


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 #: NRC-095-00-BD01
	Admitted: 8/19/2014
	Rejected:
	Identified: 8/19/2014
	Withdrawn:
	Stricken:
	Other:

NRC-095
Submitted: June 20, 2014

March 25, 2014

Mr. Philip S. Strobel, Acting Director,
NEPA Compliance and Review Program,
8EPR-N
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Dear Mr. Strobel:

The U.S. Nuclear Regulatory Commission (NRC) is in receipt of your March 10, 2014, letter commenting on the Final Supplemental Environmental Impact Statement (FSEIS) for the Dewey-Burdock In Situ Uranium Recovery (ISR) Project. The U.S. Environmental Protection Agency (EPA) presents two comments for NRC consideration. First, the EPA recommends the NRC clarify that the regulations at 40 CFR Part 61 Subpart W will apply to the proposed Dewey Burdock ISR facility. Second, the EPA recommends that the NRC require the monitoring of one additional domestic well in the vicinity of the Dewey-Burdock site.

(i) Applicability of EPA regulation 40 CFR Part 61 Subpart W to Powertech ISR Project:

In Appendix E of the FSEIS, the NRC staff addressed EPA's comments regarding the applicability of Subpart W to the proposed Dewey-Burdock ISR facility. There, the NRC staff explained that we had evaluated the pond designs proposed by the applicant, Powertech (USA) Inc., and determined the designs meet the criteria in NRC regulations at 10 CFR Part 40, Appendix A. The Appendix A criteria conform to the generally applicable standards of 40 CFR Part 192, EPA's Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.

The NRC staff is aware that EPA regulations at 40 CFR Part 61, Subpart W address radon emissions from uranium recovery facilities. Enforcing these regulatory requirements is, however, outside the NRC's authority. Nonetheless, to ensure that licensees comply with other applicable rules, the NRC staff routinely includes a condition in licenses that prohibits the licensee from commencing operations until it obtains all necessary permits, licenses, and approvals from the appropriate regulatory authorities. If NRC finds Powertech is in compliance with NRC regulatory requirements and grants a license, Powertech must obtain all necessary federal, state, and local permits or approvals before commencing operations. The NRC staff verifies that permits or approvals are obtained prior to commencement of facility operations.

Additionally, NRC Regulatory Guide 3.11 (NRC, 2008) provides that, when siting and designing retention ponds at ISR facilities, applicants should consider the requirements of the national emission regulations at 40 CFR Part 61, Subpart W. Applicants/licensees are encouraged to follow applicable NRC regulatory guides in preparing license applications, although regulatory guides are not requirements.

(ii) Suggested Groundwater Protection Measure:

As the EPA notes in its March 10, 2014 letter, the NRC imposed a license condition that requires Powertech to monitor all private wells within 2 km (1.2 miles) of each of the Dewey-Burdock ISR wellfields, pursuant to 10 CFR Part 40, Appendix A, Criterion 7A. EPA suggests expanding this monitoring to include Domestic Well #18 during the baseline period and periodically during the operation and post closure period. Domestic Well #18 is a private artesian well located outside of the 2 km (1.2 miles) boundary as measured from the wellfields, but it lies 2 km (1.2 miles) downgradient of the permit boundary. EPA proposes that the NRC require Powertech to take additional baseline samples, as well as samples from periodic monitoring, to ensure adequate protection of drinking water after operations terminate at the Dewey-Burdock facility.

Baseline monitoring of Domestic Well #18 was completed by the applicant as part of this license application. Water samples were taken from the well in the five quarters prior to submission of the application, to obtain baseline water quality measurements. According to information provided in the applicant's technical report, Domestic Well #18 was installed around 1930 and flows at a rate of 6 gpm [per the applicant's field measurements].¹ Appendix 2.2A, Table 1 of the application describes the well as 527 feet deep, with a surface casing elevation of 3266 ft msl. These baseline measurements were evaluated by the NRC staff and found to provide an adequate baseline assessment of groundwater quality in Domestic Well #18 in accordance with the requirements of Part 40, Appendix A, Criterion 7.

Furthermore, the radius of 2 km (1.2 miles) from each proposed ISR wellfield has been shown to be sufficient based on historical and current monitoring data from NRC licensed sites. There are no reported instances of contamination of any monitored private well within or beyond 2 km (1.2 miles) of an ISR wellfield at any sites historically or currently licensed by the NRC. Although sampling of a private well outside the 2 km (1.2 miles) radius from the wellfield may be justified when the flow rate of a private well is sufficient to draw water from an ISR wellfield during operations, that is not the case here.

The NRC staff evaluated the impact of Domestic Well #18 on groundwater flow using Powertech's revised groundwater model of Dewey-Burdock wellfield production and restoration operations.² The groundwater model included the operation of all 52 artesian wells in and near the license boundary. The groundwater model demonstrates the 6 gpm flow rate from Domestic Well #18 is not sufficient to draw water from any Dewey-Burdock wellfield toward the well. Because the NRC finds the drawdown in the potentiometric surface created by Domestic Well #18 will not impact any Dewey-Burdock wellfield, the NRC determined the monitoring of the well during operation and post closure is not necessary or technically justified to protect the public health, safety, and environment.

In conclusion, the NRC staff finds the Domestic Well #18 has already undergone the baseline sampling recommended by EPA. The NRC staff also finds the license condition requirement to monitor all private wells within 2 km (1.2 miles) of the proposed Dewey Burdock wellfields will adequately protect all wells used for drinking water, water for livestock, or crop irrigation.

¹ Powertech (USA), Inc., "Powertech Dewey-Burdock Application," ADAMS No. ML091200014.

² Powertech (USA), Inc., "Numerical Modeling of Hydrogeologic Conditions Dewey-Burdock Project South Dakota, February 2012, ADAMS No. ML12062A096.

Therefore, NRC staff finds no public safety or environmental justification for requiring additional monitoring of Domestic Well #18 during operations and following closure of the facility.

The NRC staff appreciates your continued involvement in providing recommendation to assure protection of human health and the environment. We look forward to collaborating with you again in our future environmental reviews.

Sincerely,

/RA/

Aby Mohseni, Deputy Director
Environmental Protection and
Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

P. Strobel

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DATE	3/18/14	3/18/14	3/18/14	3/18/14	3/20/14	3/19/14	3/25/14	3 /25/14

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