



23 September 2008

Mr. Lowell Spackman, District 1 Supervisor  
Land Quality Division  
Wyoming Department of Environmental Quality  
Herschler Building  
122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

**CAMECO RESOURCES**  
**Smith Ranch-Highland**  
**Operation**

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RE: Permit to Mine No. 633; Release of Solutions Report

Dear Mr. Spackman:

As reported to Ms. Pam Rothwell of Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD), Land Quality Division, and Mr. Doug Mandeville, NRC Project Manager, via e-mail 18 September 2008, Power Resources, Inc. dba Cameco Resources had a release of injection water at the Smith Ranch-Highland Uranium Project in Converse County, Wyoming. Approximately 3,932 gallons were released from Booster House #3 in Wellfield K.

An additional 12,842 gallons of solution was recovered. The leak was detected at approximately 1:30 am on 17 September 2008 by a Satellite Operator. The solution did not threaten nor enter the waters of the State. A fluid sample was recovered. Soil samples are being collected at representative areas at 0-6" and 6-12" for analysis, and a gamma survey will be performed across the spill area. The fluid is not considered hazardous material under RCRA and is not reportable under SARA.

The apparent cause of the leak was an overheated booster pump (#P504A) that melted a small hole in the polyethylene (HDPE) can which encases the pump. Constant circulation of water is necessary to keep the pumps from overheating. The pump problem/failure was investigated in relation to the 17 July 2008 spill at Booster House #5. Results showed a hydraulic stall was occurring preventing fluid from moving through the pump. Power Resources was in the process of implementing corrective actions at all booster houses. These include setting booster pump drives to operate above a specific frequency and to alarm if it falls below that frequency. At the time of this 17 September 2008 spill, the correction was scheduled for implementation prior to 26 September 2008, but had not yet been completed in Booster House #3.

Power Resource's Spill Committee meets monthly and after each spill to discuss preventive measures to minimize the potential of releases from Smith Ranch-Highland Operations, and to assess and make recommendations to potentially mitigate re-occurrences. The Spill Committee met to discuss the spill investigation and corrective actions.

In accordance with Chapter IV, Section 4(a)(iv) of the Water Quality Division Rules and Regulations, attached is a report describing the release and the steps taken to prevent a recurrence of this nature. A field map is also included in this package.

Please call if me at (307) 358-6541 ext. 46 if you have any questions.

Sincerely,



John McCarthy  
Manager-Environment, Health and Safety, RSO

Cc: Doug Mandeville – NRC Project Manager    T. Cannon    M. Bryson  
File HUP 4.3.3.1    File SR 4.6.4.2    File SR 4.6.4.4    S. Bakken  
B. Johnson    S. Miller    Joe Hunter – Water Quality Division

**Attachment**

**Power Resources, Inc  
Smith Ranch-Highland Uranium Project  
URANIUM IN SITU FLUID RELEASE REPORT**

**Production Fluids**

**A. DESCRIPTION OF THE EVENT AND MITIGATIVE ACTIONS TAKEN**

On 17 September 2008 at approximately 1:30 am, a Satellite Operator reported a release of production fluid at a Booster House #3 northeast of Wellfield K (see attached map). Upon discovery of the leak, the wellfield was immediately shut down to control further loss of solution.

An estimated 3,932 gallons of production fluid was released from the booster pump station with 12,842 gallons recovered. As a result, 3,932 gallons were reported as released to the environment. The released fluid did not threaten nor enter waters of the state.

A fluid sample was collected. Soil samples are being collected from the affected surface at 0-6" and 6-12" intervals, and a gamma survey will be performed across the spill area.

The release occurred adjacent to and northeast of Wellfield K and affected approximately 0.4 acre.

