

July 15, 2014

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 REBUTTAL STATEMENT OF POSITION

I. Introduction

The NRC Staff responds to the Initial Statements of Position and Initial Testimony of the Oglala Sioux Tribe and the Consolidated Intervenors (collectively, "the Intervenors"). The Intervenors' position statements and testimony address Environmental Contentions 1–4, 6, and 9.¹ In these contentions the Intervenors challenge the Final Supplemental Environmental Impact Statement (FSEIS) that the Staff prepared for Powertech's Dewey-Burdock In-Situ Uranium Recovery Project. The Intervenors allege that in preparing the FSEIS and related documentation for the Dewey-Burdock Project the Staff violated the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).

II. Summary of Staff's Position

The Staff complied with NEPA by evaluating how the Dewey-Burdock Project might affect cultural resources, groundwater, and other resources. The Staff considered various measures that might be used to mitigate environmental impacts of the Dewey-Burdock Project,

¹ The Consolidated Intervenors' position statement and testimony also addresses Contention 14. In Contention 14, the Tribe argued that the Staff failed to consult as required under the Endangered Species Act and failed to assess impacts to certain species. In its position statement, however, the Tribe voluntarily withdrew Contention 14. Initial Statement at 41–42. On July 15, 2014, the Board dismissed Contention 14 based on the Tribe's withdrawal of the contention. Order (Granting Request to Withdraw and Motion to Dismiss Contentions 14A and 14B) (July 15, 2014). Accordingly, the Staff is not submitting testimony or other evidence on Contention 14.

explaining how the measures would be effective in reducing these impacts. The Staff also considered environmental impacts related to actions Powertech might take once it obtains other permits related to the Dewey-Burdock Project. With regard to the NHPA, the Staff complied with this statute by consulting extensively with American Indian tribes and by finalizing a Programmatic Agreement to protect cultural resources in the Dewey-Burdock area. Because the Staff complied with NEPA and the NHPA, the Board should dismiss Contentions 1–4, 6, and 9.

III. The Staff's Expert Witnesses

The Staff submitted initial testimony from five witnesses: Haimanot Yilma (providing testimony on Contentions 1, 6, 9, and 14), Kellee Jamerson (Contentions 1, 6, and 9), Thomas Lancaster (Contentions 2–4), James Prikryl (Contentions 2–4 and 6), and Amy Hester (Contention 14). Except for Ms. Hester, each of these witnesses will be offering rebuttal testimony on one or more of the contentions on which he or she initially testified.² To help rebut the Intervenor's testimony on Contention 1, the Staff is submitting testimony from two additional witnesses, Dr. Kevin Hsueh and Dr. Hope Luhman.

Po Wen (Kevin) Hsueh

Dr. Hsueh is the Chief of the Environmental Review Branch in the NRC's Office of Federal and State Materials and Environmental Management Programs. As stated in his resume (Ex. NRC-002), he holds a Doctor of Philosophy degree in Nuclear Engineering from the Massachusetts Institute of Technology and Master of Science and Bachelor of Science degrees in Nuclear Engineering from the National Tsing Hua University in Hsinchu, Taiwan. Dr. Hsueh is a Health Physicist and Nuclear Engineer with over 24 years of professional experience in nuclear materials program areas. He has 15 years of experience managing rulemaking projects, overseeing agreement state programs, and managing NRC environmental

² The Staff is not submitting rebuttal testimony on Contentions 6 and 9, because the Intervenor did not submit initial testimony addressing these contentions specifically. The Staff is not submitting rebuttal testimony on Contention 14 because the Board has dismissed this contention from the hearing.

reviews. Dr. Hsueh has managerial responsibilities for the Dewey-Burdock environmental review, including responsibility for the Staff's consultations under Section 106 of the NHPA. Dr. Hsueh has been directly involved in the Staff's Section 106 consultations with American Indian tribes. He participated in consultation meetings, developed strategies for the identification of tribal properties, and managed the preparation of the Dewey-Burdock Programmatic Agreement.

Hope E. Luhman

Dr. Luhman is a professional archaeologist and cultural resource management practitioner at The Louis Berger Group, Inc. in San Antonio, Texas. She serves as Vice-President of Louis Berger's nationwide cultural resource management practice. As stated in her resume (Ex. NRC-152), she holds Doctor of Philosophy and Master of Arts degrees in Anthropology from Bryn Mawr College in Pennsylvania, and a Bachelor of Arts degree in Anthropology from Muhlenberg College in Pennsylvania. She also holds a Master of Arts degree in Social Relations from Lehigh University in Pennsylvania. She is accredited by the Register of Professional Archaeologists in Documents Research, Field Research, Historical Archaeology, Museology, and Teaching.

