

**UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

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OG LALA SIOUX TRIBE,	)	
	)	
Petitioner,	)	No. 17-1059
	)	
v.	)	
	)	
UNITED STATES NUCLEAR	)	
REGULATORY COMMISSION and	)	
UNITED STATES OF AMERICA,	)	
	)	
Respondents.	)	

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**UNDERLYING DECISION FROM WHICH PETITION ARISES**

Pursuant to the Court’s February 22, 2017 Order, undersigned counsel for Petitioner Oglala Sioux Tribe hereby submit the attached underlying decisions from which this Petition arises:

1. The United States Nuclear Regulatory Commission’s (“Commission”) January, 2014 Final Environmental Impact Statement (“EIS”) for the Dewey-Burdock In-Situ Recovery Project in Custer and Fall River Counties, South Dakota (Attachment 1) (Excerpt);
2. The Commission’s April 8, 2014 Record of Decision (“ROD”) for the Dewey-Burdock Uranium In-Situ Recovery Project (Attachment 2);

3. The Commission's April 8, 2014 Materials License No. SUA-1600, Docket No. 040-09075, to Powertech (USA) Inc. (Apr. 8, 2014) (Attachment 3); and

4. The Commission's December 23, 2016 Memorandum and Order in *In the Matter of Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), Docket No. 40-9075-MLA, CLI-16-20 (December 23, 2016) (Attachment 4).

Respectfully submitted,

/s/ Jeffrey C. Parsons

Jeffrey C. Parsons

Western Mining Action Project

P.O. Box 349

440 Main Street, Ste. 2

Lyons, CO 80540

303-823-5738

(fax) 303-823-5732

[wmap@igc.org](mailto:wmap@igc.org)

Travis E. Stills

Energy & Conservation Law

911 Main Avenue, Suite 238

Durango, Colorado 81301

[stills@frontier.net](mailto:stills@frontier.net)

phone:(970)375-9231

*Counsel for Oglala Sioux Tribe*

Filed this 24<sup>th</sup> day of March, 2017.

## ATTACHMENT 1



United States Nuclear Regulatory Commission

*Protecting People and the Environment*

NUREG-1910  
Supplement 4, Vol. 1

# **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

Chapters 1 to 5

Office of Federal and State Materials and  
Environmental Management Programs

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NRC publications in the NUREG series, NRC regulations, and Title 10, "Energy," in the *Code of Federal Regulations* may also be purchased from one of these two sources.

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U.S. Government Printing Office  
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2. The National Technical Information Service  
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A single copy of each NRC draft report for comment is available free, to the extent of supply, upon written request as follows:

Address: U.S. Nuclear Regulatory Commission  
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Some publications in the NUREG series that are posted at NRC's Web site address <http://www.nrc.gov/reading-rm/doc-collections/nuregs> are updated periodically and may differ from the last printed version. Although references to material found on a Web site bear the date the material was accessed, the material available on the date cited may subsequently be removed from the site.

### Non-NRC Reference Material

Documents available from public and special technical libraries include all open literature items, such as books, journal articles, transactions, *Federal Register* notices, Federal and State legislation, and congressional reports. Such documents as theses, dissertations, foreign reports and translations, and non-NRC conference proceedings may be purchased from their sponsoring organization.

Copies of industry codes and standards used in a substantive manner in the NRC regulatory process are maintained at—

The NRC Technical Library  
Two White Flint North  
11545 Rockville Pike  
Rockville, MD 20852-2738

These standards are available in the library for reference use by the public. Codes and standards are usually copyrighted and may be purchased from the originating organization or, if they are American National Standards, from—

American National Standards Institute  
11 West 42<sup>nd</sup> Street  
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# **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

Chapters 1 to 5

Manuscript Completed: January 2014

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Office of Federal and State Materials and  
Environmental Management Programs



## ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC) issues licenses for the possession and use of source material provided that proposed facilities meet NRC regulatory requirements and will be operated in a manner that is protective of public health and safety and the environment. Under the NRC environmental protection regulations in 10 CFR Part 51, which implement the National Environmental Policy Act of 1969 (NEPA), issuance of a license to possess and use source material for uranium milling, as defined in 10 CFR Part 40, requires an environmental impact statement (EIS) or a supplement to an EIS.

In May 2009, NRC issued NUREG–1910, the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Facilities (GEIS) (NRC, 2009). In the GEIS, NRC assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of an *in-situ* leach uranium recovery facility [also known as an *in-situ* recovery (ISR) facility] located in four specified geographic regions of the western United States. As part of this assessment, NRC determined which potential impacts will be essentially the same for all ISR facilities and which will result in varying levels of impact for different facilities, thus requiring further site-specific information to determine potential impacts. The GEIS provides a starting point for NRC NEPA analyses for site-specific license applications for new ISR facilities, as well as for applications to amend or renew existing ISR licenses.

By letter dated August 10, 2009, Powertech (USA), Inc. (Powertech, referred to herein as the applicant) submitted a license application to NRC for a new source material license for the Dewey-Burdock ISR Project. The proposed Dewey-Burdock ISR Project will be located in Fall River and Custer Counties, South Dakota, which is in the Nebraska-South Dakota-Wyoming Uranium Milling Region identified in the GEIS. The NRC staff prepared this Supplemental Environmental Impact Statement (SEIS) to evaluate the potential environmental impacts from the applicant's proposal to construct, operate, conduct aquifer restoration, and decommission an ISR uranium facility at the proposed Dewey-Burdock ISR Project. This SEIS describes the environment potentially affected by the proposed site activities, presents the potential environmental impacts resulting from reasonable alternatives to the proposed action, and describes the applicant's environmental monitoring program and proposed mitigation measures. In conducting its analysis in this SEIS, the NRC staff evaluated site-specific data and information to determine whether the applicant's proposed activities and site characteristics were consistent with those evaluated in the GEIS. NRC staff then determined relevant sections, findings, and conclusions in the GEIS that could be incorporated by reference and areas that required additional analysis. Based on its environmental review, the NRC staff recommendation is that a source material license for the proposed action be issued as requested, unless safety issues mandate otherwise.

### Paperwork Reduction Act Statement

This NUREG contains and references information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget (OMB), approval numbers 3150-0014, 3150-0020, 3150-0021, and 3150-0008.

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#### References

10 CFR Part 40. Code of Federal Regulations, Title 10, *Energy*, Part 40. “*Domestic Licensing of Source Material.*” Washington, DC: U.S. Government Printing Office.

10 CFR Part 51. Code of Federal Regulations, Title 10, *Energy*, Part 51. “*Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.*” Washington, DC: U.S. Government Printing Office.

NRC. NUREG–1910, “Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities.” ML091480244, ML091480188. Washington, DC: NRC. May 2009.

ATTACHMENT 2

**U.S. NUCLEAR REGULATORY COMMISSION  
RECORD OF DECISION  
FOR THE DEWEY-BURDOCK URANIUM IN-SITU RECOVERY PROJECT  
IN CUSTER AND FALL RIVER COUNTIES, SOUTH DAKOTA**

**Introduction:**

The U.S. Nuclear Regulatory Commission (NRC) staff prepared this record of decision (ROD) for the proposed Dewey-Burdock Uranium In-Situ Recovery (ISR) Project in Custer and Fall River Counties, South Dakota. This ROD satisfies Section 51.102(a) of Title 10 of the *Code of Federal Regulations* (10 CFR), which states that “a Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision.”

In January 2014, the NRC staff issued a Final Supplemental Environmental Impact Statement (Final SEIS) (NRC, 2014a-b) in support of the NRC’s review of the Powertech (USA) Inc. (Powertech or “applicant”) license application. Powertech’s application, which it submitted in 2009 and later amended, is for a new source materials license for the Dewey-Burdock ISR Project (Powertech, 2009a-c). The Dewey-Burdock Final SEIS is Supplement 4 to the NRC staff’s *Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities* (NUREG-1910) (known as the GEIS) (NRC, 2009).

This ROD has been prepared pursuant to NRC regulations at 10 CFR § 51.102(b) and § 51.103(a)(1)-(4). Additionally, pursuant to 10 CFR § 51.103(c), this ROD incorporates by reference materials contained in the Final SEIS.

On January 5, 2010, the NRC staff notified the public of Powertech’s application for a materials license. The NRC staff also informed members of the public that they could request a hearing in connection with Powertech’s application. *Notice of Opportunity for Hearing, License Application Request of Powertech (USA) Inc. Dewey-Burdock In Situ Uranium Recovery Facility in Fall River and Custer Counties, SD*, 75 Fed. Reg. 467. The NRC’s Atomic Safety and Licensing Board Panel (ASLBP), an independent, trial-level adjudicatory body, granted hearing requests from the Oglala Sioux Tribe and a group that is now referred to as the Consolidated Intervenors (ASLBP, 2010). The ASLBP has scheduled an oral hearing for August 2014, and the hearing may involve environmental issues. This ROD may be revised in accordance with any ASLBP decision on those issues.

**The Decision:**

This ROD documents the NRC staff’s decision to issue a materials license to Powertech for its proposed Dewey-Burdock ISR Project in Custer and Fall River Counties, South Dakota (Materials License SUA-1600; NRC, 2014c). The license will authorize Powertech to possess uranium source and byproduct materials at the Dewey-Burdock facility. Under its license, Powertech will be able to construct and operate its facilities as proposed in its license application and under the conditions in its NRC license.

The proposed Dewey-Burdock ISR Project will be located approximately 21 kilometers (13 miles) north-northwest of Edgemont, South Dakota, in southern Custer and northern Fall River Counties. The proposed facility will encompass approximately 4,282 hectares (10,580 acres), which consists of two contiguous mining units, the Burdock Unit and the Dewey Unit. Powertech intends to recover uranium and produce yellowcake at the Dewey-Burdock site. Powertech’s proposed activities include construction, operation, aquifer restoration, and decommissioning of its ISR facility. In addition, Powertech has proposed that liquid wastewater

generated during uranium recovery be disposed of through one of the following methods: (i) deep well disposal via Class V injection wells, (ii) land application, or (iii) a combination of deep well disposal and land application. Together, these actions represent the “proposed action” evaluated in the Final SEIS.

During the ISR process, an oxidant-charged solution, called a lixiviant, will be injected into the production zone aquifer (uranium orebody) through injection wells. The lixiviant will be composed of native groundwater (from the production zone aquifer) and a combination of carbon dioxide and gaseous oxygen. As the lixiviant circulates through the production zone, it will oxidize and dissolve the mineralized uranium, which is present in a reduced chemical state. The resulting uranium-rich solution will be drawn to recovery wells by pumping and then transferred to a processing facility via a network of underground pipelines. At the processing facility, the uranium will be removed from solution via ion exchange. The resulting barren solution will then be recharged with the oxidant and reinjected to recover more uranium.

**Alternatives Considered in Reaching the Decision:**

The NRC staff analyzed a number of alternatives in detail before deciding to issue Powertech a license. These alternatives included the proposed action in the license application (including the three alternative wastewater disposal options) and the no-action alternative. Under the no-action alternative, the NRC staff would not approve Powertech’s license application and, as a result, Powertech would not construct or operate the proposed Dewey-Burdock ISR Project. The no-action alternative served as a baseline for comparing the potential environmental impacts of the proposed action. In Volume 1 of the Final SEIS (NRC, 2014a), the NRC staff describes both the proposed action and the no-action alternative (Section 2.1) and compares their potential environmental impacts (Section 2.3).

The NRC staff considered several other alternatives when evaluating the proposed action. The staff eliminated these alternatives from detailed analysis, however, for reasons discussed in Volume 1, Section 2.2, of the Final SEIS (NRC, 2014a). These alternatives included conventional uranium mining techniques and associated uranium milling alternatives (conventional milling and heap leaching) for the proposed project site, the use of alternative lixiviants (acid- or ammonia-based lixiviants), alternative project sites, and alternative well completion methods at the proposed project site.

In addition, the NRC staff considered alternative methods for disposing of liquid waste. The staff discusses these alternatives in Volume 1, Section 2.1.1.2, of the Final SEIS (NRC, 2014a). Specifically, the NRC staff considered what would occur if the U.S. Environmental Protection Agency does not grant Powertech an underground injection control (UIC) permit for Class V injection wells. The staff determined that Powertech would in that case need to rely solely on land application for liquid wastewater disposal or seek an NRC license amendment approving another disposal option. Thus, in Final SEIS Section 2.1.1.2 the staff evaluates the use of evaporation ponds and surface water discharge, which have historically been used by ISR facilities to manage and dispose of liquid wastes. The staff also compares characteristics of these two methods with those of Class V well injection and land application. Further, in Section 4.14.1.4 of the Final SEIS (NRC, 2014a), the staff evaluates the potential environmental impacts of using evaporation ponds and surface water discharge.

The alternatives identified above were included in the range of alternatives analyzed in the Final SEIS.

**Preferences Among Alternatives Based on Relevant Factors:**

In Volume 1, Chapters 4 and 5, of the Final SEIS (NRC, 2014a), the NRC staff assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of the proposed Dewey-Burdock ISR Project. The staff also assessed the potential impacts of three alternative wastewater disposal options and the no-action alternative. The NRC staff assessed the impacts of these alternatives on land use, transportation, geology and soils, water resources, ecological resources, air quality, noise, historical and cultural resources, visual and scenic resources, socioeconomics, environmental justice, public and occupational health and safety, and waste management. The staff compared the potential environmental impacts of the proposed action and the no-action alternative in Volume 1, Section 2.3, of the Final SEIS (NRC, 2014a). Additionally, in Volume 2, Chapter 8, of the Final SEIS (NRC, 2014b), the staff analyzed the benefits and costs of the proposed action and no-action alternative. In preparing the Final SEIS, the NRC staff also considered, evaluated, and addressed the public comments received on the Draft SEIS published on November 26, 2012 (77 Fed. Reg. 70,486).

After weighing the impacts of the proposed action and comparing the alternatives, the NRC staff determined that the proposed action is the preferred alternative and that the NRC should issue a source materials license for the proposed action. The NRC staff based its decision on: (i) the license application (including the applicant's environmental report) (Powertech, 2009a-c); (ii) the applicant's responses to NRC staff requests for additional information (Powertech, 2010a-c; 2011; 2012a-c; 2013); (iii) the NRC staff's consultations with Federal, State, and local agencies and with Native American Tribes; (iv) independent NRC staff review; (v) NRC staff consideration of comments received on the Draft SEIS (see Appendix E in Volume 2 of the Final SEIS (NRC, 2014b)); and (vi) the assessments in the NRC staff's Final SEIS (NRC, 2014a-b) and Safety Evaluation Report (NRC, 2014d) for the Dewey-Burdock ISR Project and in the GEIS (NRC, 2009).

**Measures to Avoid or Minimize Environmental Harm from the Alternative Selected:**

As described below, the NRC has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected. In its license application (Powertech, 2009a-c) and in response to NRC staff requests for additional information (Powertech, 2010a-c; 2011; 2012a-c), the applicant identified mitigation measures to control and minimize potential adverse environmental impacts from construction, operation, aquifer restoration, and decommissioning of the Dewey-Burdock ISR Project. The applicant also identified environmental measures and monitoring programs to verify compliance with standards for the protection of worker health and safety in operational areas and for protection of the public and environment beyond the facility boundary. As discussed below, the applicant's mitigation measures and monitoring programs are included by the NRC staff as conditions in the materials license.

The mitigation measures identified by the applicant are listed for each resource area in Volume 2, Table 6.2-1, Section 6.2, of the Final SEIS (NRC, 2014b). Because many of the applicant's proposed mitigation measures apply to all four phases of the ISR process, they are listed together in the table. The applicant's environmental measures and monitoring programs for the Dewey-Burdock ISR Project are described in detail in Volume 2, Chapter 7, of the Final SEIS (NRC, 2014b), organized as follows: Radiological Monitoring (Section 7.2), Physicochemical Monitoring (Section 7.3), Ecological Monitoring (Section 7.4), Land Application Monitoring (Section 7.5), and Class V Deep Injection Well Monitoring (Section 7.6). These monitoring programs will provide data on operational and environmental conditions so that prompt corrective actions can be implemented when adverse conditions are detected. In this regard,

these programs will help to limit potential environmental impacts at the Dewey-Burdock ISR Facility and the surrounding areas.

Administrative Condition 9.2 of Materials License SUA-1600 (NRC, 2014c) requires Powertech to conduct operations in accordance with the commitments, representations, and statements contained in its license application and supplementary submittals. License Condition 9.2 incorporates by reference Powertech's approved application and the supplements to its application. Powertech's commitments, representations, and statements include the mitigation measures and monitoring programs described above. Additional license conditions relevant to mitigation and monitoring include: mitigation of potential impacts to cultural resources (Administrative Condition 9.8); documentation in association with monitoring programs (Administrative Condition 9.10); and implementation of a preoperational and operational sampling plan if land application is utilized (Operations, Controls, Limits, and Restrictions – Standard Condition 10.12).

**References:**

75 Fed. Reg. 467. *Federal Register*, Vol. 75, No. 2, p. 467–471. “Notice of Opportunity for Hearing, License Application Request of Powertech (USA) Inc. Dewey-Burdock In Situ Uranium Recovery Facility in Fall River and Custer Counties, SD, and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information (SUNSI) for Contention Preparation.” January 5, 2010.

77 Fed. Reg. 70,486. *Federal Register*, Vol. 77, No. 227, p. 70486-70487. “Supplemental Environmental Impact Statement for Proposed Dewey-Burdock In-Situ Uranium Recovery Project in Custer and Fall River Counties, SD.” November 26, 2012.

ASLBP (Atomic Safety and Licensing Board). “Memorandum and Order (Ruling on Petitions to Intervene and Requests for Hearing).” In the Matter of Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility) Docket No. 40-9075-MLA. ASLBP No. 10-898-02-MLA BD01. ADAMS Accession No. ML102170300. Washington, DC: U.S. Nuclear Regulatory Commission, ASLBP. August 5, 2010.

NRC (U.S. Nuclear Regulatory Commission). NUREG-1910, “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. Supplement 4, Volume 1. ADAMS Accession No. ML14024A477. Washington, DC: NRC, Office of Federal and State Materials and Environmental Management Programs. January 2014a.

NRC. NUREG-1910, “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. Supplement 4, Volume 2. ADAMS Accession No. ML14024A478. Washington, DC: NRC, Office of Federal and State Materials and Environmental Management Programs. January 2014b.

NRC. “Materials License SUA-1600, Dewey-Burdock Project in Fall River and Custer Counties, South Dakota.” ADAMS Accession No. ML14043A392. Washington, DC: NRC, Office of Federal and State Materials and Environmental Management Programs. 2014c.

NRC. Safety Evaluation Report (Revised) for the Dewey-Burdock Project, Fall River and Custer Counties, South Dakota.” Materials License No. SUA-1600. ADAMS Accession No. ML14043A347. Washington, DC: NRC, Office of Federal and State Materials and Environmental Management Programs. March 2014d.

NRC. NUREG–1910, “Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities.” ADAMS Accession Nos. ML091480244 (Volume 1) and ML091480188 (Volume 2). Washington, DC: NRC. May 2009.

Powertech (Powertech (USA) Inc.). “Final Air Modelling Report and Protocol (3 of 3).” Email (July 11) from J. Mays to R. Burrows, NRC, Office of Administration. ADAMS Accession No. ML13196A118. Greenwood Village, Colorado: Powertech 2013.

Powertech. “Re: Powertech (USA) Inc.’s Supplemental Sampling Plan and Responses to Comments Regarding Draft License SUA-1600, Dewey-Burdock Project, Docket No. 40-9075, TAC No. J00606.” Letter from R. Blubaugh, Vice President—Environmental, Health and Safety Resources, Powertech to R. Burrows, NRC. ADAMS Accession no. ML12305A056. October 19, 2012a.

Powertech. “Dewey-Burdock Project Groundwater Discharge Plan, Custer and Fall River Counties, South Dakota.” ADAMS Accession Nos. ML12195A039 and ML12195A040. Edgemont, South Dakota: Powertech. March 2012b.

Powertech. “Dewey-Burdock Project Emissions Inventory Revisions.” Email (July 31) from R. Blubaugh to Bradley Werling, Southwest Research Institute®. ADAMS Accession No. ML12216A220. South Dakota: Powertech. 2012c.

Powertech. “Dewey-Burdock Project, Application for NRC Uranium Recovery License, Fall River and Custer Counties, South Dakota, Technical Report RAI Responses, June, 2011.” ADAMS Accession No. ML112071064. Greenwood Village, Colorado: Powertech. 2011.

Powertech. “Dewey-Burdock Project, Application for NRC Uranium Recovery License Fall River and Custer Counties, South Dakota ER\_RAI Response August 11, 2010.” ADAMS Accession No. ML102380516. Greenwood Village, Colorado: Powertech. 2010a.

Powertech. “Subject: Powertech (USA), Inc.’s Responses to the U.S. Nuclear Regulatory Commission (NRC) Staff’s Verbal and Email Requests for Clarification of Selected Issues Related to the Dewey-Burdock Uranium Project Environmental Review Docket No. 40-9075; TAC No. J 00533.” Letter (November 4) from R. Blubaugh, Vice President-Environmental Health and Safety Resources to R. Burrows, Project Manager, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. ADAMS Accession No. ML110820582. Greenwood Village, Colorado: Powertech. 2010b.

Powertech. “Subject: Powertech (USA), Inc.’s Responses to the U.S. Nuclear Regulatory Commission (NRC) Staff’s Verbal Request for Clarification of Response Regarding Inclusion of Emissions from Drilling Disposal Wells; Dewey-Burdock Uranium Project Environmental Review Docket No. 40-9075; TAC No. J 00533.” Letter (November 17) from R. Blubaugh, Vice President-Environmental Health and Safety Resources to R. Burrows, Project Manager, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. ADAMS Accession No. ML103220208. Greenwood Village, Colorado: Powertech. 2010c.

Powertech. "Dewey-Burdock Project, Application for NRC Uranium Recovery License, Fall River and Custer Counties, South Dakota—Environmental Report." Docket No. 040-09075. ADAMS Accession No. ML092870160. Greenwood Village, Colorado: Powertech. August 2009a.

Powertech. "Dewey-Burdock Project, Application for NRC Uranium Recovery License, Fall River and Custer Counties, South Dakota—Technical Report." Docket No. 040-09075. ADAMS Accession No. ML092870160. Greenwood Village, Colorado: Powertech. August 2009b.

Powertech. "Dewey-Burdock Project, Supplement to Application for NRC Uranium Recovery License Dated February 2009." Docket No. 040-09075. ADAMS Accession No. ML092870160. Greenwood Village, Colorado: Powertech. August 2009c.

Docket No.: 04009075  
License No.: SUA-1600

FOR THE NUCLEAR REGULATORY COMMISSION

Date: 4/8/14

/RA/  
Andrew Persinko, Deputy Director  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

**ATTACHMENT 3**

NRC FORM 374

## U.S. NUCLEAR REGULATORY COMMISSION

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and the applicable parts of Title 10, Code of Federal Regulations, Chapter I, Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 70, and 71, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Powertech (USA) Inc.		3. License Number SUA-1600
2. 5575 DTC Parkway, Suite 140 Greenwood Village, CO 80111		4. Expiration Date April 8, 2024
		5. Docket No. 40-09075 Reference No.
6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
a. Natural Uranium	Any	a. Unlimited
b. Byproduct material as defined in 10 CFR 40.4	Unspecified	b. Quantity generated under operation authorized by this license

**SECTION 9: Administrative Conditions**

- 9.1 The authorized place of use shall be the licensee's Dewey-Burdock Project in Fall River and Custer Counties, South Dakota. The licensee shall conduct operations within the license boundaries shown in Figure 1.4-1 of the approved license application.
- 9.2 The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated February 28, 2009 (Accession No. ML091200014), which is supplemented by the submittals dated August 10, 2009 (Accession No. ML092870160); June 28, 2011 (Accession No. ML112071064); February 27, 2012 (Accession No. ML120620195); April 11, 2012 (Accession No. ML121030013); June 13, 2012 (Accession No. ML12173A038); June 27, 2012 (Accession No. ML12179A534); and October 19, 2012 (Accession No. ML12305A056). The approved application and supplements are, hereby, incorporated by reference, except where superseded by specific conditions in this license. The licensee must maintain at least one copy of its complete, updated, and approved license application at the licensed facility. Unless otherwise specified, all references to the "license application" refer to the current, updated application including updates made per License Condition (LC) 9.4.

