

May 3, 2010

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF'S RESPONSE TO OGLALA SIOUX TRIBE'S HEARING REQUEST

INTRODUCTION

The Nuclear Regulatory Commission (NRC or Commission) Staff responds to the hearing request that the Oglala Sioux Tribe (Tribe or Petitioner) filed on April 6, 2010.<sup>1</sup> The Tribe requests a hearing on Powertech (USA) Inc.'s application for an NRC license to be used in connection with an in-situ leach (ISL) uranium recovery facility near Edgemont, South Dakota. The Atomic Safety and Licensing Board should deny the Tribe's hearing request. Although the Tribe demonstrates that it has standing to intervene in this proceeding, the Tribe fails to set forth an admissible contention. The Tribe's hearing request must therefore be denied under 10 C.F.R. § 2.309(a).

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<sup>1</sup>"Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe" (April 6, 2010).

## BACKGROUND<sup>2</sup>

On February 25, 2009, Powertech submitted its application for a combined NRC source and 11e.(2) byproduct material license.<sup>3</sup> In response to the NRC's request for additional data, Powertech submitted revisions to its application on August 10, 2009.<sup>4</sup> On October 2, 2009, the Staff notified Powertech that it found the revised application acceptable for detailed technical and environmental review.<sup>5</sup> Powertech seeks an NRC license in order to operate the proposed Dewey-Burdock ISL uranium recovery facility in Fall River and Custer Counties, South Dakota. The proposed site, which is near the communities of Dewey and Burdock, is close to State Highway 471 and approximately 13 miles northwest of Edgemont, South Dakota.

### I. The Proposed Action

Powertech's proposed uranium recovery method, ISL recovery, involves injecting lixiviant into an underground geological formation containing uranium deposits (*i.e.*, the "ore zone").<sup>6</sup> The lixiviant Powertech plans to use consists of groundwater charged with oxygen and carbon dioxide. As lixiviant is pumped through the ore zone, the uranium dissolves into the lixiviant. The uranium-bearing lixiviant is then pumped back to the surface, where the uranium is separated from the lixiviant, processed into yellowcake, and shipped to other facilities to be

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<sup>2</sup> Sections I and II of this Background are essentially the same as Sections I and II in the Background to the "NRC Staff's Response to Hearing Request of Consolidated Petitioners" (April 12, 2010). Section III is an additional section that responds to certain statements in the Introduction to the Tribe's Petition.

<sup>3</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" (Agencywide Documents Access Management System (ADAMS) Accession No. ML091030707) (February 25, 2009). The application's supporting documentation can be found in ADAMS by searching under Docket No. 04009075.

<sup>4</sup> The revisions to Powertech's application can be found in ADAMS at Accession No. ML092870155 (August 31, 2009).

<sup>5</sup> "Results of Acceptance Review, Powertech (USA), Inc.'s Proposed Dewey-Burdock Facility, Fall River and Custer Counties, South Dakota" (ADAMS Accession No. ML092610201) (October 2, 2009).

<sup>6</sup> Powertech provides an overview of its proposed uranium recovery method and process in Section 1.7 of the Technical Report submitted with its application.

enriched for use as reactor fuel. After the uranium is removed, the lixiviant is recharged with oxygen and carbon dioxide and re-injected into the ore zone to repeat the cycle.

In order to conduct its ISL operations, Powertech plans to build a number of well fields at both the Dewey and Burdock sites. ISL well fields consist of geometric-shaped patterns of injection and production wells, along with monitor wells that surround the ore zone. The injection wells form the corners of the geometric-shaped patterns, while the production wells are at the center. Figure 3.1-5 in Powertech's Technical Report (TR) provides a cross-sectional view of typical well placement at an ISL facility.

As is typical of ISL operations, Powertech will inject 0.5 to 3 percent less groundwater through its injection wells than it extracts through its production wells. This 0.5–3% difference, referred to as "bleed," creates and maintains a cone of depression in the pressure surface of the aquifer. This forces groundwater to flow continually to the center of the production zone. This procedure is used in order to maintain a flow of groundwater into the well field and prevent the flow of lixiviant to the monitor wells surrounding the ore zone. This procedure is also designed to prevent "excursions," *i.e.*, the migration of lixiviant toward the surrounding aquifer.

The ore zone from which Powertech proposes to extract uranium is within the Inyan Kara aquifer. As stated in the application, the Inyan Kara is the shallowest of four major water resource aquifers in southwestern South Dakota.<sup>7</sup> It is separated by confining layers from the underlying aquifer, the Minnelusa. Below the Minnelusa is the Madison and, below that, the Deadwood aquifer. According to the application, the directional flow in these aquifers is generally southwestward and away from the central part of the Black Hills region.<sup>8</sup> Figures 2.2.-

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<sup>7</sup> Section 2.2.3.2.1 of the TR provides an overview of Regional Groundwater Hydrology.

<sup>8</sup> See TR Section 2.2.3.2.1, "Regional Groundwater hydrology," at page 2-10; Section 2.7.2.2.8, "Groundwater Flow," at page 2-161.

2 and 2.2-3 in the TR and Plate 3.3-5 provide overviews of the hydrogeology and stratigraphy underlying Powertech's proposed facility.

## II. Licensing and Regulation of Uranium Recovery Facilities

As with other uranium recovery applications, the NRC Staff will conduct a detailed technical review of Powertech's application. The Staff's review will include both a safety review and an environmental review. The Staff's safety review will focus on the TR that Powertech submitted with its application, while the environmental review will focus on Powertech's Environmental Report (ER). The Staff will conduct its safety review to determine whether Powertech's application meets applicable requirements in 10 C.F.R. Part 20 and 10 C.F.R. Part 40. In particular, the Staff will determine whether the application meets applicable requirements in Appendix A of Part 40, "Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content." The Staff will conduct its environmental review in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321 *et seq.*, and the NRC's NEPA-implementing regulations at 10 C.F.R. Part 51. For Powertech's application, the Staff will satisfy the requirements of NEPA and Part 51 by preparing a supplemental environmental impact statement (SEIS). The SEIS will supplement the analysis in NUREG-1910, "Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities."

As appropriate, the Staff will propose license conditions to ensure that Powertech's operations adequately protect health and safety and the environment. As an example, all current NRC licensees operating ISL facilities have license conditions intended to prevent or eliminate excursions of lixiviant.<sup>9</sup> These conditions require the licensees to (1) establish

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<sup>9</sup> See "Data on Groundwater Impacts at the Existing ISR Facilities" (ADAMS Accession No. (Continued . . .))

approved parameters for excursions and set up acceptable excursion monitoring well networks; (2) perform bi-monthly sampling at the monitoring wells; (3) promptly report any excursion to the NRC; and (4) in the event of an excursion, perform weekly confirmatory monitoring—and, if necessary, take corrective actions—until the excursion has been eliminated. These ISL licensees are also required by license condition to maintain onsite, and make available for NRC inspection, a record of excursions and the associated corrective actions. Other conditions included in all current ISL licenses require that mechanical integrity tests be performed on all injection and production wells. In addition, by license condition all current ISL licensees must prepare an annual report that provides data on radionuclide levels in regional aquifers.

### III. Scope of the Present Licensing Proceeding

“[T]his is a proceeding on an application for a Source Materials License regarding Powertech (USA)’s proposal to construct and operate an ISR facility in Fall River and Custer Counties, South Dakota.”<sup>10</sup> As stated in Section II above, in order to decide whether it can issue Powertech a license, the Staff will review Powertech’s application in light of existing statutory and regulatory requirements. The Staff will document its findings in a Safety Evaluation Report that is specific to the Dewey-Burdock site. The Staff will also conduct a site-specific environmental review, which it will document in its SEIS for the Dewey-Burdock site.

In the Introduction to its Petition, the Tribe raises a number of issues that are outside the scope of this proceeding or otherwise irrelevant. Petition at 1–6. The Tribe first states that ISL

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ML091770385) (July 10, 2009) at 3–5 (describing license conditions in current ISR licenses). This paper was submitted to the Commission as part of a “Staff Assessment of Groundwater Impacts from Previously Licensed In-Situ Uranium Recovery Facilities” (ADAMS Accession No. ML091770187) (July 10, 2009). The Staff prepared the paper in response to SRM-M081211, which directed the Staff to “provide the Commission with the data that it has in hand that assesses environmental impacts to the groundwater from previously licensed in-situ uranium recovery (ISR) facilities.”

<sup>10</sup> *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*, 75 Fed. Reg. 467, 467 (January 5, 2010).

operations in the United States have historically caused a variety of adverse environmental impacts. Petition at 2. As an example, the Tribe refers to an existing ISL licensee that the State of Wyoming recently cited for violations of Wyoming state regulations. Petition at 2–3 and Exhibit 1. These alleged violations are irrelevant to the present proceeding, which involves a different corporation and a different proposed action. The issue in this proceeding is whether *Powertech's* application meets applicable statutory and regulatory criteria, not whether current ISL licensees are complying with similar criteria.

The Tribe next claims that ISL operators have historically failed to return groundwater to baseline conditions once operations have ceased. Petition at 3–4. The performance of current ISL licensees is, as just stated, irrelevant to whether *Powertech's* application should be approved. In any event, under regulations issued by the United States Environmental Protection Agency (EPA) and implemented by the NRC, ISL licensees are not necessarily required to return all groundwater constituents to baseline levels.<sup>11</sup> The Tribe may disagree with these regulations, but the Tribe's position says nothing about the performance of ISL licensees and raises an issue outside the scope of this proceeding.

The Tribe states that the NRC's regulatory framework for ISL licensing is outdated, citing remarks made by NRC Staff at a March 2, 2010 Commission Briefing on Uranium Recovery. Petition at 4–5.<sup>12</sup> While it is true that the Staff is presently revising a number of guidance documents pertaining to ISL licensing, this does not mean the NRC is following outdated

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<sup>11</sup> Under the Uranium Mill Tailings Radiation Control Act of 1978, as amended, the EPA is required to develop groundwater restoration standards, and the NRC must implement those standards. The EPA's groundwater restoration standards are set forth in 40 C.F.R. § 264.94 and 40 C.F.R. § 192.32(a)(2). These standards are incorporated in the NRC's regulations at 10 C.F.R. Part 40, Appendix A, Criterion 5B(5). These standards permit an ISL operator to restore groundwater constituents to concentrations other than baseline if the operator demonstrates that baseline levels or the standards in Table 5C of Appendix A are not achievable. This is explained in Appendix A, Criterion 5B(6).

<sup>12</sup> Citing "March 2, 2010 U.S. NRC Briefing on Uranium Recovery" (Exhibit 5 to the Petition) at page 6.

guidance in its reviews of ISL applications. To the contrary, to the extent guidance is outdated, it will *not* be followed by the Staff.<sup>13</sup>

The Tribe further notes that the EPA and the NRC are currently revising regulations that establish groundwater protection and restoration standards at ISL sites. Petition at 5–6. These anticipated revisions are irrelevant to either the Staff’s review of Powertech’s application or the issues presently before the Board. Until new regulations are issued, the Staff and the Board are bound to apply existing regulations in reviewing Powertech’s application and ruling on the adequacy of any contention.

### DISCUSSION

A hearing request must be denied unless the petitioner demonstrates that it has standing to intervene in the proceeding and submits at least one admissible contention. 10 C.F.R. § 2.309(a).

