

August 12, 2014

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD**

Before Administrative Judges:

**William J. Froehlich, Chairman
Dr. Richard F. Cole, Special Assistant
Dr. Mark O. Barnett, Special Assistant**

In the Matter of:)	
)	
POWERTECH USA, Inc.)	
(Dewey-Burdock Project)	Docket No 40-9075-MLA
In Situ Uranium Recovery Facility))	ASLBP No. 10-898-02-MLA-BD01
)	
_____)	

**AFFIDAVIT OF RICHARD CLEMENT REGARDING DATA ACQUIRED AND
YET TO BE ACQUIRED FROM ENERGY FUELS RESOURCES (USA) Inc.**

1. This affidavit details my total understanding of the data acquired and yet to be acquired from Energy Fuels Resources (USA) Inc. (Energy Fuels) by agreement signed May 9, 2014 and revised July 31, 2014. This affidavit clearly describes how the data will be used for the purposes of economic evaluation and hydrogeologic well field package development (as required by a license condition), explains the lack of relevancy of these data to the admitted contentions and provides pertinent details regarding the timing and nature of the purchase agreement with Energy Fuels.

2. On April 2, 2014, Frank Lichnovsky, Powertech (USA) Inc. Chief Geologist, and I reviewed boxes of electric logs and location maps owned by Energy Fuels. In accordance with the agreement signed in May, we currently have received five boxes of full-scale (1 inch per 10 feet of drill depth) electric logs. As indicated in Powertech's July 16, 2014 press release (Exhibit OST-019), the original purchase agreement indicated that Powertech would make final payment to Energy Fuels by August 15, 2014 and subsequently receive the remaining data. On July 31, 2014, Powertech reached a revised agreement with Energy Fuels to the effect that Powertech would acquire digitized data of the electric logs for the purpose of updating the economic uranium resource estimate within the Dewey-Burdock Project license area. As of this affidavit, these data have been transferred to Powertech. Subject to the revised purchase agreement, Powertech has agreed to make final payment to Energy Fuels for the remaining data by September 30, 2014. At that time, the remaining data will be transferred to Powertech, including some 30 additional boxes of electric logs and location maps in paper or Mylar form.

3. For Powertech, there are two important uses of the data acquired and yet to be acquired from Energy Fuels, neither of which has to do with the admitted contentions. The first purpose is for economic evaluation. As described previously, the digitized electric logs will be used to update the economic uranium resource estimate for the Dewey-Burdock Project. The second use is to help delineate the precise location of the uranium ore and screened intervals for production, injection and monitor wells in order to begin preparation of hydrogeologic well field packages, the development of which is required by license condition 10.10 in Powertech's source and byproduct material license (Exhibit NRC-012 at 8-9). The process of delineation drilling after license issuance is described throughout the approved license application, including:

- “The extent of current potential well fields is based on available drill hole data. **Further delineation will take place after license issuance and will be used to prepare detailed well field hydrogeologic data packages for each potential well field.**” (TR RAI P&R-8 response, Exhibit APP-016-B at PDF page 54, emphasis added)
- “Consistent with NUREG-1569 (page 5-42), the perimeter monitor wells will be screened across the entire thickness of the production zone, **which will be determined following completion of delineation drilling for each well field.**” (TR RAI 5.7.8-9 response, Exhibit APP-016-D at PDF page 267, emphasis added)

- “An extensive pump test program will be designed and implemented prior to operation of each well field to evaluate the hydrogeology and assess the ability to operate the well field. Prior to pump testing several important well field development steps will be completed: 1) **Delineation drilling at a spacing approximately equivalent to well field pattern size**. As standard procedure, all delineation holes will be plugged and abandoned after drilling.” (TR RAI 5.7.8-14 response, Exhibit APP-016-D at PDF page 282, emphasis added)

4. By the nature of the business, it is critical for economic purposes to place the injection and production wells within the ore boundaries and not barren rock that has no economic potential for uranium recovery. Therefore, it is incumbent on an operator to gather as much detailed data as available prior to emplacing wells and preparation of well field packages for NRC review. The additional data will save time and money during the delineation drilling process inasmuch as existing electric logs may be used in place of newly drilled and logged delineation holes.