Whenever the words "will" or "shall" are used in the above referenced documents, it shall denote a requirement. The use of "verification" in this license with respect to a document submitted for NRC staff review means a written acknowledgement by U.S. Nuclear Regulatory Commission (NRC) staff that the specified submitted material is consistent with commitments in the approved license application, or requirements in a license condition or regulation. A verification will not require a license amendment.

**MATERIALS LICENSE  
 SUPPLEMENTARY SHEET**

License Number SUA-1600

Docket or Reference Number  
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- 9.3 All written notices and reports sent to the U.S. Nuclear Regulatory Commission (NRC) as required under this license and by regulation shall be addressed as follows: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. An additional copy shall be submitted to: Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Two White Flint North, 11545 Rockville Pike, Mail Stop T-8F5, Rockville, MD 20852-2738. Incidents and events that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100 (collect calls accepted).
- 9.4 Change, Test, and Experiment License Condition
- A) The licensee may, without obtaining a license amendment pursuant to 10 CFR 40.44, and subject to conditions specified in (B) of this condition:
- i Make changes to the facility as described in the license application;
  - ii Make changes to the procedures as described in the license application; and
  - iii Conduct tests or experiments not described in the license application.
- B) The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:
- i Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application;
  - ii Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a facility structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application;
  - iii Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application;
  - iv Result in more than a minimal increase in the consequences of a malfunction of an SEMS previously evaluated in the license application;
  - v Create a possibility for an accident of a different type than any previously evaluated in the license application;
  - vi Create a possibility for a malfunction of an SEMS with a different result than previously evaluated in the license application;
  - vii Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER), environmental impact statement (EIS), environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations for license amendments.

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viii For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been referenced in a staff SER, TER, EA, or EIS and supplements and amendments thereof.

- C) Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC staff's previous conclusions, or the basis of or analysis leading to those conclusions, regarding actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This includes all supplements and amendments to the license, as well as all SERs, TERs, EAs, and EISs associated with amendments to this license.
- D) The licensee's determinations concerning (B) and (C) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., a Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the radiation safety officer (RSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as groundwater or surface water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.
- E) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (B) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages, which shall include both a change indicator for the area changed (e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed) and a page change identification (date of change, change number, or both) for the operations plan and reclamation plan of the approved license application that reflects changes made under this condition.

9.5 **Financial Assurance.** The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR Part 40, Appendix A, Criterion 9, to adequately cover the estimated costs of decommissioning and decontamination, if accomplished by a third party. This surety arrangement shall cover offsite disposal of radioactive solid process or evaporation pond residues, and groundwater restoration pursuant to 10 CFR Part 40, Appendix A Criterion 5B (5). The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination.

Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date. The financial assurance anniversary date for the Dewey-Burdock Project will be the date on which the first surety instrument is approved by the NRC. If the NRC has not approved a proposed revision

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30 days prior to the expiration date of the existing financial assurance arrangement, the licensee shall extend the existing arrangement, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency of the financial assurance estimate, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure.

Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents.

At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC review and approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial-assurance-related correspondence submitted to the U.S. Environmental Protection Agency, a copy of the U.S. Environmental Protection Agency's financial assurance review, and the final approved financial assurance arrangement. The licensee also must ensure that the financial assurance instrument, where authorized to be held by a State or other Federal agency, identifies the NRC-related portion of the instrument and covers the activities discussed earlier in this license condition. The basis for the cost estimate is the NRC-approved site decommissioning and reclamation plan and any NRC approved revisions to the plan. Reclamation and decommissioning cost estimates and annual updates should follow the outline in Appendix C, "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates," to NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications—Final Report."

The licensee shall continuously maintain an approved surety instrument for the Dewey-Burdock Project, in favor of the NRC except for plugging and abandoning of all Class III and Class V injection wells, which will be maintained in favor of the U.S. Environmental Protection Agency. The initial surety estimate shall be submitted for NRC staff review and approval within 90 days of license issuance, and the surety instrument shall be submitted for NRC staff review and approval 90 days prior to commencing operations. The initial surety estimate shall include a reasonable estimate for the duration of groundwater restoration based on current experiences at licensed ISR facilities. The licensee shall also calculate pore volumes based on the actual screen lengths of injection and production wells and not by ore zone thickness.

- 9.6 Release of surficially contaminated equipment, materials, or packages for unrestricted use shall be in accordance with the NRC guidance document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (the Guidelines) dated April 1993 (ADAMS Accession No. ML003745526) or suitable alternative procedures approved by NRC prior to any such release.

Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides shall apply independently.

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Personnel performing contamination surveys for items released for unrestricted use shall meet the qualifications for health physics technicians or radiation safety officers defined in Regulatory Guide 8.31 (as revised). Personal effects (e.g., notebooks and flash lights) which are hand carried need not be subjected to the qualified individual survey or evaluation, but these items should be subjected to the same survey requirements as the individual possessing the items.

Regulatory Guide 8.30 (as revised), Table 2, shall apply to the removal to unrestricted areas of equipment, materials, or packages that have the potential for accessible surface contamination levels above background. The licensee shall submit to the NRC for review and written verification a contamination control program. The program shall provide sufficient detail to demonstrate how the licensee will maintain radiological controls over the equipment, materials, or packages that have the potential for accessible surface contamination levels above background, until they have been released for unrestricted use as specified in the Guidelines, and what methods will be used to limit the spread of contamination to unrestricted areas. The contamination control program shall demonstrate how the licensee will limit the spread of contamination when moving or transporting potentially contaminated equipment, materials, or packages (pumps, valves, piping, filters, etc.) from restricted or controlled areas through uncontrolled areas. The licensee shall receive written verification of the licensee's contamination control program from the NRC prior to implementing such a program in lieu of the recommendations in RG 8.30.

The licensee may identify a qualified designee(s) to perform surveys, associated with the licensee's contamination control program when moving or transporting potentially contaminated equipment, materials, or packages from restricted or controlled areas through uncontrolled areas and back into controlled or restricted areas. The qualified designee(s) shall have education, training, and experience, in addition to general radiation worker training, as specified by the licensee. The education, training, and experience required by the licensee for qualified designees shall be submitted to the NRC for review and written verification. The licensee shall receive written verification of its qualified designee(s) training program from the NRC prior to its implementation.

9.7 The licensee shall follow the guidance set forth in the current versions of NRC Regulatory Guides 8.22, "Bioassay at Uranium Recovery Facilities," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)" or NRC-approved equivalent measures.

9.8 Cultural Resources. Before engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory if such survey has not been previously conducted and submitted to the NRC. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR Part 800), as well as the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR Part 7).

In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC, the South Dakota State Historic Preservation Officer, and the Bureau of Land Management (if on Bureau of Land Management Land) to proceed.

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The licensee shall comply with the terms and conditions included in a Programmatic Agreement (PA) executed on April 7, 2014 (ADAMS Accession No. ML14066A344) that was developed to protect cultural resources within the Dewey-Burdock project boundary. If the PA is terminated, the licensee shall comply with Stipulation 16(c) of the PA. Therefore, in the event the PA is terminated, Powertech is required to follow the terms and conditions provided in the PA for on-going ground-disturbing activities, and is not permitted to begin ground-disturbing activities in unevaluated areas, until the NRC completes consultation and a new PA is executed, or the NRC has requested, taken into account, and responded to the comments of the ACHP under 36 CFR § 800.7(c)(4).

- 9.9 The licensee shall dispose of solid byproduct material from the Dewey-Burdock Project at a site that is licensed by the NRC or an NRC Agreement State to receive byproduct material. The licensee's approved solid byproduct material disposal agreement must be maintained on site. In the event that the agreement expires or is terminated, the licensee shall notify the NRC within seven working days after the date of expiration or termination. A new agreement shall be submitted for NRC staff review and written verification within 90 days after expiration or termination, or the licensee will be prohibited from further lixiviant injection.
- 9.10 The results of the following activities, operations, or actions shall be documented: sampling; analyses; surveys or monitoring; survey/ monitoring equipment calibrations; reports on audits and inspections; all meetings and training courses; and any subsequent reviews, investigations, or corrective actions required by NRC regulation or this license. Unless otherwise specified in a license condition or applicable NRC regulation, all documentation required by this license shall be maintained at the site until license termination, and is subject to NRC review and inspection.
- 9.11 The licensee is hereby exempted from the requirements of 10 CFR 20.1902(e) for areas within the facility, provided that all entrances to the facility are conspicuously posted with the words, "CAUTION: ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL."

**SECTION 10: Operations, Controls, Limits, and Restrictions**

*Standard Conditions*

- 10.1 The licensee shall use a lixiviant composed of native groundwater and a combination of carbon dioxide and gaseous oxygen, as specified in the approved license application.
- 10.2 Facility Throughput. The Dewey-Burdock Project throughput shall not exceed an average annual flow rate of 4,000 gallons per minute, excluding restoration flow. The annual production of yellowcake shall not exceed 1 million pounds.
- 10.3 At least 12 months prior to initiation of any planned final site decommissioning, reclamation, or groundwater restoration, the licensee shall submit a detailed decommissioning plan for NRC staff review and approval. The plan shall represent as-built conditions at the Dewey-Burdock Project.
- 10.4 The licensee shall have written standard operating procedures (SOPs) prior to operations for:
  - A) All routine operational activities involving radioactive and nonradioactive materials associated with licensed activities that are handled, processed, stored, or transported by employees;

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- B) All routine nonoperational activities involving radioactive materials, including in-plant radiation protection, quality assurance for the respirator program, and environmental monitoring; and
- C) Emergency procedures for potential accidents/unusual occurrences, including significant equipment or facility damage, pipe breaks and spills, loss or theft of yellowcake or sealed sources, significant fires, and other natural disasters.

The SOPs shall include appropriate radiation safety practices to be followed in accordance with 10 CFR Part 20. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. Current copies of the SOPs shall be kept in the area(s) of the production facility where they are utilized. These SOPs are subject to inspection, including the preoperational inspection specified in LC 12.3.

10.5 Mechanical Integrity Tests (MITs). The licensee shall construct all wells in accordance with methods described in Sections 3.1.2.2 and 3.1.2.3 of the approved license application. The licensee shall perform well MITs on each injection and production well before the wells are utilized and on wells that have been serviced with down hole drilling or reaming equipment or procedures that could damage the well casing. Additionally, the licensee shall retest each well at least once every 5 years. The licensee shall perform MITs in accordance with Section 3.1.2.4 of the licensee's approved license application. Any failed well casing that cannot be repaired to pass the MIT shall be appropriately plugged and abandoned in accordance with Section 6.1.8 of the approved license application.

10.6 Groundwater Restoration. The licensee shall conduct groundwater restoration activities in accordance with Section 6.1 of the approved license application. Permanent cessation of lixiviant injection in a production area would signify the licensee's intent to shift from the principal activity of uranium recovery to the initiation of groundwater restoration and decommissioning for any particular production area. If the licensee determines that these activities are expected to exceed 24 months for any particular production area, the licensee shall submit an alternate schedule request that meets the requirements of 10 CFR 40.42.

Restoration Standards. Hazardous constituents in the groundwater shall be restored to the numerical groundwater protection standards required by 10 CFR Part 40, Appendix A, Criterion 5B(5). In submitting any license amendment application requesting review and approval of proposed alternate concentration limits (ACLs) pursuant to Criterion 5B(6), the licensee must show that it has first made practicable effort to restore the specified hazardous constituents to the background or maximum contaminant levels (whichever is greater).

Restoration Stability Monitoring. The licensee shall conduct sampling of all constituents of concern on a quarterly basis during restoration stability monitoring. The sampling shall include the specified production zone aquifer wells. The applicant shall continue the stability monitoring until the data show that the most recent four consecutive quarters indicate no statistically significant increasing trend for all constituents of concern that would lead to an exceedance above the respective standard in 10 CFR Part 40, Appendix A, Criterion 5B(5).

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Notwithstanding the LC 9.4 change process, the licensee shall not implement any changes to groundwater restoration or post-restoration monitoring plans without written NRC verification that the criteria in LC 9.4 do not require a license amendment. The licensee shall submit all changes to groundwater restoration or post-restoration monitoring plans to the NRC staff, for review and written verification, at least 60 days prior to commencement of groundwater restoration in a production area.

- 10.7 The licensee shall maintain a net inward hydraulic gradient at a wellfield as measured from the surrounding perimeter monitoring well ring starting when lixiviant is first injected into the production zone and continuing until initiation of the stabilization period.
- 10.8 The licensee is permitted to construct and operate storage and treatment ponds, as described in Section 4.2 of the approved license application. Routine pond inspections will be conducted consistent with inspection procedures described in Regulatory Guide 3.11.
- 10.9 The licensee shall establish and conduct an effluent and environmental monitoring program in accordance with those programs described in Section 5.7.8 and Section 5.7.7 of the approved license application.

*Facility Specific Conditions*

10.10 Hydrologic Test Packages.

A) Prior to principal activities in a new wellfield, the licensee shall submit a hydrologic test package to the NRC at least 60 days prior to the planned start date of lixiviant injection. The hydrologic test package for B-WF-1 or D-WF-1, whichever is developed first, will be submitted for review and written verification while the remaining hydrologic test packages will be submitted for NRC staff review except as described in paragraph B of this License Condition. In each hydrologic test data package, the licensee will document that all perimeter monitoring wells are screened in the appropriate horizon in order to provide timely detection of an excursion. Contents of a wellfield package shall include:

- A description of the proposed wellfield (location, extent, etc.).
- Map(s) showing the proposed production and injection well patterns and locations of all monitor wells.
- Geologic cross sections and cross section location maps.
- Isopach maps of the production zone sand and overlying and underlying confining units.
- Discussion of aquifer test procedures, including well completion reports.
- Discussion of the results and conclusions of aquifer tests, including raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and, when appropriate, directional transmissivity data and graphs.
- Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns.
- All raw analytical data for Commission-approved background water quality.
- Summary tables of analytical data showing computed Commission-approved background water quality.
- Descriptions of statistical methods for computing Commission-approved background water quality.

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- Any other information pertinent to the proposed wellfield area tested will be included and discussed.

B) The licensee will submit, for NRC review and approval, hydrologic test packages for wellfields BWF-6, -7, and -8. No extraction will be permitted in these wellfields until the staff approves the hydrologic package. Hydrologic packages shall include all the information in paragraph A of this license condition and aquifer test results that address the partially unsaturated conditions of the Chilson Aquifer in these wellfields. These hydrologic packages will also contain a justification for well spacings in the monitoring well ring and overlying and underlying aquifers.

10.11 The licensee is prohibited from using the "glue and screw" method of joining well casings to construct any monitoring, injection, or production well.

10.12 If land application is utilized, the licensee will implement a pre operational and operational sampling plan, as discussed in Section 6.0 of the licensee's Groundwater Discharge Plan submitted to and per the conditions in its Groundwater Discharge Plan permit issued by the South Dakota Department of Environment and Natural Resources, until principal activities at the land application areas cease.

10.13 The licensee shall conduct radiological characterization of airborne samples for natural U, Th-230, Ra-226, Po-210, and Pb-210 for each restricted area air particulate sampling location at a frequency of once every 6 months for the first 2 years following issuance of the initial license, and annually thereafter to ensure compliance with 10 CFR 20.1204(g). The licensee shall also evaluate changes to plant operations to determine if more frequent radionuclide analyses are required for compliance with 10 CFR 20.1204(g).

10.14 The licensee shall ensure radiation safety training is consistent with the current versions of Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure," Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," and Section 2.5 of Regulatory Guide 8.31, or NRC-approved equivalent guidance.

**SECTION 11: Monitoring, Recording, and Bookkeeping Requirements**

*Standard Conditions*

11.1 In addition to reports required to be submitted to NRC or maintained on-site by Title 10 of the Code of Federal Regulations, the licensee shall prepare the following reports related to operations at the facility:

- A) Quarterly reports that include a summary of excursion parameter concentrations, wells placed on or removed from excursion status, corrective actions taken, and the results obtained for all wells that were on excursion status during that quarter. These reports shall be submitted to NRC within 60 days following completion of the reporting period.
- B) Semiannual reports that discuss the status of wellfields in operation (including last date of lixiviant injection), progress of wellfields in restoration and restoration progress, status of any long-term excursions, and a summary of MITs during the reporting period. These reports shall be submitted to NRC within 60 days following completion of the reporting period.

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- C) Quarterly reports summarizing daily flow rates for each injection and production well and injection manifold pressures on the entire system. These reports shall be made available for inspection upon request.
  - D) Consistent with Regulatory Position 2 of Regulatory Guide 4.14, semiannual reports that summarize the results of the operational effluent and environmental monitoring program. The licensee shall submit these reports consistent with the terms of Regulatory Guide 4.14.
- 11.2 The licensee shall submit to the NRC the results of its annual review of its radiation protection program content and implementation performed in accordance with 10 CFR 20.1101(c). These results shall include an analysis of dose to individual members of the public consistent with 10 CFR 20.1301 and 10 CFR 20.1302.
- 11.3 Establishment of Commission-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield, as defined by the licensee, the licensee shall establish Commission-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. Commission-approved background sampling will be performed in accordance with Section 5.7.8 of the approved license application, and samples shall be analyzed for the parameters listed in Table 6.1-1 of the approved application. The licensee shall submit any revisions to its Commission-approved background water quality sampling plan to the NRC staff for review and approval.
- 11.4 Establishment of UCLs. Prior to injection of lixiviant into each production wellfield, as defined by the licensee, the licensee shall establish excursion parameters and their respective upper control limits (UCLs) in the designated overlying aquifer(s), underlying aquifer, and perimeter monitoring areas in accordance with Section 5.7.8 of the approved license application. Unless otherwise determined, the site-specific excursion parameters are chloride, conductivity, and total alkalinity. The UCLs shall be established for each excursion control parameter and for each well based on the mean plus five standard deviations of the data collected for LC 11.3. The UCL for chloride can be set at the sum of the background mean concentration and either (a) five standard deviations or (b) 15 mg/L, whichever sum provides the higher limit. The licensee shall submit any revisions to its plan for establishing UCLs to the NRC staff for review and approval.
- 11.5 Excursion Monitoring. Monitoring for excursions shall occur twice monthly, and no more than 14 days apart in any given month during operations, for all wells where UCLs have been established per Section 5.7.8 of the approved license application. If a designated monitor well is not sampled within 14 days of a previous sampling event, the reasons for this postponement shall be documented. Sampling shall not be postponed for more than 5 days.

If the concentrations of any two excursion indicator parameters exceed their respective UCL or any one excursion indicator parameter exceeds its UCL by 20 percent, the excursion criterion is exceeded and a verification sample shall be taken from that well within 48 hours after results of the first analyses are received. If the verification sample confirms that the excursion criterion is exceeded, the well shall be placed on excursion status. If the verification sample does not confirm that the excursion criterion is exceeded, a third sample shall be taken within 48 hours after the results of the verification sample are received. If the third sample shows that the excursion criterion is exceeded, the well shall be placed on excursion status. If the third sample does not show that the excursion criterion is exceeded, the first sample shall be considered an error and routine excursion monitoring will be resumed (the well is not placed on excursion status).

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Upon confirmation of an excursion, the licensee shall notify NRC, as discussed below, implement corrective action, and increase the sampling frequency for the excursion indicator parameters at the well on excursion status to at least once every 7 days. Corrective actions for confirmed excursions may be, but are not limited to, those described in Section 5.7.8 of the approved license application. An excursion is considered corrected when concentrations of all indicator parameters are below the concentration levels defining the excursion for three consecutive weekly samples.

If an excursion is not corrected within 60 days of confirmation, the licensee shall either (a) terminate injection of lixiviant within the wellfield until the excursion is corrected; or (b) increase the surety in an amount to cover the full third-party cost of correcting and cleaning up the excursion. The surety increase shall remain in force until the NRC has verified that the excursion has been corrected and remediated. The written 60-day excursion report shall identify which course of action the licensee is taking. Under no circumstances does this condition eliminate the requirement that the licensee remediate the excursion to meet groundwater protection standards as required by LC 10.6 for all constituents established per LC 11.3.

The licensee shall notify the NRC Project Manager (PM) by telephone or email within 24 hours of confirming a lixiviant excursion, and by letter within 7 days from the time the excursion is confirmed, pursuant to LC 11.6 and 9.3. A written report describing the excursion event, corrective actions taken, and the corrective action results shall be submitted to the NRC within 60 days of the excursion confirmation. For all wells that remain on excursion status after 60 days, the licensee shall submit a report as discussed in LC 11.1(A).

- 11.6 Until license termination, the licensee shall maintain documentation on unplanned releases of source or byproduct material (including process solutions) and process chemicals. Documented information shall include, but not be limited to, the date, spill volume, total activity of each radionuclide released, radiological survey results, soil sample results (if taken), corrective actions, results of postremediation surveys (if taken), a map showing the spill location and the impacted area, and an evaluation of NRC reporting criteria.

The licensee shall have written procedures for evaluating the consequences of the spill or incident/event against 10 CFR Part 20, Subpart M, "Reports," and 10 CFR 40.60 reporting criteria. If the criteria are met, the licensee shall report to the NRC Operations Center as required.

If the licensee must report any production area excursion or spill of source material, byproduct material, or process chemicals that may have an impact on the environment, or any other incident/event, to any State or other Federal agency, the licensee shall make a report to the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 24 hours. In accordance with LC 9.3, this notification shall be followed, within 30 days of the notification, by submittal of a written report to NRC Headquarters detailing the conditions leading to the spill or incident/event, corrective actions taken, and results achieved.

*Facility Specific Conditions*

- 11.7 The licensee shall submit semi-annual reports that present the flow rates and volumes of liquid effluent discharged to Class V disposal wells and land application areas, influent flow rates into satellite and central processing plants, and bleed rates. The first report is due no later than 12 months after the start of operations, and shall account for all effluent discharges and inflows during the previous 12 months.

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11.8 After the initial land use update discussed in LC 12.15, every 12 months thereafter the licensee shall submit a land use update report for NRC staff review, until groundwater restoration and decommissioning are completed and approved by the NRC.

**SECTION 12.0: Preoperational Conditions**

*Standard Conditions*

- 12.1 Prior to commencement of operations in any production area, the licensee shall obtain all necessary permits, licenses, and approvals from the appropriate regulatory authorities. The licensee shall also submit a copy of all permits for its Class III and Class V underground injection wells to the NRC.
- 12.2 Prior to commencement of operations, the licensee shall coordinate emergency response requirements with local authorities, fire department, medical facilities, and other emergency services. The licensee shall document these coordination activities and maintain such documentation on-site.
- 12.3 The licensee shall not commence operations until the NRC performs a preoperational inspection to confirm, in part, that written operating procedures and approved radiation safety and environmental monitoring programs are in place, and that preoperational testing is complete. The licensee should notify the NRC, at least 90 days prior to the expected commencement of operations, to allow the NRC sufficient time to plan and perform the preoperational inspection.
- 12.4 The licensee shall identify the location, screen depth, and estimated pumping rate of any new groundwater wells or new use of an existing well within the license area and within 2 kilometers (1.25 miles) of any proposed wellfield boundary, as measured from the perimeter monitoring well ring, since the application was submitted to the NRC. The licensee shall evaluate the impact of ISR operations to potential groundwater users and recommend any additional monitoring or other measures to protect groundwater users. The evaluation shall be submitted to the NRC for review within 6 months of discovery of such well use.
- 12.5 Prior to commencement of operations, the licensee shall submit the qualifications of radiation safety staff members for NRC staff review and written verification.
- 12.6 Prior to commencement of operations, the licensee shall submit a copy of the solid byproduct material disposal agreement to the NRC.