#### I. Standing

##### A. Legal Requirements for Standing to Intervene

Under the NRC’s Rules of Practice:

[a]ny person whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing or petition for leave to intervene and a specification of the contentions which the person seeks to have litigated in the hearing.

10 C.F.R. § 2.309(a). NRC regulations further provide that the presiding officer “will grant the request [for a hearing] if it determines that the requestor has standing under the provisions of

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<sup>13</sup> See, e.g., NRC Regulatory Issue Summary 2009-05, "Uranium Recovery Policy Regarding: (1) The Process For Scheduling Licensing Reviews of Applications For New Uranium Recovery Facilities And (2) The Restoration Of Groundwater At Licensed Uranium In Situ Recovery Facilities" (April 29, 2009) at 3 (" . . . the NUREG-1569 discussion of groundwater restoration to ‘pre-operational class of use’ as being a secondary standard is not accurate, and is not an appropriate standard to use in evaluating license applications. Criterion 5B [in Appendix A of 10 C.F.R. Part 40] contains the appropriate standards that will be applied to groundwater restoration at ISR facilities.").

[10 C.F.R. § 2.309(d)] and has proposed at least one admissible contention that meets the requirements of [10 C.F.R. § 2.309(f)].” *Id.*

Under the general standing requirements in 10 C.F.R. § 2.309(d)(1), a request for hearing must state:

- (i) The name, address and telephone number of the requestor or petitioner;
- (ii) The nature of the requestor’s/petitioner’s right under the [Atomic Energy Act (AEA) of 1954, 42 U.S.C. § 2011 *et seq.*] to be made a party to the proceeding;
- (iii) The nature and extent of the requestor’s/petitioner’s property, financial or other interest in the proceeding; and
- (iv) The possible effect of any decision or order that may be issued in the proceeding on the requestor’s/petitioner’s interest.

“At the heart of the standing inquiry is whether the petitioner has ‘alleged such a personal stake in the outcome of the controversy’ as to demonstrate that a concrete adverseness exists which will sharpen the presentation of issues.” *Sequoyah Fuels Corp. & Gen. Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71 (1994) (citing *Duke Power Co. v. Carolina Envtl. Study Group, Inc.*, 438 U.S. 59, 72 (1978), and quoting *Baker v. Carr*, 369 U.S. 186, 204 (1962)). The Commission has long applied contemporaneous judicial concepts of standing to determine whether a party has a sufficient personal interest to intervene as a matter of right. *Calvert Cliffs 3 Nuclear Project, LLC & Unistar Nuclear Operating Servs., LLC* (Combined License Application for Calvert Cliffs, Unit 3), CLI-09-20, 70 NRC \_\_\_\_ (Oct. 13, 2009) (slip op. at 2). In order to demonstrate the requisite personal interest, the petitioner must:

- (1) allege an “injury in fact” that is
- (2) “fairly traceable to the challenged action” and
- (3) is “likely” to be “redressed by a favorable decision.”

*Sequoyah Fuels*, CLI-94-12, 40 NRC at 71–72 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992)) (citations and internal quotation marks omitted). Although the Commission has applied a “proximity-plus” theory to evaluate claims of standing in materials licensing cases,



a presumption of standing based on geographical proximity to the proposed facility is only applied “where there is a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.” *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 116 (1995) (citing *Sequoyah Fuels Corporation* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)). Where the proposed action does not present an obvious potential for offsite consequences, the petitioners must show a “specific and plausible means” by which the licensing decision may harm them. *USEC, Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311–12 (2005).

B. The Tribe’s Interest in Cultural Artifacts at Dewey-Burdock is Sufficient to Demonstrate Standing

The Tribe makes three arguments for why it has standing to intervene in this proceeding. First, the Tribe states that it has an interest in preserving cultural and historical artifacts at the Dewey-Burdock site. Petition at 8–9. The Tribe supports its arguments with Declarations from Wilmer Mesteth, the Oglala Sioux Tribal Historic Preservation Officer (Exhibit 7 to the Petition), and Denise Mesteth, Director of the Oglala Sioux Tribal Land Office (Exhibit 8). According to Mr. Mesteth, the Dewey-Burdock site is on the Tribe’s aboriginal land, and Tribal artifacts remain at the site. Declaration at ¶ 5.

As explained below, the Tribe’s interest in artifacts that may be found at the Dewey-Burdock site is sufficient to demonstrate standing. However, the Tribe has not demonstrated standing under any of the other theories set forth in its Petition.

In *Crow Butte*, Docket No. 40-8943, the Board found that the Oglala Sioux Tribe had an interest in preserving cultural artifacts at the Crow Butte site, which sits on the Tribe’s aboriginal land. *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 715 (2008). The Commission affirmed this finding, stating that the Tribe “has a current, concrete interest in protecting the artifacts on the site[.]” CLI-09-09, 69 NRC 331, 338 (2009). Based on the Declarations submitted in the present proceeding, the Dewey-Burdock

site also sits on the Tribe's aboriginal land, and Tribal artifacts may be present at the site. Accordingly, in light of CLI-09-09, the Staff does not oppose the Tribe's claim that it has a current, concrete interest in preserving cultural artifacts at the Dewey-Burdock site. This interest alone, however, is not enough to establish the Tribe's standing to intervene in this proceeding. Rather, the Tribe must allege some type of *injury* to its interests that is "fairly traceable" to Powertech's proposed action. *Sequoyah Fuels*, CLI-94-12, 40 NRC at 71–72.

On March 11, 2010, the Staff mailed the Tribe an unredacted version of Powertech's Level III Cultural Resources Evaluation for the Dewey-Burdock site.<sup>14</sup> This Evaluation identifies Native American archeological sites identified within the Dewey-Burdock boundary. The Evaluation also describes the artifacts or features associated with those sites, and it gives the specific locations of the sites.<sup>15</sup> With this information, it is incumbent on the Tribe to explain how Powertech's operations might threaten the Tribe's interests in the artifacts that have been identified at the Dewey-Burdock site. The Tribe does not do that, as it refers neither to specific activities that Powertech has proposed at the site or specific artifacts that may be threatened by those activities. The Tribe therefore does not show it might suffer a plausible injury to its interests in identified artifacts that is fairly traceable to Powertech's activities.

The Tribe also asserts an interest in cultural artifacts that may yet be identified at the Dewey-Burdock site. Declaration of Wilmer Mesteth at ¶ 5. The Tribe made a similar claim in

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<sup>14</sup> This document's full title is, "A Level III Cultural Resources Evaluation of Powertech (USA) Incorporated's Proposed Dewey-Burdock Uranium Project Locality within the Southern Black Hills, Custer and Fall River Counties, South Dakota." Portions of the Evaluation refer to the locations of archeological sites. These portions contain Sensitive Unclassified Non-Safeguards information (SUNSI), because the release of records pertaining to the location of archaeological sites is restricted under South Dakota Codified Laws, specifically § 1-20-21.2.

<sup>15</sup> See, e.g., the following portions of the Evaluation: "Volume V: Appendices, Appendix D: Topographic Site Location Maps" (ADAMS Accession No. ML091070721); "Vol. II, Chapter 5: Custer County Cultural Resources Inventory and NRHP Recommendations" at Table 5.1., "Archeological Sites Documented in Custer County" (ADAMS Accession No. ML091070699); "Vol. II, Chapter 6: Fall River County Cultural Resources Inventory and NRHP Recommendations" at Table 6.1., "Archeological Sites Documented in Fall River County" (ADAMS Accession No. ML091070683).

*Crow Butte*. There, the Board appeared to find the Tribe had standing based in part on the Tribe's interest in artifacts that "have not been properly identified" but were "likely . . . to be found." *Crow Butte*, LBP-08-24, 68 NRC at 713–14. Because the Commission affirmed the Board's standing determination, CLI-09-09, 69 NRC at 338–39, the Staff does not oppose the Tribe's claim that it has an interest in unidentified cultural artifacts that may be present at the Dewey-Burdock site. The Staff also does not oppose the Tribe's claim that it may suffer an injury to its interest in those artifacts that is fairly traceable to Powertech's proposed activities. Declaration of Wilmer Mesteth at ¶ 5. The Staff therefore does not oppose the Tribe's claim of standing based on its interest in artifacts that may yet be identified at the Dewey-Burdock site.

The Tribe also "seeks standing under the National Historic Preservation Act (NHPA), 16 U.S.C. §§ 470 *et seq.*, based on the Tribe's procedural rights in identifying, evaluating, and establishing protections for historic and cultural resources." Petition at 9. As support for its claim, the Tribe cites *Crow Butte*, CLI-09-09. The Tribe's reliance on CLI-09-09 for its claim is misplaced. In CLI-09-09 the Commission affirmed the Board's finding that, in prior licensing proceedings involving Crow Butte's facility, the Staff failed to consult with the Tribe as required by NHPA Section 106. *See Crow Butte*, CLI-09-09, 69 NRC at 338 ("The Board noted that under [Section 106 of the NHPA], the NRC Staff should have consulted with the Tribe regarding cultural resources when Crow Butte's license was renewed in 1995, but apparently never did so."). The Board and Commission found this prior lack of consultation regarding the Crow Butte site sufficient to vest in the Tribe a present procedural interest in being consulted on the significance of artifacts at the site. In contrast, the present licensing proceeding is an *initial* licensing proceeding. There is no history of the Staff failing to consult with the Tribe regarding artifacts at the Dewey-Burdock site, and there is thus no basis for finding that the Tribe has a procedural right under the NHPA sufficient to demonstrate standing. The Board should therefore reject the Tribe's claim of standing based on Section 106 of the NHPA.

Finally, the Tribe claims that it has standing based on its interest in protecting lands it owns within the vicinity of the Dewey-Burdock site. Petition at 10. The Tribe cites Ms. Mesteth's Declaration (Exhibit 8) in support of its claim. Ms. Mesteth, however, fails to identify any specific lands owned by the Tribe. She also fails to explain how close Tribal lands may be to the Dewey-Burdock site, and she fails to describe any pathway by which operations at Dewey-Burdock might harm the Tribe's interest in those lands. Accordingly, Ms. Mesteth's Declaration does not show that the Tribe has standing based on potential harm to lands it owns.

The Tribe also provides an Affidavit from Dayton Hyde (Exhibit 9). Mr. Hyde leases land from the Tribe, and the Tribe asserts that any injury to the land leased by Mr. Hyde will also injure the Tribe. Petition at 8, 10. Mr. Hyde's Affidavit is the same document he submitted to support his own standing claim as part of the Consolidated Petitioners' hearing request.<sup>16</sup> As the Staff explained in its response to that hearing request, Mr. Hyde does not describe a plausible pathway by which operations at Dewey-Burdock might harm his interests.<sup>17</sup> The Board should therefore reject the Tribe's standing claim to the extent it is based on injury to Mr. Hyde.

To summarize, the Staff does not oppose the Tribe's standing claim to the extent it is based on potential harm to cultural artifacts that may yet be found at the Dewey-Burdock site. The Tribe has not demonstrated standing under any of the other theories set forth in its Petition.

## II. Contentions

### A. Legal Requirements for Contentions

The legal standards governing admissibility of contentions are set forth in the NRC's Rules of Practice at 10 C.F.R. § 2.309 (f)(1). In order to be admissible, a contention must:

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<sup>16</sup> "Affidavit of Dayton Hyde" (ADAMS Accession No. ML100960638) (February 26, 2010).

