

April 22, 2014

Don Kelly, M.D.  
12637 Merritt-Estes Rd.  
Deadwood, SD 57732

SUBJECT: RESPONSES TO LETTERS SENT TO THE CHAIRMAN AND  
COMMISSIONERS REGARDING THE DEWEY-BURDOCK PROJECT,  
DOCKET NO. 04009075

Dear Dr. Kelly:

Thank you for taking the time to write Chairman Macfarlane and the Commissioners expressing your concerns about the Dewey-Burdock In Situ Uranium Recovery (ISR) Project near Edgemont, South Dakota. Chairman Macfarlane and the Commissioners appreciate your comments on how the staff conducts its review and requested that the staff respond to your comments because your concerns focus on technical details within the staff's expertise and involve a specific licensing action in litigation.

You raise two principal concerns: (i) issuance of the final Supplemental Environmental Impact Statement (SEIS)<sup>1</sup> before completing the consultation with tribal governments required under the National Historic Preservation Act (NHPA), and (ii) the SEIS does not consider scientific research challenging the staff determination that aquifers at the Dewey-Burdock site are geologically suitable for the licensed in situ recovery activities. You request the NRC staff revise the SEIS to include additional scientific information and tribal consultation documents, and that the final SEIS be reissued.

i) Issuance of the final SEIS before completing the consultation with tribal governments required under the NHPA

The National Environmental Policy Act (NEPA) of 1969, as amended requires Federal agencies consider (take a hard look at) the environmental impacts of their actions prior to making a decision. The NHPA requires Federal agencies to take into account the effects a Federal undertaking may have on historic properties and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the agency's findings. The NHPA regulations at 36 CFR 800.8 (a) allow, but do not require, Federal agencies to coordinate compliance with Section 106 with any steps taken to meeting the requirements of NEPA.

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<sup>1</sup> "Environmental Impact Statement for the Dewey-Burdock Project in Custer and Fall River Counties, South Dakota: Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities," Final Report, Volumes 1 and 2 was issued in January 2014 (Agencywide Documents Access and Management System [ADAMS] Accession Nos. ML14024A477 and ML14024A478).

In conducting NEPA reviews, Federal agencies evaluate impacts on resource areas, including cultural resources, prior to making their final decision. In order to minimize the duplication of reviews, conserve agency resources, and reduce the expenditure of taxpayer funds, both NHPA regulations and NRC regulations<sup>2</sup> encourage the coordination of NEPA and Section 106 (NHPA) reviews. When the NRC staff began consulting with the Tribes on the Dewey-Burdock Project over 4 years ago, it planned to coordinate its NHPA review with its review under the NEPA.<sup>3</sup> Appendix A of the final SEIS includes correspondence of the staff's consultation under the NHPA through November 2013<sup>4</sup>. Table A-1 in Appendix A provides a chronology of the documents associated with the NRC staff's consultation.

In November 2013, the NRC staff notified all consulting parties, including the Tribes, of its decision to separate the NEPA and NHPA processes.<sup>5</sup> The NRC staff took this action because while the final SEIS was being finalized for publication, Section 106 consultation with the Tribes on the evaluation of traditional cultural properties was on-going. The separation allowed the NRC staff to issue its final NEPA document, the vast majority of which concerns environmental impacts unrelated to cultural resources, while continuing to consult with interested Tribes on impacts to historic properties.

In the final SEIS, the NRC staff evaluated impacts to cultural resources. The SEIS analyzed and evaluated the tribal field survey results and associated determinations of effects. The staff identified expected impacts in the impact assessment section of the SEIS. The staff stated impacts could be further reduced through the implementation of specific measures to avoid, minimize, or mitigate adverse effects to historic properties. These measures are described in Section 4.9 of the SEIS.

On April 7, 2014, the Final Programmatic Agreement (PA) for the Proposed Dewey-Burdock In Situ Uranium Recovery Project became effective,<sup>6</sup> which completed the staff's Section 106 process. Section 5 of the Programmatic Agreement addresses the resolution of adverse effects and lays out procedures for adopting mitigation measures or proposing

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<sup>2</sup> 10 CFR Part 51 contains the NRC regulations implementing NEPA.

<sup>3</sup> Letter to Tribal Leaders Requesting Additional Information Regarding Tribal Historic and Cultural Resources Potentially Affected by the Powertech Inc. Proposed Dewey-Burdock In-Situ Recovery Facility (March 19, 2010) (ADAMS Accession No. ML100331999); see also Letter to Cheyenne River Sioux Tribe (and all consulting Tribes) Invitation for Formal Consultation under the Section 106 of the National Historic Preservation Act (ADAMS Accession No. ML102520239).

<sup>4</sup> Appendix A of the final SEIS includes correspondence related to the NRC staff's consultation under other acts, such as the Endangered Species Act. The vast majority of the correspondence, however, relates to the Staff's NHPA consultation efforts (ADAMS Accession Nos. ML14024A477 and ML14024A478).