*Facility Specific Conditions*

- 12.7 At least 60 days prior to construction, the licensee will propose in writing, for NRC review and written verification, a monitoring well network for the Fall River Aquifer in the Burdock area for those wellfields in which the Chilson Aquifer is the extraction zone.
- 12.8 The licensee will continue to collect additional meteorological data on a continuous basis at a data recovery rate of 90 percent until the data collected is determined by the NRC staff to be representative of long-term conditions. Justification of the similarity or validity of the data will include analysis of the statistical data presented to illustrate confidence in the representativeness of the data. The data collected shall include, at a minimum, wind speed, wind direction, and an annual wind rose. The submittal shall include a summary of the stability classification.

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- 12.9 The licensee shall submit preoperational surface water analytical data for the new surface water sampling locations to the NRC for review and written verification within 3 months of the initiation of operations. Surface water analytical data shall be of the same completeness (e.g. parameters, quality of analyses, and frequency) as the data provided in the licensee's June 2011 submittal (ADAMS Accession No. ML112071064).
- 12.10 Prior to commencement of operations, the licensee will collect four quarterly groundwater samples from each well within 2 km (1.25 mi) of the boundary of any wellfield, as measured from the perimeter monitoring well ring. This data shall be submitted to the NRC staff for review and written verification. Furthermore, all domestic, livestock, and crop irrigation wells within 2 km (1.25 mi) of the boundary of any wellfield, as measured from the perimeter monitoring well ring, will be included in the routine environmental sampling program provided that well owners consent to sampling and the condition of the wells renders them suitable for sampling.
- 12.11 No later than 30 days prior to construction, the licensee will provide additional statistical analysis of the soil sampling data and gamma measurements to establish sufficient statistical relationships. If such relationships are not sufficient for use at the site, additional procedures or data shall be submitted to the NRC staff for review and written verification.
- 12.12 No later than 30 days before the start of operations, the licensee shall provide the NRC staff, for review and written verification, its procedures for documenting the wellfield inspections. These procedures shall include the personnel tasked with performing these inspections, items to be inspected, criteria for determining upset conditions, and the manner in which the inspections will be documented.
- 12.13 No later than 30 days prior to the preoperational inspection, the licensee shall provide to the NRC staff, for review and written verification, its procedures for preparing logs of the dryer and emissions control system performance in accordance with 10 CFR Part 40, Appendix A, Criterion 8. The procedure shall include the manner in which logs for inspection will be produced and maintained at the Dewey-Burdock Project. These procedures shall also specify specific job functions or categories of personnel responsible for responding to malfunctions of the dryer and emissions control system and the manner in which such responsible persons are notified of malfunctions.
- 12.14 No later than 90 days before the start of operations, the licensee shall provide, for the NRC Staff review and written verification, the qualifications and training required for RSO designees for reviewing and issuing radiation work permits.
- 12.15 No later than 30 days before the start of operations, the licensee shall submit a report for NRC staff review updating land use descriptions within the Dewey-Burdock Project and within 2 miles of the license boundary. This report shall identify actual land use changes, new structures and the purpose, and new water supply wells and the purpose.
- 12.16 At least 30 days prior to the preoperational inspection, the licensee shall provide a list of its instrumentation to be used during operations, including the manufacturer, model number or a description, and the range of sensitivity of the radiation survey meters for measuring beta radiation. The licensee shall also provide a plan for conducting beta surveys in process areas.

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 SUPPLEMENTARY SHEET**

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- 12.17 No later than 30 days before the preoperational inspection, the licensee shall submit to the NRC staff, for review and written verification, an acceptable method to ensure the soluble intake of uranium will be ALARA.
- 12.18 The licensee shall submit to the NRC staff for review and written verification the procedures by which it will ensure that unmonitored employees will not exceed 10 percent of the dose limits in 10 CFR Part 20, Subpart C.
- 12.19 The licensee shall prepare a bioassay QA/QC procedure that is consistent with Regulatory Guide 8.22. This procedure shall be made available for NRC staff review and written verification during the preoperational inspection.
- 12.20 No later than 30 days before the preoperational inspection, the licensee shall develop a survey program for beta-gamma contamination for personnel exiting from restricted areas that complies with the requirements of 10 CFR Part 20, Subpart F.
- 12.21 The licensee shall provide, for NRC staff review and written verification, the surface contamination detection capability (scan MDC) for radiation survey meters used for contamination surveys to release equipment and materials for unrestricted use and for personnel contamination surveys. The detection capability in the scanning mode for the alpha and beta-gamma radiation expected shall be provided in terms of dpm per 100 cm<sup>2</sup>.
- 12.22 No later than 30 days before the preoperational inspection, the licensee shall provide to the NRC staff, for review and written verification, written procedures for its airborne effluent and environmental monitoring program that:
- A. Discuss how, in accordance with 10 CFR 40.65, the quantity of the principal radionuclides from all point and diffuse sources will be accounted for in, and verified by, surveys and/or monitoring.
  - B. Evaluate the member(s) of the public likely to receive the highest exposures from licensed operations consistent with 10 CFR 20.1302.
  - C. Discuss and identify how radon (radon-222) progeny will be factored into analyzing potential public dose from operations consistent with 10 CFR Part 20, Appendix B, Table 2.
  - D. Discuss how, in accordance with 10 CFR 20.1501, the occupational dose (gaseous and particulate) received throughout the entire License Area from licensed operations will be accounted for, and verified by, surveys and/or monitoring.
- 12.23 Within 90 days of receipt of an NRC license, the licensee will submit to the NRC for review and approval a revised decommissioning, decontamination, and reclamation plan. The revised plan will include soil cleanup criteria for radionuclides other than radium based on the radium benchmark dose method, as well as procedures for monitoring beta-gamma contamination on equipment, structures, and material released for unrestricted use. The soil cleanup criteria, based on the radium benchmark dose methodology for U and other radionuclides, will demonstrate that residual radioactivity in soil meets the criteria in 10 CFR Part 40, Appendix A, Criterion 6(6). The revised plan will also include procedures for restoring stream channels to their original geomorphology.

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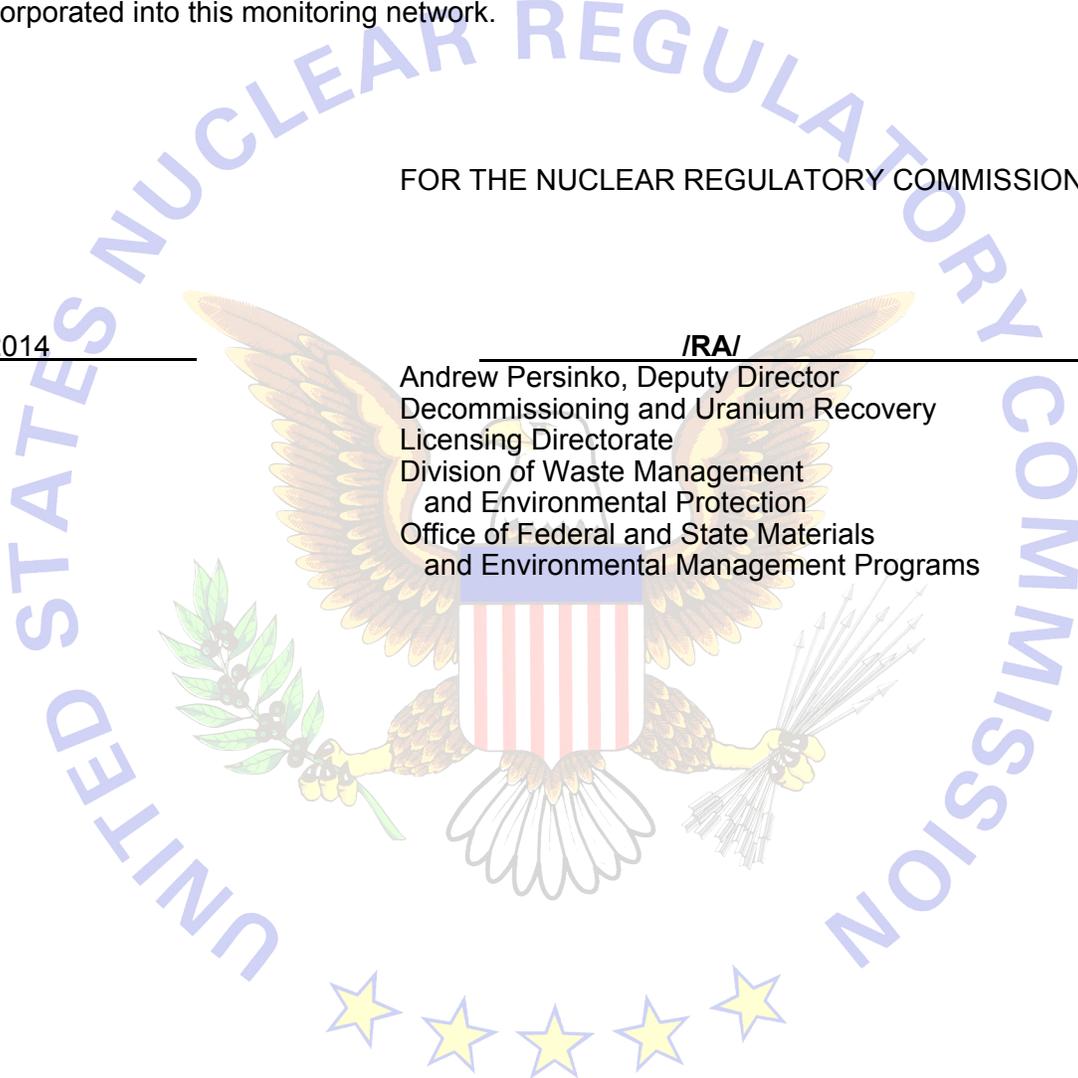
- 12.24 At least 60 days prior to the preoperational inspection, the licensee will submit a completed Quality Assurance Project Plan (QAPP) to the NRC for review to verify that the QAPP will be consistent with Regulatory Guide 4.15 (as revised).
- 12.25 No later than 60 days prior to construction, the licensee shall submit to the NRC for review and written verification, a pond detection monitoring plan that contains the number, locations, and screen depths of groundwater monitoring wells to installed around the Burdock area and Dewey area ponds. The plan shall also include sampling frequency and sampling parameters. Monitoring wells installed to comply with the licensee's Groundwater Discharge Permit issued by the State of South Dakota may be incorporated into this monitoring network.

FOR THE NUCLEAR REGULATORY COMMISSION

Date: 4/8/2014

/RA/

Andrew Persinko, Deputy Director  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs



ATTACHMENT 4

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman  
Kristine L. Svinicki  
Jeff Baran

In the Matter of  
  
POWERTECH (USA), INC.  
  
(Dewey-Burdock  
*In Situ* Uranium Recovery Facility)

Docket No. 40-9075-MLA

CLI-16-20

**MEMORANDUM AND ORDER**

This decision addresses four petitions for review relating to a materials license application for an *in situ* uranium recovery facility filed by Powertech (USA), Inc.<sup>1</sup> All parties to the proceeding—the Oglala Sioux Tribe, Consolidated Intervenors, Powertech, and the NRC Staff—have filed petitions for review of the Atomic Safety and Licensing Board’s Partial Initial Decision and in the case of the Oglala Sioux Tribe and Consolidated Intervenors, earlier Board decisions finding several of their proffered contentions inadmissible.<sup>2</sup>

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<sup>1</sup> Powertech (USA) Inc.’s Submission of an Application for a Nuclear Regulatory Commission Uranium Recovery License for Its Proposed Dewey-Burdock In Situ Leach Uranium Recovery Facility in the State of South Dakota (Feb. 25, 2009) (ADAMS accession no. ML091030707).

<sup>2</sup> LBP-15-16, 81 NRC 618 (2015); see *Oglala Sioux Tribe’s Petition for Review of LBP-15-16 and Decisions Finding Tribal Contentions Inadmissible* (May 26, 2015) (Tribe’s Petition); *Consolidated Intervenors’ Petition for Review of LBP-15-16* (May 26, 2015) (Consolidated Intervenors’ Petition); *Brief of Powertech (USA), Inc. Petition for Review of LBP-15-16* (May 26,

As discussed below, we take review of these petitions in part. We grant each party's petition with respect to the finality of the Board's ruling on Contentions 1A and 1B, find that these contentions should be considered "final" for the purposes of the petitions for review at issue here, and, pursuant to our inherent supervisory authority over agency adjudications, direct that the proceeding remain open for the narrow issue of resolving the deficiencies identified in Contentions 1A and 1B. We deny the remainder of Consolidated Intervenors' petition for review. With respect to Powertech's and the Staff's petitions for review, we also take review of the Board's direction to the Staff to address the deficiencies identified in Contentions 1A and 1B and we affirm the Board's direction to the Staff to submit monthly status reports and to file an agreement between the parties or a motion for summary disposition to resolve the deficiencies identified by the Board. We deny the remainder of Powertech's and the Staff's petitions for review. With respect to the Tribe's petition for review, we take review of the Board's rejection of Contention 8 as inadmissible. We find that the Board erred in its reasoning for dismissing Contention 8, but we affirm the Board's decision. We deny the remainder of the Tribe's petition for review.

## I. BACKGROUND

*In situ* uranium recovery involves injecting a solution, called lixiviant, into an ore body through an injection well. As it flows through the ore body, the lixiviant dissolves the underground uranium. A separate production well extracts the uranium-containing solution from the ground. The uranium is then extracted from the solution through a process called ion

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2015) (Powertech's Petition); *NRC Staff's Petition for Review of LBP-15-16* (May 26, 2015) (Staff's Petition).

The Board has referred to Susan Henderson, Dayton Hyde, and Aligning for Responsible Mining as Consolidated Intervenors, although it originally called them Consolidated Petitioners. See LBP-14-5, 79 NRC 377, 379 n.3 (2014); LBP-13-9, 78 NRC 37, 42 n.2 (2013).

exchange. After extraction, the lixiviant is recycled and reinjected into the ore body to dissolve more uranium.<sup>3</sup> The *in situ* uranium recovery process is used widely throughout Wyoming, South Dakota, Nebraska, and New Mexico to recover subterranean uranium for enrichment and later use in nuclear power plants.

In order to comply with its National Environmental Policy Act (NEPA) obligations and recognizing the widespread use of this technology in this region of the country, the Staff prepared a generic environmental impact statement (GEIS) to address certain aspects of the environmental analysis for these facilities that tend to be similar across sites.<sup>4</sup> The GEIS also identifies resource areas that require site-specific information to fully analyze the environmental impacts. It also notes that subsequent site-specific environmental review documents may summarize and incorporate by reference information from the GEIS.<sup>5</sup> Any subsequent site-specific environmental impact analysis must also include new and significant information necessary to evaluate the *in situ* recovery license application.<sup>6</sup>

This proceeding began in February 2009, when Powertech filed an application for an *in situ* uranium recovery facility in Custer and Fall River Counties, South Dakota. In response, the Oglala Sioux Tribe and Consolidated Intervenors challenged the license application.<sup>7</sup> The

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<sup>3</sup> Ex. APP-021-A, "Powertech (USA), Inc., Dewey-Burdock Project Application for NRC Uranium Recovery License Fall River and Custer Counties, South Dakota Technical Report," (Feb. 2009), at 1-6 (ML14247A342).

<sup>4</sup> Exs. NRC-010-A-1 to NRC-010-B-2, "Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities" (Final Report), NUREG-1910, vols. 1-2 (May 2009) (ML14246A328, ML14247A345, ML14246A333, ML14246A332, ML14246A351) (GEIS).

<sup>5</sup> Ex. NRC-010-A-1, GEIS, at xxxvii.

<sup>6</sup> *Id.*

<sup>7</sup> *Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe* (Apr. 6, 2010) (Tribe's Petition to Intervene); *Consolidated Request for Hearing and Petition for Leave to Intervene* (Mar. 8, 2010) (Consolidated Intervenors' Petition to Intervene).

Board granted their hearing requests in August 2010.<sup>8</sup> On November 26, 2012, the Staff issued the Draft Supplemental Environmental Impact Statement (DSEIS) for public comment.<sup>9</sup> The NRC Staff issued a Safety Evaluation Report (SER) in March 2013.<sup>10</sup> On January 29, 2014, the Staff issued the FSEIS.<sup>11</sup> The Staff issued the license to Powertech on April 8, 2014.<sup>12</sup> The

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<sup>8</sup> LBP-10-16, 72 NRC 361, 443-44 (2010).

<sup>9</sup> Exs. NRC-009-A-1 to NRC-009-B-2, "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" (Draft Report for Comment), NUREG-1910, Supplement 4, vols. 1-2 (Nov. 2012) (ML14247A350, ML14246A329, ML14246A330, ML14246A331) (DSEIS).

Both the Tribe and individual members of Consolidated Intervenors (Susan Henderson and Dayton Hyde) commented on the DSEIS and later filed proposed contentions relating to the DSEIS. Exs. NRC-008-A-1 to NRC-008-B-2, "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), NUREG-1910, Supplement 4, vols. 1-2 (Jan. 2014), app. E, at E-5 to E-6 (ML14246A350, ML14246A326, ML14246A327, ML14247A334) (FSEIS); see *Consolidated Intervenors' New Contentions Based on DSEIS* (Jan. 25, 2013) (Consolidated Intervenors' DSEIS Contentions); *List of Contentions of the Oglala Sioux Tribe Based on the Draft Supplemental Environmental Impact Statement* (Jan. 25, 2013) (Tribe's DSEIS Contentions). On July 22, 2013, the Board admitted three of the new contentions and migrated seven of the originally admitted contentions. LBP-13-9, 78 NRC at 113-15.

<sup>10</sup> Ex. NRC-135, "Safety Evaluation Report for the Dewey-Burdock Project Fall River and Custer Counties, South Dakota" (Mar. 2013) (ML13052A182). The Staff issued a revised SER in April 2014 to correct certain technical references. Ex. NRC-134, "Safety Evaluation Report (Revised) for the Dewey-Burdock Project Fall River and Custer Counties, South Dakota" (Apr. 2014) (ML14245A347).

<sup>11</sup> Exs. NRC-008-A-1 to NRC-008-B-2, FSEIS. On March 17, 2014, the Tribe and Consolidated Intervenors filed additional contentions related to the FSEIS. *Consolidated Intervenors' Statement of Contentions* (Mar. 17, 2014) (Consolidated Intervenors' FSEIS Contentions); *Statement of Contentions of the Oglala Sioux Tribe Following Issuance of Final Supplemental Environmental Impact Statement* (Mar. 17, 2014) (Tribe's FSEIS Contentions). The Board ruled that the contentions previously admitted in reference to the DSEIS migrated to the FSEIS and held inadmissible the remaining proposed contentions. LBP-14-5, 79 NRC at 401.

<sup>12</sup> Ex. NRC-012, License Number SUA-1600, Materials License for Powertech (USA) Inc. (Apr. 8, 2014) (ML14246A408) (License).

Board held an evidentiary hearing on all nine admitted contentions in August 2014. In November 2014, the Tribe moved to file two new environmental contentions.<sup>13</sup>

The Board decision, LBP-15-16, resolved seven contentions in favor of Powertech and the Staff but found deficiencies in the Staff's NEPA analysis and NHPA consultation.<sup>14</sup> The Board upheld the license with an additional license condition, ruled inadmissible the two post-hearing contentions proffered by the Tribe, and directed the Staff to submit monthly reports regarding its progress in resolving the identified deficiencies.<sup>15</sup>

Our decision today involves four petitions for review that were filed by the parties to this proceeding. We summarize each petition below, along with the relevant procedural history for each set of issues. A full procedural history can be found in the Board's various decisions on this matter.<sup>16</sup>

#### **A. The Oglala Sioux Tribe's and Consolidated Intervenors' Petitions for Review**

The Oglala Sioux Tribe appeals the Board's resolution of several of its admitted contentions in favor of Powertech and the Staff.<sup>17</sup> The Tribe also seeks review of the Board's ruling on two of its admitted contentions that left the license in place and required the Staff to conduct additional consultation.<sup>18</sup> Consolidated Intervenors petition for review of the Board's decision resolving their admitted contentions in favor of Powertech and the Staff.<sup>19</sup> They further

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<sup>13</sup> *Motion for Leave to File New or Amended Contention on Behalf of the Oglala Sioux Tribe* (Nov. 7, 2014) (Tribe's Motion for New Contentions).

<sup>14</sup> LBP-15-16, 81 NRC at 657-58, 708-10.

<sup>15</sup> *Id.* at 708-10.

<sup>16</sup> See *id.* at 626-35; see also LBP-14-5, 79 NRC at 379-81; LBP-13-9, 78 NRC at 43-45; LBP-10-16, 72 NRC at 376-78.

<sup>17</sup> Tribe's Petition at 19-25.

<sup>18</sup> *Id.* at 18-19.

<sup>19</sup> Consolidated Intervenors' Petition at 2 & n.3, 4-7.

challenge the Board's ruling that left the license in place despite ruling in Consolidated Intervenor's favor on two of their admitted contentions.<sup>20</sup>

In Contentions 1A and 1B, the Tribe and Consolidated Intervenor's challenged the NEPA analysis of cultural resources in the FSEIS and the Staff's compliance with the National Historic Preservation Act (NHPA).<sup>21</sup> The Board concluded that the Staff had fulfilled its NHPA obligations with respect to identification of historic properties. It nonetheless held that the Staff's analysis in the FSEIS did not satisfy NEPA's hard look requirement regarding cultural resources and that the Staff's consultation with the Tribe had been insufficient to comply with the Staff's additional obligations under the NHPA.<sup>22</sup> The Board retained jurisdiction over these contentions and required the Staff to "promptly initiat[e] a government-to-government consultation with the Oglala Sioux Tribe" to address the deficiencies identified in the Board's decision.<sup>23</sup> The Tribe and Consolidated Intervenor's seek review of the Board's decision to leave the license in place pending resolution of Contentions 1A and 1B.<sup>24</sup>

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<sup>20</sup> *Id.* at 3, 6-7.

Consolidated Intervenor's have requested that we set a briefing schedule for any issues that we accept for review. *Id.* at 8-9. In accordance with 10 C.F.R. § 2.341(c)(2), we have decided these matters on the basis of the petitions for review, and therefore deny Consolidated Intervenor's request to establish a briefing schedule.

Consolidated Intervenor's also challenge the Board's ruling in LBP-10-16 that "certain petitioners" lacked standing to intervene. *Id.* at 2. In their petition, Consolidated Intervenor's do not identify which petitioners they are referencing. We therefore deny review of that portion of their petition.

<sup>21</sup> *Oglala Sioux Tribe's Post-Hearing Initial Brief with Findings of Fact and Conclusions of Law* (Jan. 9, 2015), at 12, 27 (Tribe's Post-Hearing Brief); *Consolidated Intervenor's Proposed Findings of Fact and Conclusions of Law and Response to Post-Hearing Order* (Jan. 9, 2015), at 1-2, 14 (Consolidated Intervenor's Post-Hearing Brief).

<sup>22</sup> LBP-15-16, 81 NRC at 653-57.

<sup>23</sup> *Id.* at 657-58, 708, 710.

<sup>24</sup> Tribe's Petition at 18-19; Consolidated Intervenor's Petition at 6-7.