<sup>17</sup> "NRC Staff's Response to Hearing Request of Consolidated Petitioners" at 12–13.

- (i) Provide a specific statement of the legal or factual issue sought to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at the hearing, together with references to the specific sources and documents, which the petitioner intends to rely to support its position on the issue; and
- (iv) Provide sufficient information to show that a genuine dispute with the applicant/licensee exists on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

10 C.F.R. § 2.309(f)(1).

The purpose of the Commission's contention pleading requirements is to "focus litigation on concrete issues and result in a clearer and more focused record for decision." *Changes to Adjudicatory Process (Part II)*, 69 Fed. Reg. 2182, 2202 (January 14, 2004). The Commission "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing." *Id.* The "contention admissibility 'requirements are deliberately strict, and [the Commission] will reject any contention that does not satisfy the requirements.'" *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 & 3), CLI-10-09, 71 NRC \_\_\_\_ (March 11, 2010) (slip op. at 4) (quoting *USEC, Inc. (American Centrifuge Plant)*, CLI-06-9, 63 NRC 433, 437 (2006)). Mere "notice pleading" does not suffice. See *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear

Power Station, Unit 3), CLI-09-5, 69 NRC 115, 120 (2009) (citing *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 414 (2007)).

A contention must be rejected where, rather than raising an issue that is concrete or litigable, it reflects nothing more than a generalization regarding the petitioner's view of what the applicable policies ought to be. *Private Fuel Storage, L.L.C.*, (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 129 (2004) (citing *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20–21 (1974)). Further, a contention must demonstrate a genuine dispute with the *applicant*. "It is the license application, not the NRC staff review, that is at issue in our adjudications." *Florida Power & Light Co.* (Turkey Point Nuclear Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 24 (2001).<sup>18</sup>

B. The Tribe Has Not Set Forth an Admissible Contention

The Tribe proposes ten contentions covering a range of issues. None of these contentions is admissible. Contentions 1 and 9, which challenge the Staff's reviews under NEPA and the NHPA, are not ripe for adjudication.<sup>19</sup> In Contentions 2, 3 and 4 the Tribe asserts that Powertech has provided inadequate information on various hydrological issues. The Tribe fails to address relevant sections of Powertech's application, however, and it does not adequately support its claims. Contentions 5, 6 and 7 challenge Powertech's financial assurance estimates, the organization of its application, and its plan for disposal of 11e.(2) byproduct material. Each contention must be rejected because it fails to raise a genuine dispute with Powertech on a material issue. Contention 8 raises an impermissible challenge to the

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<sup>18</sup> Citing *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998), *aff'd sub nom National Whistleblower Center v. NRC*, 208 F.3d 256 (D.C. Cir.), *cert. denied*, 121 S.Ct. 758 (2001). As explained in the Staff's responses to the Tribe's Contentions 1 and 9, while a petitioner may challenge the adequacy of the Staff's review under NEPA or the NHPA, such a contention is not ripe for adjudication at the present time.

<sup>19</sup> In Contention 1 the Tribe also claims that Powertech's evaluation of cultural resources does not comply with 10 C.F.R. Part 51. As explained below, this claim is unsupported.

NRC's regulations, as the Tribe claims that the procedures established by 10 C.F.R. Part 51 violate NEPA. Finally, Contention 10 must be rejected because, while the Tribe claims that Powertech's application fails to address tornado strikes, the Tribe overlooks the TR section addressing this very issue.

Contention 1: Compliance with NEPA and the NHPA

The Application fails to meet the requirements of 10 C.F.R. §§ 51.60 and 51.45, and the National Environmental Policy Act because it lacks an adequate description of either the affected environment or the impacts of the project on archaeological, historical, and traditional cultural resources. The Application also fails to demonstrate compliance under the National Historic Preservation Act, and the relevant portions of NRC guidance included at NUREG-1569 section 2.4.

Petition at 12.

In this contention the Tribe makes two claims. First, the Tribe claims that Powertech has not complied with certain regulations in 10 C.F.R. Part 51 and with NUREG-1569. Petition at 12–13. Second, the Tribe claims that the NRC has not complied with the NHPA. Petition at 13–17.<sup>20</sup> The Tribe fails to support either claim. Further, the Tribe's NHPA-based arguments are not ripe for adjudication. Contention 1 must therefore be dismissed.

The Tribe first discusses Powertech's application. The Tribe argues that Powertech's ER violates 10 C.F.R. § 51.45(b) because "a significant number of archaeological, historical, and traditional resources on the [Dewey-Burdock] site have not been evaluated; therefore, the potential impacts to these resources have not been addressed." Petition at 12. The Tribe claims that "there are discrepancies between the number of sites identified in the [ER] and sworn testimony given by the state historic preservation officer [SHPO] in a State of South Dakota proceeding related to this matter, such that it appears that some significant sites may

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<sup>20</sup> Although the Tribe states that "[t]he Application also fails to demonstrate compliance under the [NHPA]," it is clear from the text on pages 13–17 of the Petition that the Tribe is challenging the Staff's, rather than Powertech's, compliance with the NHPA.

not be included or discussed in the Application.” Petition at 12–13 (citing Declaration of Wilmer Mesteth at ¶¶ 15–19).<sup>21</sup> Finally, the Tribe argues that NUREG-1569 requires a more comprehensive assessment of historic properties than Powertech provided in its application, including a memorandum of agreement with the Tribe. Petition at 13.

The Tribe fails to support its claim that Powertech insufficiently evaluated cultural resources at the Dewey-Burdock site. As stated above, in early March 2010 the Staff sent the Tribe unredacted versions of the Level III Cultural Resources Evaluation for the Dewey-Burdock site. This Evaluation was prepared by the Archaeology Laboratory of Augustana College, which conducted on-the-ground field investigations at the Dewey-Burdock site in 2007 and 2008. The Tribe does not specifically challenge the analysis or conclusions in any portion of the Evaluation. Rather, the Tribe relies on the Declaration of Mr. Mesteth. Petition at 12–13 (citing Exhibit 7 at ¶¶ 15–19). Mr. Mesteth makes several broad claims concerning the Evaluation that are either unsupported or rest on a misreading of the Evaluation.

Mr. Mesteth bases his claims on testimony given at a February 19, 2009 hearing on the Dewey-Burdock proposal. The hearing was before the State of South Dakota Department of Environment and Natural Resources (DENR), Board of Minerals and Environment. Declaration at ¶ 15.<sup>22</sup> Mr. Mesteth first cites an Oglala Sioux Tribe member’s testimony that “his grandparents and their relatives were buried in th[e] areas” subject to Powertech’s proposed action. Declaration at ¶ 16. The cited testimony, however, does not identify any deficiency in the Cultural Resources Evaluation. The individual provides minimal information regarding his relatives’ burial sites, and he does not allege that the Evaluation fails to consider impacts to

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<sup>21</sup> The Tribe refers to testimony from the SHPO, but Mr. Mesteth states that the pertinent testimony was given by South Dakota’s Assistant State Archeologist, not the SHPO.

<sup>22</sup> In paragraph 15 of his Declaration, Mr. Mesteth states that the testimony from the hearing is attached to the Declaration. However, the Tribe did not submit a transcript of the hearing with its Petition.



those sites.<sup>23</sup>

Mr. Mesteth next cites the testimony of an archeologist, Mr. Ben Rhodd, who at the hearing alleged “significant defects in the process employed by Augustana in its cultural survey, including the failure to conduct an inquiry into or an evaluation of ethnographic information available for the site.” Declaration at ¶ 17. The cited testimony, however, does not explain what standards Mr. Rhodd used to reach his conclusion. Mr. Mesteth himself does not identify any standard requiring Powertech to include this type of information in its application. Further, neither Mr. Rhodd nor Mr. Mesteth addresses specific sections of the Cultural Resources Evaluation and explains why those sections are deficient. Their claims are thus insufficient to show a genuine dispute with Powertech.

Mr. Mesteth states that, at the February 19, 2009 hearing, South Dakota’s Assistant State Archeologist reported that Augustana College conducted additional studies at the Dewey-Burdock site in 2008. Declaration at ¶ 18. Mr. Mesteth argues that Powertech’s ER fails to mention these additional studies. *Id.* Mr. Mesteth is incorrect. The Cultural Resources Evaluation, which is part of Powertech’s ER, contains multiple volumes that report on studies conducted in 2008.<sup>24</sup>

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<sup>23</sup> The hearing cited by the Tribe related to petitions by the Tribe and others to include the Dewey-Burdock site on South Dakota’s preliminary list of special, exceptional, critical or unique lands. On April 20, 2009, DENR denied those petitions. <http://denr.sd.gov/powertech/PTSUFindingsofFact.pdf> Among its findings of fact, DENR concluded that “[t]here is no evidence of Native American burials on the nominated lands.” *Id.* at ¶ 20.

<sup>24</sup> “A Level III Cultural Resources Evaluation of Powertech (USA) Incorporated’s Proposed Dewey-Burdock Uranium Project Locality within Southern Black Hills, Custer & Fall River Counties, SD, Addendum 1, Volume 1, Evaluative Testing Report and Volume 2, Appendices A, B, C, and D” (2008) (ADAMS Accession Nos. ML091070723 and ML091070725); “Addendum 2, Volume 1: Additional Survey Report; Sections 27, 31, and 34, T6S, R1 E and Sections 4, 5, and 14, T7S, R1E and Volume 2: Appendices” (2008) (ADAMS Accession Nos. ML091070717 and ML091070718); “Evaluative Testing of Four Sites within Powertech (USA) Incorporated’s Proposed Dewey-Burdock Uranium Project Locality, Southern Black Hills, Custer and Fall River Counties, South Dakota, Volume 1: Evaluative Testing Report and Volume 2, Appendices” (2009) (ADAMS Accession Nos. ML091070726 and ML091070727).

Mr. Mesteth further states that at the February 19, 2009 hearing South Dakota's Assistant State Archeologist mentioned 217 cultural resource sites being present at the Dewey-Burdock site. Declaration at ¶ 19. Mr. Mesteth claims this number is greater than the 190 sites identified in Section 3.8.1 (page 3-178) of the ER, demonstrating that the ER does not address all known sites. *Id.* Mr. Mesteth misreads the ER. Section 3.8.1 of the ER, "Historic, Archeological and Cultural Resources," states:

Augustana documented 161 previously unrecorded archaeological sites and revisited 29 previously recorded sites during the current investigation. Expansion of site boundaries during the 2007 survey resulted in a number of previously recorded sites being combined into a single, larger site. Twenty-eight previously recorded sites were not relocated during the current investigation. Excepting a small foundation, the non relocated sites were previously documented as either prehistoric isolated finds or diffuse prehistoric artifact scatters.

Adding 161 previously unrecorded sites, 29 previously recorded and revisited sites, and 28 previously recorded but not relocated sites<sup>25</sup> equals 218 sites. This is one site *more* than the 217 sites mentioned by the Assistant State Archeologist at the February 19, 2009 meeting. The Tribe therefore fails to show there is a genuine issue as to whether Powertech's Cultural Resources Evaluation overlooks archeological sites.