<sup>5</sup> Letter to the Crow Creek Sioux Tribe re: Notification of Intention to Separate NHPA Section 106 Process from NEPA Review for Dewey-Burdock ISR Project (ADAMS Accession No. ML13308A667). Similar letter sent to all consulting parties.

<sup>6</sup> The Programmatic Agreement, Appendices, and signature pages are available at ADAMS Accession Nos. ML14066A344, ML14098A464, ML14098A107, ML14098A110, ML14098A102, and ML14098A155.

alternative measures. Appendix B of the Programmatic Agreement provides details of the NRC's comprehensive Tribal consultation efforts with 23 consulting Tribes for more than 4 years. These efforts included three face-to-face meetings, three teleconferences, a number of correspondences and five webinars to develop and finalize the PA. The NRC staff regularly corresponded by e-mail and telephone with designated representatives of the consulting Tribes in order to gather information regarding historic properties and issues that the Tribes asked the NRC to consider during the course of our review. Based on these comprehensive efforts, the NRC staff believes that it has made a "reasonable and good faith effort" to conduct the Section 106 activities in accordance with the 36 CFR Part 800 regulations.

On April 8, 2014, the staff issued Powertech (USA) Inc. NRC Source Materials License No. SUA-1600.<sup>7</sup> The NRC staff also issued its Record of Decision (ROD) for the Dewey-Burdock project on April 8, 2014.<sup>8</sup> The issuance of the license and the ROD followed the requirements of the NHPA regulations at 36 CFR § 800.1(c), which states that an agency "must complete the Section 106 process" *prior* to issuing a license allowing the undertaking. The NRC acted according to the requirements of the NHPA and NRC regulations when it completed its Section 106 activities and subsequently issued the license and ROD.

- ii) The SEIS does not consider scientific research challenging the staff determination that aquifers at the Dewey-Burdock site are geologically suitable for the licensed in situ recovery activities<sup>9</sup>

The NRC staff evaluates all available scientific information in developing an environmental impact statement. The NRC staff analysis begins by evaluating the adequacy of an applicant's environmental report (ER). The NRC staff review involves independent research to validate the data in an applicant's ER. The NRC staff requests additional information from an applicant when necessary.

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<sup>7</sup> The license allows Powertech to possess and use source and byproduct material in connection with its Dewey-Burdock Project in Fall River and Custer Counties, South Dakota. The license is available under ADAMS Accession No. ML14043A392.

<sup>8</sup> The Record of Decision is at ADAMS Accession No. ML14066A466.

<sup>9</sup> Although your concerns address the adequacy of the final SEIS and raise environmental concerns, it should be noted that aquifer confinement issues were fully addressed as safety issues in the NRC staff's Safety Evaluation Report [SER] for the Dewey-Burdock Project, Fall River and Custer Counties, South Dakota issued March 2013 (ADAMS Accession No. ML13052A182), revised April 2014 (ADAMS Accession No. ML14043A347).

Additional information concerning confinement issues submitted by the applicant in response to the NRC staff requests is found in ADAMS Accession Nos. ML110050468, ML110050472, and ML110590639. The scientific information and technical analyses contained in these documents and the SER was evaluated by the staff as part of its NEPA review.

The NRC staff requested additional data on environmental issues for the Dewey-Burdock project.<sup>10</sup> The applicant provided additional data for the NRC staff's consideration and this information was evaluated during the NEPA review.<sup>11</sup> The NRC staff also analyzed the extensive data concerning hydrology, aquifer confinement, breccia pipes, and aquifers provided by the applicant in responses to the NRC staff's RAIs on the Technical Report.<sup>12</sup> The NRC staff conducted a targeted information gathering site visit in December, 2009 early in the review process. During this visit, the NRC staff met with representatives of South Dakota Department of Environmental Natural Resources, U.S. Geological Survey, South Dakota Game and Fish, U.S. Forest Service, U.S. Army Corps of Engineers, U.S. Bureau of Land Management, South Dakota State Historic Society Archaeological Research Center, South Dakota State Historic Preservation Office, South Dakota Office of Tribal Government Relations, South Dakota local governmental agencies, and interested stakeholder (Defenders of the Black Hills, Edgemont Area Chamber of Commerce, and Custer County Planning and Economic Development). The NRC staff attempted to meet with Oglala Sioux Tribe, but was advised Tribal leadership was in transition and would be unable to meet with the NRC staff in December 2009.<sup>13</sup>

The governmental agencies and private stakeholders provided pertinent scientific information used by the NRC staff to independently assess and validate data in the applicant's ER. The NRC staff used the information obtained from all sources to identify and evaluate environmental impacts. As an example, the NRC staff used the most current U.S. Geological Survey data on geological and hydrogeological conditions in the vicinity of the project site in evaluating suitability of the project site for ISR operation. The NRC staff particularly considered existence of faults and fractures as part of its environmental analysis.<sup>14</sup>

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<sup>10</sup> See "2010/04/14-Attachment to Oglala Sioux Tribe Reply - Letter to Powertech from NRC re Request for Additional Information to Support Environmental Review of Proposed License Application for Powertech (USA) Inc. Dewey-Burdock Uranium Recovery Project," which asks for specific information concerning water resources and cultural resources, among other environmental issues. (ADAMS Accession No. ML101340869).