Dr. Luhman has 31 years of professional experience managing archaeological, architectural, and historic preservation planning projects nationwide that involve historic and precontact resources. She has served as an archaeological consultant on project-specific studies for all phases of archaeological investigations and architectural resource surveys for numerous federal and state agencies. Dr. Luhman has taught graduate and undergraduate level courses in Cultural Anthropology, World Prehistory, Prehistoric Cultures of North America, Archaeology, and Field Archaeology. She serves as a cultural resources consultant to the NRC for its NHPA-related activities. For the Dewey-Burdock application, Dr. Luhman advises the NRC staff on Section 106 consultation activities and helped manage the preparation of the Dewey-Burdock Programmatic Agreement.

IV. Staff's Position on Individual Contentions

In their initial position statements and testimony, the Intervenor's rely on numerous arguments that they had submitted previously in support of their contentions challenging Powertech's application or the Staff's environmental documents. Through its initial position statement and testimony, the Staff has already addressed the vast majority of these arguments. Below, the Staff focuses on the Intervenor's new arguments and any supporting testimony. Where the Staff has previously addressed an issue, the Staff summarizes its position and provides citations to the relevant portions of its initial position statement or testimony.

As the Staff explains below, when reviewing Powertech's application it complied with both NEPA and the NHPA. The Board should dismiss each contention, because the evidence does not show a violation of either statute.

A. Contention 1: The Staff Thoroughly Considered Impacts to Historic and Cultural Resources and Consulted in Good Faith with Interested Tribes

In Contention 1A, the Intervenor's argue that the FSEIS does not sufficiently consider impacts to cultural resources. In Contention 1B, they argue that in preparing the FSEIS the Staff failed to consult with American Indian tribes as required by the NHPA and other laws. The Board should reject both arguments.

As the Staff explained in its initial position statement and testimony, over the past four years it has thoroughly considered impacts to historic properties and consulted extensively with interested tribes.³ The Staff's substantial efforts are reflected in the Programmatic Agreement for the Dewey-Burdock Project, which was signed by both the Advisory Council on Historic Preservation (ACHP) and the South Dakota State Historic Preservation Office (SHPO).⁴ The

³ Ex. NRC-001 at A1.15 through A1.21. See *also* Ex. NRC-015 (providing a 17-page summary of the Staff's tribal outreach efforts from November 2009, when the Staff first offered to meet with leadership of the Oglala Sioux Tribe, through March 2014, when the Staff sent the Programmatic Agreement to the consulting parties for signature).

⁴ The documents related to the Programmatic Agreement can be found at Exs. NRC-018-A through NRC-018-H.

ACHP specifically found that, “based on the background documentation, the issues addressed during consultation, and the processes established in the [Programmatic Agreement], the ACHP has concluded that the content and spirit of the Section 106 process has been met by the NRC.”⁵

In brief, the Staff has consulted extensively with interested tribes and worked diligently to identify cultural resources of significance to the tribes. The ACHP and the South Dakota SHPO, two agencies with expertise in administering the NHPA, found the Staff’s efforts in these areas sufficient, as reflected by their decisions to join the Programmatic Agreement for the Dewey-Burdock Project. Based on the evidence of record, the Board should reject Contention 1 and find that the Staff complied with both NEPA and the NHPA.

1. Contention 1A: The Staff Evaluated Impacts to Historic Properties as Required under NEPA and the NHPA

a. Oglala Sioux Tribe’s Arguments

The Tribe argues that the Staff violated NEPA by issuing Powertech a license without fully analyzing cultural resources in a NEPA document. Initial Statement at 10. The Tribe suggests that the FSEIS contains the entirety of the Staff’s discussion of cultural resources, but that is not the case. As the evidence shows, the Staff further analyzed cultural resources when preparing the Dewey-Burdock Programmatic Agreement.⁶ The Staff finalized the Programmatic Agreement while its NEPA review remained open—that is, before issuing its Record of Decision⁷—thereby complying with both NEPA and the NHPA.⁸

⁵ Ex. NRC-031.

⁶ *E.g.*, Exs. NRC-017, NRC-018-B, and NRC-019.

⁷ The Staff sent the final version of the Programmatic Agreement to the consulting parties for signature on March 19, 2014. Ex. NRC-015 at 17. The Programmatic Agreement was finalized with the ACHP’s signature on April 7, 2014. Ex. NRC-018-E. The Staff issued its Record of Decision on April 8, 2014. Ex. NRC-011.