Mr. Mesteth alleges that the Evaluation is incomplete because Powertech has not conducted a "full evaluation of some 81 sites within the proposed mining area[.]" Declaration at ¶ 19. However, Powertech's application states that these sites are outside the area that will be disturbed during the initial phases of operations at Dewey-Burdock.<sup>26</sup> Mr. Mesteth does not

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<sup>25</sup> "Relocated" means that in the more recent survey the site was located again. In other words, a "previously recorded but *not* relocated site" is a site that was identified previously but not found in the more recent survey. These 28 sites are therefore separate from both the 29 sites that were revisited during the current investigation and the 161 sites that were not previously recorded.

<sup>26</sup> ER Supplement § 4.10 at p. 4-46 and § 5.8 at p. 5-10. (ADAMS Accession No. ML092870360). See *also* ER § 3.8.1 at 3-180 (discussing commitments to protect against, avoid, or mitigate potential impacts on cultural resources). Powertech states, "Sites that may require additional data evaluation or recovery will be avoided as well field development progresses." ER at p. 7-11. See *also*, Cultural Resources Evaluation, Chapter 7, Table 7.8, "Documented Archeological Properties Requiring Additional Evaluation (Continued . . . )

address Powertech's plans for a phased approach to archeological investigations. In general, a phased approach to evaluating archeological sites is acceptable under Commission precedent. *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-11, 63 NRC 483, 489 (2006) (explaining that "the NHPA regulations continue to expressly permit a phased approach to cultural resource review") (emphasis in original). See also *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120) CLI-99-22, 50 NRC 3, 13 (1999) ("phased compliance [with the NHPA] is acceptable under applicable law"). Because Mr. Mesteth does not address Powertech's plans for a phased approach, he is necessarily unable to raise a genuine dispute with those plans. Because the Tribe does not cite any authority holding that Powertech must fully evaluate all sites at the present time, and because Mr. Mesteth does not address Powertech's application specifically, the claims in this portion of Contention 1 fail to satisfy 10 C.F.R. § 2.309(f)(1)(vi).

The Tribe further argues that NUREG-1569 requires Powertech to more thoroughly analyze cultural resources and execute a memorandum of agreement with the Tribe. Petition at 13. NUREG-1569, like all NUREGs, only sets forth the Staff's *guidance* on how an applicant or licensee may comply with NRC regulations.<sup>27</sup> Cf. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-698, 16 NRC 1290, 1298-99 (1982) ("NUREG-0654 is not a regulation. It is guidance."). The Tribe's claims based on the NUREG therefore cannot be admitted as a contention.

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in APE" (ADAMS Accession No. ML091070700) at 7.14–7.15 and "Cultural Evaluation Report, Volume V, Appendix F: Project Scope-of-Work" (ADAMS Accession No. ML091070721).

<sup>27</sup> See, e.g., NUREG-1569 at xviii ("It is important to note that the acceptance criteria laid out in this standard review plan are for the guidance of NRC staff responsible for the review of applications to operate *in situ* leach facilities. Review plans are not substitutes for the Commission's regulations, and compliance with a particular standard review plan is not required. . . . Methods and solutions different from those set out in the standard review plan will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a license by NRC.").

The Tribe next argues that the NRC has not consulted with the Tribe as required by the NHPA. Petition at 13–17. This claim is premature. The Tribe’s arguments on this issue were squarely addressed by the Commission in *Crow Butte*, CLI-09-09, 69 NRC at 348–51. In *Crow Butte*, the Tribe’s Contention B alleged that the Staff had not engaged in consultation required by the NHPA. The Commission found this contention was not ripe for adjudication. *Id.* at 350–51. The Commission noted that in the event the Tribe believed the Staff’s NEPA document, when issued, reflected a lack of consultation under the NHPA, the Tribe could avail itself of the NRC’s procedures for submitting late-filed contentions. *Id.* at 351. *See also Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 564–66 (2009) (holding that where a petitioner alleges a deficiency in the Staff’s application review process, rather than the application itself, the issue is not ripe for litigation until the Staff releases its NEPA document).

The Tribe claims *Crow Butte* is distinguishable because “in this case, the Tribe argues that the NHPA requires consultation under Section 106 to begin as early as possible in the consideration of an undertaking.” Petition at 16–17. In *Crow Butte*, however, the Tribe also argued that the Staff failed to consult with the Tribe as required by Section 106 of the NHPA.<sup>28</sup> While in *Crow Butte* the Tribe did not specifically argue that consultation under Section 106 must begin “as early as possible,” the Tribe fails to explain why this would have mattered. The Commission considered the language of Section 106 in ruling on the Tribe’s NHPA-based contention,<sup>29</sup> and the Commission found that a contention alleging a failure to consult as required by Section 106 must wait until the Staff releases its NEPA document.

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<sup>28</sup> “Request for Hearing and Petition to Intervene” (ADAMS Accession No. ML082170264) (July 28, 2008) at 14–15.

<sup>29</sup> CLI-09-09, 69 NRC at 348–49.

In sum, the Tribe fails to allege any specific deficiency in Powertech's Cultural Resources Evaluation for the Dewey-Burdock site. Mr. Mesteth does not adequately support his claims that Powertech needs to provide additional information, and at least two of his claims rest on a misreading of the Evaluation. Further, Mr. Mesteth fails to address pertinent sections of Powertech's application. Mr. Mesteth's claims therefore cannot be admitted as a contention. 10 C.F.R. §§ 2.309(f)(1)(v), (vi). The Tribe further claims that the Staff has not complied with Section 106 of the NHPA. Under the *Crow Butte* decisions, however, this issue is not ripe for adjudication. Because the Tribe's dispute is with the Staff rather than Powertech, its claim must be rejected under 10 C.F.R. § 2.309(f)(1)(vi).

#### Contention 2: Baseline Water Conditions

The Application violates 10 C.F.R. § 51.45 and the National Environmental Policy Act, requiring a description of the affected environment, 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.

Petition at 17.

The Tribe relies on a Declaration from Robert Moran, Ph.D. (Exhibit 10 to the Petition), as support for its contention. Dr. Moran's arguments on pages 18 through the top of page 20 of the Petition (¶¶ 16 and 22–24 of the Declaration) are essentially the same as the arguments presented in Contention D (pages 36–37) of the Consolidated Petitioners' hearing request, which also relies on Dr. Moran's opinion.<sup>30</sup> As the Staff explained in its Response to the Consolidated Petitioners' hearing request, Dr. Moran fails to show there is a genuine issue as to whether Powertech needs to provide additional information on baseline water conditions.<sup>31</sup>

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<sup>30</sup> "Opinion of Dr. Robert Moran, February 23, 2010" (ADAMS Accession No. ML100680010) (March 9, 2010).

<sup>31</sup> "NRC Staff's Response to Hearing Request of Consolidated Petitioners" at 26–29.

Dr. Moran argues that “[n]o coordinated, statistically-sound data set for all Baseline Water Quality (both surface and ground water) is presented in [the application]—as is required in NUREG-1569.” Petition at 19, Declaration at ¶ 22. Dr. Moran also argues that the application is deficient because, while Powertech provides both laboratory data and water quality data from the Tennessee Valley Authority (TVA), it fails to statistically summarize the laboratory data and leaves out historic TVA data. Petition at 19, Declaration at ¶¶ 22–23. Dr. Moran claims that Powertech “further confuse[s] the baseline issues” because its application “states on pg. 3-3 [of the TR]: ‘A minimum of eight baseline water quality wells will be installed in the ore zone in the planned well field area.’” Petition at 19–20, Declaration at ¶ 24. According to Dr. Moran, this is significant because it shows that “the massive amounts of water quality data (historic and recent) presented in both the TR and ER (Environmental Report) will not actually be used to determine baseline.” *Id.*

Dr. Moran fails to support his claim that Powertech needs to provide additional data on baseline water conditions.<sup>32</sup> Dr. Moran does not address Sections 2.7.3.2 and 2.9.8 of the TR, where Powertech provides one year of preoperational baseline data, explains how it obtained this data, and describes its methods for sample collection and analysis. Accordingly, Dr. Moran fails to specifically challenge Powertech’s methodology for determining preoperational baseline conditions. Dr. Moran also argues that in its application Powertech should have statistically summarized laboratory data and included historic TVA data. Dr. Moran fails to cite any requirement that Powertech include this information in its application, particularly where, as Dr. Moran concedes, Powertech has already presented “massive amounts of water quality data

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<sup>32</sup> In its Response to the Consolidated Petitioners’ Hearing Request, the Staff noted that under Criterion 7 in Appendix A, “[a]t least one full year prior to any major site construction, a preoperational monitoring program must be conducted to provide complete baseline data.” This requirement is imposed by the first sentence in Criterion 7. Powertech has, in fact, submitted preoperational baseline data with its application, and Dr. Moran may appropriately challenge this data. Dr. Moran’s challenges must still be rejected, however, for the reasons stated below.

(historic and recent) . . . in both the TR and ER[.]” Declaration at ¶ 24.

Dr. Moran appears to argue that Powertech’s plan to install a minimum of eight baseline water quality wells in the ore zone<sup>33</sup> shows that its current baseline water quality data are deficient. Petition at 19–20, Declaration at ¶ 24. Powertech plans to install these wells not to obtain preoperational baseline data, however, but *operational* data that will allow it to develop the groundwater restoration standards imposed by Criterion 5B.<sup>34</sup> Powertech is necessarily unable to obtain this data at the preoperational stage, and its plans for water quality wells therefore do not reflect any deficiency in Powertech’s preoperational baseline data.

Dr. Moran also argues that Powertech’s plan for establishing baseline water conditions is inconsistent with NUREG-1569. As stated above, a NUREG only sets forth the Staff’s guidance on how an applicant or licensee may comply with NRC regulations; it does not impose requirements. *Three Mile Island*, ALAB-698, 16 NRC at 1298–99. In any event, Dr. Moran appears to simply assume NUREG-1569 requires Powertech to include historic TVA data and statistically summarize laboratory data in its application. Petition at 37–38, Declaration at ¶¶ 22–23. Dr. Moran does not cite specific sections of the NUREG to support his claim that additional analysis is required.

Dr. Moran additionally claims that “it is unclear whether Powertech has baseline (pre-operational) ground water quality data that describes the *non-ore zone regions of the relevant aquifers*.” Petition at 20, Declaration at ¶ 24 (emphasis in original). Dr. Moran does not describe the regions or aquifers to which he is referring, however, and he fails to cite any standard that requires Powertech to provide such data in its application. In particular, Dr. Moran

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<sup>33</sup> Supplement to Powertech’s Application at page 3-3.

<sup>34</sup> The second sentence in Criterion 7 states, “Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.”

does not cite any criterion in Appendix A that would require Powertech to provide such data.

The Tribe's Petition includes two claims from Dr. Moran that were not previously set forth in the Consolidated Petitioners' Hearing Request. Neither claim supports admitting Contention 2. Dr. Moran first claims that Powertech "has not adequately defined whether zones peripheral to the [Dewey-Burdock] ore-bearing geologic formations and bounding formations (above and below) also contain zones of high-quality, possibly potable ground water." Petition at 20, Declaration at ¶ 29. As support for his claim, Dr. Moran cites page 1-16 of the ER, where Powertech discusses its plans for placing monitoring wells in zones overlying and underlying the ore zone. *Id.* (citing ER at page 1-16). Dr. Moran appears to assume these wells will be used to obtain preoperational baseline data that should have been included with the application. In fact, these wells will be used to obtain operational data relevant to meeting the requirements of Criterion 5B.<sup>35</sup> As explained above, Powertech's plans for these types of monitoring wells do not demonstrate any deficiency in its preoperational baseline data.

