



November 5, 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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**82637 USA**

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Re: Mine Permit No. 633; Smith Ranch-Highland Uranium Project (SR-HUP):  
Release of Solutions Report pursuant to WDEQ-LQD Non-Coal R&Rs, Chapter 11,  
§12(a)(ii)(A-D), Mine Unit K Injection Trunk line to Header House K-7, 30 October  
2008

Dear Mr. Spackman:

As reported to Mr. Steve Ingle and Ms. Pam Rothwell of the Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD), and Mr. Doug Mandeville, NRC Project Manager, via e-mail and/or phone 30 October 2008, Power Resources, Inc. dba Cameco Resources (CR) had a release of injection water at the Smith Ranch-Highland Uranium Project (SR-HUP) in Converse County, Wyoming (reported per WDEQ-LQD Non-Coal R&Rs, Chapter 11, §12(a)(i) et seq). Approximately 5,500 gallons were released from the Mine Unit K injection trunk line to Header House K-7.

The leak was detected at approximately 12:23 am on Thursday, 30 October 2008, by a Satellite Operator; the duration of the spill event was estimated at approximately 40 minutes. The Operator saw a change on the graph (computer screen) at Satellite #3 after returning from the Central Plant, he reported the observation at 12:23 a.m, and immediately went to the field, found the problem, and isolated the pipeline by shutting down the trunk line.

The solution spill was contained within a topographical bowl and did not threaten or enter the waters of the State. A fluid sample of the spilled solution was collected, and sent to Energy Laboratories for analysis of uranium, radium-226, selenium, and arsenic. The preliminary analytical results from the on-site laboratory showed uranium concentration of the solution was 2.0 ppm. Soil samples were collected at representative areas at 0-2", 2-6" and 6-12" for analysis (see attached map; K7-1 through K7-3 were taken within the spill area; background samples 1 and 2 were taken outside the area of the spill) in addition samples were taken below the pipeline failure. A gamma survey was performed across the spill area at each of the soil sample sites. The sample points for soils and gamma radiation are located on the attached map, which also gives the gamma readings in microroetgens ( $\mu\text{R/hr}$ ). Readings from the spill area were between 13-24  $\mu\text{R/hr}$ ; a

background readings showed 12-14  $\mu\text{R/hr}$ . The fluid is not considered hazardous material under RCRA and is not reportable under SARA.

Cameco Resource's Spill Committee meets monthly and after each spill to discuss preventive measures to minimize the potential of releases from Smith Ranch-Highland Uranium Project, and to assess and make recommendations to potentially mitigate re-occurrences. The Spill Committee will tentatively convene on November 6, 2008 to discuss and review this spill with Committee members. Any further potential remedial actions will be based upon analysis of soil sample data when received.

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

Please call if me at (307) 358-6541 ext. 62 if you have any questions.

Sincerely,



Krista Wenzel

Manager-Environment, Health and Safety

Power Resources, Smith Ranch Highland Uranium Project

Attachments

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

**Attachment**

**Cameco 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 30 October 2008 at approximately 12:23 am, a Satellite Operator reported the identification (via computer monitoring system at Satellite Station #3) of a release of injection fluid at the Mine Unit K injection 8" trunk line to Header House K-7 (see attached map). Upon discovery of the discrepancy, the wellfield operator immediately went to the field, found the problem, and isolated the pipeline by shutting down the trunk line.

Approximately 5,500 gallons were released from the Mine Unit K injection trunk line to Header House K-7. The solution spill was contained within a topographical bowl and did not threaten or enter the waters of the State.

