

## POWERTECH (USA) INC.

**RICHARD E. BLUBAUGH**  
**Vice President – Environmental**  
**Health & Safety Resources**

June 28, 2011

Mr. Ronald A. Burrows, Project Manager  
 Office of Federal and State Materials and  
 Environmental Management Programs  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555-0001

RE: Revised Responses to the Request for Additional Information (RAI) for the  
 Technical Report (TR); Powertech (USA) Inc.'s Proposed Dewey-Burdock Project;  
 Docket No. 40-9075

Dear Mr. Burrows:


Powertech (USA) Inc. (Powertech) hereby submits the revised TR RAI response package to the TR RAIs dated May 19, 2010 and May 28, 2010. The enclosed submittal contains three bound copies of the TR RAI response package bound in four volumes as follows:

- Volume 1: Response Text and Figures
- Volume 2: Exhibits
- Volume 3: Appendices 2.5-D through 2.7-L
- Volume 4: Appendices 2.7-M through 7.3-C

The revised TR RAI response package is presented in a question and answer format, with the full text of each RAI followed by the revised response. It is a complete document that includes many additional figures, exhibits and appendices that have been prepared in response to the April 7-8, 2011 meeting with NRC staff. The intent is to allow NRC staff to evaluate each response without excessive cross referencing to previous license application materials. The responses clearly indicate how the TR will be revised. Powertech will continue to work with you to determine when the revised TR will be needed.

In response to the April 7-8, 2011 meeting, the revised TR RAI response package contains numerous additional commitments such as additional surface soil sampling and additional food sampling. Powertech also commits to the development of a numerical groundwater model to assess both regional flow characteristics and well field-scale parameters such as excursion detection and recovery.

The TR RAI response package directly addresses the four issues of concern expressed by NRC staff in the May 6, 2011 letter to Powertech, including:


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	POWERTECH USA, INC. (Dewey-Burdock In Situ Uranium Recovery Facility)
	ASLBP #: 10-898-02-MLA-BD01
	Docket #: 04009075
	Exhibit #: APP-016-A-00-BD01
	Admitted: 8/19/2014
	Rejected:
Other:	
	Identified: 8/19/2014
	Withdrawn:
	Stricken:

- (1) Potential for surface water to be spring fed with production zone groundwater through unplugged exploratory drill holes: The revised responses describe how Powertech will use the best available information and best professional practices to locate boreholes or wells in the vicinity of potential well field areas, including historical records, field investigations, use of color infrared imagery, and potentiometric surface evaluation and pump testing conducted for each well field (TR RAI P&R-9).
- (2) Potential hydraulic influence of operations on newly identified underground mine workings located within or in close proximity to newly revised well field areas: The response to TR RAI P&R-2 provides extensive information about the historical underground mine workings in and around the project area, including interviews with former geologists and miners who worked in these mines. The response describes how all underground workings are associated with existing open-pit remnants that are clearly visible. More importantly, all underground workings were confined to the Fall River Formation, which is not proposed for ISR recovery in the vicinity of the underground workings and which is separated from the underlying Chilson Member of the Lakota Formation by the Fuson Shale. The Fuson Shale was not compromised as result of the very limited underground mining.
- (3) Potential inadequate hydraulic containment of production fluids from proposed operations: Powertech has prepared revised geologic cross sections and isopachs that clearly demonstrate the major confining units in relation to the proposed production zones, including the Graneros Group, Fuson Shale, and the Morrison Formation. The responses to TR RAI P&R-1 and others demonstrate that the major and minor confining units will provide excellent containment of ISR fluids.
- (4) Potential inadequate hydraulic containment of production fluids from the hydraulic effects of breccia pipes. The response to TR RAI P&R-12(a) demonstrates that there are no breccia pipes within the project area. The potential presence of breccia pipes in the project area is a theory for which no supporting evidence has been found.

Included with each bound copy is a DVD containing complete files in Adobe PDF format that meet the NRC requirements for electronic submittals including optical character recognition (OCR), 300 dpi resolution, and embedded fonts. Two of the appendices containing laboratory analytical results (Appendices 2.7-F and 2.7-H) are provided on the DVDs only to minimize printing as discussed previously with you. Preparation of the electronic files has been conducted in coordination with Mr. Kenny Nguyen, IT Specialist/Project Officer with the NRC, Document Control Desk. In particular, Powertech solicited advice from Mr. Nguyen on several figures in Appendix 3.1-A, presenting him with two options: one option that passed all Preflight requirements but had diminished quality due to scanning, and a second option that did not pass all Preflight requirements but had better quality. In this instance Mr. Nguyen advised Powertech's consultant that the better quality option would be acceptable.

Powertech appreciates the time given by NRC staff in the April meeting and in subsequent PM-to-PM conversations. These meetings have allowed us to better understand the intent of the RAIs. Should there be any questions or concerns regarding the enclosed, please contact the undersigned at your earliest convenience.

Respectfully yours,



Richard Blubaugh

cc: U.S. NRC )  
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