Finally, Dr. Moran argues that high field pH and specific conductance values Powertech obtained may be evidence of contamination from prior uranium recovery operations. Petition at 20–21, Declaration at ¶ 62. Dr. Moran fails to explain why this conclusion is relevant to determining baseline water conditions. In other words, Dr. Moran does not explain why it matters whether (1) high pH and specific conductance values are naturally occurring or the result of contamination, or (2) the source of any contamination is prior uranium recovery operations. The ER plainly shows that Powertech *considered* the data cited by Dr. Moran, and Dr. Moran does not cite any authority suggesting that Powertech was required to draw the same

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<sup>35</sup> Although the application at page 1-16 states that the wells will be "used to obtain baseline water quality data," it is clear from the context in which this statement appears that Powertech is referring not to preoperational baseline data, but *operational* data.



conclusions from the data that he did.<sup>36</sup>

To summarize, the Tribe fails to identify any requirement that Powertech provide additional data on baseline water conditions. The Tribe also fails to address relevant sections of Powertech's application. The Tribe's claims therefore cannot be admitted as a contention. 10 C.F.R. §§ 2.309(f)(1)(v), (vi).

### Contention 3: Description of Geological Setting

The application fails to provide sufficient information regarding the geological setting of the area to meet the requirements of 10 C.F.R. § 40.31(f); 10 C.F.R. § 51.45; 10 C.F.R. § 51.60; 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2)<sup>[37]</sup>; the National Environmental Policy Act; and NUREG-1569 section 2.6. The application similarly fails to provide sufficient information to establish potential effects of the project on the adjacent surface and ground-water resources, as required by 10 C.F.R. § 51.45, NUREG-1569 section 2.7, and the National Environmental Policy Act.

Petition at 21.

The Tribe argues that Powertech has not characterized local hydrogeology sufficiently to ensure that extraction fluids will be confined to the Dewey-Burdock site. Petition at 21–25. The Tribe relies on paragraphs 36 through 46 of the Moran Declaration (Exhibit 10 to the Petition) as support for its claims. In these paragraphs Dr. Moran argues that Powertech makes “unsubstantiated assumptions as to the isolation of the aquifers in the ore-bearing zones.” Petition at 22. Dr. Moran also argues that Powertech fail[s] to account for natural and man-made hydraulic conductivity through natural breccias pipe formations and the historic drilling of

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<sup>36</sup> Dr. Moran claims that Powertech “ignore[s] the more reasonable conclusion that some form of contamination has occurred.” Petition at 21, Declaration at ¶ 62. This claim is difficult to reconcile with Dr. Moran's earlier statement that “[m]uch of the Application discussion concerning ground water quality seems focused on showing that the site waters are already contaminated.” Petition at 20, Declaration at ¶ 29.

<sup>37</sup> Criteria 4(e) and 5G(2) apply to tailings and impoundments associated with uranium mills. These criteria do not apply to ISL facilities. See *Hydro Resources, Inc.* (2929 Coors Road Suite 101 Albuquerque, New Mexico 87120), CLI-99-22, 50 NRC 3, 9 (1999) (“We agree that those requirements in Part 40, such as many of the provisions in Appendix A, that, by their own terms, apply only to conventional uranium milling activities, cannot sensibly govern ISL mining.”)

literally thousands of drill holes in the aquifers and ore-bearing zones in question, which were not properly abandoned.” *Id.*

As explained below, Dr. Moran’s claims do not form an admissible contention. Many of Dr. Moran’s claims fail to address sections of Powertech’s application that are directly relevant to the issues he raises. Other claims appear to rest on a misreading of the application or are merely unsupported assertions. Because Contention 3 depends entirely on Dr. Moran’s claims, the Board should dismiss this contention under 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).<sup>38</sup>

Below, the Staff responds to Dr. Moran’s claims in paragraphs 36 through 46 of his Declaration. The Staff addresses paragraphs 37 and 38 together, because those claims raise very similar issues.

36. The application presents overly-optimistic conclusions about the isolation of the ore-bearing zones, aquifers, and the lack of fluid excursions that will occur, both vertically and horizontally. Powertech’s description and evaluation of possible water-related impacts [ER pg. 8-2 (Table 8.1-1)] are unreasonably optimistic. It is unlikely that the process waters can be contained within the project boundaries given the following sources of the evidence.

Dr. Moran claims that Powertech’s conclusions are unreasonably optimistic, but he does not cite any authority in support of his claim. Dr. Moran also fails to address numerous sections of Powertech’s application that are relevant to assessing whether Powertech’s conclusions are reasonable. For example, Dr. Moran does not address sections of the TR discussing regional geology, the results of production zone pumping tests, drill hole data from exploratory boreholes, and core analyses of the overlying and underlying confining units. *See generally* TR Sections 2.6, 2.7, 3.0, 5.7.8 and 6.1; TR Appendix 2.7-B; and the TR Supplement. While the Staff recognizes that in this paragraph Dr. Moran refers to other “sources of the evidence”—

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<sup>38</sup> At the end of Contention 3, the Tribe argues that Dr. Moran’s concerns “are echoed in Exhibit 6, at 4–5, where EPA critiques the environmental review process conducted by NRC for ISL operations proposed in Wyoming.” Petition at 24. Exhibit 6 is irrelevant to the issues before the Board, as it involves (1) a different applicant, and (2) the Staff’s review, rather than the license application.

presumably his claims in paragraphs 37 through 46—it is clear that paragraph 36 itself does not satisfy 10 C.F.R. §§ 2.309(f)(1)(v) or (vi).

37. The D-B uranium deposits occur in subsurface, fluvial channel, sandstone deposits in the Lakota and Fall River formations (Smith, 2005). These sandstones inter-finger with finer-grained silts and shales, often associated with lignites and coals, which form the typical lithologic sequences often seen in classic sedimentary uranium deposits (Abitz, 2005; Gott, 1974; Henry, 1982; Galloway, 1982; Henry, 1980; Harshman, 1972).

38. Hydraulically, such sedimentary packages typically allow ground waters to flow between the inter-fingering facies, both vertically and horizontally, when the coarser-grained sediments are stressed by long-term pumping. The hydraulic inter-connections are verified by conducting long-term aquifer tests integrated with sequential water quality sampling and in-situ measurement of field parameters (Henry, 1982; Galloway, 1982; Moran, R.E.—hydrogeochemical research activities, U.S.G.S., Water Resources Div., 1973—1978).

Dr. Moran refers to studies that discuss the general hydrogeology in the Lakota and Fall River formations. Dr. Moran fails to explain, however, why these studies call into question the site-specific data Powertech provided with its application. As noted above, Powertech's application includes numerous sections addressing the hydrogeology at the Dewey-Burdock site. These sections include Appendix 2.7-B, which provides the results of pumping tests conducted at the site. These tests provide local information relevant to assessing hydraulic connectivity. Although Dr. Moran refers to various studies, he does not explain why these studies call into question Powertech's pumping tests or any of its other data or analyses. Accordingly, Dr. Moran fails to raise a genuine dispute with Powertech, and his claims cannot be admitted as a contention. 10 C.F.R. § 2.309(f)(1)(vi).

39. Thus, ore-bearing sandstones in typical sedimentary packages associated with roll-front uranium deposits do not routinely behave as hydraulically-isolated bodies. Numerous specific lines of evidence from the D-B Application documents indicate that the project sediments possess various pathways for the migration of water and contaminants from the ore zones into neighboring sediments, both vertically and laterally. For example, thousands of exploration boreholes have been drilled since the 1950's at the D-B site (Smith, 2005; TR, ER), many of which were not correctly plugged and abandoned (TR, Pg. 2-157; Append. 2.7-B, sub-Appendix D, pg. 1484; TR, Append. 2.6-A, pg. 972-1111). In addition, several sources (Smith, 2005, pg. 9; ER, pg. 3-106) report that the area contains historic, shallow mine workings, both open pits and short tunnels that would provide additional flow pathways.

Powertech's application addresses all the issues to which Dr. Moran refers. Powertech addresses exploratory drill holes in TR Sections 2.6.2, 2.6.4, 2.7.2.2.5 and 2.7.2.2.16, as well as in the TR Supplement. Powertech provides historical mine data in TR sections 2.2 and 2.6. Although Dr. Moran claims that drill holes and mine workings could provide additional flow pathways for excursions, he does not allege any deficiency in Powertech's analyses of these issues. For example, Dr. Moran does not argue that Powertech has failed to identify boreholes or mine workings. Nor does Dr. Moran claim that Powertech has failed to acknowledge that boreholes or mine workings could, in certain cases, serve as groundwater pathways.<sup>39</sup> Because Dr. Moran fails to identify a genuine dispute with Powertech, the issues he raises cannot be admitted as a contention. 10 C.F.R. § 2.309(f)(1)(vi).

40. There are numerous old and existing water wells and old oil test wells in the D-B area, many with rusty and leaky casings, often unplugged or partially-plugged, drilled through several formations which act as potential pathways for flow between water-bearing units (ER, pg.3-40; TR, Append. 2.2-A, pg. 740-779; 2.2-B, especially pg. 864-902).<sup>[40]</sup>

In Appendix 2.2-A to the TR, "Well Location Data," Powertech provides data and figures showing the location of flowing artesian wells. This information also shows the location of flowing artesian wells that draw water from the Inyan Kara but are in need of repair. Based on the figures in Appendix 2.2-A, none of these wells would be near the Dewey-Burdock production zones. Dr. Moran does not address the specific data Powertech presents in Appendix 2.2-A, and he does not challenge Powertech's statement that any wells in need of repair would be remote from the Dewey-Burdock production zones. Because Dr. Moran does not specifically challenge Powertech's data or analyses, paragraph 40 fails to set forth an admissible

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<sup>39</sup> The application shows that Powertech has considered this possibility. See, e.g., TR at Section 2.7.2.2.5 (page 2-157) ("It is possible that, 'interaquifer connection here could result from as-yet-unidentified structural features or old open exploration holes.' As such, the Inyan Kara is treated in this report as one aquifer with the Fall River and Lakota representing subaquifers.")

<sup>40</sup> Dr. Moran refers to "pg. 740-779" and "pg. 864-902," but these pages do not appear in the ER, TR, Appendix 2.2-A or 2.2-B.

contention. 10 C.F.R. § 2.309(f)(1)(vi).

41. The TR, pg. 2-153-154, states that hydraulic connections between local D-B aquifers often result because confining units thin or are absent in many areas (ER, pg.3-56-57). In addition, Gott (1974) and others have mentioned the presence of breccia/evaporite pipes (collapse structures), which create vertical permeability pathways between aquifers. Gott (1974, pg. 27-29) and others discuss the common presence of faults and joints throughout the region, which could easily act as flow pathways.

