



Smith Ranch - Highland  
 Uranium Project  
 P. O. Box 1210  
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 Casper: 307-235-1628  
 Douglas: 307-358-6541  
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September 15, 2003

Mr. John Wagner, Cheyenne Office Program Manager  
 Land Quality Division  
 Wyoming Department of Environmental Quality  
 Herschler Building  
 122 West 25<sup>th</sup> Street  
 Cheyenne, WY 82002

40-8964

RE: Permit to Mine 633  
 In Situ Uranium Wellfield Release Report

Dear Mr. Wagner:

As reported to Mr. Steve Ingle of the Land Quality Division on September 8, 2003, Power Resources, Inc. (PRI) had a release of wellfield injection fluid at the Smith Ranch Project in Converse County, Wyoming. The release occurred on September 6, 2003 at a header house in Wellfield 4 and resulted from the failure of an injection pipeline. Wellfield injection fluid typically contains concentrations above background of uranium, radium and selenium but is not considered a hazardous material under RCRA, nor is it reportable under SARA.

In accordance with Chapter IV, Section 4(a)(iv) of the Water Quality Division Rules and Regulations, attached please find a report describing the release and the steps taken to prevent a recurrence.

Please call if you have any questions.

Sincerely,

W.F. Kearney  
 Manager-Health, Safety  
 & Environmental Affairs

cc: John Lusher - NRC Project Manager      R. Knode      S.A. Bakken  
 M.D. Bryson      File SR 4.4.1      File SR 4.3.3.1      File SR 4.6.4.2  
 WFK/sab

UMSS01

## ATTACHMENT

### POWER RESOURCES, INC. HIGHLAND URANIUM PROJECT URANIUM IN SITU WELLFIELD FLUID RELEASE REPORT

#### FAILURE OF 6-INCH PVC INJECTION PIPELINE IN HEADERHOUSE 4-7

##### A. DESCRIPTION OF EVENT AND MITIGATIVE ACTIONS TAKEN

At approximately 7:40 AM on September 6, 2003, a Satellite Operator discovered fluid leaking from Headerhouse 4-7 in Wellfield 4. The headerhouse was immediately shut down and the source of the leak investigated. It was determined that a Schedule 80 PVC elbow had separated from the six-inch injection pipeline just prior to the Injection Header Manifold. In addition, the low pressure and sump water detection devices that monitor the headerhouse for leaks did not shut down the headerhouse and activate the alarm as designed. This allowed the release to go undetected until the Operator discovered the leak.

The extent of the spill is shown on the attached map. Approximately 20,800 gallons of injection fluid was released. The injection fluid contained approximately 1.1 mg/L of natural uranium. The fluid did not enter any "Waters of the State". The release occurred in the NW¼, Section 35, T36N, R74W and affected approximately 0.25 acres. The fluid flowed down a wellfield road and soaked into the ground before any sampling or recovery activities could be initiated.

The entire area affected by the spill is contained within the fenced wellfield area. Two soil samples were obtained from the affected area to assess any impacts to soil (see attached map). The soil samples will be analyzed by Energy Labs Inc. of Casper, Wyoming for selenium, uranium, and radium-226. Depending on the results of the soil analyses, the need for any soil cleanup will be assessed. Nonetheless, the area will be reevaluated during decommissioning of the wellfield to ensure that applicable decommissioning standards for soil are not exceeded.

