	T29N/R51W	4244.38	4,260	1,050	4.95	0.020	1000	1043	1000-1013, 1023-1043
Marsland Monitor-8*	7,702	1115496	451029	2	T29N/R51W	4353.70	4,460	1,180	4.95	0.020	1085	1125	1085-1125
Brule Observation Wells													
Marsland BOW-1	40	1121542	446218	1	T29N/R51W	4260.10	4,260	370	4.95	0.020	285	365	285-305, 325-365
Marsland BOW-2	3,804	1121292	450054	1	T29N/R51W	4323.40	4,320	400	4.95	0.020	339	399	339-369, 389-399
Marsland BOW-3	7,689	1115496	451009	2	T29N/R51W	4350.30	4,460	415	4.95	0.020	345	415	345-365, 385-415

Note:  
\* Wells Monitor-2 and Monitor-8 will be monitored and analyzed as described in the original Plan, but are not part of the formal monitoring network used to establish radius of influence.