⁸ The Tribe makes the related claim that, because the Staff separated the NEPA and NHPA processes, “the NHPA Section 106 process is still ongoing, despite finalization of the FSEIS[.]” In fact, the Staff finalized the Section 106 process with the Programmatic Agreement for the Dewey-Burdock Project. See

The Tribe next argues that the FSEIS is deficient because the Staff relied in part on a Class III archeological survey conducted by the Archeology Laboratory at Augustana College. The Tribe argues that the survey is incomplete because it left a number of sites unevaluated. Initial Statement at 10. The Tribe overlooks, however, that in 2011 Augustana conducted evaluative testing on a number of these previously unevaluated sites.⁹ The Tribe further overlooks the Programmatic Agreement, which calls for additional evaluative testing before Powertech begins ground-disturbing activity that may affect a site.¹⁰ This provision ensures that unevaluated sites will be addressed consistent with the requirements of the NHPA.

The Tribe claims that the field surveys of the Dewey-Burdock site conducted by seven tribes in April and May 2013 lacked an appropriate methodology. Initial Statement at 11–12. The Tribe does not explain, however, what is an appropriate methodology for identifying sites of significance to the Northern Arapaho Tribe, the Northern Cheyenne Tribe, the Turtle Mountain Band of Chippewa Indians, the Crow Creek Sioux Tribe, the Cheyenne and Arapaho Tribes of Oklahoma, the Crow Nation, and the Santee Sioux Tribe—the seven tribes that participated in the surveys.¹¹ Nor does the Tribe point to any law, regulation, or guidance document suggesting that the survey approach here was impermissible. In fact, the ACHP’s regulations instruct federal agencies to recognize that tribes have special expertise in identifying their own artifacts,¹² while the ACHP’s guidance documents state that agencies may use a variety of means to identify such artifacts, including field surveys like those involved here.¹³

Ex. NRC-018-D at 1 (April 7, 2014 letter from ACHP to NRC stating, “Our signature completes the requirements of Section 106 of the National Historic Preservation Act (NHPA) and the Advisory Council on Historic Preservation’s (ACHP’s) regulations at 36 CFR Part 800.”).

⁹ Exs. NRC-136-A through NRC-136-C.

¹⁰ Ex. NRC-018-A at Stipulation 3.

¹¹ Ex. NRC-001 at A1.7.

¹² 36 C.F.R. § 800.4(c)(1).

¹³ Ex. NRC-047.

For Contention 1A, the Tribe relies on declarations from Wilmer Mesteth, the Oglala Sioux Tribal Historic Preservation Officer, and Michael CatchesEnemy. Initial Statement at 12, 14. In its rebuttal testimony, the Staff responds to the arguments in these declarations.¹⁴ The Tribe also cites letters from the Oglala Sioux Tribe's President, Bryan Brewer, and the Standing Rock Tribal Historic Preservation Officer. Initial Statement at 12. In its testimony the Staff also responds to the arguments in these letters. As the Staff explains, the Tribe does identify any deficiency in either the FSEIS or the Programmatic Agreement for the Dewey-Burdock Project.

b. Consolidated Intervenors' Arguments

In their initial statement, the Consolidated Intervenors likewise argue that the Staff failed to meet NEPA and NHPA standards for protecting cultural resources. Initial Statement at 2–4. The Consolidated Intervenors rely on the same declarations and letters cited by the Tribe, which the Staff has addressed above. The Consolidated Intervenors also cite testimony from Dr. Louis Redmond, who discusses the historical presence of American Indians in the Dewey-Burdock area. Initial Statement at 3. In its rebuttal testimony, the Staff explains that Dr. Redmond's testimony does not call into question the adequacy of the analysis in the FSEIS.¹⁵

2. Contention 1B: The Staff Consulted Extensively and in Good Faith with Interested Tribes

a. Oglala Sioux Tribe's Arguments

The Tribe argues that, despite having Powertech's application since 2009, the Staff still has not consulted with interested tribes as required under the NHPA. Initial Statement at 16. The evidence, however, shows otherwise. The Staff consulted with tribes for approximately four years, both extensively and in good faith, before finalizing the Programmatic Agreement for the Dewey-Burdock Project.¹⁶ The Staff's efforts were acknowledged by the ACHP and the South

¹⁴ Ex. NRC-151 at A1.1 through A1.5, A1.9, A1.12.

¹⁵ Ex. NRC-151 at A1.4.

¹⁶ Ex. NRC-015.

Dakota SHPO, which both signed the Programmatic Agreement. The ACHP specifically found that the Staff's consultation efforts met both the letter and the spirit of the NHPA.¹⁷ The Staff's extensive consultation efforts are also reflected in the tribal field surveys of the Dewey-Burdock site. Although the Oglala Sioux Tribe declined to join those surveys, seven other tribes surveyed the Dewey-Burdock site, with a number of tribes providing important information that the Staff used in its NEPA and NHPA reviews.¹⁸

The Tribe also argues that the Staff ignored tribal input regarding the field surveys of the Dewey-Burdock site. Initial Statement at 16-17. The Tribe cites several letters from tribal representatives alleging problems with issues such as the survey methodology, scope, and timing. In its rebuttal testimony, the Staff addresses each of these letters.¹⁹ As the Staff explains, none of the criticisms calls into question the use of the tribal surveys as a means of obtaining data on cultural resources at the Dewey-Burdock site.