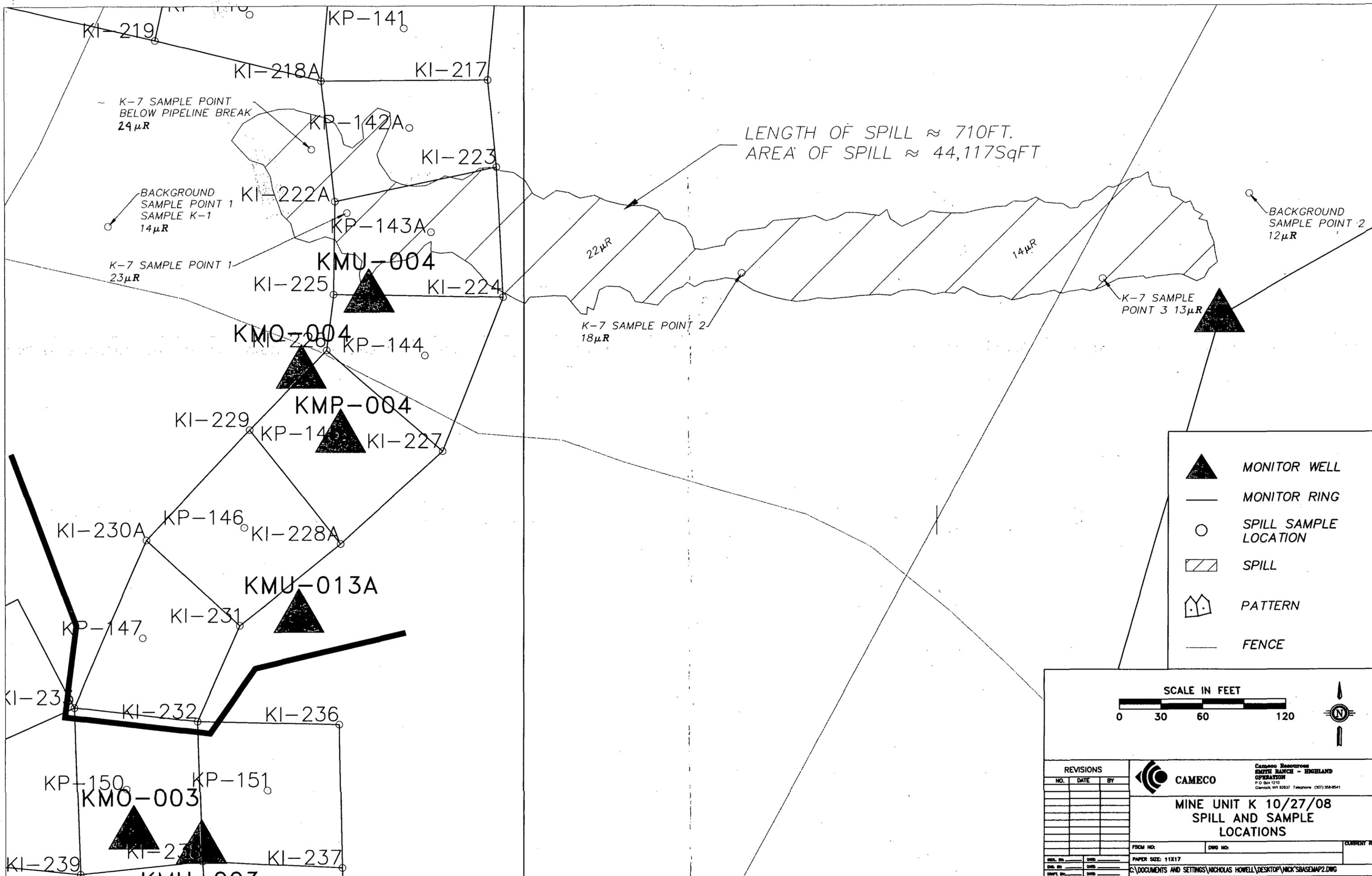
A fluid sample of the spilled solution was collected and sent to Energy Laboratories for analysis of uranium, radium 226, selenium, and arsenic. The preliminary analytical results from the on-site laboratory indicated that the uranium concentration of the solution was 2.0 ppm. Soil samples were collected from the affected surface at 0-2", 2-6" and 6-12" intervals (K7-1 through K7-3), and a gamma survey was performed across the entire spill area using the same sample points. Readings from the spill area were between 13-24  $\mu\text{R/hr}$ ; a background readings showed 12-14  $\mu\text{R/hr}$ .

The release occurred in a Mine Unit K injection trunk line, and affected approximately 1 acre.

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

Cause

The leak occurred as a result of a failed electrically fused collar. Use of the electric fusion below ground was discontinued in August 2008. Preventative measures will be discussed at the upcoming Spill Committee meeting.



-  MONITOR WELL
-  MONITOR RING
-  SPILL SAMPLE LOCATION
-  SPILL
-  PATTERN
-  FENCE

SCALE IN FEET

0 30 60 120



REVISIONS		
NO.	DATE	BY

 **CAMECO**

Cameco Resources  
SMITH RANCH - HIGHLAND  
OPERATION  
P.O. Box 1210  
Clarendon, WI 52637 Telephone (307) 358-0541

**MINE UNIT K 10/27/08  
SPILL AND SAMPLE  
LOCATIONS**

FORM NO: \_\_\_\_\_ DWG NO: \_\_\_\_\_ CURRENT REV: \_\_\_\_\_

ISS. BY: \_\_\_\_\_ DESIGNED BY: \_\_\_\_\_ PAPER SIZE: 11X17  
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 DWG. NO: \_\_\_\_\_