Dr. Moran does not raise a genuine dispute with Powertech. Although Dr. Moran refers to studies describing the general hydrogeology in southwestern South Dakota, he fails to address relevant sections in Powertech's application. In the application Powertech explains that breccia pipes were *not* found to be present in the proposed action area. Section 2.3.1 in the TR Supplement, "Breccia Pipes," and Exhibit 2.2-1 address this very issue. Dr. Moran fails to address this site-specific data. In particular, Dr. Moran fails to address Powertech's statement that information from approximately 4,000 exploratory drill holes within the proposed action area demonstrates breccia pipes are not present. TR Supplement at page 2-8. As for potential faults, Section 2.6.2.1 (page 2-93) of the TR, "Site Structure," states that "there are no identified faults within the Dewy [sic]-Burdock PAA." Dr. Moran does not address this section or explain why the conclusions Powertech draws may be incorrect. Because Dr. Moran fails to dispute relevant sections in the application, his claims do not form an admissible contention. 10 C.F.R. § 2.309(f)(1)(vi).

42. Vertical and lateral hydraulic connectivity between the ore zones and the neighboring facies/formations are also indicated by the aquifer test results conducted in both 1979 and 2008 (ER, pg.3-56-57; TR, pg. 2-170 & 2-180, for example; TR Append. 2.7-B, Knight-Piesold Pumping Test Report, pg. 1290).

Dr. Moran again fails to identify a genuine dispute with Powertech. In the application, Powertech does not deny that there may be some communication between aquifers underlying the Dewey-Burdock site. See, e.g., TR Section 2.7.2.2.12.2, "Burdock Project Area" ("There was communication between the Fall River and Lakota formations through the intervening Fuson shale-siltstone member"); TR Section 2.7.2.2.16, "Hydraulic Connection of Aquifers at

the Project Site" ("Results of aquifer tests at the project site indicate that the Fuson Shale is not an effective barrier in some locations (Boggs and Jenkins, 1980)."). It is not enough for Dr. Moran to simply recite conclusions drawn by Powertech in its application. To raise a genuine dispute with Powertech, Dr. Moran must at the very least allege that the information he identifies is relevant to some material issue in this proceeding. Dr. Moran does not do that here. Merely because there may be some communication between aquifers does not show that Powertech's application fails to meet statutory or regulatory criteria. Numerous sections of Powertech's application are devoted to showing that, even taking into account the potential for communication between aquifers, operations at Dewey-Burdock will meet all applicable criteria because process fluids will be adequately contained. Dr. Moran does not address Powertech's plans for containing process fluids. He therefore fails to set forth an admissible contention. 10 C.F.R. § 2.309(f)(1)(vi).

43. It seems obvious that the aquifer testing already performed demonstrates leakage between the various formations / facies bounding the ore zone. However, it seems equally likely that longer-duration aquifer tests conducted at even higher pumping rates would demonstrate even more clearly the leaky nature of these site sediments.

Dr. Moran fails to support his claims. Dr. Moran's claim that "the aquifer testing already performed demonstrates leakage. . . ." is merely a restatement of his claim in paragraph 42. Dr. Moran also suggests that pumping tests at higher rates would more clearly demonstrate leakage from the ore zone. Dr. Moran fails to explain why this is so, however, and he does not explain why a "clearer" demonstration of leakage is necessary. Dr. Moran also does not identify any specific deficiency in the pumping tests Powertech conducted. See Appendix 2.7-B, "2008 Pumping Tests: Results and Analysis." Because Dr. Moran neither supports his claims regarding pumping tests nor addresses relevant sections of Powertech's application, his claims must be rejected under 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

44. Repeatedly throughout the Application, Powertech states that the project will bleed 0.5 to 3% of leachate to maintain a cone of depression, which will prevent flow of leachate outwards (i.e. ER, pg. 1-14). Rather than supporting this allegation with long-

term, technical data from other operating sites, Powertech has inserted a public relations statement from the mining industries lobbying group, the National Mining Association (NMA, 2007).

Dr. Moran misreads the application. The application does not state that “the project will bleed 0.5 to 3% of leachate to maintain a cone of depression.” If that were the case, Powertech would be disposing of uranium recovered through the leaching process. Rather, the application at page 1-14 of the ER and elsewhere states that the bleed will withdraw leachate and maintain a cone of depression to prevent the flow of leachate outwards. Although Dr. Moran argues that Powertech should further support its statement that a bleed of 0.5 to 3% will maintain a cone of depression, it is the petitioner’s burden to support its claims and raise a genuine dispute with the applicant. Here, Dr. Moran does not give any reason to question Powertech’s statements. His claim must therefore be rejected under 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

45. D-B Application Supplement, pg. 5-5 describes an aquifer exemption boundary, which acts as an additional buffer zone outside the monitor well rings “to provide protection to adjacent water from the excursions that occur in the normal course of operations.” Page 5-6 of the Supplement further states that the aquifer exemption boundary is proposed to be up to 1200 ft. outside the monitor well ring, and would be considered the point of regulatory compliance. Apparently simply pumping to create an inward flow direction is not adequate to control “excursions”. It appears this aquifer exemption boundary is actually an expanded ground water sacrifice zone.

Dr. Moran suggests that Powertech’s application for an aquifer exemption boundary demonstrates that groundwater outside the production area will be used as a “sacrifice zone.” Dr. Moran provides no support for his claim. Powertech obviously has taken into account that the cone of depression created by groundwater bleed may not be sufficient to prevent all excursions. Page 5-5 of Powertech’s Supplement, which Dr. Moran cites, makes this clear. Indeed, NRC regulations require Powertech to address this very possibility. *See, e.g.,* Criterion 7A (requiring ISL licensees to establish detection monitoring programs). Dr. Moran appears to be suggesting that Powertech’s proposed ISL method is insufficient to prevent the area inside the aquifer exemption boundary from becoming permanently contaminated with leachate. If this is his claim, Dr. Moran fails to identify any deficiency in the numerous sections



of Powertech's application describing its ISL method and its procedures for controlling excursions.<sup>41</sup> Because Dr. Moran does not dispute relevant sections of Powertech's application, his claims cannot be admitted as a contention. 10 C.F.R. § 2.309(f)(1)(vi).

46. The discussion above presents ample evidence that the D-B area sediments contain numerous possible subsurface pathways for project leach fluids to migrate vertically between water-bearing units and outside the project boundaries. Unfortunately, as noted above, Powertech has not adequately defined the baseline water levels or water quality conditions of neighboring wells within a 1 to 2 mile radius of the D-B project. In addition, the TR, pg. 2-180, states that no public data are available on the use of aquifers in Fall River or Custer counties. Such data should have been compiled by Powertech as part of the Application, and must be required before any licenses are given.

The first sentence in this paragraph merely summarizes arguments Dr. Moran made previously; it does not raise any new claim. Likewise, in the second sentence Dr. Moran merely summarizes his arguments regarding baseline water conditions, arguments upon which the Tribe relies in Contention 2. As the Staff explains above, Dr. Moran fails to support his claim that Powertech must provide additional data on baseline water conditions.

Dr. Moran's final claim in paragraph 46 is that in its application Powertech should have included data quantifying public use of water from aquifers within Fall River and Custer Counties. Dr. Moran cites page 2-180 of the TR, which states that "[t]here is no public data available to quantify the use from each of th[e] aquifers within Fall River or Custer County." Because Dr. Moran does not dispute this statement, his only claim appears to be that Powertech should have collected such data itself. Dr. Moran fails to provide any support for the claim that Powertech needed to prepare this type of study as part of its application. Accordingly, Dr. Moran's claims in paragraph 46 fail to satisfy 10 C.F.R. § 2.309(f)(1)(v).

#### Contention 4: Groundwater Quantity Impacts

The application violates the National Environmental Policy Act in its failure to

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<sup>41</sup> See, e.g., TR Sections 2.6, 2.7, 3.0, 5.7.8 and 6.1, as well as TR Appendix 2.7-B.



provide an analysis of the ground water quantity impacts of the project. Further, the application presents conflicting information on ground water consumption such that the water consumption impacts of the project cannot be accurately evaluated. These failings violate 10 C.F.R. § 40.32(c), 40.32(d), and 51.45.

Petition at 25.

The Tribe's first claim in Contention 4 must be rejected because Powertech does, in fact, provide an analysis of groundwater quantity impacts. Powertech addresses drawdowns and other impacts to groundwater in numerous sections of the TR and ER.<sup>42</sup> Because the Tribe does not challenge any of these sections, the Tribe is necessarily unable to show it has a genuine dispute with Powertech.

Although the Tribe cites the Moran Declaration as support for its claim, Dr. Moran does not identify any specific deficiency in Powertech's analysis of groundwater impacts, beyond claiming that Powertech has provided inconsistent estimates of water usage. Dr. Moran claims that the water usage estimates in Section 4.6.2.7.2 (page 4-25) of the ER and Section 2.7.2.2.20 (page 2-181) of the TR are inconsistent with the estimate in Table 8.1-1 (page 8-2) of the ER. Petition at 26, Moran Declaration at ¶¶ 13–14. Sections 4.6.2.7.2 and 2.7.2.2.20 state that "[w]ater requirements of the CPP [Central Processing Plant] and other facilities are estimated to have a maximum requirement of 65 gpm." Table 8.1-1, on the other hand, includes a column titled "Estimated impacts" that states "Groundwater consumption (net gpm) . . . 320."

Dr. Moran fails to show there is a genuine issue as to whether Powertech has provided inconsistent estimates of water usage. The estimates to which Dr. Moran refers—65 gpm and 320 gpm—are different because they refer to different activities. As stated in the application,

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<sup>42</sup> See, e.g., TR Section 4.6.2.6, "Potential Impacts of Groundwater Consumption During Operations and Restoration"; Table 4.6-1, "Net Water Usage with Reverse Osmosis"; Table 4.6-2, "Net Water Usage without Reverse Osmosis"; Section 7.2.5, "Potential Groundwater Effects on Operations"; Section 7.2.5.1, "Potential Groundwater Consumption"; Section 7.2.5.1.1, "Drawdown Impact - Fall River Aquifer"; and Section 7.2.5.1.2, "Drawdown Impact - Lakota Aquifer." See also ER Sections 4.6.2.6.1 through 4.6.2.7.1 and Section 4.6.2.7.3 (addressing issues similar to those discussed in the just-cited TR sections), and Section 7.4.3, "Potential Groundwater Impacts."

the 65 gpm estimate refers to the operating requirements of the CPP and other facilities. The 320 gpm estimate, on the other hand, refers to *total water usage* from operations at Dewey-Burdock, from construction through reclamation. See Section 8.1, “Summary of Environmental Consequences” (“Table 8.1-1 summarizes the environmental impacts associated with the Proposed Action from construction through reclamation.”). Dr. Moran fails to explain why these different categories of activities should result in identical levels of water usage. Instead, he simply assumes the water usage estimates refer to the same activities.

Because the Tribe does not address sections of the application in which Powertech discusses groundwater drawdowns, and because Dr. Moran fails to support his claim that Powertech’s estimates of water usage are inconsistent, Contention 4 must be rejected. 10 C.F.R. §§ 2.309(f)(1)(v), (vi).

#### Contention 5: Financial Assurance

The application fails to provide a sufficient and acceptable financial assurance cost estimate, as required by 10 C.F.R. Part 40, Appendix A, Criterion 9, to assure the availability of sufficient funds to complete the reclamation plan and the activities in the application by an independent contractor.

Petition at 27.