The Tribe again argues that the Staff failed to comply with NEPA because "the activities identified in the [Programmatic Agreement] are required before the finalization of the FSEIS." Initial Statement at 17. If this were true, programmatic agreements would not exist, because there would be no need for them. In any event, the Tribe's argument conflicts with NHPA regulations and with the joint guidance of the ACHP and the CEQ, all of which expressly allow for programmatic agreements.²⁰

Finally, the Tribe argues that in discharging its responsibilities under NEPA and the NHPA the Staff failed to fulfill the federal government's trust responsibility to American Indian tribes. Initial Statement at 8, 18. The Tribe fails to explain, however, what specific

¹⁷ Exs. NRC-018-E, NRC-018-G.

¹⁸ Ex. NRC-001 at A1.7.

¹⁹ Ex. NRC-151 at A1.1 through A1.5, A1.12.

²⁰ 36 C.F.R. § 800.4(b)(2); Ex. NRC-048 at 12, 18, 33.

responsibilities the Staff had when reviewing the Dewey-Burdock application, other than to comply with applicable law. In fact, the Staff had no additional responsibilities.²¹

b. Consolidated Intervenor's Arguments

The Consolidated Intervenor's state that they "adopt the evidence, authority, and arguments presented in the [Oglala Sioux Tribe] Opening Statement regarding [Contention 1B]." Initial Statement at 4. For reasons stated above, the Board should reject those arguments and find that the Staff consulted with interested tribes to the extent required under federal law.

B. Contention 2: The Staff Adequately Analyzed Baseline Groundwater Quality

1. Oglala Sioux Tribe's Arguments

The Tribe argues that the FSEIS is deficient because in its analysis the Staff used baseline water quality data Powertech collected between 2007 and 2009. Initial Statement at 19. The Tribe argues that these data suffer from problems they have "previously alleged in detail," presumably referring to the Declarations from Dr. Moran and the report from Dr. Abitz that the Tribe submitted with its various iterations of Contention 2. *Id.* The Staff addresses each of Dr. Moran's and Dr. Abitz's claims in its initial testimony.²² As the Staff explains, Powertech collected its baseline water quality data consistent with NRC guidance in this area. These data, as clarified by Powertech's responses to the Staff's requests for additional information (RAIs), are sufficient to characterize water resources in the Dewey-Burdock area.

²¹ See *Gros Ventre Tribe v. United States*, 469 F.3d 801 (9th Cir. 2006) ("We recognize that there is a 'distinctive obligation of trust incumbent upon the Government in its dealings with [Indian tribes].' That alone, however, does not impose a duty on the government to take action beyond complying with generally applicable statutes and regulations.") See also *Shoshone-Bannock Tribes v. Reno*, 56 F.3d 1476, 1482 (D.C. Cir. 1995) ("[A]n Indian tribe cannot force the government to take a specific action unless a treaty, statute or agreement imposes, expressly or by implication, that duty."); *Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 574 (9th Cir. 1998) (holding that "unless there is a specific duty that has been placed on the government with respect to Indians, [the government's general trust obligation] is discharged by [the government's] compliance with general regulations and statutes not specifically aimed at protecting Indian tribes.").

²² Ex. NRC-001 at A2.1 through A2.19.

The Tribe next argues that in the FSEIS the Staff acknowledges “data gaps” concerning baseline water quality. Initial Statement at 19–20. The Tribe is referring to a Staff comment response explaining that, as required under Criterion 5B(5) in Appendix A of 10 C.F.R. Part 40, Powertech will need to conduct additional sampling before beginning operations in specific wellfields. This sampling will not be conducted to establish baseline water quality, however, but to establish standards for excursion monitoring and groundwater restoration. The Staff does not need the results of this additional sampling in order to characterize the Dewey-Burdock site or assess how the Dewey-Burdock Project may affect the environment. Rather, the information described in the NRC’s relevant guidance documents—NUREG-1569 in particular—is sufficient for these purposes, and Powertech provided that information in support of its application.²³

The Tribe argues that the information required by Criterion 5B(5) must be made available now unless this information “cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known.” Initial Statement at 20 (citing 40 C.F.R. § 1502.22). This rule only applies, however, where the information “is essential to a reasoned choice among alternatives.”²⁴ Because an ISR applicant must submit site characterization information as part of its application,²⁵ including detailed information on baseline groundwater quality,²⁶ the information required under Criterion 5B(5) cannot be considered essential to informing the NRC’s decision on whether or not to issue the applicant a license.²⁷

²³ Exs. NRC-001 at A2.3, A2.7, A2.12; NRC-151 at A2.2, A2.12.