In Contention 2, the Tribe and Consolidated Intervenors argued that the FSEIS did not contain sufficient background groundwater characterization.<sup>25</sup> The Board resolved this contention in favor of Powertech and the Staff, and the Tribe seeks review of the Board's decision.<sup>26</sup>

In Contention 3, the Tribe and Consolidated Intervenors argued that the FSEIS insufficiently analyzed certain geological and manmade features that may permit groundwater migration.<sup>27</sup> The Board resolved this contention in favor of Powertech and the Staff but added a license condition regarding the proper treatment of unplugged boreholes.<sup>28</sup> Both the Tribe and Consolidated Intervenors seek review of the Board's decision.<sup>29</sup>

In Contention 6, the Tribe and Consolidated Intervenors challenged the FSEIS's analysis of mitigation measures and argued that it impermissibly deferred the development of additional mitigation measures.<sup>30</sup> The Board resolved this contention in favor of Powertech and the Staff, and the Tribe seeks review of the Board's decision.<sup>31</sup>

Additionally, the Tribe challenges the Board's decision in LBP-15-16 to reject as inadmissible new contentions submitted after the hearing regarding borehole data and an Environmental Protection Agency (EPA) Preliminary Assessment regarding potential Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

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<sup>25</sup> Tribe's Post-Hearing Brief at 38; Consolidated Intervenors' Post-Hearing Brief at 21.

<sup>26</sup> LBP-15-16, 81 NRC at 666, 708-09; see Tribe's Petition at 19-21.

<sup>27</sup> Tribe's Post-Hearing Brief at 43; Consolidated Intervenors' Post-Hearing Brief at 28, 47.

<sup>28</sup> LBP-15-16, 81 NRC at 681, 709.

<sup>29</sup> Tribe's Petition at 22-23; Consolidated Intervenors' Petition at 2 n.3, 4-7.

<sup>30</sup> Tribe's Post-Hearing Brief at 61-62; Consolidated Intervenors' Post-Hearing Brief at 53-56.

<sup>31</sup> LBP-15-16, 81 NRC at 697, 709; Tribe's Petition for Review at 23-25.

cleanup.<sup>32</sup> Further, it seeks review of earlier Board decisions that found two of its contentions (Contentions 7 and 8) inadmissible.<sup>33</sup> In proposed Contention 7, the Tribe argued that the application was deficient because it did not include a reviewable plan for disposal of byproduct material or discuss the environmental effects of such disposal.<sup>34</sup> The Tribe resubmitted this contention on both the DSEIS and the FSEIS, and the Board dismissed it as inadmissible each time.<sup>35</sup> In proposed Contention 8, the Tribe argued that the DSEIS had been issued without the requisite scoping process.<sup>36</sup> The Board held this contention inadmissible, finding that it did not articulate a material dispute, as required by the contention admissibility standards.<sup>37</sup>

Finally, Consolidated Intervenors challenge the Board's decision at the outset of the proceeding finding one of their contentions inadmissible.<sup>38</sup> In proposed Contention D, Consolidated Intervenors argued that Powertech's application was so disorganized that it violated 10 C.F.R. § 40.9, and the Board rejected this portion of the contention as inadmissible.<sup>39</sup>

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<sup>32</sup> Tribe's Petition at 8-11; see LBP-15-16, 81 NRC at 704-06, 709.

<sup>33</sup> Tribe's Petition at 3-8.

<sup>34</sup> Tribe's Petition to Intervene at 31-34.

<sup>35</sup> Tribe's FSEIS Contentions at 33-39; Tribe's DSEIS Contentions at 27-30, see LBP-14-5, 79 NRC at 396-97; LBP-13-9, 78 NRC at 71-72.

<sup>36</sup> Tribe's DSEIS Contentions at 30-33.

<sup>37</sup> LBP-13-9, 78 NRC at 74-75.

<sup>38</sup> Consolidated Intervenors' Petition at 2 n.3, 3-4, 7.

<sup>39</sup> Consolidated Intervenors' Petition to Intervene at 36; see LBP-10-16, 72 NRC at 402.

## B. Powertech's and the NRC Staff's Petitions for Review

On appeal, the Staff and Powertech challenge the Board's resolution of Contentions 1A and 1B in favor of the Tribe and Consolidated Intervenors.<sup>40</sup> Additionally, both parties seek review of the Board's retention of jurisdiction over these contentions.<sup>41</sup> Finally, Powertech challenges the Board's imposition of an additional license condition in resolving Contention 3 that requires Powertech to locate and properly abandon unplugged boreholes within each wellfield prior to operations.<sup>42</sup>

## II. DISCUSSION

### A. Standard of Review

We will grant a petition for review at our discretion, upon a showing that the petitioner has raised a substantial question as to whether

- (i) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
- (ii) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
- (iii) A substantial and important question of law, policy, or discretion has been raised;
- (iv) The conduct of the proceeding involved a prejudicial procedural error; or
- (v) Any other consideration that we may deem to be in the public interest.<sup>43</sup>

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<sup>40</sup> Powertech's Petition at 6-22; Staff's Petition at 17, 23. The Tribe filed a response to both petitions on June 22, 2015. *Oglala Sioux Tribe's Consolidated Response to Petitions for Review of LBP-15-16* (June 22, 2015) (Tribe's Response).

<sup>41</sup> Powertech's Petition at 5-6, 6 n.9; Staff's Petition at 13-16, 16 n.73.

<sup>42</sup> Powertech's Petition at 22-25; see LBP-15-16, 81 NRC at 709.

<sup>43</sup> 10 C.F.R. § 2.341(b)(4).

We review questions of law *de novo*, but we defer to the Board's findings with respect to the underlying facts unless they are "clearly erroneous."<sup>44</sup> The standard for showing "clear error" is a difficult one to meet: petitioners must demonstrate that the Board's determination is "not even plausible" in light of the record as a whole.<sup>45</sup> For this reason, where a petition for review relies primarily on claims that the Board erred in weighing the evidence in a merits decision, we seldom grant review.<sup>46</sup> In addition, we give substantial deference to the Board on issues of contention admissibility and will affirm admissibility determinations absent a showing of an error of law or abuse of discretion.<sup>47</sup> In *Pa`ina Hawaii, LLC* (Materials License Application) we said the following about our standard of review:

We refrain from exercising our authority to make *de novo* findings of fact in situations where a Licensing Board has issued a plausible decision that rests on carefully rendered findings of fact. As we have stated many times, while we have discretion to review all underlying factual issues *de novo*, we are disinclined to do so where a Board has weighed arguments presented by experts and rendered reasonable, record-based factual findings. Our standard of "clear error" for overturning a Board's factual findings is quite high. We defer to a board's factual findings, correcting only clearly erroneous findings—that is, findings not even plausible in light of the record viewed in its entirety—where we have strong

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<sup>44</sup> *Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 18-19 (2013); *David Geisen*, CLI-10-23, 72 NRC 210, 224-25, 242 (2010).

<sup>45</sup> *Honeywell*, CLI-13-1, 77 NRC at 18 n.102; *Geisen*, CLI-10-23, 72 NRC at 224-25.

<sup>46</sup> See, e.g., *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-10, 80 NRC 157, 162-63 (2014); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 46 (2012) (stating "where a Board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, we generally will defer"); *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 30 (2010) (noting that the Commission is "generally disinclined to upset *fact*-driven Licensing Board determinations") (internal quotations omitted).

<sup>47</sup> *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 354-55 (2015); *Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 914 (2009); *Southern Nuclear Operating Co.* (Vogle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 35 (2009).

reason to believe that a board has overlooked or misunderstood important evidence.<sup>48</sup>

## **B. Contentions Rejected Prior to Hearing**

The Tribe and Consolidated Intervenors seek review of three Board decisions that found several of their proposed contentions inadmissible.

### **1. *The Tribe's Proposed Contention 7***

In proposed Contention 7, the Tribe challenged the lack of a reviewable plan for disposal of byproduct material as defined in Section 11e.(2) of the Atomic Energy Act of 1954, as amended (byproduct material).<sup>49</sup> The Tribe submitted this contention three times: with respect to the environmental report, the DSEIS, and the FSEIS.<sup>50</sup> In each case, the Tribe provided a different basis for the contention, and the Board dismissed each iteration as inadmissible.<sup>51</sup> In its petition for review, the Tribe argues that the Board “erred at law and abused its discretion” each time it found Contention 7 inadmissible.<sup>52</sup> We do not find that the Tribe raises a substantial question regarding the admissibility of this contention. With respect to each Board decision, the Tribe provides a separate basis to support its petition.

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<sup>48</sup> *Pa`ina Hawaii, LLC* (Materials License Application), CLI-10-18, 72 NRC 56, 72-73 (2010) (internal quotations and citations omitted).

<sup>49</sup> Tribe's Petition to Intervene at 31-34. Section 11e.(2) of the Atomic Energy Act of 1954, as amended, defines “byproduct material” as “the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.” 42 U.S.C. § 2014(e)(2).

<sup>50</sup> Tribe's FSEIS Contentions at 33-39; Tribe's DSEIS Contentions at 27-30; Tribe's Petition to Intervene at 31-34.

<sup>51</sup> See Tribe's FSEIS Contentions at 33-39; Tribe's DSEIS Contentions at 27-30; Tribe's Petition to Intervene at 31-34; see also LBP-14-5, 79 NRC at 397; LBP-13-9, 78 NRC at 71-72; LBP-10-16, 72 NRC at 434-35.

<sup>52</sup> Tribe's Petition at 3.

a. *Proposed Contention and Board Orders LBP-10-16, LBP-13-9, and LBP-14-5*

The Board rejected Contention 7 in LBP-10-16, finding that the Tribe did not show that Powertech had failed to comply with any NRC or other federal regulation.<sup>53</sup> The Tribe argued that 10 C.F.R. § 40.31(h) and Criterion 1 in Appendix A to 10 C.F.R. Part 40 require Powertech to provide a specific plan for disposal of byproduct material in its application. The Board rejected this argument and explained that—per our case law—these provisions apply to uranium mills, not *in situ* recovery sites.<sup>54</sup> Additionally, the Tribe argued that NEPA required that the application contain a specific disposal plan. The Board disagreed, holding that the Staff, not the applicant, is bound by NEPA.<sup>55</sup> But the Board noted that the Tribe would have the opportunity, if it were not satisfied with the treatment of this issue in the Staff's environmental documents, to renew this contention after issuance of those documents.<sup>56</sup>

The Tribe did just that when it filed a similar contention with respect to the analysis in the DSEIS, which the Board ruled inadmissible in LBP-13-9.<sup>57</sup> The Board determined that the Staff had addressed impacts related to byproduct material in both the DSEIS and the GEIS.<sup>58</sup> The Board observed that, insofar as the Tribe claimed that the contention was one of “omission,” the

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<sup>53</sup> LBP-10-16, 72 NRC at 434. The Tribe called this Contention 7 in its initial petition and its DSEIS Contentions. It refers to the same contention as FSEIS Contention 2 in its FSEIS Contentions. To minimize confusion, we will refer to this contention as Contention 7 throughout this decision.

<sup>54</sup> *Id.* (citing *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 8 (1999) (“We agree with the Presiding Officer’s general conclusion that section 40.31(h) and Part 40, Appendix A, ‘were designed to address the problems related to mill tailings and not problems related to [*in situ*] mining.’”)).

<sup>55</sup> *Id.* at 435.

<sup>56</sup> *Id.*

<sup>57</sup> Tribe’s DSEIS Contentions at 27-30; see LBP-13-9, 78 NRC at 71-72.

<sup>58</sup> LBP-13-9, 78 NRC at 71.

contention was moot because the DSEIS contained the information the Tribe claimed was missing.<sup>59</sup> The Board stated that

because the Oglala Sioux Tribe neither substantively disputes the analysis of impacts related to disposal of byproduct material in relevant sections of the DSEIS and the GEIS, nor addresses the license condition related to disposal of byproduct material, the Board rejects this contention as failing to comply with the admissibility dictates of 10 C.F.R. § 2.309(f)(1)(vi).<sup>60</sup>

Upon issuance of the FSEIS, the Tribe refiled an identical contention alleging inadequate analysis of direct, indirect, and cumulative impacts of disposal of byproduct material.<sup>61</sup> The Board found the contention inadmissible and explained that the section of the FSEIS the Tribe cited did not differ materially from the parallel section in the DSEIS. Accordingly, the Board held that the Tribe failed to meet the requirements of 10 C.F.R. § 2.309(c)(1)(ii) for the filing of a new contention.<sup>62</sup>

*b. The Tribe's Petition for Review*

On appeal, the Tribe challenges the Board's ruling, supported by both the plain language of the regulation and our precedent, that 10 C.F.R. § 40.31(h) and Part 40 Appendix A, Criterion 1, are inapplicable to *in situ* recovery facilities. We disagree—this point is well settled and we see no reason to revisit it here.<sup>63</sup>

Further, the Tribe argues that Part 40 Appendix A, Criterion 2, which is applicable to *in situ* uranium recovery facilities, requires a plan for waste disposal in the application. Based on

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<sup>59</sup> *Id.*

<sup>60</sup> *Id.* at 71-72.

<sup>61</sup> Tribe's FSEIS Contentions at 33-39.

<sup>62</sup> LBP-14-5, 79 NRC at 397. Additionally, the Board noted that Powertech's draft license contained license conditions requiring that "Powertech [have a] byproduct material disposal contract in place prior to the commencement of operations." *Id.*

<sup>63</sup> *Hydro Resources, Inc.*, CLI-99-22, 50 NRC at 8.

the plain language of Criterion 2, we disagree. Criterion 2 states that “byproduct material from [*in situ*] extraction operations ... must be disposed of at existing large mill tailings disposal sites ....”<sup>64</sup> This provision mandates that disposal of byproduct material take place at an existing disposal site—it does not require that the application include a waste disposal plan or designate which waste disposal site will be used.

Next, the Tribe argues that the Standard Review Plan “specifically discusses the need for a ... waste disposal plan.”<sup>65</sup> But the Tribe’s argument regarding the Standard Review Plan does not demonstrate Board error. The Standard Review Plan is not a regulation; it is guidance for the Staff in reviewing an application, and it provides one way to comply with our regulations.<sup>66</sup> Additionally, as the Board explained in LBP-10-16, the Staff’s standard practice allows applicants *either* to identify a waste disposal site in their applications *or* to implement a license condition regarding waste disposal.<sup>67</sup> As discussed below, Powertech’s license includes two conditions related to waste disposal.<sup>68</sup> The Tribe has not identified any regulation to the contrary.

Additionally, the Tribe takes issue with the Board’s statement that an applicant is not bound by NEPA.<sup>69</sup> The Board had stated that although “[t]he Tribe also argue[d] that a specific disposal plan must be included in Powertech’s Application in order to comply with NEPA. ... It is

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<sup>64</sup> 10 C.F.R. pt. 40, app. A, Criterion 2.

<sup>65</sup> Tribe’s Petition at 4.

<sup>66</sup> *Crow Butte Resources, Inc.* (Marsland Expansion Area), CLI-14-2, 79 NRC 11, 23 n.70 (2014) (citing *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 98 (1995)).

<sup>67</sup> LBP-10-16, 72 NRC at 435.

<sup>68</sup> See Ex. NRC-012, License, at 6, 12.

<sup>69</sup> Tribe’s Petition at 4.

settled law that an applicant is not bound by NEPA, but by NRC regulations in Part 51.”<sup>70</sup>

Insofar as it could be interpreted as implying that the Tribe was premature in filing its environmental contentions on the application, the Board’s decision was incorrect. Although it is true that “the ultimate burden with respect to NEPA lies with the NRC Staff,” our regulations require that intervenors file environmental contentions on the applicant’s environmental report.<sup>71</sup> In any case, any Board error here was harmless because it also stated that the Tribe would have the opportunity to formulate a contention regarding disposal of byproduct material on the DSEIS, and indeed, the Tribe did so.<sup>72</sup>

The Tribe asserts that the Board’s recognition that planning for waste disposal is an important aspect of our regulations necessarily raises a substantial question for our review.<sup>73</sup> In support of this argument, the Tribe refers to concerns the Board expressed regarding whether waste disposal would be addressed in Powertech’s license.<sup>74</sup> In LBP-10-16, the Board noted that “if a condition dealing with ... byproduct material is not included in the license, the Tribe has no recourse because it cannot challenge the license at that time.”<sup>75</sup> However, Powertech’s

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<sup>70</sup> LBP-10-16, 72 NRC at 435.

<sup>71</sup> *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 34 (2010); see 10 C.F.R. § 2.309(f)(2).

<sup>72</sup> LBP-10-16, 72 NRC at 435. See Tribe’s DSEIS Contentions at 27-30; see also *Geisen*, CLI-10-23, 72 NRC at 245 (“[T]o prevail on appeal, [a party] must show not only that the majority erred but also that the error had a prejudicial effect on the [party’s] case.” (citations omitted)).

<sup>73</sup> The Tribe argues that “[a]lthough the [Board] excluded Contention 7, the Board recommended ‘that this issue be considered by the Commission (or Board) when it conducts the mandatory review and hearing that must be held in this case.’” Tribe’s Petition at 4 (quoting LBP-10-16, 72 NRC at 435). The Board cited 10 C.F.R. § 51.107(a), which refers to issuance of a combined license for a nuclear power reactor; it has no applicability to *in situ* leach facilities. Mandatory hearings are not held in materials licensing proceedings like this one.

<sup>74</sup> Tribe’s Petition at 4.

<sup>75</sup> LBP-10-16, 72 NRC at 435.

license contains multiple conditions regarding disposal of byproduct material. License Condition 12.6 requires Powertech to submit to the NRC a disposal agreement with a licensed disposal site before beginning operations.<sup>76</sup> License Condition 9.9 requires Powertech to maintain such a disposal agreement; if the agreement expires or otherwise terminates, Powertech must halt operations.<sup>77</sup>

Although the Board held that Contention 7 was rendered moot by the analysis of the impacts of the disposal of byproduct material in the DSEIS, the Tribe argues that the DSEIS only identified a possible site for the disposal of byproduct material; the Tribe reiterates its argument that the DSEIS's analysis of the impacts of byproduct material disposal was lacking.<sup>78</sup> On appeal, the Tribe argues that the Board erred in rejecting Contention 7 as a contention of omission.<sup>79</sup> But, as explained above, the Board found that the DSEIS and the GEIS analyzed the impacts of the disposal of byproduct material, and it pointed to specific sections of both documents.<sup>80</sup> The Board's ruling did not rest on the distinction between a contention of omission and one of inaccuracy—it found that the Tribe's proposed contention failed to challenge or address the information in the DSEIS and the draft license condition related to waste disposal.<sup>81</sup> On appeal, the Tribe argues that the discussion of waste disposal in the GEIS was insufficient to fulfill the Staff's responsibilities, but the Tribe fails to consider that, as the

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<sup>76</sup> Ex. NRC-012, License, at 12.

<sup>77</sup> *Id.* at 6.

<sup>78</sup> Tribe's Petition at 5; see LBP-13-9, 78 NRC at 71.

<sup>79</sup> Tribe's Petition at 5. As the Board noted, the Tribe itself characterized this contention as one of omission. See Tribe's DSEIS Contentions at 28; see *also* LBP-13-9, 78 NRC at 71.

<sup>80</sup> LBP-13-9, 78 NRC at 71.

<sup>81</sup> *Id.* at 71-72.

Board noted, both the DSEIS and the draft license condition also addressed waste disposal.<sup>82</sup>

The Tribe does not identify any error regarding the Board's ruling on this point; therefore it does not raise a substantial question for our review.

Next, the Tribe argues that the Board dismissed Contention 7 as inadmissible "simply because the draft license contained a provision requiring the applicant to establish a disposal plan at some point in the future."<sup>83</sup> But the Tribe misstates the Board's basis for its ruling. The Board based its ruling on the Staff's analysis in the GEIS, the DSEIS, and expectation that the license would include conditions regarding waste disposal.<sup>84</sup> Given the Board's reliance on the Staff's analysis and the expected license conditions—which, are indeed present in Powertech's license—we see no substantial question for review here.

The Tribe's final argument in its petition for review with respect to Contention 7 invokes the United States Court of Appeals for the District of Columbia Circuit's decision vacating the waste confidence rule, now called the continued storage rule (10 C.F.R. § 51.23).<sup>85</sup> The Tribe argues that the court's vacatur of the former waste confidence rule confirms that the Tribe has raised a substantial question regarding the Board's dismissal of its proposed Contention 7 in LBP-14-5 and is analogous to this proceeding.<sup>86</sup>

But the court's decision regarding continued storage has no bearing on this issue. Neither the waste confidence rule nor the continued storage rule applies to 11e.(2) byproduct

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<sup>82</sup> Tribe's Petition at 5; see LBP-13-9, 78 NRC at 71-72.

<sup>83</sup> Tribe's Petition at 5.

<sup>84</sup> LBP-13-9, 78 NRC at 71-72.

<sup>85</sup> Tribe's Petition at 5-6; see *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

<sup>86</sup> In a decision issued on June 3, 2016, the U.S. Court of Appeals for the District of Columbia Circuit denied the petitions for review challenging the NRC's updated continued storage rule. *New York v. NRC*, 824 F.3d 1012 (D.C. Cir. 2016), *reh'g denied* 2016 U.S. App. LEXIS 14584 (D.C. Cir. Aug. 8, 2016).

material. These rules only apply to environmental impacts of spent fuel storage at power reactors and spent fuel storage facilities after the end of a reactor's license term and before disposal in a deep geologic repository.<sup>87</sup> Moreover, License Condition 12.6 expressly prevents Powertech from beginning operations—and therefore producing byproduct material—before it has in place an agreement with a licensed waste disposal site. And License Condition 9.9 prevents Powertech from continuing to operate if the waste disposal agreement expires or is otherwise terminated. In sum, the continued storage rule is inapplicable to Powertech's facility and Powertech's license is conditioned to ensure that it will not produce byproduct material without a plan for disposal. Accordingly, the Tribe does not raise a substantial question for review.

## **2. *The Tribe's Proposed Contention 8***

The Tribe petitions for review of the Board's rejection of its proposed Contention 8, in which it argued that the DSEIS had been issued without the requisite scoping process.<sup>88</sup> The Board rejected the contention for failing to demonstrate that a "genuine dispute exists with the applicant/licensee on a material issue of law or fact."<sup>89</sup> The Board held that 10 C.F.R. §§ 51.26(d) and 51.92(d) both exempt the Staff from conducting a scoping process for a

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<sup>87</sup> See 10 C.F.R. § 51.23.

<sup>88</sup> Tribe's Petition at 7; see Tribe's DSEIS Contentions at 30-33; LBP-13-9, 78 NRC at 74-75. In Contention 8, which the Tribe submitted on both the application and the DSEIS, the Tribe also challenged the requirement to submit environmental contentions before the Staff's completion of its NEPA analysis. The Board rejected—in both LBP-10-16 and LBP-13-9—the Tribe's argument that this requirement violates NEPA. LBP-13-9, 78 NRC at 74; LBP-10-16, 72 NRC at 437-38. The Board explained that the challenge "could be properly characterized as 'an impermissible attack on NRC regulations, in contravention of 10 C.F.R. § 2.335.'" LBP-13-9, 78 NRC at 74 (quoting LBP-10-16, 72 NRC at 436). The Tribe has not challenged the Board's reasoning on this portion of Contention 8.

<sup>89</sup> LBP-13-9, 78 NRC at 74-75 (quoting 10 C.F.R. § 2.309(f)(1)(vi)).

“supplemental” EIS based on a plain language reading of the regulation.<sup>90</sup> Further, the Board found that the Staff had engaged in a scoping process when it developed the GEIS and had conducted additional outreach during development of the SEIS, thereby satisfying the scoping requirement.<sup>91</sup> Therefore, the Board concluded that the Tribe’s contention was inadmissible.<sup>92</sup>

In its petition for review, the Tribe argues that the exceptions to the scoping requirements in 10 C.F.R. §§ 51.26(d) and 51.92(d) do not apply to site-specific EISs that tier off of a GEIS merely because the Staff may describe them as supplements.<sup>93</sup> In support of this argument, the Tribe refers to an Office of Inspector General (OIG) Audit Report from August 2013.<sup>94</sup> With respect to scoping, the Audit Report concluded that

NRC did not fully comply with the scoping regulations because of incorrect understanding of the regulations related to scoping for EISs that tier off of a generic EIS. Specifically, NRC staff refer to the tiered site-specific EIS as a “supplement” to the generic EIS, leading to the belief that the exception in 10 [C.F.R.] § 51.26(d) applies to tiered EISs. Some NRC managers assert that the public scoping process for the generic EIS for [*in situ*] uranium recovery suffices for subsequent, site-specific uranium recovery applications.