The Tribe claims that Powertech’s decommissioning cost estimates are inadequate because they are based on full production only in 2011 and minor production in 2012, whereas the expected life of the Dewey-Burdock project is seven to twenty years. Petition at 27. The Tribe argues that Powertech’s estimates are therefore inconsistent with Criterion 9 in Appendix A, which states:

Financial surety arrangements must be established by each mill operator prior to the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. . . . The licensee’s surety mechanism will be reviewed annually by the Commission to assure, that sufficient funds would be available for completion of the reclamation plan if the work had to be performed by an independent contractor. The amount of surety liability should be adjusted to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs.

This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. . . .

Petition at 27–28. The Tribe also argues that, in calculating financial surety, Powertech should have taken into account that restoration times at Dewey-Burdock may be longer than anticipated. Petition at 28.

Powertech's financial assurance calculations are in Appendix 6.6-A.<sup>43</sup> This Appendix sets forth the methodology by which Powertech intends to calculate its surety for decontamination and decommissioning at Dewey-Burdock. Powertech provides 30 pages of estimates addressing closure costs for both Land Application and Waste Disposal Well options. These estimates address factors such as labor costs, equipment costs, and site preparation fees. Many of Powertech's estimates are not tied to any particular year of production, but are either annual costs or costs based on pounds of uranium recovered.<sup>44</sup>

The Tribe's contention appears to be based on the tables at the beginning of the "Land Application" and "Waste Disposal Well" sections in Appendix 6.6-A. In these tables Powertech estimates total decommissioning costs associated with production in 2011–12, but not for subsequent years. The Tribe fails to explain, however, why Powertech needs to provide additional estimates at this time. Powertech has provided the methodology by which it intends to calculate total decommissioning costs associated with production years beyond 2011–12, including the factors it will consider in its calculations. Because the Tribe does not challenge that methodology, its contention must be dismissed. *See Crow Butte*, LBP-08-24, 68 NRC at 754–56 (rejecting challenge to applicant's financial assurance cost estimates where petitioners "fail[ed] to dispute Crow Butte's methodology for conducting post-reclamation that underlies

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<sup>43</sup> ADAMS Accession No. ML091040367 at pages 203–234.

<sup>44</sup> *See, e.g.*, pages 210–218 and 226–31 at ADAMS Accession No. ML091040367.

many of Crow Butte's surety estimates").

If Powertech is granted an NRC license, its surety amount will be reviewed by the NRC annually, and the surety amount will be adjusted in order to "recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs." Appendix A, Criterion 9.<sup>45</sup> This procedure, which Powertech acknowledges it must follow,<sup>46</sup> will be sufficient to ensure that funds are available to carry out decommissioning of the Dewey-Burdock facility by an independent contractor.<sup>47</sup> This procedure will also ensure that Powertech adjusts its surety if, as the Tribe suggests, the restoration times at Dewey-Burdock are longer than anticipated. Petition at 22.

In sum, the Tribe fails to challenge the specific cost estimates in Powertech's financial assurance calculations. The Tribe merely argues that those estimates should have been used to generate dollar amounts for total decommissioning costs associated with production beyond 2011–12. Because the Tribe fails to raise a genuine dispute with Powertech, the Board should reject Contention 5 under 10 C.F.R. § 2.309(f)(1)(vi).

#### Contention 6: Organization of the Application

The application fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers, as required by the National Environmental Policy Act, Regulatory Guide 3.46, and NUREG 1569.

Petition at 28.

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<sup>45</sup> Further, Powertech cannot begin operations at Dewey-Burdock until it establishes NRC-approved financial surety arrangements. Appendix A, Criterion 9.

<sup>46</sup> See TR at Section 6.6 (page 6-35) ("In accordance with NRC requirements, an updated Annual Surety Estimate Revision will be submitted each year adjusting the surety instrument to reflect existing operations and those planned for construction or operation in the following year. After review and approval of the Annual Surety Estimate Revision by the NRC, Powertech (USA) will revise the surety instrument to reflect the updated amount.").

<sup>47</sup> Under Criterion 9, "In establishing specific surety arrangements, the licensee's cost estimates must take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work."

Contention 6 fails because the issues the Tribe raises do not present a genuine dispute with Powertech. Contention 6 also fails because the Tribe does not adequately support its arguments.

The Tribe first argues that Powertech's application is not organized consistent with NUREG-1569 and Regulatory Guide 3.46. Petition at 28. These documents merely provide guidance to applicants for NRC licenses. They do not impose requirements, organizational or otherwise, on license applications. *Three Mile Island*, ALAB-698, 16 NRC at 1298–99.<sup>48</sup> Accordingly, even assuming Powertech's application departs in some way from the guidance in NUREG-1569 or Regulatory Guide 3.46, the Tribe has not shown why that is a material issue in this proceeding. The Tribe's claim must therefore be rejected under 10 C.F.R. § 2.309(f)(1)(vi).

The Tribe next argues that Powertech's application is inconsistent with Council on Environmental Quality (CEQ) regulations requiring that environmental documents be written clearly, concisely and in plain language. Petition at 29 (citing 40 C.F.R. §§ 1500.2(b) and 1502.8).<sup>49</sup> The Tribe also cites the opinion of Dr. Moran, who claims that Powertech's application "is so disorganized and technically-deficient that it does not comply with the terms of NUREG-1569 and other relevant NRC regulations and should be revised." Petition at 29, Moran Declaration at ¶ 5. Dr. Moran cites five examples of the alleged disorganization reflected in Powertech's application. Declaration at ¶¶ 6–10.

The Tribe fails to support its claim that Powertech's application must be rejected as highly disorganized. The CEQ regulations the Tribe cites do not impose organizational requirements on an application. Rather, these regulations apply to *environmental impact*

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<sup>48</sup> The front page of Reg. Guide 3.46 explains that "Regulatory Guides are not substitutes for regulations, and compliance with them is not required."

<sup>49</sup> The CEQ has an advisory role under NEPA. Although the CEQ's guidance does not bind the NRC Staff, the NRC generally assigns CEQ guidance substantial weight. *Dominion Nuclear North Anna, LLC* (North Anna ESP Site), CLI-07-27, 66 NRC 215, 222, n.21 (2007).

*statements* prepared by federal agencies. The Tribe does not cite any case law or other authority demonstrating that these regulations have been used to reject an application. Although Dr. Moran argues that the alleged lack of organization in Powertech's application violates NUREG-1569, as explained above, this document does not impose requirements on applicants. Dr. Moran further states that Powertech's application fails to satisfy "other relevant NRC regulations," but neither he nor the Tribe identifies those regulations. In sum, the Tribe fails to cite any governing standard under which Powertech's application might be rejected as highly disorganized. The Tribe's arguments must therefore be rejected under 10 C.F.R. § 2.309(f)(1)(v).

In any event, the Tribe does not support its claim that Powertech's application is highly disorganized. The five examples of "disorganization" alleged by Dr. Moran say little about the overall organization of a document containing approximately 6,000 pages. The NRC Staff, which accepted Powertech's application for detailed review, did not conclude that the application is highly disorganized. The Staff also notes that, despite Dr. Moran's claim that Powertech's application violates NUREG-1569, the application appears to generally follow the structure of the NUREG. See NUREG-1569 at pages v–xii (table of contents).

#### Contention 7: Disposal of 11e.(2) Byproduct Material

The Environmental Report indicates that Powertech intends to use some unidentified facility for disposal of the 11e2 Byproduct generated at the proposed ISL Facility. See Powertech ER at 1-7, 4-6. It is not sufficient, however, for an applicant to merely state that permanent disposal will occur in conformance with applicable laws.

The very reason for the licensing process is to ensure that the problems associated with mill tailings which UMTRCA addresses do not recur under the modern licensing regime. Nowhere do the regulations at 10 C.F.R. Part 40, Appendix A allow an applicant to merely assert that tailings will be handled in accordance with applicable law. The opposite is required by federal law: an applicant must address permanent disposal at the time it seeks a license for activities which create 11e2 Byproduct.

Petition at 31.

The Tribe states that "it is impossible to determine, based on the application,

Environmental Report, and NEPA documents, whether any specific plans exist for the disposition of the 11(e)2 Byproduct that will be produced by Powertech and what impacts such disposition would entail.” Petition at 31–32. The Tribe claims that “specific plans for handling the tailings is a mandatory requirement” of Appendix A. *Id.* at 32 (citing 10 C.F.R. § 40.31(h)).<sup>50</sup> The Tribe argues that because Powertech did not include such plans in its application, the application must be summarily denied. Petition at 32.

The Board should reject Contention 7 because the Tribe fails to identify any issue material to a finding the NRC must make in its review of Powertech’s application. The Tribe assumes that 10 C.F.R. § 40.31(h) applies to ISL facilities. That is incorrect. As explained by the Presiding Officer in another ISL licensing proceeding:

On its face, 10 C.F.R. § 40.31(h) states that it applies ‘at sites formerly associated with such [uranium or thorium] milling.’ Intervenors do not present any argument that explains why they believe the section applies to the HRI license even though the HRI site is not “formerly associated with such milling.” The language of the section simply does not apply to the HRI site. The legislative history also strongly suggests that 10 C.F.R. § 40.31(h) and 10 C.F.R. Part 40, Appendix A, were designed to address the problems related to mill tailings and not problems related to injection mining. See *Hydro Resources’ Response* at 9-16; *Staff Response* at 5-21. The history of 10 C.F.R. § 40.31(h) demonstrates that it does not apply to injection mining license applicants, and in implementing the general requirements of 10 C.F.R. § 40.32 instead, the Staff properly applies only those Appendix A criteria that apply to injection mining.

*Hydro Resources, Inc.* (2929 Coors Road Suite 101 Albuquerque, New Mexico 87120), LBP-99-1, 49 NRC 29, 33 (1999), *affirmed at* CLI-99-22, 50 NRC 3, 8–12 (1999). The Tribe also argues that Powertech’s application violates Criterion 1 in Appendix A. Petition at 34. This criterion, however, addresses “tailings and associated contaminants.” Like § 40.31(h), Criterion 1 does not apply to the Dewey-Burdock site. See *Hydro Resources*, CLI-99-22, 50 NRC at 9 (“We agree that those requirements in Part 40, such as many of the provisions in Appendix A, that, by

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<sup>50</sup> The Tribe refers to 40 C.F.R. § 40.31(h), but the Staff assumes the Tribe is referring to 10 C.F.R. § 40.31(h).

their own terms, apply only to conventional uranium milling activities, cannot sensibly govern ISL mining.” ) Because the Tribe relies on § 40.31(h) and Criterion 1 to support its claim that Powertech needs to provide additional information, and because these provisions do not apply to the Dewey-Burdock site, the Tribe fails to show there is a material issue regarding whether Powertech has complied with applicable requirements.<sup>51</sup> Contention 7 therefore fails to satisfy 10 C.F.R. § 2.309(f)(iv).

