

**CAMECO RESOURCES
CROW BUTTE OPERATION**



**86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169**

**(308) 665-2215
(308) 665-2341 – FAX**

July 24, 2015

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Marty Link, Acting Water Quality Division Administrator
Nebraska Department of Environmental Quality
PO Box 98922
Lincoln, Nebraska 68509-8922

Dear Ms. Link:

On July 2, 2015, during routine 5-year Mechanical Integrity Testing (MIT), well number I-5534 in Mine Unit 11, Wellhouse 60 failed the MIT criteria at the Crow Butte Resources (CBR) mine site. Isolation procedures indicated that the failure was the casing joint at the 100-foot level. Shar Sapp, of the NDEQ Chadron field office, and Ron Burrows, NRC Project Manager, were notified concerning this well on July 2, 2015.

Based upon a review of the geophysical and lithology logs for I-5534, the failed casing joint was located in a sandy zone near the base of the Brule Formation. Because I-5534 had been operated as an injection well, the opportunity existed for this casing failure to impact the Brule Aquifer. This well had been in operation since October 12, 2011.

Based upon review of the data with Dave Miesbach, of the NDEQ Lincoln office, it was requested that CBR install at least one shallow monitor well to sample the water quality in proximity to I-5534. This well (I5534a) was air drilled to a total depth of 120 feet, approximately 10 feet downstream (northwest) of the failed well. NDEQ field personnel and the CBR lab independently measured conductivities ranging from 379 to 420 μ ohms. This range of conductivity is consistent with the natural conductivity of the Brule Formation, and is an order of magnitude less than injection fluid.

I-5534a Water Quality (ave)	400 μ ohms
Brule Formation Water Quality (ave)	350 μ ohms
Chadron Formation Water Quality (ave)	1900 μ ohms
Mining Solution (ave)	5000 μ ohms

CROW BUTTE RESOURCES, INC.



The results of the water samples were discussed with Dave Miesbach of NDEQ, and he was of the opinion that no contamination had occurred and that the test well could be plugged and abandoned. Abandonment of test hole 5534a was completed on July 21, 2015.

On July 20, 2015, a 10-foot long sleeve consisting of 3-inch schedule 40 PVC pipe with rubber K-packer assemblies on both ends was installed into I-5534 with the top of the sleeve at 95 feet. The well was successfully mechanically integrity tested on July 21, 2015. Attached is a copy of the MIT.

If you have any questions or concerns on this matter, please do not hesitate to call me at 308-665-2215 ext. 114.

Sincerely,

Larry Teahon
SHEQ Manager

Enclosure

cc: Ron Burrows - NRC
CBO - File

cc: Shar Sapp - NDEQ
CR - Casper



Nebraska Department of Environmental Quality

Casing Integrity Test Report

Company: Crow Butte Permit No: NE0122611
Project: Crow Butte Well No: 5534
Casing Type: Certa-Lok Diameter: 4.5 in.
Hole Depth: 690 ft. Casing Depth: 679 ft.
Screened Interval 1 Top: 612 ft. Screened Interval 2 Top: ft.
Screened Interval 1 Bottom: 641 ft. Screened Interval 2 Bottom: ft.
Screened Interval 3 Top: ft. Screened Interval 4 Top: ft.
Screened Interval 3 Bottom: ft. Screened Interval 4 Bottom: ft.
Depth to K-Packer: 601 ft. Depth to Test Packer(s) Top: Ground Level ft.
Bottom: 593 ft.

Comments:

5yr Retest
Sleeve

Time	Elapsed Time (Min)	Pressure (PSIG)
11:15	0	125
11:20	5	124
11:25	10	122
11:30	15	120
11:35	20	118

Well Tag ID Number: 5534

Test Performed By: Rick Dunn

Date: 7-21-15

Calibration Performed By: QD

Date: 7-21-15

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on inquiry of those individuals immediately responsible for obtaining information, I believe that the information is true, accurate, and complete. Further, I certify awareness that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

By Steven Boeselager
PRINTED NAME OF PERSON SIGNING

By *Steven Boeselager*
SIGNATURE

Restoration Supervisor

TITLE

7-23-15

DATE