However, during that generic EIS scoping process in 2007, NRC staff emphasized in response to public comments that all applications would receive a site-specific review. Staff also emphasized that there would be a request for public input on scoping through a “scoping meeting” on site-specific issues if an EIS were prepared for a future application.<sup>95</sup>

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<sup>90</sup> *Id.* at 75.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> Tribe’s Petition at 7.

<sup>94</sup> “Audit of NRC’s Compliance with 10 CFR Part 51 Relative to Environmental Impact Statements,” OIG-13-A-20 (Aug. 20, 2013) (ML13232A192) (Audit Report). The OIG published the Audit Report after the Board’s dismissal of the scoping portion of the Tribe’s proposed Contention 8 in LBP-13-9.

<sup>95</sup> *Id.* at 24.

The Audit Report specifically identified the DSEIS for this project as deficient because it lacked a formal scoping process.<sup>96</sup>

We take review of the Board's denial of the Tribe's proposed Contention 8 with respect to scoping pursuant to 10 C.F.R. § 2.341(b)(4)(ii).<sup>97</sup> The Tribe's contention identifies an issue of law with respect to our NEPA scoping process. We find that the Board's reasoning was flawed because it relied on a section of our NEPA regulations (10 C.F.R. § 51.92) that is not applicable here. Despite this error on the part of the Board, we affirm the Board's ruling and find that, even without a separate scoping process on the SEIS, the Staff provided the Tribe with ample opportunities at an early stage in the process to participate in the development of the site-specific, supplemental EIS. The Tribe had the opportunity to participate in the NEPA process from the beginning, and it has not demonstrated harm or prejudice resulting from the lack of a separate, formal scoping process on the site-specific SEIS; thus, the Board's error was harmless.

We agree with the Staff's observation that tiering and supplementing are not mutually exclusive concepts.<sup>98</sup> However, we agree with the petitioners that the exception in 10 C.F.R. § 51.92(d) does not apply to a supplemental, site-specific EIS that tiers off a GEIS. Section 51.92(d) states: "[t]he supplement to a *final environmental impact statement* will be prepared in the same manner as the *final environmental impact statement* except that a scoping process need not be used."<sup>99</sup> This provision provides an exception from the scoping process for supplements to *final* EISs. The GEIS is not a final EIS for the purpose of the specific federal

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<sup>96</sup> *Id.* at 22; see Tribe's Petition at 7.

<sup>97</sup> We review questions of law *de novo*. See *Geisen*, CLI-10-23, 72 NRC at 242.

<sup>98</sup> *NRC Staff's Response to Oglala Sioux Tribe's Petition for Review of LBP-15-16* (June 22, 2015), at 8 (Staff's Response to Tribe).

<sup>99</sup> 10 C.F.R. § 51.92(d) (emphasis added).

action here—the proposed licensing of Powertech’s *in situ* uranium recovery facility. The Powertech site-specific SEIS is not a supplement in the sense meant by 10 C.F.R. § 51.92(d). The Staff’s reference to the SEIS for this project as a supplement does not change the applicability of the exception in 10 C.F.R. § 51.92(d)—it applies to supplements to final EISs, not site-specific supplements to a GEIS.

Because we determine that the Tribe is correct that 10 C.F.R. § 51.92 does not apply here, we now turn to the effect of the Board’s error. After considering the Staff’s involvement with the Tribe and other interested stakeholders throughout the NEPA process, we find that the Tribe has not shown that the lack of scoping resulted in harm or prejudice. Despite the fact that the Staff did not engage in a separate, formal scoping process in preparing the DSEIS, the Staff provided the Tribe with ample opportunities at an early stage in the process to participate in the development of the site-specific EIS.<sup>100</sup> For example, the Staff states that in 2009 it proposed a meeting with the Tribe to discuss the project, but that the Tribe was unable to attend.<sup>101</sup> Further, “[i]n early 2010, the Staff placed advertisements in six newspapers with circulation in the Dewey-Burdock area, including the Lakota Country Times and the Native Sun, inviting the public to comment on the Dewey-Burdock Project.”<sup>102</sup> This public outreach demonstrates that the Tribe and the public had sufficient opportunity to provide input to the Staff regarding the scope of the Staff’s environmental analysis. Moreover, the Staff conducted full scoping for the GEIS, which considered specific features of the Black Hills and identified Dewey-Burdock on

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<sup>100</sup> See, e.g., Staff’s Response to Tribe at 8-9 (listing opportunities for the Tribe’s participation).

<sup>101</sup> *Id.* at 8-9; see Tr. at 771.

<sup>102</sup> Staff’s Response to Tribe at 9; see Ex. NRC-008-A-1, FSEIS § 1.4.2.

maps and figures. The GEIS also specified that it would serve as part of Dewey-Burdock's environmental analysis.<sup>103</sup>

It is well settled that parties challenging an agency's NEPA process are not entitled to relief unless they demonstrate harm or prejudice—and the Tribe has not done so here.<sup>104</sup> Federal case law makes clear that procedural violations of NEPA do not automatically void an agency's ultimate decision.<sup>105</sup> For example, in *Northwest Coalition for Alternatives to Pesticides v. Lyng*, although the Bureau of Land Management had not properly notified the plaintiff during the scoping process, the Ninth Circuit upheld the District Court's determination that the plaintiff was unable to demonstrate prejudice after having participated in the development of the EIS.<sup>106</sup> Also in *Lyng*, the court, discussing the high bar for overturning a federal administrative decision, referred to a Fourth Circuit case holding that individuals not given notice of public hearings on a proposed wastewater treatment plant did not suffer prejudice, even though they were not provided the opportunity to participate until "the eleventh hour" of the NEPA process.<sup>107</sup> Here, by contrast, the Tribe was involved from the beginning of the process, despite the acknowledged lack of formality in the scoping for this EIS.

Further, the scoping process is intended to provide notice to individuals potentially affected by the proposed federal action.<sup>108</sup> Here, although the Staff did not conduct a formal

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<sup>103</sup> See Staff's Response to Tribe at 9.

<sup>104</sup> *Nw. Coal. for Alts. to Pesticides v. Lyng*, 844 F.2d 588, 594-95 (9th Cir. 1988); *Cty. of Del Norte v. United States*, 732 F.2d 1462, 1467 (9th Cir. 1984); *Cent. Delta Water Agency v. U.S. Fish & Wildlife Serv.*, 653 F. Supp. 2d 1066, 1086-87 (E.D. Cal. 2009); *Muhly v. Espy*, 877 F. Supp. 294, 300-01 (W.D. Va. 1995).

<sup>105</sup> *Lyng*, 844 F.2d at 595.

<sup>106</sup> *Id.* at 594-95.

<sup>107</sup> *Id.* at 595 (citing *Providence Rd. Cmty. Ass'n v. EPA*, 683 F.2d 80, 82 (4th Cir. 1982)).

<sup>108</sup> *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1116 (9th Cir. 2002) ("The primary purpose of the scoping period is to notify those who may be affected by a proposed government

scoping process for the DSEIS for the Dewey-Burdock project, the Tribe had ample notice of the project and numerous opportunities throughout the process to participate in the development of the DSEIS. The Tribe argues that it was “deprived ... of the opportunity to present its concerns at the proper time,” but it has not argued that any particular section of the site-specific EIS is deficient because of the lack of a formal scoping process.<sup>109</sup>

We are satisfied that the Tribe had the opportunity to provide input on the development of the DSEIS in this case; therefore, the Tribe has not demonstrated harm or prejudice resulting from the lack of a formal scoping process. We find that any error by the Board was harmless and decline to order a hearing on the merits of this contention.<sup>110</sup>

### **3. Consolidated Intervenor’s Proposed Contention D**

#### **a. Proposed Contention and Board Order**

Consolidated Intervenor’s challenge the Board’s partial denial of their proposed Contention D in LBP-10-16.<sup>111</sup> In the dismissed part of Contention D, Consolidated Intervenor’s argued that Powertech’s application violated 10 C.F.R. § 40.9 “by being disorganized ....”<sup>112</sup> In

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action which is governed by NEPA that the relevant entity is beginning the EIS process; this notice requirement ensures that interested parties are aware of and therefore are able to participate meaningfully in the entire EIS process, from start to finish.” (citing *Lyng*, 844 F.2d at 594–95)), *abrogated on other grounds by Wilderness Soc’y v. U.S. Forest Serv.*, 630 F.3d 1173 (9th Cir. 2011).

<sup>109</sup> Tribe’s Petition at 8.

<sup>110</sup> Notably, the Tribe has not articulated a request for any specific relief regarding the Board’s dismissal of this portion of Contention 8 on the DSEIS. Because the Staff has revised its guidance to provide for scoping for future supplemental EISs that tier off of a generic EIS, we decline to delve into the underlying legal issue. Memorandum from Catherine Haney, NMSS, to Stephen D. Dingbaum, OIG (June 30, 2015), at 2 (ML15166A406).

<sup>111</sup> Consolidated Intervenor’s Petition at 2 n.3, 3-4, 7. In their petition for review, Consolidated Intervenor’s cite LBP-15-16 as the Board order that dismissed portions of their proposed Contention D. *Id.* at 2 n.3. To clarify, the Board actually held inadmissible the relevant portions of Contention D in LBP-10-16. See LBP-10-16, 72 NRC at 402-03.

<sup>112</sup> Consolidated Intervenor’s Petition to Intervene at 36; see LBP-10-16, 72 NRC at 400-01. The Board only denied Consolidated Intervenor’s Contention D with respect to the

denying this portion of Contention D, the Board found that the application was not “so incomprehensible as to be useless to the public” and stated that “issues of disorganization in an application cannot be said to be germane to the licensing process.”<sup>113</sup>

*b. Consolidated Intervenors’ Petition for Review*

On appeal, Consolidated Intervenors argue that the Board created “new standards for accuracy and completeness under [10 C.F.R. § 40.9]” and held “that [a]pplications must be ‘incomprehensible’ and ‘useless to the public’ to be deficient under [10 C.F.R. § 40.9].”<sup>114</sup> They claim that the Board’s decision “undermines the entire purpose of having an [a]pplication if the standard is so low that it will pass muster if it is barely comprehensible and a hair better than ‘useless.’”<sup>115</sup> Finally, Consolidated Intervenors argue that “[t]he public has a strong interest in the standard for accuracy and completeness of source material license applications being higher than that set by the Board (‘incomprehensible’[;] ‘useless to the public’).”<sup>116</sup>

We find that Consolidated Intervenors have not identified a substantial question for our review here. They have not demonstrated that the Board erred at law or abused its discretion in dismissing this portion of Contention D. Consolidated Intervenors have misconstrued the Board’s holding; the Board did not adopt or create a new standard for an application to be deemed deficient under 10 C.F.R. § 40.9. Rather, the Board determined that Powertech’s application was sufficiently comprehensible for compliance with our regulations. That is, the

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comprehensibility of the application. LBP-10-16, 72 NRC at 402-03. The Board admitted portions of the contention that related to the technical adequacy of baseline water quality and adequate confinement of the host aquifer. *Id.* at 403.

<sup>113</sup> *Id.* at 402-03 (quoting *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 280 (1998)).

<sup>114</sup> Consolidated Intervenors’ Petition at 2 n.3, 7.

<sup>115</sup> *Id.* at 3-4.

<sup>116</sup> *Id.* at 7.

Board simply disagreed with Consolidated Intervenors' argument that the application was incomprehensible and useless. Pursuant to 10 C.F.R. § 2.341(b)(4)(i), we will take review of a Board's factual findings when those findings are clearly erroneous or in conflict with a finding regarding the same fact in a different proceeding.<sup>117</sup> Consolidated Intervenors have not raised a substantial question with respect to the Board's factual conclusions here. Therefore, we deny Consolidated Intervenors' petition for review.

### **C. New Contentions Held Inadmissible**

The Tribe has petitioned for review of the Board's ruling in LBP-15-16 finding its two newly proposed contentions inadmissible.<sup>118</sup> The Tribe filed these two contentions after the conclusion of the evidentiary hearing in August 2014 in response to the Board's post-hearing order directing Powertech to disclose to all parties additional information regarding borehole log data concerning the project site.<sup>119</sup> The Staff reviewed the data and determined that it did not contradict the findings in the FSEIS.<sup>120</sup> Thereafter, the Tribe proposed two new contentions: the first related to the Staff's October 2014 submissions regarding the data and the second related to EPA documents regarding potential CERCLA cleanup at the Powertech site.<sup>121</sup>

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<sup>117</sup> See *Honeywell*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

<sup>118</sup> Tribe's Petition at 8-11; see LBP-15-16, 81 NRC at 704-06.

<sup>119</sup> Post Hearing Order (Sept. 8, 2014), at 19 (unpublished) (Post-Hearing Order); see Ex. OST-19, Press Release, Powertech Uranium Corp., Powertech Uranium (Azarga Uranium) Enters into Data Purchase Agreement for Dewey-Burdock Project (July 16, 2014) (ML14247A415).

<sup>120</sup> *NRC Staff's Motion to Admit Testimony and Exhibits Addressing Powertech's September 14, 2014 Disclosures* (Oct. 14, 2014), at 1; Ex. NRC-158, Supplemental Testimony Regarding NRC Staff Analysis of TVA Well Log Data (Oct. 14, 2014), at 12 (ML14344A931) (Staff's Supplemental Testimony).

<sup>121</sup> Tribe's Motion for New Contentions at 2-3.

## 1. *The Tribe's New Contention 1*

### a. *Proposed Contention and Board Order*

In its first new contention, the Tribe argued that the Staff was required to evaluate the well log data as part of the NEPA process, and that the methodology the Staff used to evaluate the well logs (by conducting a “spot check”) was unacceptable.<sup>122</sup>

The Board found that the contention did not meet the requirements of 10 C.F.R. § 2.309(c)(1)(ii) because the information in the well logs was not materially different from information already in the record.<sup>123</sup> The Board also noted that the Tribe failed to meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi) because it had not raised a genuine dispute on a material issue of law or fact—the Staff’s method for evaluating borehole data by reviewing representative borehole logs had not changed throughout the proceeding.<sup>124</sup> Further, the Board noted that the Tribe had not met the requirements in 10 C.F.R. § 51.92 for demonstrating the need to supplement a FSEIS—in particular that the information in question was “new and significant.”<sup>125</sup>

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<sup>122</sup> *Id.* at 6-9.

<sup>123</sup> LBP-15-16, 81 NRC at 704-05. See 10 C.F.R. § 2.309(c)(1)(i)-(iii); see also Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562, 46,571 (Aug. 3, 2012) (clarifying the requirements governing hearing requests, intervention petitions, and motions for leave to file new or amended contentions). Although this proceeding began in 2009, the Board ruled on the Tribe’s proposed new contentions in 2015 and had previously adopted the 2012 amendments to 10 C.F.R. Part 2 for this proceeding. Order (Concerning Changes to 10 C.F.R. Part 2) (Aug. 21, 2012) (unpublished).

<sup>124</sup> LBP-15-16, 81 NRC at 705.

<sup>125</sup> *Id.* The Tribe objects to the Board’s discussion of this point in its petition for review. The Tribe argues that the Board “conflate[d] the contention admissibility standard with the substantive standard of whether the new information would require a supplement to the NEPA documents.” Tribe’s Petition at 9. Regardless, the Tribe’s challenge does not raise a substantial question for review, because the Tribe’s New Contention 1 did not meet the requirements of 10 C.F.R. §§ 2.309(c)(1)(ii) and 2.309(f)(1)(vi). If the information is not materially different from previously available information, it stands to reason that it does not “paint a seriously different picture of the environmental landscape” for this proceeding. *Hydro*

*b. The Tribe's Petition for Review*

On appeal, the Tribe argues that the Board's denial of the Tribe's request to develop and present its contention presents a substantial question for review.<sup>126</sup> It challenges the Board's factual determinations that new well log data did not present materially different information and that the NRC's "spot check" methodology has been used throughout the Staff's review and issuance of the Powertech's license.<sup>127</sup> But this challenge does not show how the Board's determination here is in error. The Board determined that the Tribe did not present any information that was materially different than what was previously available.<sup>128</sup> The Tribe raised this contention after the hearing was complete and the Board had the benefit of hearing from all of the parties on the borehole information and the Staff's review methodology. On appeal, the Tribe does not give us a reason to find that the Board, which was familiar with the information available throughout the pendency of the proceeding, committed an error or abuse of discretion. Therefore, we decline to take review of the Board's dismissal of this contention as inadmissible.

**2. The Tribe's New Contention 2**

*a. Proposed Contention and Board Order*

In its second new contention, the Tribe argued that the Staff had not considered in its NEPA analysis information in a newly released EPA assessment regarding a historic hardrock

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*Resources, Inc.*, CLI-99-22, 50 NRC at 14 (quoting *Sierra Club v. Froehike*, 816 F.2d 205, 210 (5th Cir. 1987)).

<sup>126</sup> The Tribe argues that the Board's post-hearing order provides support for its argument that rejection of this contention presents a substantial question for review. Tribe's Petition at 10. There, the Board ordered disclosure of various documents. Post-Hearing Order at 10-12, 19. The Board denied the Tribe's request for sanctions, and denied Powertech's motion for reconsideration. *Id.* at 12, 16. While the Tribe's description of the Board's post-hearing order is accurate, those rulings do not support its petition for review.

<sup>127</sup> Tribe's Petition at 8-10.

<sup>128</sup> See LBP-15-16, 81 NRC at 704-05; see also Ex. NRC-158, Staff's Supplemental Testimony, at 9-13.

uranium mine site within the Dewey-Burdock project area.<sup>129</sup> The Tribe argued that “the EPA states that it has determined that a CERCLA removal action is recommended for the site and will proceed.”<sup>130</sup> In its contention, the Tribe asserted that the CERCLA removal action was therefore reasonably foreseeable, and that the Staff should have considered the action in the cumulative impacts analysis in the EIS.<sup>131</sup>

The Board held this contention inadmissible because the Tribe “fail[ed] to present sufficient information to show a genuine dispute exists on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).”<sup>132</sup> Moreover, the Board found that the Tribe disregarded the analysis in the FSEIS of the environmental concerns raised in the EPA Preliminary Assessment, as well as the EPA Preliminary Assessment’s repeated references to the FSEIS.<sup>133</sup> Given that the EPA documents themselves referred to the Staff’s analysis in both the DSEIS and FSEIS, the Board concluded that the Tribe had not met the contention admissibility requirements, specifically 10 C.F.R. § 2.309(f)(1)(vi).<sup>134</sup>

*b. The Tribe’s Petition for Review*

In its petition for review, the Tribe argues that the Board erred because it “glossed over” the fact that “[t]he EPA identified a new contamination pathway with implications for pollution containment at the site that is not addressed in the application, any NRC materials, or the

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<sup>129</sup> Tribe’s Motion for New Contentions at 11; see *also* Ex. OST-026, Letter from Ryan M. Lunt, Task Order Project Manager, Seagull Env’tl. Techs., Inc., to Victor Ketellapper, Site Assessment Team Leader, U.S. Env’tl. Prot. Agency, Region 8 (Sept. 24, 2014), attach. “Preliminary Assessment Report Regarding the Darrow/Freezeout/Triangle Uranium Mine Site Near Edgemont, South Dakota” (ML14344A926).

<sup>130</sup> Tribe’s Motion for New Contentions at 11.

<sup>131</sup> *Id.*

<sup>132</sup> LBP-15-16, 81 NRC at 706.

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

FSEIS.”<sup>135</sup> The Tribe asserts that the FSEIS discusses the unreclaimed mines but does not address “the contamination pathway from the unreclaimed mines to the groundwater” and argues that this presents a substantial question for our review.<sup>136</sup>

Contrary to the Tribe’s argument on appeal, the Board did not overlook the Tribe’s arguments regarding environmental concerns related to the abandoned mines. In finding New Contention 2 inadmissible, the Board determined that the Tribe had “fail[ed] to show that the Preliminary Assessment is or contains significant new information” and therefore did not demonstrate a genuine dispute on a material issue of law or fact.<sup>137</sup> The Board’s ruling was based on its determination that the information in the Preliminary Assessment, including information regarding groundwater contamination, did not differ significantly from that in the FSEIS so as to demonstrate that a genuine dispute existed on a material issue of law or fact.<sup>138</sup> The Tribe’s petition does not raise a substantial question regarding the Board’s finding that the information in the Preliminary Assessment about unreclaimed mines was insufficient to meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi). Therefore, we deny review of the Board’s dismissal of New Contention 2.

We now turn to the parties’ claims with respect to the Board’s merits decision.

#### **D. Contentions Decided on the Merits**

##### **1. Contentions 1A and 1B**

As we discuss in detail below, we find that the Board’s ruling on Contentions 1A and 1B is final, and consideration of the petitions for review under 10 C.F.R. § 2.341(b)(4) is appropriate at this time. We deny each party’s petition for review with respect to Contentions 1A and 1B—

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<sup>135</sup> Tribe’s Petition at 11.

<sup>136</sup> *Id.*

<sup>137</sup> LBP-15-16, 81 NRC at 706.

<sup>138</sup> *Id.*

thus leaving in place the Board's ruling in favor of the Tribe and Consolidated Intervenors. Further, under our inherent supervisory authority over agency adjudications, we leave the proceeding open for the narrow issue of resolving the deficiencies identified by the Board.

*a. Partial Initial Decision*

First, we must clarify the appropriate standard of review of the Board's decision on these contentions. By its terms, the Board presented LBP-15-16 as a "partial initial decision" that left the ultimate resolution of Contentions 1A and 1B for a future decision.<sup>139</sup> Under this approach, the Board retained jurisdiction pending the Staff's remedy of the deficiencies the Board identified in the Board's ruling on Contentions 1A and 1B.<sup>140</sup> Each party, in turn, questioned the Board's decision to retain jurisdiction.<sup>141</sup>

The Board received full briefing and held oral argument and a merits hearing on the issues raised in Contentions 1A and 1B. The Board found in favor of the Tribe and Consolidated Intervenors and identified deficiencies in the Staff's efforts to comply with NEPA and the NHPA.<sup>142</sup> With briefing on these issues completed and the Board's having found in favor of the Tribe and Consolidated Intervenors, we find that the Board's resolution of Contentions 1A and 1B is final and consideration of the petitions for review of these contentions is appropriate at this time.<sup>143</sup>

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<sup>139</sup> *Id.* at 658, 710.

<sup>140</sup> *Id.*

<sup>141</sup> Consolidated Intervenors' Petition at 2 & n.3, 3, 6-7; Powertech's Petition at 5-6, 6 n.9; Staff's Petition at 13-16; see also Tribe's Petition at 18-19 (arguing that the "proper remedy" is to "vacate the [licensing] decision and remand back to the agency for further proceedings").

<sup>142</sup> See LBP-15-16, 81 NRC at 708.

<sup>143</sup> See 10 C.F.R. § 2.341(b)(4); *Pa`ina*, CLI-10-18, 72 NRC at 69-74 (fully reviewing appeals from a licensing board order on an issue where the board ruled in favor of the intervenor on the merits but directed further corrective action); *Vermont Yankee*, CLI-10-17, 72 NRC at 4-9 (same).