<sup>11</sup> See Powertech (USA) Inc.'s Response to the Request for Additional Information to Support the Environmental Review of its Application for a Nuclear Regulatory Uranium Recovery Facility in the State of South Dakota (ADAMS Accession No. ML102380516). Powertech responded to the staff request with specific information on hydrology and confinement at pages 17 -29.

<sup>12</sup> See Revised Responses to the Request for Additional Information (RAI) for the Technical Report (TR); Powertech (USA) Inc.'s Proposed Dewey-Burdock Project, Volumes 1-4 (ADAMS Accession Package Number ML112071064)(June 28, 2011)(hydrogeological data in summarized in ADAMS Accession No. 11207A711) and Petrotek "Numerical Modeling of Hydrogeologic Conditions Dewey-Burdock Project South Dakota, Powertech Dewey-Burdock Project" (ADAMS Accession No. ML12062A096).

<sup>13</sup> ADAMS Accession No. ML102380609.

<sup>14</sup> See Sections 3.4, 3.5, 4.4, 4.5, and 5.4 of the final SEIS (ADAMS Accession Nos. ML14024A477 and ML14024A478).

Because the U.S. Bureau of Land Management (BLM) is a cooperating agency on the Dewey-Burdock project, the NRC worked closely with BLM on the development of the SEIS. The NRC relied on the special expertise of the BLM as the Federal land management agency in its assessments of land use, geology, cultural resources, air impacts, and ecology.

The NRC informally cooperated with the U.S. Environmental Protection Agency Region 8 (EPA) in the identification and assessment of water resources, waste management, air impact, mitigation measures, cumulative impacts, and overall ISR process presented in Chapter 2 of the SEIS for the Powertech project. As the lead Federal agency for permitting underground injection well Class III and Class V permitting, EPA provided valuable input on the permit requirements for Class III and Class V wells, which was incorporated into the SEIS impact analysis for groundwater. In addition, the EPA provided extensive comments on the draft SEIS.<sup>15</sup> Furthermore, the production portion of the aquifer will need to be exempted from being a Underground Source of Drinker Water through an EPA-issued aquifer exemption in accordance with the criteria under 40 CFR 146.4.<sup>16</sup>

The NRC staff issued the draft SEIS in November 2012 and provided a 45-day comment period. The NRC staff reviewed, evaluated, and considered public comments in developing the final SEIS. The public comments and the NRC staff responses are found in Appendix E of the final SEIS.

The NRC regulations at 10 CFR 51.72 and 10 CFR 51.92 set out the circumstances that require the NRC staff prepare a supplement to either a draft or final environmental impact statement. A supplement is published only when:

- (1) there are *substantial changes* in the proposed action that are relevant to environmental concerns; or
- (2) there are *new and significant circumstances or information* relevant to environmental concerns and bearing on the proposed action or its impacts.

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<sup>15</sup> EPA Region 8 comments on draft SEIS (ADAMS Accession No. ML13036A159). Responses to EPA Region 8 comments are presented in Appendix E of the final SEIS (ADAMS Accession Nos. ML14024A477 and ML14024A478).

<sup>16</sup> See section 4.5.2.1.1.2.2 of the final SEIS under Excursions and Groundwater Quality (ADAMS Accession Nos. ML14024A477 and ML14024A478).

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The final SEIS does not contain new and significant information that would change the NRC staff finding.<sup>17</sup> Moreover, there has been no substantial change in the proposed action since the issuance of the final SEIS. No information or circumstances have been identified that warrant the issuance of a supplement or revise the SEIS for the Dewey-Burdock project.

Sincerely,

**/RA/**

Larry W. Camper, Director  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

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<sup>17</sup> The NRC staff summarized its findings in the Executive Summary of the final SEIS. This recommendation is based on: (i) the license application, including the ER and supplemental documents the applicant submitted and responses to the NRC staff requests for additional information; (ii) consultation with Federal, State, tribal, and local agencies; (iii) the NRC staff independent review; (iv) the NRC staff consideration of comments received on the draft SEIS; and (v) the assessments summarized in this SEIS.

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The final SEIS does not contain new and significant information that would change the NRC staff finding.<sup>18</sup> Moreover, there has been no substantial change in the proposed action since the issuance of the final SEIS. No information or circumstances have been identified that warrant the issuance of a supplement or revise the SEIS for the Dewey-Burdock project.

Sincerely,

Larry W. Camper, Director  
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and Environmental Protection  
Office of Federal and State Materials  
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<sup>18</sup> The NRC staff summarized its findings in the Executive Summary of the final SEIS. This recommendation is based on: (i) the license application, including the ER and supplemental documents the applicant submitted and responses to the NRC staff requests for additional information; (ii) consultation with Federal, State, tribal, and local agencies; (iii) the NRC staff independent review; (iv) the NRC staff consideration of comments received on the draft SEIS; and (v) the assessments summarized in this SEIS.