²⁴ 40 C.F.R. § 1502.22(a).

²⁵ 10 C.F.R. Part 40, Appendix A, Criterion 7.

²⁶ As discussed above, NUREG-1569 (Ex. NRC-013) provides guidance on how an applicant can submit the required environmental information on baseline water quality. Regulatory Guide 4.14 (Ex. NRC-074) also provides guidance in this area.

²⁷ If the data Powertech submits for a particular wellfield under Criterion 5B(5) differ significantly from the existing data and call into question the Staff’s assessment of impacts in the FSEIS, the Staff will have to further review the environmental impacts of the Dewey-Burdock Project. 10 C.F.R. § 51.92.

The Tribe also refers to a number of specific paragraphs from the Moran Declarations and the Abitz Report, repeating the arguments made in those documents. Initial Statement at 21. As stated above, in its initial testimony the Staff has already addressed Dr. Moran's and Dr. Abitz's claims. For example, although Dr. Moran claims the Staff failed to analyze impacts from past mining activities, the Staff analyzes these very impacts in Chapter 5, "Cumulative Impacts."²⁸

Finally, the Tribe claims that "the FSEIS improperly relies on the outdated Regulatory Guide 4.14 (1980)." Initial Statement at 21. As the Staff explains in its initial testimony, Regulatory Guide 4.14, "Radiological Effluent and Environmental Monitoring at Uranium Mills," has in fact been *validated* by more recent analyses.²⁹ Furthermore, although the NRC developed Regulatory Guide 4.14 in the context of conventional uranium mills, its guidance actually provides a conservative testing protocol for ISR sites, as compared to conventional mills.³⁰ Accordingly, the Staff appropriately considered Regulatory Guide 4.14 in determining whether Powertech's baseline testing provided sufficient information to make the findings required under NEPA.

2. Consolidated Intervenor's Arguments

The Consolidated Intervenor's rely on the testimony of Dr. Moran in claiming that the FSEIS fails to adequately assess baseline groundwater quality. Initial Statement at 5. The Staff has already addressed Dr. Moran's arguments on Contention 2 at length, both above and in its initial statement of position, as well as in its initial and rebuttal testimony. As the Staff explains,

Furthermore, if these data show that Powertech's proposed operations in a wellfield would result in a change in a method of evaluation described in its license application, Powertech will need to seek a license amendment, which will likewise trigger additional NEPA review.

²⁸ Ex. NRC-001 at A2.4, A2.6.

²⁹ Ex. NRC-001 at A2.12, A2.15.

³⁰ *Id.*

Powertech collected baseline groundwater data consistent with NRC guidance, and these data are sufficient for the Staff to assess the environmental impacts of the Dewey-Burdock Project.

The Consolidated Intervenors also rely on the testimony of Susan Henderson, a rancher in southwestern South Dakota and one of the Consolidated Intervenors. Initial Statement at 5. In her testimony Ms. Henderson “raises concerns about the failure of the FSEIS to properly determine baseline ground water quality with consideration to the impact of prior open-pit and underground uranium mines, as well as the thousands of improperly plugged boreholes from prior uranium exploration.” *Id.* (citing Ex. INT-007 at 4–7).

Ms. Henderson’s concerns are outside the scope of Contention 2. As admitted by the Board, Contention 2 claims that the Staff did not adequately evaluate the baseline quality of groundwater that may be affected by the Dewey-Burdock Project. Ms. Henderson’s testimony relates to other issues, such as the characterization of geological features (*e.g.*, unplugged boreholes) in the Dewey-Burdock area, the possible migration of contaminants as a result of ISR operations, whether the EPA and South Dakota state agencies should grant Powertech an exemption from the Safe Drinking Water Act, Powertech’s ownership structure, and nuclear security. The scope of Contention 2 is limited, however, to whether the Staff sufficiently analyzed baseline water quality. It does not extend to any of these other issues.³¹ Accordingly, Ms. Henderson’s testimony does not support the Consolidated Intervenors’ position on Contention 2.

³¹ See *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-05, 71 NRC 90, 100–01 (2010):

The scope of a contention is limited to issues of law and fact pled with particularity in the intervention petition, including its stated bases, unless the contention is satisfactorily amended in accordance with our rules. . . . Parties and licensing boards must be on notice of the issues being litigated, so that parties and boards may prepare for summary disposition or for hearing. Our procedural rules are designed to ensure focused and fair proceedings.

C. Contention 3: The Staff Thoroughly Reviewed the Hydrogeology of the Aquifers in which Powertech Plans to Operate

1. Oglala Sioux Tribe's Arguments

The Tribe argues that the Staff violated NEPA by including a license condition requiring Powertech to submit wellfield hydrogeologic data packages before beginning operations in any specific wellfield. Initial Statement at 22–23. The Tribe argues that the Staff should require these data packages at the pre-license stage, so that they may be considered during the Staff's NEPA review.