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

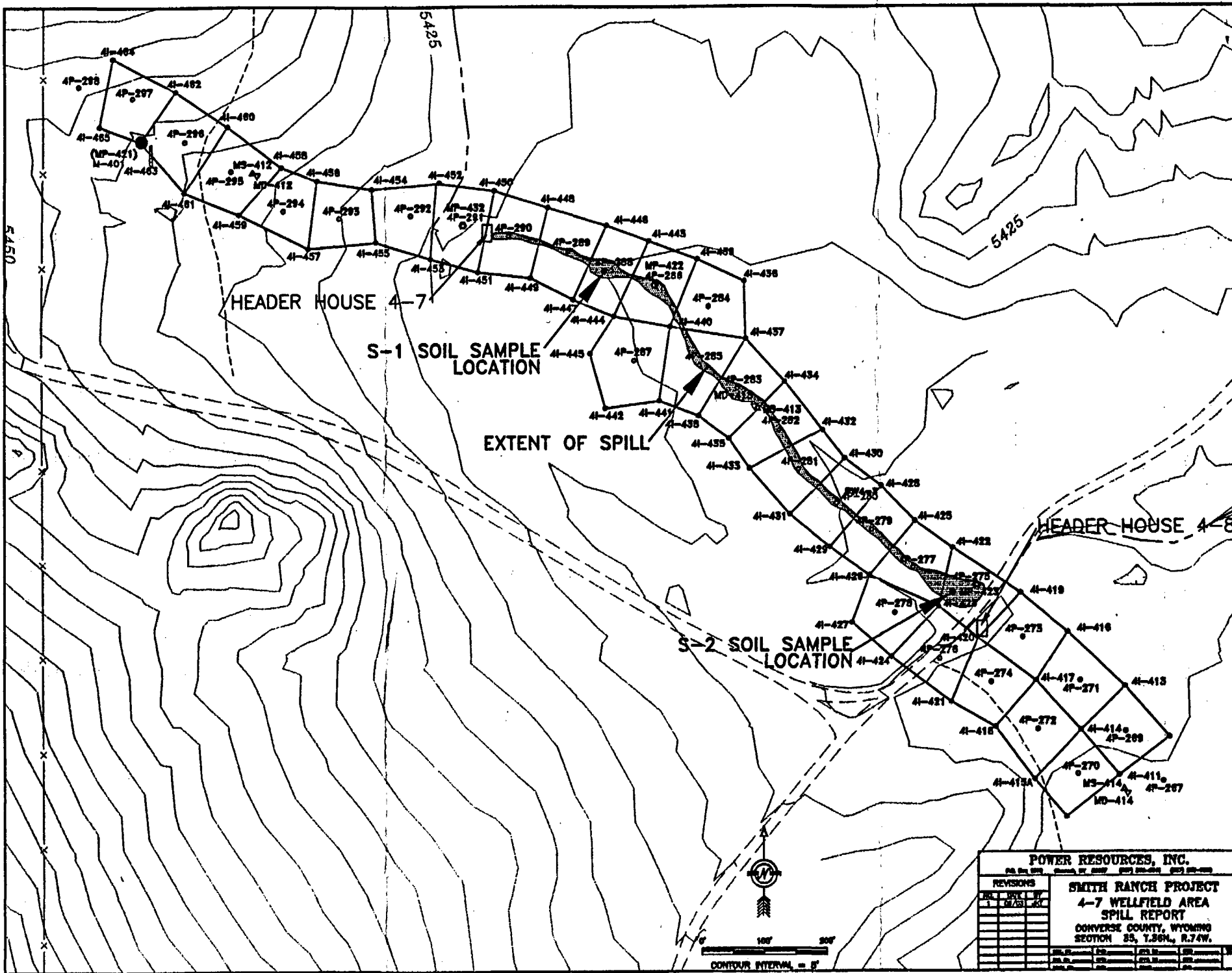
###### Cause

The release was caused by the separation of a Schedule 80 PVC elbow along the injection pipeline due to an apparent inferior glue joint. In addition, the low pressure and sump water detection devices used on this pipeline did not shut down the headerhouse and activate the alarm as designed, allowing the release to go undetected until the Operator discovered the leak. Under normal operating conditions, the headerhouse would have been shut down immediately via a shunt trip and the Wellfield Operators notified in a

timelier manner via a flashing red light on the headerhouse and/or an observed pressure change in the satellite facility.

#### Recurrence Prevention

The inferior glue joint was most likely a result of human error during construction activities. PRI personnel are routinely instructed on the proper procedures to be used on PVC materials during headerhouse construction. PRI is also in the process of redesigning the safety circuit shunt trip and alarm system to ensure that any future spill occurrences are detected in a timelier manner.



POWER RESOURCES, INC.	
2000 W. 10th Street, Cheyenne, WY 82001 (307) 233-2200	
REVISIONS	SMITH RANCH PROJECT
NO. 1	4-7 WELLFIELD AREA
DATE	SPILL REPORT
BY	CORVERSE COUNTY, WYOMING
	SECTION 35, T.36N., R.74W.
NO. 2	
DATE	
BY	
NO. 3	
DATE	
BY	

CONTOUR INTERVAL = 5'