*b. Contentions and Board Order*

In Contention 1A, the Tribe and Consolidated Intervenors challenged the FSEIS's treatment of historic and cultural resources under the NHPA and NEPA.<sup>144</sup> In Contention 1B, the Tribe and Consolidated Intervenors challenged the adequacy of the Staff's NHPA consultation process.<sup>145</sup>

With respect to Contention 1A, the Board held that the Staff had complied with the NHPA requirement to "make a good faith and reasonable effort to identify properties ... eligible for inclusion in the National Register of Historical Places within the Dewey-Burdock [*in situ* leach] project area."<sup>146</sup> The Board found that the Staff had largely complied with Advisory Council on Historic Preservation (ACHP) guidance on identification of historic properties.<sup>147</sup> However, with respect to the Staff's NEPA responsibilities, the Board found insufficient the Staff's analysis of the environmental effects of the Dewey-Burdock project on Native American cultural, historic, and religious resources.<sup>148</sup> Accordingly, it held that the Record of Decision was incomplete because the Staff "did not give this issue its required hard look in the FSEIS."<sup>149</sup> Regarding Contention 1B, section 106 consultation, the Board acknowledged that it could not

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<sup>144</sup> Tribe's FSEIS Contentions at 5-9; Consolidated Intervenors' FSEIS Contentions at 6-14. The Tribe and Consolidated Intervenors previously filed similar contentions on the application and the DSEIS. See Tribe's DSEIS Contentions at 4-10; Consolidated Intervenors' DSEIS Contentions at 2-7; *Petitioners' Request for Leave to File a New Contention Based on SUNSI Material* (April 30, 2010), at 1-6; Tribe's Petition to Intervene at 12-17.

<sup>145</sup> Tribe's FSEIS Contentions at 9-14; Consolidated Intervenors' FSEIS Contentions at 14-20. The Tribe previously filed similar contentions on the application and the DSEIS. Tribe's DSEIS Contentions at 4-10; Tribe's Petition to Intervene at 12-17.

<sup>146</sup> LBP-15-16, 81 NRC at 654.

<sup>147</sup> *Id.*

<sup>148</sup> *Id.* at 655. More specifically, the Board found a deficiency in the analysis of sites that might be significant to the Oglala Sioux Tribe.

<sup>149</sup> *Id.*

definitively determine whether the Staff or the Tribe bore responsibility for what the Board considered a breakdown in consultation. But the Board found that the NHPA consultation process between the Staff and the Tribe was inadequate because it did not provide sufficient opportunity for the Tribe to articulate its views on the Dewey-Burdock project's effects on historic properties and participate in the resolution of adverse effects.<sup>150</sup>

The Board directed the Staff to conduct additional consultation with the Tribe “to satisfy the hard look at impacts required by NEPA ... [and] to satisfy the consultation requirements of the NHPA.”<sup>151</sup> By the terms of its order, the Board issued a partial initial decision with respect to these contentions and, therefore, retained jurisdiction over the proceeding pending the Staff's curing of the deficiencies in the FSEIS and consultation with the Tribe.<sup>152</sup> On appeal, each party challenged the Board's issuance of a partial initial decision and retention of jurisdiction.<sup>153</sup>

*c. Petitions for Review*

**(1) THE TRIBE'S AND CONSOLIDATED INTERVENORS' PETITIONS FOR REVIEW**

Although the Board found in favor of the Tribe and Consolidated Intervenors, both parties have appealed the relief the Board granted with respect to these contentions.

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<sup>150</sup> *Id.* at 656-57.

<sup>151</sup> *Id.* at 657. The Board noted that it could have suspended Powertech's license, and it attributed its decision to leave the license in place to the Tribe's incomplete participation in the consultation process. *Id.* at 658.

<sup>152</sup> *Id.* at 710.

<sup>153</sup> Consolidated Intervenors' Petition at 2 & n.3, 3, 6-7; Powertech's Petition at 5-6, 6 n.9; Staff's Petition at 13-16; see also Tribe's Petition at 18-19 (arguing that the “proper remedy” is to “vacate the [licensing] decision and remand back to the agency for further proceedings”).

**(a) The Tribe's Petition for Review**

The Tribe challenges the Board's decision to leave the license in place, despite finding that the NRC Staff's analysis did not comply with NEPA or the NHPA.<sup>154</sup> Given the Board's decision, the Tribe argues that NEPA and the NHPA prohibit the Board from leaving the license in place and asserts that "the proper remedy is that employed by federal courts up[on] a finding of a violation of NEPA: to vacate the decision and remand back to the agency for further proceedings necessary to achieve compliance."<sup>155</sup>

We disagree. It is well settled that a failure to comply with every aspect of procedural statutes like those at issue here does not necessarily void agency action; federal courts have required that parties demonstrate harm or prejudice to disturb an agency's decision.<sup>156</sup> Here, the Tribe has not articulated any harm or prejudice; in fact, it did not request a stay of the effectiveness of the license, despite the Board's invitation for it to do so.<sup>157</sup> Nor has the Tribe raised a substantial question that would merit granting its petition for review with respect to this issue.<sup>158</sup> Therefore, we deny this portion of the Tribe's petition for review and its request that we vacate Powertech's license.

**(b) Consolidated Intervenors' Petition for Review**

Consolidated Intervenors argue that "the Board improperly withheld an initial decision and refused to rule on Contentions 1A [and] 1B thereby depriving the Tribe and tribal

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<sup>154</sup> Tribe's Petition at 19.

<sup>155</sup> *Id.* (citing *New York*, 681 F.3d at 471).

<sup>156</sup> *Lyng*, 844 F.2d at 594-95; *Cty. of Del Norte*, 732 F.2d at 1467; *Cent. Delta Water Agency*, 653 F. Supp. 2d at 1086-87; *Muhly*, 877 F. Supp. at 300-01.

<sup>157</sup> See LBP-15-16, 81 NRC at 658.

<sup>158</sup> See *Pa`ina*, CLI-10-18, 72 NRC at 69-74 (noting that the board ruled in favor of the intervenor after a merits hearing but directed the parties to undertake additional action to cure identified deficiencies); *Vermont Yankee*, CLI-10-17, 72 NRC at 4-9 (same).

members ... an opportunity to appeal the Board's decision."<sup>159</sup> Despite their argument that the Board's decision deprived them of an opportunity to appeal the decision, Consolidated Intervenors challenge the Board's decision to leave the license in place—tying their objection to the NRC's federal trust responsibility.<sup>160</sup> But they do not articulate why the federal trust responsibility precludes the Board from finding as it did; nor do Consolidated Intervenors attempt to demonstrate the existence of a substantial question that would merit granting their petition for review. Instead, they argue that the Board misconstrued the trust responsibility federal agencies owe to the Tribe by "presuming that the Tribe will act '[u]nreasonably.'"<sup>161</sup> This argument misconstrues the Board's decision and does not raise a legal question or demonstrate factual error on the part of the Board. In ruling on Contentions 1A and 1B, the Board did not presume that the Tribe would act unreasonably. Rather, the Board stated that "[e]ven after a thorough review of the record ... [it was] not able to decide definitively which party or specific actions led to the impasse preventing an adequate tribal cultural survey."<sup>162</sup> Therefore, the Board directed the Staff to resume consultation with the Tribe, but it reminded the Tribe of its obligation to engage in a meaningful manner with the Staff.<sup>163</sup> We do not see how this statement presumes any unreasonable action or misconstrues the NRC's trust responsibility, nor does it satisfy our standards for granting a petition for review. Therefore, we deny Consolidated Intervenors' petition for review with respect to these contentions.

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<sup>159</sup> Consolidated Intervenors' Petition at 2.

<sup>160</sup> *Id.* at 3.

<sup>161</sup> *Id.*; *see also id.* at 6.

<sup>162</sup> LBP-15-16, 81 NRC at 656.

<sup>163</sup> *Id.* at 657-58, 658 n.236.

**(2) POWERTECH AND THE STAFF'S PETITIONS FOR REVIEW**

Powertech and the Staff appeal the Board's rulings on Contentions 1A and 1B as well as the Board's retention of jurisdiction.<sup>164</sup>

**(a) Powertech's Petition for Review**

On appeal, Powertech argues, at length, that the Board's ruling on Contentions 1A and 1B was inconsistent, legally flawed, and factually incorrect. Specifically, Powertech claims that the Board erred in finding the Staff's NHPA analysis deficient by committing clear error of law, ignoring the ACHP's determinations regarding the propriety of the Staff's analysis, providing "special treatment" to the Tribe as a litigant and consulting party, and ignoring critical facts regarding the nature of the government-to-government consultation between the NRC Staff and the Tribe.<sup>165</sup> With respect to the Board's NEPA determination, Powertech argues that the Board erred in finding that the Staff's analysis does not comply with NEPA. In Powertech's view, the NRC Staff has satisfied its NEPA obligation to assess the impacts to historic and cultural resources by considering and evaluating all the available information or information that could reasonably be obtained.<sup>166</sup> Powertech asserts that in requiring more from the Staff, the Board has committed a clear error of law.<sup>167</sup> We disagree. At bottom, Powertech's dispute with the Board's decision is factual, not legal. When assessing a petition for review on factual issues, we typically defer to a Board's findings, absent a showing of clear error.<sup>168</sup> Here, Powertech challenges the Board's weighing of the evidence to find that the Staff's NEPA and NHPA

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<sup>164</sup> Powertech's Petition at 6-22; Staff's Petition at 14-25.

<sup>165</sup> Powertech's Petition at 7, 9-11, 16.

<sup>166</sup> *Id.* at 20-22.

<sup>167</sup> *Id.* at 17.

<sup>168</sup> 10 C.F.R. § 2.341(b)(4)(i).

analyses do not satisfy the NRC's statutory obligations. For example, with respect to the Staff's NEPA analysis, Powertech claims that the Staff considered and evaluated "all available information or information that reasonably could be obtained ...."<sup>169</sup> Yet none of Powertech's claims show clear error on the part of the Board, absent which we will not reconsider the Board's resolution of factual issues.<sup>170</sup> We therefore deny Powertech's petition for review with respect to the Board's findings in Contentions 1A and 1B.

**(b) The Staff's Petition for Review**

On appeal, the Staff argues that the Board misapplied NEPA's hard look standard as a matter of law, under which the Board should assess whether the Staff "made reasonable efforts" to obtain complete information on the cultural resources at issue here.<sup>171</sup> In its brief, the Staff describes the efforts it undertook and argues that these efforts were sufficient to meet the hard-look standard.<sup>172</sup> The Staff asks us to view the Board's application of the hard-look standard as a legal issue under 10 C.F.R. § 2.341(b)(4)(ii).<sup>173</sup> But the fundamental issue here—whether Staff complied with NEPA—is inherently factual.

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<sup>169</sup> Powertech's Petition at 21-22.

<sup>170</sup> We recognize that, as Powertech notes, the ACHP participated in the section 106 process and concluded that the NRC Staff's process complies with the "content and spirit" of the section 106 process. Ex. NRC-031, Letter from John Fowler, ACHP, to Waste Win Young, Standing Rock Sioux Tribe, at 3 (Apr. 7, 2014) (ML14241A473); see Powertech's Petition at 3, 9, 11, 15-16. The Staff likewise asks us to treat the ACHP's and North Dakota SHPO's views as dispositive of the fact that it complied with the NHPA. Staff's Petition at 24. Here, where the Board has weighed the relevant facts, including the cited exhibits, and determined that the Staff has not satisfied its obligations under the NHPA and NEPA, we will not disturb the Board's findings absent clear error.

<sup>171</sup> Staff's Petition at 17-18.

<sup>172</sup> *Id.* at 19-20.

<sup>173</sup> *Id.* at 17.

As a general matter, we defer to the Board's findings with respect to the underlying facts unless they are "clearly erroneous."<sup>174</sup> Here, the Board weighed the evidence and determined that the analysis of the environmental effects on cultural resources in the FSEIS was insufficient.<sup>175</sup> The Staff challenges this determination, describing the efforts it made to gather information on cultural resources, but the Staff has not demonstrated that the Board's findings are clearly erroneous.<sup>176</sup> Given the complexity of this proceeding, which involved hundreds of exhibits and over five years of litigation, we are not inclined to second guess the Board's fact-finding.

The Staff next challenges the Board's determination that, on the one hand, the Staff complied with the NHPA regarding identification of historic properties, but the Staff's analysis of cultural, religious, and historic resources under NEPA was insufficient. It argues that the Board's finding that it had complied with the NHPA in identifying historic properties compels the Board to conclude that the Staff also complied with NEPA with respect to cultural resources.<sup>177</sup> The Staff acknowledges that the Board relied on precedent in stating that NEPA compliance does not necessarily follow from NHPA compliance.<sup>178</sup> But it challenges the Board's application of that legal principle to the facts in this case, stating that it had taken a hard look at cultural resources in the FSEIS and arguing that "[t]he Board did not cite any authority supporting its divergent findings on whether the Staff complied with a common requirement of both

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<sup>174</sup> *Honeywell*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

<sup>175</sup> LBP-15-16, 81 NRC at 644-55.

<sup>176</sup> Staff's Petition at 19-20.

<sup>177</sup> *Id.* at 21-22.

<sup>178</sup> *Id.*; see LBP-15-16, 81 NRC 654-55 (citing *Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 608 F.3d 592, 606, 610 (9th Cir. 2010); *Hydro Resources, Inc.* (P.O. Box 777 Crownpoint, New Mexico 87313), LBP-05-26, 62 NRC 442, 472 (2005)).

statutes ....”<sup>179</sup> The Staff’s challenge to the Board’s alleged failure to cite authority for its findings is misplaced. Federal case law supports the legal principle that NHPA and NEPA compliance do not necessarily mirror one another.<sup>180</sup> The Board found that NEPA requires an analysis of the effects on all of the cultural resources present at the site, not only those properties eligible for listing on the National Register of Historic Places, which is the standard for further analysis under the NHPA.<sup>181</sup> The Staff does not demonstrate that the Board’s factual finding was implausible. Therefore, we decline to disturb the Board’s finding here.

Next, the Staff seeks review of the Board’s ruling on Contention 1B that the Staff failed to adequately consult with the Tribe under the NHPA.<sup>182</sup> The Staff argues that the Board’s holdings on Contentions 1A and 1B are contradictory because in Contention 1A the Board held “that the Staff complied with the NHPA when identifying cultural resources” while in Contention 1B, the Board held that the NHPA consultation process was inadequate.<sup>183</sup> But the Board’s rulings on compliance with the NHPA are not contradictory; its rulings on NHPA compliance in Contentions 1A and 1B relate to different obligations.

The NHPA imposes several obligations on federal agencies, which proceed in a step-by-step manner.<sup>184</sup> The consultation requirement continues throughout the steps. The first step is identifying any historic properties that might be affected by the federal undertaking (here

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<sup>179</sup> Staff’s Petition at 22.

<sup>180</sup> See *Te-Moak*, 608 F.3d at 606-07, 610.

<sup>181</sup> See 36 C.F.R. § 800.4 (requiring agencies to identify “historic properties”); *id.* § 800.16 (defining historic properties as “districts, sites, buildings, structures, or objects included in or eligible for inclusion in, the National Register of Historic Places”); see *generally id.* § 60.4 (providing the criteria for inclusion in the National Register of Historic Places).

<sup>182</sup> Staff’s Petition at 23.

<sup>183</sup> *Id.* Compare LBP-15-16, 81 NRC at 654, *with id.* at 657.

<sup>184</sup> *Id.* at 638-41.

licensing), and in doing so, making a reasonable and good faith effort to seek information from consulting parties, including Native American Tribes, to aid in that identification.<sup>185</sup> In ruling on Contention 1A, the Board determined that the Staff had satisfied the NHPA's consultation requirements with respect to identifying historic properties.<sup>186</sup> In other words, the Board determined that the Staff had satisfactorily completed the first step in the process.

But, as discussed by the Board, the identification of historic properties is not the end of the NHPA consultation process. After it identifies eligible sites that might be affected by the project, an agency must assess<sup>187</sup> and resolve<sup>188</sup> potential adverse effects in consultation with tribes that attach religious and cultural significance to those sites.<sup>189</sup> In its ruling on Contention 1B, the Board found that the Staff had not adequately consulted with the Tribe on the second and third steps; that is, despite its good faith effort to consult in order to identify historic properties, the Staff had not demonstrated that it provided the Tribe with the opportunity to identify concerns about those properties and participate in the resolution of any adverse effects.<sup>190</sup> The Board, after a merits hearing, reasonably concluded that the Staff's consultation with the Tribe was insufficient to meet these requirements. Thus, the Staff has not raised a substantial question for review. For the reasons stated above, we deny review of the Staff's petition with respect to Contentions 1A and 1B.

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<sup>185</sup> 36 C.F.R. § 800.4.

<sup>186</sup> LBP-15-16, 81 NRC at 654.

<sup>187</sup> 36 C.F.R. § 800.5.

<sup>188</sup> *Id.* § 800.6.

<sup>189</sup> *Id.* § 800.2(c)(2)(ii)(A).

<sup>190</sup> LBP-15-16, 81 NRC at 656-57. *See also* 36 C.F.R. § 800.2(c)(2)(ii)(A).

**(3) RETENTION OF JURISDICTION**

Both the Staff and Powertech appeal the Board's retention of jurisdiction pending resolution of the deficiencies identified in Contentions 1A and 1B.<sup>191</sup> In retaining jurisdiction, the Board directed the Staff to: (1) initiate government-to-government consultation with the Tribe; (2) file monthly status reports; and (3) submit "an agreement reflecting the parties' settlement ... or a motion for summary disposition of Contentions 1A and 1B."<sup>192</sup> Both the Staff and Powertech argue that in each instance the Board "exceeded its authority" by retaining jurisdiction over the proceeding and prescribing "a process for the Staff to resolve" the deficiencies identified in Contentions 1A and 1B.<sup>193</sup> Consolidated Intervenors also questioned the Board's retention of jurisdiction over these contentions. Consolidated Intervenors argue that doing so constitutes prejudicial procedural error.<sup>194</sup>

With respect to the Board's specific direction to the Staff to initiate "government-to-government" consultation, we agree in principle with the Staff and Powertech. To the extent that the Board's ruling can be viewed as providing specific direction to the Staff, the Board overstepped its authority.<sup>195</sup> But, based upon our review of the Board's decision, the Board has not stated that it will direct or oversee the Staff's review of cultural resources; instead, it leaves it to the Staff—either by agreement among the parties or by motion for summary disposition—to

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<sup>191</sup> Staff's Petition at 15-16; Powertech's Petition at 6.

<sup>192</sup> LBP-15-16, 81 NRC at 708, 710.

<sup>193</sup> Staff's Petition at 15-16; see also Powertech's Petition at 5-6, 6 n.9.

<sup>194</sup> Consolidated Intervenors' Petition at 6-7.

<sup>195</sup> See, e.g., *Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2)*, CLI-04-6, 59 NRC 62, 74 (2004) ("NRC Staff Reviews, which frequently proceed in parallel to adjudicatory proceedings, fall under the direction of Staff management and the Commission itself, not the licensing boards.").

determine when it has addressed the deficiencies identified by the Board.<sup>196</sup> All the Board has required is that the Staff provide reports regarding its consultation efforts in a manner similar to that in which it reports on the progress of its review and the Board's directions to the parties in this respect do not exceed the bounds of its authority. Our regulations provide the Board with the authority to "take appropriate action to control the ... hearing process," "[r]egulate the course of the hearing and the conduct of the participants," and "[i]ssue orders necessary to carry out the presiding officer's duties and responsibilities under [10 C.F.R. Part 2]."<sup>197</sup> In circumstances like these, we have made it clear that a Board has relative latitude to fashion appropriate remedies regarding issues properly before it.<sup>198</sup> The Staff is free to select whatever course of action it deems appropriate to address the deficiencies identified in the Board's order, including, but not limited to further government-to-government consultation.<sup>199</sup> For these reasons, we decline to disturb the Board's approach—the Staff must still file monthly reports, along with an agreement or a motion for summary disposition—depending on the outcome of its efforts to

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<sup>196</sup> LBP-15-16, 81 NRC at 710.

<sup>197</sup> 10 C.F.R. § 2.319.

<sup>198</sup> *Pa`ina*, CLI-10-18, 72 NRC at 96 (affirming the Board's decision to require an additional period for written public comment on a supplemental EA); *see also Offshore Power Systems* (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194, 206 (1978) ("[T]he boards have broad and strong discretionary authority to conduct their functions with efficiency and economy. However, they must exercise it with fairness to all the parties ...." (citation omitted)); *Wisconsin Electric Power Co., et al.* (Point Beach, Unit 2), ALAB-82, 5 AEC 350, 351 (1972) ("Administrative agencies and courts have long been accepted as 'collaborative instrumentalities of justice.'" (quoting *United States v. Morgan*, 313 U.S. 409, 422 (1941))); *Duke Power Co., et al.* (Catawba Nuclear Station, Units 1 and 2), LBP-83-24A, 17 NRC 674, 680 (1983).

<sup>199</sup> We note, however, that in licensing reviews such as this one, where Native American Tribes could be affected by the NRC's licensing action, we expect the Staff's actions to be guided by the principles outlined in the NRC's Tribal Protocol Manual. "Tribal Protocol Manual," NUREG-2173 (2014) (ML14274A014).

address the deficiencies. Therefore, we deny Powertech's, the Staff's, and Consolidated Intervenor's petitions for review of the Board's retention of jurisdiction over these contentions.

## 2. *Contention 2*

### a. *Contention and Board Order*

The Tribe seeks review of the Board's resolution of Contention 2 in favor of Powertech and the Staff. In Contention 2, the Tribe argued that

the FSEIS violates 10 C.F.R. Part 40, Appendix A, Criterion 7, 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations ... in that it fails to provide an adequate baseline groundwater characterization or demonstrate that ground water samples were collected in a scientifically defensible manner, using proper sample methodologies.<sup>200</sup>

The Tribe also challenged the fact that "while the FSEIS contains data from 2007-2009, the background water quality for use in the actual regulatory process for the facility will be established [at] a future date, outside of the NEPA process, and outside of the public's review."<sup>201</sup> The Tribe objected to the collection of additional background groundwater quality data after issuance of the license, but before the facility begins operating, and argued that the practice violates NEPA.<sup>202</sup>

In ruling on Contention 2, the Board noted that NRC case law supports the industry practice of definitively establishing groundwater quality baselines after licensing but before operation.<sup>203</sup> Additionally, the Board noted that it found the testimony offered by the Staff's and Powertech's witnesses more detailed and persuasive than the testimony offered by the Tribe's

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<sup>200</sup> Tribe's Post-Hearing Brief at 38.

<sup>201</sup> *Id.* at 39.

<sup>202</sup> *Id.* at 38-39.

<sup>203</sup> LBP-15-16, 81 NRC at 665 (quoting *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 6 (2006)).

witness.<sup>204</sup> In reaching its decision, the Board examined the Tribe's exhibits regarding the EPA's Preliminary Assessment to determine that document's relevance to this contention.<sup>205</sup>

The Board found unavailing the Tribe's argument that the conclusions in the Preliminary Assessment translated to an insufficient discussion of historic mining operations in the FSEIS.<sup>206</sup>

*b. The Tribe's Petition for Review*

On appeal, the Tribe challenges the Board's ruling, claiming that the Board erred as a matter of law when it permitted Powertech to defer collection of groundwater data to after licensing but before operation.<sup>207</sup> Based on our review of the record, we find that the Tribe has not raised a substantial question of law with respect to the applicable standards for site characterization. The Tribe mischaracterizes the Board's ruling when it claims that the Board allowed the Staff and Powertech to defer gathering groundwater data until after licensing.<sup>208</sup> The Board did not rule that "meaningful" baseline characterization may be deferred until the post-licensing period. Rather, it held that the pre-licensing groundwater monitoring used to describe the site for NEPA purposes need not conform to the post-licensing, pre-operation groundwater monitoring requirements applicable to a licensed facility because the monitoring

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<sup>204</sup> *Id.* at 666.