As the Staff explains in its testimony, the license condition to which the Tribe refers is a standard ISR license condition, not a condition unique to Powertech's license.³² This condition is also fully consistent with NEPA. If Powertech's data packages show that operations in a specific wellfield would cause environmental impacts that differ significantly from those described in the FSEIS, the Staff will conduct additional NEPA review.³³ The Staff will also conduct additional NEPA review if Powertech seeks a license amendment, which will be required before Powertech can begin operations in certain wellfields at the Dewey-Burdock site, and which may be required before Powertech begins operations in other wellfields.³⁴

The Tribe next argues that allowing Powertech to submit wellfield data packages at a later time violates Criterion 5G(2) in Appendix A. Initial Statement at 23. Under Criterion 5G(2) an applicant must gather information "from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to ground water." Criterion 5G(2) does not, however, apply to an ISR applicant like Powertech,

³² Ex. NRC-001 at A3.4.

³³ 10 C.F.R. § 51.92.

³⁴ For proposed Burdock Wellfields 6, 7, and 8, Powertech will need to seek a license amendment before beginning operations. Ex. NRC-012 at License Condition 10.10(B). For other wellfields, Powertech will need to seek a license amendment if the proposed operations would result in a departure from the method of evaluation used to reach the conclusions in the FSEIS. *Id.* at License Condition 9.4(B)(vii).

which will not be operating an impoundment area such as those involved in conventional uranium mining.³⁵ In any event, Criterion 5G(2) is a safety criterion identifying information that an *applicant* must include in its Technical Report; it is not an environmental standard governing the Staff's preparation of an FSEIS.

The Tribe further argues that Dr. Moran, through his declarations, refutes the Staff's conclusion that the Dewey-Burdock production-zone aquifer is hydraulically isolated from surrounding aquifers. Initial Statement at 23–24. The Tribe refers to Dr. Moran's statements regarding possible pathways for groundwater connectivity, such as breccia pipes, fractures and faults, inter-fingering sediments, and exploration boreholes. The Staff, however, addresses all of these claims in its testimony.³⁶ As the Staff explains, it considered each of the features Dr. Moran identifies. To the extent there is evidence of these features at the Dewey-Burdock sites, the Staff took these features into account when assessing the environmental impacts of the Dewey-Burdock Project.

Finally, the Tribe challenges the groundwater modeling report (the Petrotek Report) that Powertech submitted in 2012. Initial Statement at 25. Through Dr. Moran's testimony, the Tribe alleges various deficiencies in this report and claims that, because the Staff relied on this report in the FSEIS, the Staff's NEPA analysis is likewise defective. As with Dr. Moran's other claims, however, when the Staff filed its initial testimony it addressed many of his claims of deficiencies in the Petrotek Report.³⁷ In its rebuttal testimony, the Staff responds to additional arguments Dr. Moran makes regarding the Petrotek Report.³⁸ As the Staff explains, Dr. Moran's arguments do

³⁵ 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").

³⁶ Ex. NRC-001 at A3.3, A3.5, A3.8 through A3.13, A3.15 through A3.17, A3.21 through A3.27.

³⁷ Ex. NRC-001 at A3.27.

³⁸ Ex. NRC-151 at A3.9.

not call into question the FSEIS's analysis of hydrogeology. The Tribe therefore fails to show any violation of NEPA.

2. Consolidated Intervenor's Arguments

The Consolidated Intervenor's state that they adopt the testimony of Dr. Moran submitted as Ex. OST-001. Initial Statement at 6. The Staff has responded to Dr. Moran's claims above, through its initial position statement, and through its initial and rebuttal testimony. The Consolidated Intervenor's also rely on testimony from Dr. Hannon LaGarry (Ex. INT-017.) *Id.* Dr. LaGarry raises general concerns regarding the confinement of aquifers in northwestern Nebraska and southwestern South Dakota. For example, Dr. LaGarry argues that flow pathways between aquifers may result from geologic faults and fractures, thinning of confinement, and perforations from new and existing wells. Dr. LaGarry's concerns are simply more general statements of issues that the Staff has already addressed in response to the more specific claims in Dr. Moran's three declarations and initial testimony. Nonetheless, the Staff addresses each of Dr. LaGarry's claims in its rebuttal testimony, explaining how it took into account the issues he raises in its NEPA analysis.³⁹

The Consolidated Intervenor's also rely on the testimony of four other witnesses: Susan Henderson, Dayton Hyde, Dr. Donald Kelley, and Linsey McLean. Initial Statement at 7. The testimony of each witness, however, falls almost entirely outside the scope of Contention 3. To reiterate, Contention 3 alleges that the FSEIS lacks an adequate hydrogeologic analysis of the aquifers in which Powertech plans to conduct ISR operations. In their testimony the Consolidated Intervenor's witnesses raise numerous other issues:

- whether the EPA and South Dakota state agencies should grant Powertech an exemption from the Safe Drinking Water Act, Powertech's ownership structure, and nuclear security (Susan Henderson);
- potential contamination of the Cheyenne River from surface spills and leaks at the Dewey-Burdock site, along with general concerns over uranium extraction (Dayton Hyde);

³⁹ Ex. NRC-151 at A3.10 through A3.14.