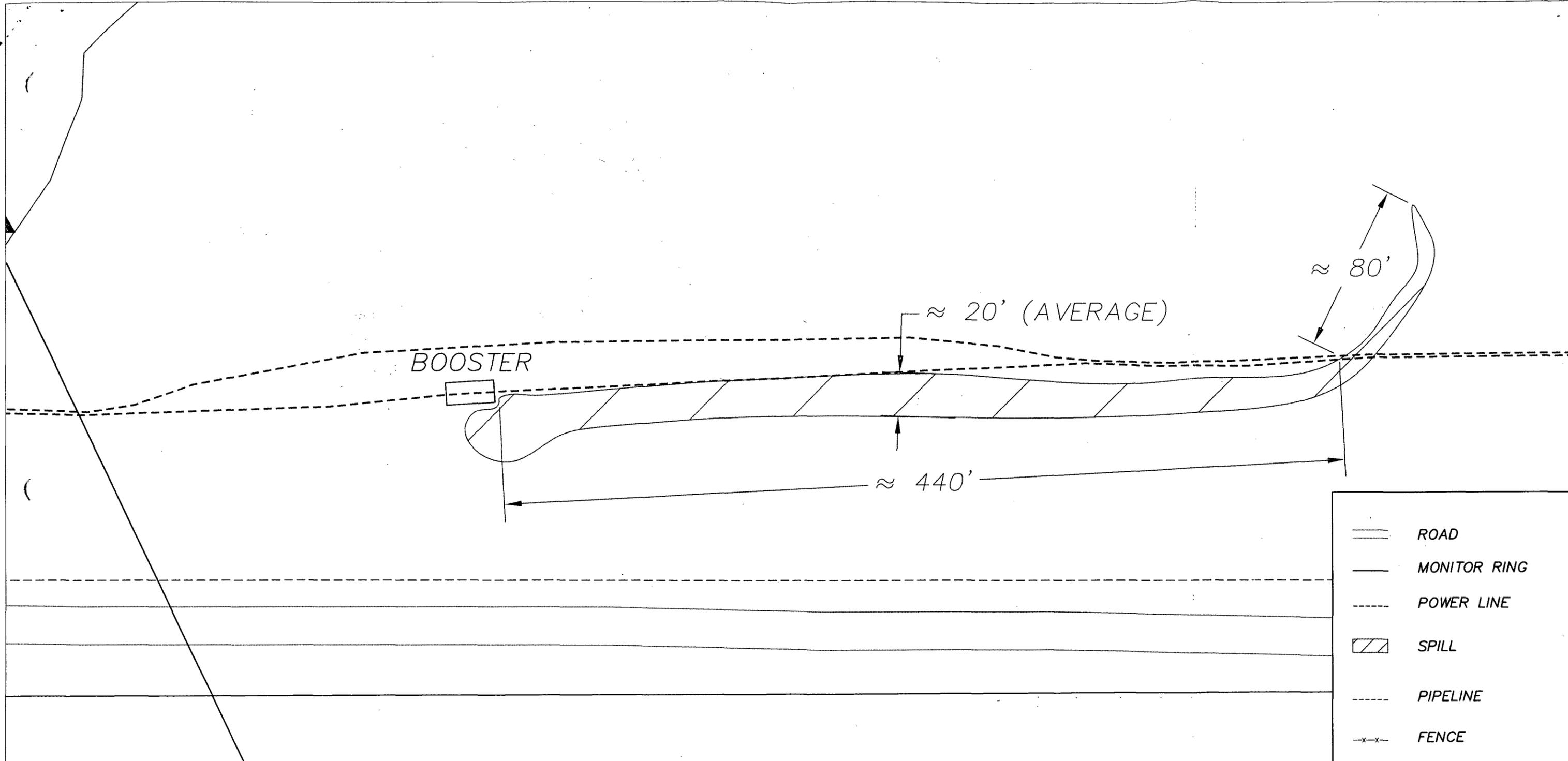
**B. CAUSE OF THE RELEASE AND THE STEPS TAKEN TO PREVENT RECURRENCE**

**Cause**

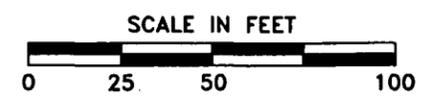
The cause of the release was a failure of a polyethylene can that encases a booster pump as a result of heat/pressure in the pump, and consequent melting of the polyethylene material of the can.

**Recurrence Prevention**

Cameco Resource's Spill Committee members met to discuss this spill. Corrective action had been determined and was in the process of being implemented at all booster houses.



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|  | ROAD         |
|  | MONITOR RING |
|  | POWER LINE   |
|  | SPILL        |
|  | PIPELINE     |
|  | FENCE        |



| REVISIONS |      |    |
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**CAMECO**

Cameco Resources  
SOUTH RANGE - HIGHLAND  
OPERATION  
P.O. Box 1210  
Clarendon, WY 82637 Telephone (307) 354-6541

**MINE UNIT K  
BOOSTER 3, PUMP A  
SPILL 9-17-2008**

FROM NO: \_\_\_\_\_ DWG NO: \_\_\_\_\_ CURRENT REV: \_\_\_\_\_

PAPER SIZE: 11X17

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