<sup>205</sup> *Id.*

<sup>206</sup> *Id.* The Board reasoned that the conclusion in the Preliminary Assessment that lack of groundwater sampling data limited the availability of background concentrations did not force a conclusion that the FSEIS's discussion of background water quality data was insufficient. It explained that the Preliminary Assessment was focused on CERCLA and the FSEIS was focused on our environmental regulations and the CEQ regulations. CERCLA's objectives are different from NEPA's objectives. With respect to CERCLA, it is important to determine the background levels to assess the impact of *past* mining activities on the site. By contrast, for NEPA purposes, the site's current baseline is important to determine the potential future impacts of the proposed project on the site.

<sup>207</sup> Tribe's Petition at 19-20.

<sup>208</sup> *Id.* at 20.

activities at these two stages serve different purposes.<sup>209</sup> We see no substantial question of law relating to NEPA's site characterization requirements.

The Tribe further asserts that the Board "committed ... error and abused its discretion" by not requiring the Staff to account for past mining activity in its baseline water quality data.<sup>210</sup> In support of this argument, the Tribe argues that "[t]he Board even ignored evidence from the EPA Preliminary Assessment ... confirming the lack of meaningful data as to the impacts associated with historic mining at the site and how that impacts current water quality and future impacts from the Dewey-Burdock site."<sup>211</sup> Contrary to the Tribe's assertions, the Board did not disregard the Preliminary Assessment; it specifically addressed the Tribe's argument regarding the Preliminary Assessment in its decision.<sup>212</sup> The Board found that due to the different objectives of NEPA and CERCLA, the Preliminary Assessment's finding regarding background data did not impact the adequacy of the analysis in the FSEIS.<sup>213</sup> The Tribe does not explain how the Board's determination on this point constitutes clear error or abuse of discretion.<sup>214</sup> The

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<sup>209</sup> LBP-15-16, 81 NRC at 665 (quoting *Strata Energy, Inc. (Ross In Situ Uranium Recovery Project)*, LBP-15-3, 81 NRC 65, 91-92 (2015)). In the *Strata* proceeding, we recently denied review of the Board's decision on a contention that was substantially similar to the Tribe's Contention 2, on the same grounds. *Strata Energy, Inc. (Ross In Situ Uranium Recovery Project)*, CLI-16-13, 83 NRC 566, 583-84 (2016) ("[T]he groundwater monitoring used to describe the environmental conditions at the site for NEPA purposes need not conform to the groundwater monitoring requirements applicable to an operating facility. The two standards serve different purposes.") (citations omitted).

<sup>210</sup> Tribe's Petition at 20.

<sup>211</sup> *Id.*

<sup>212</sup> LBP-15-16, 81 NRC at 666.

<sup>213</sup> *Id.*

<sup>214</sup> See Tribe's Petition at 20.

Tribe does not present a substantial question for review with respect to the Board's ruling on Contention 2; therefore, we decline to take review.<sup>215</sup>

### 3. *Contention 3*

#### a. *Contention and Board Order*

In Contention 3, the Tribe and Consolidated Intervenors argued that the Dewey-Burdock site contains numerous geological and man-made features that will permit groundwater migration.<sup>216</sup> Overall, the Board resolved this contention in favor of Powertech and the Staff.<sup>217</sup> The Board carefully and extensively considered evidence presented by all four parties, and it concluded that the Staff had taken the required hard look at the confinement of the overall ore zone.<sup>218</sup> Because of the numerous issues covered by this contention, the Board explained its ruling on each specific technical issue related to fluid containment separately.<sup>219</sup>

In its ruling on Contention 3, the Board conditioned Powertech's license as follows:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and properly abandon all historic drill holes located within the perimeter well ring for the wellfield. The licensee will document, and provide to the NRC, such efforts to identify and properly abandon all drill holes in the wellfield data package.<sup>220</sup>

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<sup>215</sup> The Tribe also argues that the Board abused its discretion in disregarding the Tribe's argument that Regulatory Guide 4.14 is outdated. *Id.* at 20-21. The Tribe's dissatisfaction with Regulatory Guide 4.14 does not demonstrate Board error presenting a substantial question for our review, particularly since, as the Staff points out, the Regulatory Guide did not form a basis for the Board's decision. See LBP-15-16, 81 NRC at 665-66; see *also* Staff's Response to Tribe at 17-18.

<sup>216</sup> See Tribe's Post-Hearing Brief at 43-56.

<sup>217</sup> LBP-15-16, 81 NRC at 681.

<sup>218</sup> *Id.* at 676.

<sup>219</sup> See *id.* at 676-81.

<sup>220</sup> *Id.* at 679, 709.

The Board explained that it conditioned the license because “despite the NRC Staff’s claim that ‘because there are a number of improperly plugged or abandoned boreholes at the Dewey-Burdock site, as a condition of its license Powertech must address these boreholes before beginning operations,’ [the Board] did not find any such explicit condition in the license.”<sup>221</sup> It concluded that with the additional license condition, the FSEIS and the record contain “adequate hydrogeological information to demonstrate the ability to contain fluid migration and assess potential impacts to groundwater.”<sup>222</sup>

*b. Petitions for Review*

Both the Tribe and Consolidated Intervenors have petitioned for review of the Board’s ruling on this contention.<sup>223</sup> Additionally, Powertech has petitioned for review of the license condition the Board imposed as part of its ruling.<sup>224</sup> As explained below, none of the petitions for review regarding this contention raise a substantial question.

**(1) THE TRIBE’S PETITION FOR REVIEW**

Although the Tribe characterizes its challenges to the Board’s ruling on Contention 3 as legal arguments, the arguments generally relate to how the Board weighed the evidence.<sup>225</sup> With respect to those challenges, based upon our review of the record, we find that none of the Tribe’s arguments demonstrate a substantial question for review regarding the Board’s factual findings.

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<sup>221</sup> *Id.* at 679 (quoting *NRC Staff’s Reply Brief* (Jan. 29, 2015), at 26).

<sup>222</sup> *Id.* at 681.

<sup>223</sup> Tribe’s Petition at 22-23; Consolidated Intervenors’ Petition at 2 & n.3, 4-7.

<sup>224</sup> Powertech’s Petition at 22-25.

<sup>225</sup> See Tribe’s Petition at 22.

The Tribe argues that the Board committed legal error in holding that, while “small faults and joints may be present in the project area, their presence does not support Intervenors’ assertions [regarding the impacts of the faults and joints.]”<sup>226</sup> The Tribe asserts that the Board “appl[ied] an inappropriate legal standard when it effectively placed the burden on the Tribe to demonstrate the impacts associated with these faults and fractures.”<sup>227</sup> We disagree—the Board has neither shifted the burden of proof nor applied an inappropriate legal standard. In its ruling, the Board made clear that “[t]his is not simply a question of whether faults and joints are present, but rather whether they are large and open enough to produce a substantial breach in the confining layers ....”<sup>228</sup> The Board carefully weighed the evidence and made a factual finding that the faults and joints would not provide pathways for groundwater migration.<sup>229</sup> We defer to the Board’s findings with respect to the underlying facts unless they are “clearly erroneous.”<sup>230</sup> Here, the Tribe has not raised a substantial question of clear error on the part of the Board.

Next, the Tribe objects to the Board’s imposition of a license condition requiring Powertech to attempt to locate and abandon boreholes.<sup>231</sup> The Tribe characterizes the license condition imposed by the Board as the sole means of achieving compliance and preventing leakage.<sup>232</sup> We disagree. In addition to the license condition imposed by the Board, License Condition 11.5 requires Powertech to monitor for excursions and take corrective action—

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<sup>226</sup> LBP-15-16, 81 NRC at 678.

<sup>227</sup> Tribe’s Petition at 23.

<sup>228</sup> LBP-15-16, 81 NRC at 677.

<sup>229</sup> *Id.* at 671-73; 677-78.

<sup>230</sup> *Honeywell*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

<sup>231</sup> Tribe’s Petition at 22-23.

<sup>232</sup> *Id.* at 22.

including potentially terminating injection of lixiviant within the wellfield until the excursion is corrected.<sup>233</sup> This requirement provides incentive for Powertech to locate and abandon the boreholes. Moreover, the Board's additional license condition requires Powertech to "document its efforts" to find and fill the boreholes, enabling the Staff to assess whether Powertech's efforts are undertaken in good faith.<sup>234</sup> Additionally, absent evidence to the contrary, we assume at the licensing stage that a licensee will comply with its obligations.<sup>235</sup>

The Tribe argues that the Board "relie[d] entirely" on a license condition outside the NEPA process.<sup>236</sup> But the Tribe's assertion is inaccurate. As explained above, the Board relied on much more than one license condition; it weighed all parties' evidence and testimony on this contention, along with the information in the FSEIS and the record.<sup>237</sup> We see no clear error in the Board's reasonable conclusion that the additional license condition will ensure Powertech's compliance with the requirement to attempt to find and plug historic boreholes. Accordingly, we deny the Tribe's petition for review with respect to Contention 3.

## **(2) CONSOLIDATED INTERVENORS' PETITION FOR REVIEW**

Like the Tribe, Consolidated Intervenors challenge the Board's weighing of the evidence in its ruling on Contention 3. Consolidated Intervenors argue that the Board shifted the burden of proof and instituted "a new 'compelling' standard"; they refer to the Board's findings with

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<sup>233</sup> Ex. NRC-012, License, at 10-11.

<sup>234</sup> LBP-15-16, 81 NRC at 679, 709.

<sup>235</sup> See *Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 400 (1995); cf. *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003).

<sup>236</sup> Tribe's Petition at 22.

<sup>237</sup> LBP-15-16, 81 NRC at 676-81; Ex. NRC-008-A-2, FSEIS § 4.5.2.1.1.2.2.

respect to whether leakage was caused by unplugged boreholes or by naturally occurring fissures and joints.<sup>238</sup>

Contrary to Consolidated Intervenor's argument, the Board's decision contains careful consideration of the parties' evidence regarding several subjects in dispute.<sup>239</sup> The Board neither shifted the burden of proof nor created a new standard of proof. It appropriately weighed the evidence presented by the parties and made factual determinations based on that evidence.<sup>240</sup>

Additionally, Consolidated Intervenor's argue that the Board erred when it accepted a witness's "unsubstantiated opinion," and they argue generally that the Board committed factual error regarding leakage at the site.<sup>241</sup> Consolidated Intervenor's argue that the Board should not have credited an expert witness proffered by Powertech because that witness was "speaking from the perspective of the mining industry" rather than in the interest of public health and safety.<sup>242</sup> The witness the Board cited is an experienced engineer and hydrologist.<sup>243</sup> Consolidated Intervenor's have raised no objection to his qualifications aside from the fact that he testified for the applicant. Our deference to the Board is particularly great when it comes to weighing the credibility of witnesses.<sup>244</sup> Our review of the record demonstrates that the Board examined the exhibits, questioned witnesses, and considered the parties' pleadings and

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<sup>238</sup> Consolidated Intervenor's Petition at 2 & n.3, 4, 6-7; see LBP-15-16, 81 NRC at 677.

<sup>239</sup> LBP-15-16, 81 NRC at 676-81.

<sup>240</sup> *Id.*

<sup>241</sup> Consolidated Intervenor's Petition at 2 & n.3, 4-6.

<sup>242</sup> *Id.* at 5.

<sup>243</sup> See Ex. APP-014, Curriculum Vitae of Hal. P. Demuth, M.S., Petrotek Engineering Corporation (ML14240A422).

<sup>244</sup> See, e.g., *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 26 (2003) (citations omitted).

statements of position in making its decision.<sup>245</sup> Because Consolidated Intervenors have not raised a substantial question regarding the Board's findings of fact, we deny their petition with respect to this contention.

### (3) POWERTECH'S PETITION FOR REVIEW

Powertech seeks review of the Board's imposition of an additional license condition regarding location and abandonment of historic boreholes. It argues that the Board's addition of this license condition constituted clear error of fact because Powertech had already committed to plugging historic boreholes.<sup>246</sup> We find that any factual error in the Board's determination that the license did not contain an explicit condition regarding historic boreholes was harmless. While Powertech is bound by License Condition 9.2 to its commitment to plug boreholes, we do not see the inherent conflict between that commitment and the Board's additional license condition that Powertech and the Staff assert exists. The Board's general license condition can be implemented through the more specific procedures contained in Powertech's commitment. We also see little in the way of additional burden here, particularly if, as Powertech asserts, the Dewey-Burdock site's artesian conditions make it easier to identify improperly plugged boreholes, and it has documentation that historical boreholes were plugged according to State regulations.<sup>247</sup>

Next, Powertech asserts that the Board committed factual and legal error in imposing the license condition *sua sponte*.<sup>248</sup> Powertech argues that because "[n]one of the argument or testimony pertained to plugging and abandoning *all* boreholes prior to the commencement of

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<sup>245</sup> See, e.g., LBP-15-16, 81 NRC at 667-81.

<sup>246</sup> Powertech's Petition at 22-23.

<sup>247</sup> *Id.* at 25 n.57.

<sup>248</sup> *Id.* at 23-25.

licensed operations in a given wellfield,” the Board imposed the license condition *sua sponte*.<sup>249</sup> But as the record reflects, historical boreholes were one of the issues raised in Contention 3; the Board imposed this license condition in ruling on that contention, which was the subject of a full evidentiary hearing.<sup>250</sup> Moreover, as the Staff points out in its response to Powertech’s petition, “[the Tribe’s and Consolidated Intervenors’] arguments could reasonably be construed as claiming that, in order to ensure adequate containment, Powertech must properly abandon all boreholes within the perimeter of each wellfield.”<sup>251</sup> The Board ruled on a matter properly before it in imposing an additional license condition on Powertech. Powertech’s argument that the license condition was imposed *sua sponte* does not raise a substantial question for review. We deny review of Powertech’s petition regarding Contention 3.

#### **4. Contention 6**

In Contention 6, the Tribe argued that discussion of mitigation measures in the FSEIS was inadequate for two reasons. First, the Tribe asserted that the FSEIS’s discussion and evaluation of mitigation measures was insufficiently detailed.<sup>252</sup> Second, it argued that the Staff erroneously deferred development of further mitigation measures until after the issuance of the FSEIS and the Record of Decision.<sup>253</sup> In its petition, the Tribe challenges the Board’s ruling by asserting that the Board failed to address several of its arguments and that the Board’s ruling on Contention 6 is inconsistent with its ruling on Contention 1A.

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<sup>249</sup> *Id.* at 24.

<sup>250</sup> See LBP-15-16, 81 NRC at 674-75, 679.

<sup>251</sup> *NRC Staff’s Response to Powertech’s Petition for Review of LBP-15-16* (June 22, 2015), at 7 n.16.

<sup>252</sup> *Oglala Sioux Tribe’s Statement of Position on Contentions* (June 20, 2014), at 27-28 (Tribe’s Statement of Position). Consolidated Intervenors adopted the Tribe’s arguments with respect to Contention 6. *Consolidated Intervenors’ Opening Statement* (July 7, 2014), at 9.

<sup>253</sup> Tribe’s Statement of Position at 28.

a. *Contention and Board Order*

With respect to the portion of its contention that challenged the discussion of mitigation measures in the FSEIS, the Tribe argued before the Board that NEPA requires an EIS to “detail[] with [a] specific description, supporting data, and analysis of process and effectiveness” each mitigation measure.<sup>254</sup> The Tribe asserted that the Dewey-Burdock project FSEIS merely listed potential mitigation measures and lacked scientific evidence or analysis regarding the effectiveness of each measure.<sup>255</sup>

The Board, after a merits hearing and review of the record, determined that the Staff’s discussion and evaluation of mitigation measures was sufficient.<sup>256</sup> The Board agreed with the Tribe’s arguments regarding NEPA’s requirements for analysis of mitigation measures, but it found that the Staff had met those requirements.<sup>257</sup> In its holding, the Board determined that the Tribe completely overlooked Chapter 4 of the FSEIS, which contained extensive analysis of mitigation measures.<sup>258</sup> Further, the Board stated that the FSEIS “fully evaluated the impacts and mitigation strategies detailed under other [expert agency] permits.”<sup>259</sup> Finally, the Board concluded that Powertech’s license requires compliance with mitigation and monitoring measures described in the FSEIS, the Record of Decision, and the license.<sup>260</sup> Accordingly, the

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<sup>254</sup> *Id.* at 38.

<sup>255</sup> *Id.* at 30-32.

<sup>256</sup> LBP-15-16, 81 NRC at 690-91.

<sup>257</sup> *Id.* at 690.

<sup>258</sup> *Id.* at 690-91.

<sup>259</sup> *Id.* at 692.

<sup>260</sup> *Id.* at 691.

Board found that Powertech would be required to comply with mitigation strategies analyzed in the FSEIS from initial, pre-licensing activities through decommissioning.<sup>261</sup>

In the second portion of Contention 6, the Tribe argued that the Staff violated NEPA by deferring development of certain mitigation measures—particularly mitigation of adverse effects on cultural resources—until after issuance of the FSEIS.<sup>262</sup> The Tribe also challenged the Staff's analysis of the proposed monitoring well network, historical well hole plugging, and wildlife protections and monitoring.<sup>263</sup>

Regarding the development of mitigation measures after FSEIS completion, the Board ruled that “[t]he release of an FSEIS does not mark the completion of the NEPA review process.”<sup>264</sup> The Board noted that the FSEIS referenced the yet-to-be-issued Programmatic Agreement and explained that mitigation measures adopted in the Programmatic Agreement could mitigate impacts on historic or cultural resources.<sup>265</sup> Further, the Board determined that the FSEIS included analysis of certain mitigation measures to be implemented post-licensing.

In finding the FSEIS's analysis adequate, the Board relied upon the generally accepted presumption that Powertech will comply with its obligations as listed in the license, the FSEIS, and associated documents.<sup>266</sup> The Board noted that monitoring programs are “a principal aid” to the Staff and the licensee in determining whether mitigation measures are effective.<sup>267</sup> Moreover, it stated that several of Powertech's license conditions require Powertech to

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<sup>261</sup> *Id.*

<sup>262</sup> Tribe's Statement of Position at 28.

<sup>263</sup> *Id.* at 33-34.

<sup>264</sup> LBP-15-16, 81 NRC at 694.

<sup>265</sup> *Id.*

<sup>266</sup> *Id.* at 695.

<sup>267</sup> *Id.*

document, maintain, and submit to NRC its monitoring results.<sup>268</sup> In sum, the Board held that the mitigation and monitoring plans in the FSEIS, while not final, complied with NEPA.<sup>269</sup> Accordingly, the Board resolved Contention 6 in favor of Powertech and the Staff.

*b. The Tribe's Petition for Review*

On appeal, the Tribe argues that it had identified significant analytical gaps in the agency's review of mitigation measures, and that the Board failed to address all of its arguments when ruling on Contention 6.<sup>270</sup> We disagree. The Board, after a careful examination of the record, determined that the FSEIS contained sufficient analysis of mitigation measures.<sup>271</sup> Absent clear error, which the Tribe has not demonstrated, we decline to disturb the Board's determination that the FSEIS's analysis of mitigation measures was sufficient for NEPA compliance. Therefore, we deny the Tribe's petition with respect to this point.

The Tribe also seeks review of the Board's decision regarding deferral of development of mitigation measures and argues that the Board erred at law and abused its discretion.<sup>272</sup> For the reasons stated below, we deny the Tribe's petition for review with respect to this issue.

First, the Tribe argues that future development of mitigation measures through the Programmatic Agreement violated NEPA.<sup>273</sup> The Tribe asserts that the Board's ruling disregarded the Tribe's claim that the Programmatic Agreement failed to include "any actual

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<sup>268</sup> *Id.* at 695-97.

<sup>269</sup> *Id.* at 694 (quoting *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, NM 87313), CLI-06-29, 64 NRC 417, 426-27 (2006)).

<sup>270</sup> Tribe's Petition at 24 (citing LBP-15-16, 81 NRC at 689).

<sup>271</sup> LBP-15-16, 81 NRC at 690-92.

<sup>272</sup> Tribe's Petition at 24.

<sup>273</sup> *Id.*

mitigation [measures],” in violation of NEPA.<sup>274</sup> We disagree with the Tribe’s argument regarding lack of analysis in the Programmatic Agreement. Our examination of the record reveals that the Programmatic Agreement and the FSEIS contain discussion of mitigation measures for cultural resources, and the Board did not find deficiencies in those discussions.<sup>275</sup> Because the Tribe fails to address these discussions, it does not raise a substantial question for review of the Board’s finding that they are adequate for NEPA compliance.

Next, the Tribe challenges the Board’s ruling regarding the FSEIS’s discussion of mitigation measures in numerous areas, including wildlife protection, wellfield testing, air impacts, and historical well hole plugging and abandonment.<sup>276</sup> It argues that “the [Board’s] ruling also substantially ignore[d] the Tribe’s arguments regarding other mitigation issues,” which, in the Tribe’s view, the Staff did not sufficiently describe or analyze in the FSEIS.<sup>277</sup>

We disagree. In ruling on these points, the Board did not disregard the Tribe’s arguments; it determined—based on precedent and its review of the record—that the mitigation and monitoring plans discussed in the FSEIS and Programmatic Agreement contained the level

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<sup>274</sup> *Id.*

<sup>275</sup> See, e.g., Ex. NRC-018-A, “Programmatic Agreement Among U.S. Nuclear Regulatory Commission, U.S. Bureau of Land Management, South Dakota State Historic Preservation Office, Powertech (USA), Inc., and Advisory Council on Historic Preservation Regarding the Dewey-Burdock [*In Situ*] Recovery Project Located in Custer and Fall River Counties, South Dakota” (Mar. 3, 2014), at 5 (requiring Powertech to protect all unevaluated properties until National Register-eligibility determinations are completed), at 10 (requiring Powertech to halt ground-disturbing activities within a 150-foot area and take numerous additional steps if a previously unknown cultural resource is discovered during the implementation of the Dewey-Burdock Project) (ML14246A401) (Programmatic Agreement); Ex. NRC-008-A-2, FSEIS § 4.9.1.1.1. The Staff’s mitigation recommendations appear in the far-right columns of Tables 4.9-1 through 4.9-6.

<sup>276</sup> Tribe’s Petition at 25.

<sup>277</sup> *Id.*

of detail required by NEPA.<sup>278</sup> The Tribe's petition does not articulate a substantial question for review with respect to this portion of the Board's decision.

Finally, the Tribe asserts that the Board's ruling with respect to Contention 6 is "internally inconsistent" because it conflicts with the Board's ruling on Contention 1A where it found, in part, that the Staff's analysis of mitigation measures for cultural resources did not satisfy NEPA.<sup>279</sup> The Board found generally that the Staff's analysis of mitigation was sufficient. Specifically regarding mitigation of cultural resources, the Board ruled that

[t]he FSEIS ... explains that mitigation measures adopted in the Programmatic Agreement "could reduce an adverse impact to a historic or cultural resource." ... Therefore, the Board finds that the NRC Staff completing the Programmatic Agreement after the FSEIS was released, but before the issuance of the Record of Decision or the license, adequately satisfied NEPA.<sup>280</sup>

Regarding Contention 6, the Board concluded that the Staff's analysis of mitigation measures for cultural resources fulfilled NEPA's requirements. We agree with the parties, however, that this statement is inconsistent with the Board's ruling on Contention 1A. Specifically, there the Board stated that "the FSEIS does not include mitigation measures sufficient to protect [the Tribe's] cultural, historical, and religious sites that may be affected by the Powertech project."<sup>281</sup> With this statement, the Board appears to be mixing the requirements of NEPA and the NHPA—NEPA does not require the adoption of mitigation measures, only a discussion of their potential effects. Regardless, by pointing out these inconsistent Board statements, the Tribe has demonstrated only harmless error because the mitigation measures for cultural resources are covered by Contentions 1A and 1B. Thus, a separate ruling on this specific issue under

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<sup>278</sup> LBP-15-16, 81 NRC at 694-95.

<sup>279</sup> Tribe's Petition at 25; see LBP-15-16, 81 NRC at 655.

<sup>280</sup> LBP-15-16, 81 NRC at 694.

<sup>281</sup> *Id.* at 655.