- toxic effects related to exposure to heavy metals (Dr. Kelley);
- safety concerns related to using land application or settlement ponds for disposal of wastewater, reclamation of lands used during ISR operations, and toxicity from bioaccumulation of heavy metals (Linsey McLean).

All of these issues are unrelated to whether the Staff adequately analyzed the hydrogeology of the aquifers in which Powertech plans to operate. Because these arguments are outside the scope of Contention 3, the Board should not consider them in ruling on the contention.

To the extent any of the testimony from these four witnesses is within the scope of Contention 3, the witnesses raise general concerns that are set forth more specifically in Dr. Moran's declarations and testimony. In other words, the Staff has already addressed these concerns through its testimony refuting Dr. Moran's claims. For example, Ms. Henderson suggests that unplugged boreholes in southwestern South Dakota may provide pathways for contamination. Ex. INT-007 at 4. Dr. Moran previously raised more specific claims regarding boreholes, and the Staff addressed these claims in its initial testimony.⁴⁰ Similarly, Mr. Hyde states that the land in southwestern South Dakota is highly fractured and that mining companies cannot guarantee aquifers will be left unpolluted. Ex. INT-012 at 3. Dr. Moran raised a number of specific claims regarding geologic faults and fractures in his declarations, however, and the Staff has addressed these claims.⁴¹ In sum, to the extent the testimony from Ms. Henderson, Mr. Hyde, Dr. Kelley, and Ms. McLean falls within the scope of Contention 3, it does not show that the Staff violated NEPA.

D. Contention 4: The Staff Fully Considered the Quantity of Groundwater To Be Used during the Dewey-Burdock Project

1. Oglala Sioux Tribe's Arguments

Relying on Dr. Moran's Declarations, the Tribe argues that the FSEIS presents inadequate or conflicting information on the amount of water to be used during the Dewey-

⁴⁰ Ex. NRC-001 at A3.5, A3.8.

⁴¹ Ex. NRC-001 at A3.5, A3.8, A3.25.

Burdock Project. Initial Statement at 26–27. The Staff addressed this issue in its initial testimony, explaining that the alleged inadequacies or conflicts do not, in fact, exist.⁴² In its initial statement and testimony, the Tribe does not present any new arguments in this area. Accordingly, the evidence fails to support any violation of NEPA.

The Tribe further argues that the water balance described in the FSEIS is inadequate, relying again on Dr. Moran’s Declarations. The Staff addressed this issue in its initial testimony as well, refuting each of Dr. Moran’s claims.⁴³ In particular, the Staff explained that, although Dr. Moran argues that the water balance must include “detailed, measured data for volumes of water entering the system and losses,” this information cannot be obtained until Powertech begins operations.⁴⁴ Because the Staff necessarily had to finalize the FSEIS *before* Powertech begins operations, there is no violation of NEPA.

2. Consolidated Intervenors’ Arguments

The Consolidated Intervenors also argue that the water balance in the FSEIS is inadequate, referring to the Tribe’s arguments on Contention 4. The Consolidated Intervenors go further, however, citing the testimony of Susan Henderson, Dayton Hyde, and Marvin Kammera in support of its position. This is impermissible, because Contention 4 is not one of the Consolidated Intervenors’ contentions. In fact, the Board specifically rejected the Consolidated Intervenors’ Contention F, which addressed water consumption.⁴⁵ Under longstanding NRC precedent, an intervenor may not introduce affirmative evidence on issues

⁴² Ex. NRC-001 at A4.1 through A4.18.

⁴³ Ex. NRC-001 at A4.4, A4.5, A4.8 through A4.11, A4.16, A4.17.

⁴⁴ Ex. NRC-001 at A4.16.

⁴⁵ *Powertech (USA) Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 408, 444 (2010).

raised by another intervenor's contentions.⁴⁶ Consistent with this precedent, the Board should disregard the testimony of the Consolidated Intervenors' witnesses on Contention 4.

In any event, even if the Board were to consider the testimony from the Consolidated Intervenors' witnesses, it would find no reason to question the Staff's analysis of groundwater consumption. While the Consolidated Intervenors' witnesses raise general concerns about water usage, they do not address the analysis in the FSEIS specifically. Because the analysis in the FSEIS is at issue in Contention 4, and because the witnesses fail to address that analysis, the Consolidated Intervenors are unable to show that the Staff violated NEPA.