The Tribe also claims that Powertech’s “[f]ailure to identify the permanent disposal facility [for 11e.(2) byproduct material] avoids examination of all direct, indirect, and cumulative impacts of the proposal, as required by NEPA.” Petition at 33. It is well established that NEPA does not impose substantive mandates. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (explaining that NEPA itself does not mandate particular results in order to accomplish its ends, but imposes only procedural requirements on federal agencies). Accordingly, NEPA itself does not require Powertech to identify a permanent disposal facility. NEPA requires only that the Staff consider the reasonably foreseeable environmental effects of the actions Powertech has proposed. Because the Tribe does not identify any requirement that Powertech name a specific disposal site at this time, the Tribe fails to support its claim as required by 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

#### Contention 8: Adequacy of the NRC’s NEPA Regulations

The procedure used by NRC to consider the Powertech application fails to satisfy the public participation and informed decision-making mandates of NEPA. The procedural requirements of NEPA are designed to benefit those who participate in agency decision-making processes and to require that the agency take a “hard look” at the impacts, alternatives, mitigation measures, and other aspects of a federal action at the earliest stages of the decision process, in recognition that when a “decision is made without the information that NEPA seeks to put before the decisionmaker, the harm that NEPA seeks to prevent

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<sup>51</sup> The Tribe also twice quotes language from the Introduction to Appendix A. Petition at 31 and 32. The Tribe fails to explain, however, why the quoted language is relevant to the Staff’s review of an ISL application.



occurs.” See: *Sierra Club v. Marsh*, 872 F.2d 497, 500 (1st Cir. 1989) quoting *Commonwealth of Massachusetts v. Watt*, 716 F.2d 946 at 953 (1st Cir. 1983)

By contrast, the procedure used in the present proceedings denies the Tribe and the NRC the information that a NEPA analysis provides. Importantly, this interdisciplinary analysis and information is provided during the NEPA process by the applicant, staff, and members of the public. All of these sources of information are recognized by NEPA, but the Tribe is prejudiced here when significant sources of information are not available until the NRC has taken final action to accept or deny its contentions. It is of no consequence that the NRC provides an opportunity to seek permission to pursue new or rejected contentions later in the proceedings, based on information revealed in the NEPA analysis. See: *Id.* (“Once large bureaucracies are committed to a course of action, it is difficult to change that course - even if new, or more thorough, NEPA statements are prepared and the agency is told to ‘redecide.’”).

Petition at 34–35.

Contention 8 must be rejected as an impermissible challenge to the NRC’s regulations. Although the Tribe argues that the procedure used in the “present proceedings” violates NEPA, the procedure used here—under which a petitioner must include with its hearing request any contention challenging an applicant’s ER—is no different than that used in any other NRC proceeding. The NRC’s regulations state unequivocally that a petitioner must file any contention challenging the applicant’s ER at the time the petitioner requests a hearing. See 10 C.F.R. § 2.309(f)(2) (“On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant’s environmental report.”). See *also Florida Power & Light Co.* (Turkey Point Nuclear Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 24 (2001) (rejecting petitioner’s claim of unwarranted difficulty framing contentions because the NRC staff had not yet issued its SEIS and explaining that, under NRC regulations, “[c]ontentions must be based upon the applicant’s . . . license application and Environmental Report”). The Tribe challenges this procedure, but its challenge is not a litigable issue in this proceeding. See *Shearon Harris*, CLI-10-09, 71 NRC \_\_\_\_ (slip op. at 38) (holding that a contention must be rejected to the extent it challenges NRC regulations); *Private Fuel Storage*, CLI-04-22, 60 NRC at 129 (explaining that a contention must be rejected where it reflects nothing more than a generalization regarding the petitioner’s view of what the applicable policies ought to be).

In any event, the Tribe fails to explain why the NRC's hearing procedures "den[y] the Tribe and the NRC the information that a NEPA analysis provides." Petition at 35. The hearing process is not the sole means by which NRC Staff and members of the public share information relating to the potential environmental impacts of a licensing action. The NRC's regulations in 10 C.F.R. Part 51 provide substantial opportunities for public involvement *apart from* the hearing process. In the present case, for example, the Staff will prepare a supplemental environmental impact statement (SEIS) for Powertech's proposed action.<sup>52</sup> Before releasing the final SEIS, the Staff will prepare a draft SEIS. The Staff will circulate the draft SEIS for public comment, and it will take public comments into account when preparing the final SEIS.<sup>53</sup> The Staff will also make non-sensitive documents relating to the proposed action available for public review through the NRC's Agencywide Documents Access Management System (ADAMS).

#### Contention 9: Staff's Review under NEPA

The Powertech proposal to conduct ISL operations and conduct associated waste disposal activities is being considered by multiple federal agencies. However, NRC, the lead agency for purposes of NEPA - has failed to engage these other agencies and therefore has failed to comply with the "action-forcing" mandate and purpose of NEPA.

Petition at 36.

Like Contention 1, this contention is not ripe for litigation. Contention 9 is not ripe because the Staff has yet to issue a draft or final SEIS for Powertech's proposed action.

On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement,

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<sup>52</sup> As stated in the Background section above, the SEIS will supplement the analysis in NUREG-1910, "Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities."

<sup>53</sup> In this case the Staff also published advertisements in six South Dakota newspapers inviting public comments on issues for the Staff to consider when preparing the SEIS for Dewey-Burdock. The advertisements were published in late January 2010 in the *Rapid City Journal*, *Edgemont Herald Tribune*, *Custer Chronicle*, *Hot Springs Star*, *Lakota Country Times*, and *Native Son*.

environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents.

10 C.F.R. § 2.309(f)(2). *See also Crow Butte*, CLI-09-09, 69 NRC at 348–51; *Crow Butte*, CLI-09-12, 69 NRC at 566. Accordingly, the Tribe must wait until the Staff issues its SEIS before challenging the adequacy of the Staff's NEPA review. Because in Contention 9 the Tribe challenges only the Staff's ongoing NEPA review, not Powertech's application, this contention must be rejected under 10 C.F.R. § 2.309(f)(1)(vi). *See also Crow Butte*, CLI-09-09, 69 NRC at 351; *Crow Butte*, CLI-09-12, 69 NRC at 566.

In any event, the Tribe provides no support for its claim that the Staff has failed to engage other agencies in violation of NEPA. The Staff accepted Powertech's application for detailed technical review on October 9, 2009. As the lead agency in the environmental review for Powertech's application, the NRC will consult with EPA, the United States Bureau of Land Management (BLM) and other appropriate agencies. Accordingly, the Staff will provide EPA the opportunity to review the Dewey-Burdock SEIS at various stages of its development.<sup>54</sup> The Tribe does not point to any authority holding that the Staff's approach violates NEPA. The three cases the Tribe cites at pages 37–38 of its Petition are inapposite, as each case involves a *final* agency decision and EIS. These cases do not support the Board admitting a contention challenging the Staff's ongoing NEPA review.

#### Contention 10: Tornado Strikes

The Environmental Report provides an encyclopedic recital of considerable irrelevant information, but fails to provide information on reasonably foreseeable impacts of the proposal. As one example, although tornado strikes are common occurrences in the region, there is no recognition of this reasonably foreseeable impact, even though it is coupled with catastrophic consequences. See Exhibit 11 (NOAA announcement regarding tornado preparedness in region surrounding Rapid City, South Dakota). This is but one example of the applicant's failure to

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<sup>54</sup> The Staff previously provided the EPA the opportunity to review and comment on NUREG-1910. *See* Appendix G of NUREG-1910 (summarizing comments from EPA and others, and providing Staff responses).

provide a complete Environmental Report and the NRC failure to comply with the NEPA requirements at the earliest stages of the proceedings.

Petition at 38.

Contention 10 must be rejected because Powertech's application does, in fact, address tornado strikes. Section 7.5.5 of the TR, "Potential Natural Disaster Risk," states in part:

NUREG/CR 6733 evaluates potential risks associated with ISL facilities for the release of radioactive materials or hazardous chemicals due to the effects of an earthquake or tornado strike. The NRC determined that in the event of a tornado strike, chemical storage tanks could fail resulting in the release of chemicals. NUREG-0706 analyzed the risk from a tornado strike, which determined that ISL facilities were not designed to withstand tornado strength winds and assumed that an inventory of 45,000 kg of yellowcake was present on-site and that 15 percent (11,400 kg) or 26, 55-gallon drums of the yellowcake was dispersed by the tornado. The model assumes that all the yellowcake was in a respirable form and was carried by the tornado to the project's site boundary. According to the model, the maximum 50-yr. dose to an individual's lung would be  $8.3 \times 10^{-7}$  rem and located approximately 2.5 miles from the mill. NUREG- 6733/CR concluded that the risk of a tornado strike on an ISL facility was very low and that no design or operational changes were necessary to mitigate the potential risks, but that it was important to locate chemical storage tanks far enough from each other to prevent contact of reactive chemicals in the event of an accident.

Although this analysis of tornado strikes appears in the TR rather than the ER, it can be readily located by searching the application using either "tornado" or "natural disaster" as keywords.

"Petitioners have an 'ironclad obligation' to examine the application and publicly available documents to uncover any information that could serve as a foundation for a contention."

*Florida Power & Light Co*, CLI-01-17, 54 NRC at 24–25 (citation omitted). Because the Tribe fails to dispute Powertech's analysis of impacts from tornado strikes, the Board should reject its contention under 10 C.F.R. § 2.309(f)(1)(vi). *See also Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994) (holding that a contention may be dismissed where it mistakenly asserts that the application does not address a relevant issue).

In any event, the Tribe has not shown that 10 C.F.R. Part 51 even requires Powertech to

address impacts from tornado strikes. NEPA requires the consideration of *reasonably foreseeable* environmental impacts.<sup>55</sup> As explained in NUREG-6733/CR, “the risk of a tornado strike on an ISL facility [is] very low.” The Tribe cites a CEQ regulation requiring federal agencies “to consider low-probability environmental impacts with catastrophic consequences, if those impacts are reasonably foreseeable.” Petition at 38. The Tribe does not explain, however, why the impacts of a tornado strike at Dewey-Burdock would be “catastrophic.” The Tribe refers to a tornado strike affecting the Fansteel plant in Oklahoma, but the impacts cited by the Tribe do not appear to have been catastrophic. Petition at 38–39. Further, the Tribe does not explain why the impacts of a tornado strike at Fansteel, a non-ISL licensee,<sup>56</sup> are even relevant to assessing the impacts of a similar event at Dewey-Burdock.

#### CONCLUSION

Because the Tribe has not submitted an admissible contention, the Board must deny its hearing request under 10 C.F.R. § 2.309(a).

Respectfully submitted,

*/Signed (electronically) by/*  
Patricia A. Jehle  
Patricia A. Jehle  
Counsel for the NRC Staff

*/Signed (electronically) by/*  
Michael J. Clark  
Michael J. Clark  
Counsel for the NRC Staff

Dated at Rockville, Maryland  
this 3<sup>rd</sup> day of May, 2010

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<sup>55</sup> See, e.g., 40 C.F.R. § 1508.8(b) (defining the “indirect effects” of a proposed action to include those effects that “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable”).

<sup>56</sup> The Fansteel plant “formerly processed ores to extract tantalum, niobium and scandium for use in industrial products.” (ADAMS Accession No. ML032300642) (August 18, 2003).

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
POWERTECH (USA) INC	)	Docket No. 40-9075-MLA
	)	ASLBP No. 10-898-02- MLA-BD01
	)	
(Dewey-Burdock In Situ Uranium Recovery	)	Date: May 3, 2010
Facility)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC STAFF'S RESPONSE TO OGLALA SIOUX TRIBE'S HEARING REQUEST" in this proceeding have been served via the Electronic Information Exchange (EIE) this 3<sup>rd</sup> day of May 2010, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the above captioned proceeding.

*/RA/*

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Michael J. Clark  
Counsel for the NRC Staff