Contention 6 is not necessary. Therefore, we find that the Tribe does not raise a substantial question for our review with respect to Contention 6.

### III. CONCLUSION

For the foregoing reasons, we *deny* in part each party's petition for review. We *grant* each party's petition with respect to the finality of the Board's ruling on Contentions 1A and 1B and find that these contentions should be considered "final" for the purposes of the petitions for review at issue here. We *grant* the Staff's and Powertech's petitions for review with respect to the Board's direction to the Staff regarding the resolution of Contentions 1A and 1B. Pursuant to our inherent supervisory authority over agency adjudications, we *direct* that the proceeding remain open for the narrow purpose of resolving the deficiencies identified by the Board in Contentions 1A and 1B and *affirm* the Board's direction to the Staff to submit monthly status reports and the Board's direction to file an agreement between the parties or a motion for summary disposition to resolve the deficiencies identified by the Board. We *grant* the Tribe's petition for review with respect to proposed Contention 8 and dismiss that contention.

IT IS SO ORDERED.

For the Commission

**NRC Seal**

*/RA/*

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 23<sup>rd</sup> day of December, 2016

**Commissioner Svinicki, dissenting in part.**

I fully join the majority's order today with one exception: the Staff's and Powertech's appeals of Contentions 1A and 1B. For the reasons expressed below, I would take review of these petitions because the Board applied the wrong legal standards to these contentions. Moreover, when considered under the correct legal standards, the evidentiary record supports resolving Contentions 1A and 1B in favor of the Staff. Therefore, I would enter judgment in favor of the Staff and direct the Board to terminate this proceeding.

**A. Contention 1A**

On appeal, the Staff argues that the Board's ruling on Contention 1A constitutes legal error because it misapplied NEPA's hard look standard, under which the Board should assess whether the Staff "made reasonable efforts" to obtain adequate information on the cultural resources at issue here.<sup>1</sup> In its brief, the Staff describes the efforts it undertook and argues that these efforts were sufficient to meet the hard look standard.<sup>2</sup> The Staff asks us to view the Board's application of the hard look standard as a legal issue under 10 C.F.R. § 2.341(b)(4)(ii).<sup>3</sup> I would take review of the Staff's petition for review of Contention 1A and reverse the Board's ruling that the Staff's environmental analysis did not adequately address the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources.

We have previously acknowledged that for some NEPA reviews, necessary data may "prove to be unavailable, unreliable, inapplicable, or simply not adaptable."<sup>4</sup> In such cases, we

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<sup>1</sup> Staff's Petition at 17-18.

<sup>2</sup> *Id.* at 19-20.

<sup>3</sup> *Id.* at 17.

<sup>4</sup> *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010).

have directed the Staff to provide a reasonable analysis of the available information with a “disclosure of incomplete or unavailable information.”<sup>5</sup> Likewise, Federal courts have upheld agency determinations not to analyze impacts “for which there are not yet standard methods of measurement or analysis.”<sup>6</sup> Moreover, the NRC looks for guidance to the Council on Environmental Quality’s implementing regulations for NEPA, which specify that an agency need not include relevant information if “the overall costs of obtaining it are exorbitant.”<sup>7</sup>

While the Board cited to these principles in its discussion of legal standards, it did not apply these rules to the FSEIS.<sup>8</sup> Instead of responding to the Staff’s argument that “it complied with NEPA by making repeated attempts to obtain information on cultural resources,”<sup>9</sup> the Board examined whether the FSEIS “adequately catalogued” the “cultural, historical, and religious sites of the Oglala Sioux Tribe.”<sup>10</sup> Because it found that the FSEIS did not contain this information, the Board concluded that the “NRC Staff did not give this issue its required hard look in the FSEIS.”<sup>11</sup> Consequently, the Staff is correct that the Board’s ruling on Contention 1A constitutes legal error. Instead of considering whether the Staff could reasonably obtain the information it acknowledged was missing, the Board invalidated the FSEIS simply because the

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<sup>5</sup> *Id.*

<sup>6</sup> *Town of Winthrop v. F.A.A.*, 535 F.3d 1, 13 (1st Cir. 2008).

<sup>7</sup> 40 C.F.R. § 1502.22; see also *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 443-44 (2011) (observing that while the NRC is not bound by CEQ regulations, it looks to them for guidance).

<sup>8</sup> LBP-15-16, 81 NRC at 638 (noting that “an environmental impact statement is not intended to be a research document” (internal quotation marks omitted)).

<sup>9</sup> *Id.* at 652.

<sup>10</sup> *Id.* at 655.

<sup>11</sup> *Id.*

information was missing in the first place.<sup>12</sup> This approach is facially inconsistent with our precedent, Federal case law, and the CEQ regulations, which recognize that in some instances information relevant to an EIS will not be reasonably available and direct the agency to proceed in accord with NEPA's rule of reason in the face of such lacunae.<sup>13</sup> Therefore, the Board's ruling on Contention 1A rests on a legal error.<sup>14</sup>

While the Commission would normally hesitate to wade through such a detailed factual record ourselves, particularly when we have not had the advantage of observing testimony first hand,<sup>15</sup> in this case other findings from the Board indicate that the missing information was not reasonably available. Specifically, upon reviewing the record in its entirety, the Board concluded that the amount of "funds requested to collect tribal cultural information" by the Oglala Sioux was "patently unreasonable."<sup>16</sup> If information is only available at a patently unreasonable cost, here potentially four million dollars to conduct one part of the cultural survey (itself only one part of the larger NEPA review), it follows that such information is not reasonably available.<sup>17</sup> Moreover, because this information missing from the FSEIS was not reasonably available, its absence from the FSEIS analysis cannot be a basis upon which the FSEIS fails to meet NEPA's hard look standard.

In its Response, the Tribe argues that the precedents cited by Staff do not stand for the legal principle that when relevant information to an EIS is unavailable, the agency must only

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<sup>12</sup> *Id.*

<sup>13</sup> *Pilgrim*, CLI-10-22, 72 NRC at 208; *Town of Winthrop*, 535 F.3d at 13; 40 C.F.R. § 1502.22.

<sup>14</sup> 10 C.F.R. § 2.341(b)(4)(ii).

<sup>15</sup> *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear 1), ALAB-303, 2 NRC 858, 867 (1975) (noting that "Licensing Boards are the Commission's primary fact finding tribunals").

<sup>16</sup> LBP-15-16, 81 NRC at 657 & n.229.

<sup>17</sup> Staff's Petition at 6 (citing Tr. at 804, 807).

make reasonable efforts to obtain the information.<sup>18</sup> Specifically, the Tribe argues that many of the cases relied on by the Staff only hold that agencies need not consider remote and speculative impacts in an EIS.<sup>19</sup> But, it appears that the Staff only cited to these precedents to establish NEPA's general rule of reason.<sup>20</sup> Moreover, several of the authorities relied on by the Staff appear to support the position that agencies need only undertake reasonable efforts to acquire missing information, such as 40 C.F.R. § 1502.22, *Town of Winthrop*, and *Pilgrim*.<sup>21</sup> For the most part, the Tribe did not discuss these authorities in its response.<sup>22</sup> While the Tribe asserts that *Pilgrim* "simply confirmed" that an EIS is "not intended to be a research document,"<sup>23</sup> these quotations from *Pilgrim* support the Staff's position because they indicate that an agency need not take extraordinary efforts to obtain or create missing information.

#### **B. Contention 1B**

Powertech advances a similar argument with respect to Contention 1B — that the Board did not apply the correct standard for tribal consultation under the NHPA implementing regulations.<sup>24</sup> I would take review of Powertech's petition with respect to Contention 1B and

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<sup>18</sup> Tribe's Response at 15-17.

<sup>19</sup> *Id.* (citing *Ground Zero Ctr. for Non-Violent Action v. U.S. Dep't of the Navy*, 383 F.3d 1082 (9th Cir. 2004); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017 (9th Cir. 1980); *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-10-11, 71 NRC 287 (2010)).

<sup>20</sup> Staff's Petition at 17-18.

<sup>21</sup> *Id.* (citing *Pilgrim*, CLI-10-22, 72 NRC at 208; *Town of Winthrop*, 535 F.3d at 13; 40 C.F.R. § 1502.22).

<sup>22</sup> Tribe's Response at 16.

<sup>23</sup> *Id.* (quotation marks omitted).

<sup>24</sup> See Powertech's Petition at 9-11 ("[T]he Licensing Board's attempt to distinguish between the characterizations of consultation as 'reasonable' versus 'meaningful' is not part of the NHPA statutory framework or regulatory regime.").

reverse the Board's ruling that the consultation process between the Staff and the Tribe was inadequate.

Under the NHPA's implementing regulations, the NRC must provide every tribe "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its view on the undertaking's effects on such properties, and participate in the resolution of such adverse effects."<sup>25</sup> While the "Tribe is entitled to 'identify its concerns,' to 'advise,' to 'articulate,' and to 'participate,'" courts have warned that "consultation is not the same thing as control over a project."<sup>26</sup> Even if a party's involvement is limited, if that limited involvement is by choice, the agency has provided the party with a reasonable opportunity to participate.<sup>27</sup>

With regard to Contention 1B, the Board initially stated the correct legal standard, whether the Staff provided a "reasonable opportunity" for consultation.<sup>28</sup> However, in evaluating Contention 1B, rather than apply that standard, the Board sought to determine "which party or specific action led to the impasse preventing an adequate tribal cultural survey."<sup>29</sup> Ultimately, the Board determined that the "NRC Staff is at least partly at fault for the failed consultation process" largely because it never "held a single consultation session, on a government-to-government basis, solely with members of the Oglala Sioux Tribe."<sup>30</sup> Likewise, the Board

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<sup>25</sup> 36 C.F.R. § 800.2(c)(2)(ii)(A).

<sup>26</sup> *Narragansett Indian Tribe v. Warwick Sewer Authority*, 334 F.3d 161, 168 (1st Cir. 2003).

<sup>27</sup> *Montana Wilderness Ass'n v. Connell*, 725 F.3d 988, 1009 (9th Cir. 2013).

<sup>28</sup> LBP-15-16, 81 NRC at 639 (quoting 36 C.F.R. § 800.2(c)(2)(ii)(A)).

<sup>29</sup> *Id.* at 656.

<sup>30</sup> *Id.* And the Tribe's status as a litigant in this proceeding does not alter its role as a consulting party. To be sure, the ACHP's regulations list various consulting parties, including both Indian tribes and "[c]ertain individuals and organizations with a demonstrated interest in the

concluded that the “Oglala Sioux Tribe does share some responsibility for the ... lack of meaningful consultation.”<sup>31</sup> Therefore, because the Board focused its attention on apportioning culpability for what became an impasse, instead of determining whether the opportunity for consultation itself was a reasonable one, the Board’s decision constituted legal error.<sup>32</sup>

As noted above, the Commission generally hesitates to make factual findings in the first instance, but again the record developed by the Board is sufficient to answer the question posed: here, whether the Staff provided a reasonable opportunity for consultation. One of the most striking aspects of this record is that the ACHP, the agency expert in implementing the NHPA, signed the NRC’s Programmatic Agreement for the Dewey-Burdock project, and in so doing, found that it set forth a phased process for compliance with section 106.<sup>33</sup> While the ACHP’s agreement is not binding on the Commission, its findings are entitled to considerable

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undertaking ... due to their legal or economic relation to the undertaking or affected properties.” See 36 C.F.R. § 800.2(c)(2) and (5). But the Board’s implication that the Tribe’s status as an intervenor somehow elevates its status as a consulting party is incorrect. See LBP-15-16, 81 NRC at 656.

<sup>31</sup> LBP-15-16, 81 NRC at 656.

<sup>32</sup> 10 C.F.R. § 2.341(b)(4)(ii).

<sup>33</sup> Ex. NRC-018-D, Letter from Charlene Dwin Vaughn, Advisory Council on Historic Preservation, to Kevin Hsueh, NRC (Apr. 7, 2014) (ML14246A405); see Ex. NRC-18-E, Advisory Council on Historic Preservation Signature Page of Programmatic Agreement Among U.S. Nuclear Regulatory Commission, U.S. Bureau of Land Management, South Dakota State Historic Preservation Office, Powertech (USA), Inc., and Advisory Council on Historic Preservation Regarding the Dewey-Burdock [*In Situ*] Recovery Project Located in Custer and Fall River Counties South Dakota (Apr. 7, 2014) (ML14246A417); see also Ex. NRC-018-A, Programmatic Agreement, at 2; Ex. NRC-018-B, Appendices Related to the Programmatic Agreement Among U.S. Nuclear Regulatory Commission, U.S. Bureau of Land Management, South Dakota State Historic Preservation Office, Powertech (USA), Inc., and Advisory Council on Historic Preservation Regarding the Dewey-Burdock [*In Situ*] Recovery Project Located in Custer and Fall River Counties South Dakota, app. A, at 2-7 (ML14246A406); 36 C.F.R. § 800.4(b)(2).51-52.

weight.<sup>34</sup> On balance, the record demonstrates that the Staff has committed to phased compliance with section 106, as endorsed by the ACHP. I fully expect the Staff to satisfy its obligations under the Programmatic Agreement, which include consultation. Accordingly, I would conclude that the Staff has provided the Tribe with a reasonable opportunity to consult and will continue to take appropriate actions under the Programmatic Agreement.

In its Response, the Tribe argues that the factual record contains sufficient information to rebut the Staff's and Powertech's efforts to "blame the Tribe for the problems with NRC Staff's NHPA compliance."<sup>35</sup> But, as noted above, the correct standard is not whether there is sufficient evidence to apportion blame, but whether the opportunity to consult was reasonable. While the Tribe may well be disappointed with how the consultation unfolded, courts have consistently held that "a reasonable opportunity to consult" does not guarantee any specific results.<sup>36</sup> Consequently, this argument is not persuasive.

Next, the Tribe argues that Federal case law supports the reasonableness of the Board's holding.<sup>37</sup> But, it appears that these cases involve very different factual backgrounds.<sup>38</sup> Indeed,

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<sup>34</sup> *Public Service Co. of New Hampshire, et al.* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 527 (1977).

<sup>35</sup> Tribe's Response at 19.

<sup>36</sup> *Narragansett Indian Tribe*, 334 F.3d at 168. While some courts have determined that agency shortcomings, such as misrepresenting important facts or only relying on written communications, may render an opportunity to consult unreasonable, *Pueblo of Sandia v. United States*, 50 F.3d 856. 860-62 (10th Cir. 1995), on balance the record does not support such findings here.

<sup>37</sup> Tribe's Response at 19-21 (citing *Quechan Indian Tribe of Fort Yuma Indian Reservation v. Dep't of the Interior*, 755 F. Supp. 2d 1104 (D. Ariz. 2008); *Attakai v. United States*, 746 F. Supp. 1395 (D. Ariz. 1990); *Slockish v. U.S. Federal Highway Admin.*, 682 F. Supp. 2d 1178 (D. Or. 2010); *Pueblo of Sandia*, 50 F.3d at 856).

<sup>38</sup> *Quechan Tribe*, 755 F. Supp. 2d at 1119 (noting that the Tribe was not provided with adequate information or time); *Slockish*, 682 F. Supp. 2d at 1197 (stating that in deciding whether the NHPA claim was moot, the court "must begin by assuming ... that the defendants have violated the NHPA").

the Tribe concedes that many of the cases have distinguishing characteristics from the instant case.<sup>39</sup> Finally, some aspects of these cases appear to be unfavorable to the Tribe's position; for example one district court noted, "None of this analysis is meant to suggest federal agencies must acquiesce to every tribal request."<sup>40</sup> Consequently, I am not persuaded by the Tribe's efforts to rehabilitate the Board's legal analysis.

Therefore, because the Board applied the incorrect legal standards to Contentions 1A and 1B, I would overturn the Board's determinations with respect to those two contentions and find (1) that the Staff's NEPA analysis of the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources was adequate and (2) the Staff has provided the Tribe with a reasonable opportunity to consult under the NHPA. Consequently, I would find in favor of the Staff on these two contentions and direct the Board to terminate this proceeding.

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<sup>39</sup> Tribe's Response at 21-22 (observing that *Attakai* and *Pueblo of Sandia* involved cases in which the agency wholly failed to consult with an affected Tribe).

<sup>40</sup> *Quechan Tribe*, 755 F. Supp. 2d at 1119.

**Commissioner Baran, dissenting in part.**

I join in the Commission's decision except for the portion of the decision that denies review of the Tribe's claim that the Board erred by not vacating the license for failure to complete an adequate NEPA review. I respectfully dissent on this issue.

As I stated in my partial dissent in the *Strata* proceeding and my dissent in the *Turkey Point* proceeding, a core requirement of NEPA is that an agency decisionmaker must consider an adequate environmental review *before* making a decision on a licensing action.<sup>1</sup> If the Commission allows a Board to supplement and cure an inadequate NEPA document *after* the agency has already made a licensing decision, then this fundamental purpose of NEPA is frustrated.

In this case, the Board found that the Staff's FSEIS did not meet the requirements of NEPA because the FSEIS was deficient with respect to the effects of the licensing action on Native American cultural, religious, and historic resources.<sup>2</sup> Thus, the agency did not have an adequate environmental analysis at the time it decided whether to issue the license. In fact, the deficiencies in the NEPA analysis remain unaddressed today, and therefore the Staff still cannot make an adequately informed decision on whether to issue the license. The Staff's licensing decision was based on (and continues to rest on) an inadequate environmental review. As a result, the Staff has not complied with NEPA.

The Commission should suspend the license until the Staff has, in accordance with the Board's order, filed its final monthly status report demonstrating that the FSEIS complies with

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<sup>1</sup> *Strata*, CLI-16-13, 83 NRC at 604 (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)), *appeal docketed*, No. 16-1298 (D.C. Cir. Aug. 24, 2016); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-16-18, 84 NRC \_\_\_ (Dec. 15, 2016) (slip op.).

<sup>2</sup> LBP-15-16, 81 NRC at 708, 655-58. The Board also identified a NEPA deficiency with respect to hydrogeological information, the subject of Contention 3, and conditioned Powertech's license to cure this deficiency. See *id.* at 679, 681, 709.

NEPA and our regulations. Once the Staff had satisfied the Board's order and completed an adequate NEPA analysis on which to base its decision, the Staff would then be in a position to decide whether to modify, reinstate, condition, or revoke the license.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
POWERTECH (USA) INC.	)	Docket No. 40-9075-MLA
(Dewey-Burdock In Situ Recovery Facility)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER (CLI-16-20)** have been served upon the following persons by Electronic Information Exchange, and by electronic mail as indicated by an asterisk.

U.S. Nuclear Regulatory Commission  
Atomic Safety and Licensing Board (ASLB)  
Mail Stop T-3F23  
Washington, DC 20555-0001

William J. Froehlich, Chair  
Administrative Judge  
[william.froehlich@nrc.gov](mailto:william.froehlich@nrc.gov)

Mark O. Barnett  
Administrative Judge  
[mark.barnett@nrc.gov](mailto:mark.barnett@nrc.gov)

G. Paul Bollwerk, III  
Administrative Judge  
[paul.bollwerk@nrc.gov](mailto:paul.bollwerk@nrc.gov)

Margaret J. Bupp, Esq., Chief Counsel  
[margaret.bupp@nrc.gov](mailto:margaret.bupp@nrc.gov)

Cooper J Strickland, Law Clerk  
[Cooper.Strickland@nrc.gov](mailto:Cooper.Strickland@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of Commission Appellate Adjudication  
Mail Stop O-16C1  
Washington, DC 20555-0001  
OCA Mail Center  
[ocaamail@nrc.gov](mailto:ocaamail@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of the Secretary of the Commission  
Rulemakings & Adjudications Staff  
Mail Stop O-16C1  
Washington, DC 20555-0001  
[hearingdocket@nrc.gov](mailto:hearingdocket@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of the General Counsel  
Mail Stop O-15 D21  
Washington, DC 20555-0001  
Mary Spencer, Esq.  
[mary.spencer@nrc.gov](mailto:mary.spencer@nrc.gov)  
Patricia Jehle, Esq.  
[patricia.jehle@nrc.gov](mailto:patricia.jehle@nrc.gov)  
Susan Vrahoretis, Esq.  
[Susan.Vrahoretis@nrc.gov](mailto:Susan.Vrahoretis@nrc.gov)  
Emily Monteith, Esq.  
[emily.monteith@nrc.gov](mailto:emily.monteith@nrc.gov)  
Sabrina Allen, Paralegal  
[sabrina.allen@nrc.gov](mailto:sabrina.allen@nrc.gov)  
OGC Mail Center:  
[OGCMailCenter@nrc.gov](mailto:OGCMailCenter@nrc.gov)

POWERTECH (USA) INC., DEWEY-BURDOCK IN SITU RECOVERY FACILITY  
DOCKET NO. 40-9075-MLA

**COMMISSION MEMORANDUM AND ORDER (CLI-16-20)**

Counsel for the Applicant (Powertech)  
Thompson & Pugsley, PLLC  
1225 19<sup>th</sup> Street, NW, Suite 300  
Washington, DC 20036  
Christopher S. Pugsley, Esq.  
[cpugsley@athompsonlaw.com](mailto:cpugsley@athompsonlaw.com)  
Cynthia L. Seaton, Paralegal  
[cseaton@athompsonlaw.com](mailto:cseaton@athompsonlaw.com)  
Anthony J. Thompson, Esq.  
[ajthompson@athompsonlaw.com](mailto:ajthompson@athompsonlaw.com)

Consultant to Applicant (Powertech)  
WWC Engineering  
1849 Terra Ave.  
Sheridan, WY 82801  
Jack Fritz  
[jfritz@wwcengineering.com](mailto:jfritz@wwcengineering.com)

Counsel for the Oglala Sioux Tribe  
Western Mining Action Project  
P. O. Box 349  
Lyons, CO 80540  
Jeffrey C. Parsons, Esq.  
[wmap@igc.org](mailto:wmap@igc.org)

Counsel for the Oglala Sioux Tribe  
Energy & Conservation Law  
1911 Main Avenue, Suite 238  
Durango, CO 81301  
Travis E. Stills, Esq.  
[stills@frontier.net](mailto:stills@frontier.net)

Counsel for Consolidated Intervenor  
Aligning for Responsible Mining (ARM)  
David Frankel, Esq.  
P.O.B. 3014  
Pine Ridge, SD 57770  
[arm.legal@gmail.com](mailto:arm.legal@gmail.com)

Counsel for Consolidated Intervenor  
(Susan Henderson and Dayton Hyde)  
Law Office of Bruce Ellison  
P.O. Box 2508  
Rapid City, SD 57709  
Bruce Ellison, Esq.\*  
[belli4law@aol.com](mailto:belli4law@aol.com)  
Roxanne Andre, Paralegal\*  
[roxanneandre@yahoo.com](mailto:roxanneandre@yahoo.com)

Counsel for Consolidated Intervenor  
(Dayton Hyde)  
Thomas J. Ballanco, Esq.\*  
945 Traval Street, #186  
San Francisco, CA 94116  
[harmonicengineering@gmail.com](mailto:harmonicengineering@gmail.com)

[Original signed by Clara Sola \_\_\_\_\_]  
Office of the Secretary of the Commission

Dated at Rockville, Maryland  
this 23<sup>RD</sup> day of December, 2016

**CERTIFICATE OF SERVICE**

I, Jeffrey C. Parsons, hereby certify that the foregoing Underlying Decision from Which Petition Arises was served on all counsel of record in case number 17-1059 through the electronic filing system (CM/ECF) of the U.S. Court of Appeals for the District of Columbia Circuit.

*/s/ Jeffrey C. Parsons*  
Jeffrey C. Parsons  
Western Mining Action Project  
P.O. Box 349  
440 Main Street, Ste. 2  
Lyons, CO 80540  
303-823-5738  
(fax) 303-823-5732  
[wmap@igc.org](mailto:wmap@igc.org)