5. These two uses of the data acquired and yet to be acquired from Energy Fuels explain why the data were not acquired earlier. Powertech intends to use the updated uranium resource estimate for the preparation of updated economic reports that may be used to secure additional project financing necessary for construction. Since preparation of hydrogeologic well field data packages does not take place until after license issuance, there was no need to acquire the data used to prepare the well field packages before the license was issued. The timing of the purchase agreement with Energy Fuels has absolutely nothing whatsoever to do with the licensing process or the admitted contentions in this hearing.

6. As far as relevancy to the admitted contentions, and Contention 3 in particular, I can see no reason why additional electric logs are relevant to the adequacy of the hydrogeologic information in the FSEIS to demonstrate ability to contain fluid migration and assess potential impacts to groundwater. The August 6, 2014 Board Order (Question Following Prehearing Conference) mentions the issue of “whether or not the historic drilling in the area affects the intermingling of aquifer waters.” Based on the data reviewed to date, the electric logs acquired and yet to be acquired from Energy Fuels are from the same drill holes listed in TR Appendix 2.6-A (Exhibit APP-021-AA at PDF pages 233-372) and depicted in Figure TR RAI P&R-12a-3 (Exhibit APP-016-B at PDF page 77) of the approved license application. In other words, the locations of the drill holes were already known and disclosed in the license application, and therefore the electric logs in the purchase agreement do not add to this information. Since the number and location of drill holes will not change and since the electric logs do not contain any information regarding plugging and abandonment procedures, the additional data will not aid in the evaluation of “whether or not the historic drilling in the area affects the intermingling of aquifer waters.”

7. Electric logs by themselves do not demonstrate the ability to contain fluid migration, which I understand to be the substance of Contention 3. To the best of my knowledge, there are no electric logs acquired or yet to be acquired from Energy Fuels that are not surrounded by and encompassed by the drill hole data from thousands of electric logs already in Powertech's possession that were used to prepare the project geologic model and which formed the basis for the understanding of site stratigraphy. For an example of an electric log, refer to Figure 2.6-2a (Type Log) in the revised TR (Exhibit APP-015-B at PDF page 179). Other information in Powertech's license application and summarized in the FSEIS demonstrates hydrogeologic confinement, including the continuity of the major confining units across the license area, differences in potentiometric water level elevations between aquifers, pumping test results, and differences in water quality between the various aquifers.

8. Based on decades of personal experience working for and managing uranium ISR companies, it is my experience that all companies either applying for NRC or Agreement State source and byproduct material licenses or operating uranium recovery facilities maintain files containing hundreds or thousands of electric logs from exploration and/or delineation drilling. Yet I am not aware of any instance in which a license applicant or licensee has disclosed all electric logs pertaining to economic information in a public document such as a license application.

9. This affidavit concludes by addressing four final issues. The first is the phased nature of data acquisition for a uranium ISR project. The procedures of developing well field packages after license issuance based in part on detailed delineation drilling data are clearly defined in Commission-approved guidance in NUREG-1569 (Exhibit NRC-013). For example, NUREG-1569 Section 1.2 notes, "Reviewers should keep in mind that the development and initial licensing of an *in situ* leach facility is not based on comprehensive information. This is because *in situ* leach facilities obtain enough information to generally locate the ore body and to understand the natural systems involved. More detailed information is developed as each area is brought into production. Therefore, reviewers should verify that sufficient information is presented to reach only the conclusion necessary for initial licensing." (Exhibit NRC-013 at PDF page 36). The second issue is the confidential nature of the additional data. Powertech has paid money for the data acquired to date and therefore it is an asset held by the company. It is data that can be sold again (has value) and therefore is worth protecting through a confidentiality agreement. Third, the cost of scanning the thousands of electric logs and making them available would be prohibitive. The five boxes of recently acquired data include an estimated 1,400 electric logs in paper form. Each of these measures approximately 5 to 7 feet long (depending on total depth) by approximately 1 foot wide. The cost of scanning just the recently acquired logs to PDF would run into the thousands if not tens of thousands of dollars, and the time required would be weeks or months. Fourth, Powertech does not have the majority of the additional electric logs in paper or Mylar form yet in its possession and will not have them until

final payment is made by September 30, 2014 in accordance with the terms of the revised purchase agreement.

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AFFIDAVIT OF RICHARD CLEMENT

I declare under penalty of perjury that my statements in this affidavit are true and correct to the best of my knowledge and belief.



Richard F. Clement, Jr.
President/CEO
Powertech Uranium Corp.

Executed in Corrales, NM
this 12th day of August, 2014