E. Contention 6: The Staff Identified and Evaluated the Effectiveness of Mitigation Measures as Required under NEPA

1. Oglala Sioux Tribe's Arguments

In its initial statement of position, the Tribe argues that the FSEIS does not adequately discuss measures that could be used to mitigate the environmental impacts of the Dewey-Burdock Project. Initial Statement at 27–38. Most of the Tribe's arguments were set forth previously in its contentions or in its April 11, 2014 motion for summary disposition on mitigation measures. For that reason the Staff, through its initial position statement and testimony, has already responded to most of the Tribe's arguments. Because the Staff addressed this contention thoroughly in its initial testimony, and because the Tribe did not submit any testimony addressing Contention 6 specifically, the Staff is not submitting rebuttal testimony on this contention. The Staff will, however, respond to the Tribe's arguments in its initial statement of position.

The Tribe argues that in the FSEIS the Staff simply lists mitigation measures in a multi-page chart, without explaining how Powertech will implement the measures and without

⁴⁶ *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857, 863, 869 n.17 (1974), *aff'd in pertinent part*, CLI-75-1, 1 NRC 1 (1975). See also *Louisiana Energy Servs., L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 626 (2004) (affirming Board's decisions to deny the New Mexico Environment Department's and Attorney General's requests to participate on other parties' contentions).

discussing how the measures will limit environmental impacts. Initial Statement at 32, 37. The Tribe is referring to Chapter 6 of the FSEIS, which lists mitigation measure proposed by Powertech, along with measures identified by the Staff. The Tribe overlooks Chapter 4 of the FSEIS, however, where the Staff explains in detail how various mitigation measures will limit environmental impacts.⁴⁷ The Tribe also overlooks other FSEIS chapters in which the Staff discusses mitigation measures, such as Chapter 2, where the Staff discusses alternatives to issuing Powertech's requested license. Because the Tribe does not account for the Staff's full discussion of mitigation measures, it is unable to establish a NEPA violation.⁴⁸

The Tribe also argues that the FSEIS is inadequate because some of the mitigation measures to which the Staff refers will not be finalized until Powertech obtains other licenses or permits needed to operate the Dewey-Burdock Project. Initial Statement at 28, 33–36. As the Commission has explained, however:

[A] mitigation plan “need not be legally enforceable, funded or even in final form to comply with NEPA's procedural requirements.” As long as the potential adverse impacts from a proposed action have been adequately disclosed, it is not improper for an EIS to describe “mitigating measures in general terms and rel[y] on general processes[.]”⁴⁹

In the Dewey-Burdock FSEIS, the Staff describes mitigation measures in as much detail as possible, considering that certain measures will not be finalized until other agencies finish reviewing Powertech's applications for related permits. For example, because Powertech has not yet submitted its application for a National Pollutant Discharge Elimination System (NPDES) permit, the Staff cannot describe the specific mitigation measures that will be included in any

⁴⁷ Ex. NRC-001 at A6.2, A6.4, A6.5.

⁴⁸ See *Vermont Pub. Interest Research Group v. United States Fish & Wildlife Serv.*, 247 F. Supp. 2d 495, 525 (D. Vt. 2002) (“Perhaps if this were the only relevant discussion of mitigation measures for listed species, Plaintiffs' complaint might carry some weight. However, as this section indicates, additional discussion elsewhere in the FSEIS expands upon the mitigation measures proposed.”).

⁴⁹ *Hydro Res.*, 64 N.R.C. 417, 426–427 (2006) (internal citations and quotations omitted).

permit. The Staff does, however, discuss the standards applying to NPDES permits generally,⁵⁰ and it explains in detail how an NPDES permit would mitigate impacts of the Dewey-Burdock Project.⁵¹ The Staff's evaluation of mitigation measures tied to future permitting actions is consistent with both Commission precedent and NEPA law generally.⁵² The same is true for each of the other actions to which the Tribe refers on pages 35–36 of its initial position statement.

The Tribe also claims that, rather than analyzing mitigation measures related to groundwater restoration, the Staff merely assumes that Powertech will comply with NRC regulations. Initial Statement at 36. The Tribe fails to show any error in the Staff considering NRC regulations as a source of mitigation measures. The NRC's regulations are legally enforceable, and the Staff may properly rely on them as mitigation measures.⁵³ In any event, the Staff does not rely solely on NRC regulations as a means of mitigating impacts to groundwater; the Staff also includes a license condition requiring Powertech to establish Commission-approved background water quality before beginning operations in any wellfield.⁵⁴

⁵⁰ *E.g.*, Ex. NRC-008-A-1 at 2-62 (“The NPDES permit specifies effluent limits to ensure water quality standards are maintained. Pretreatment of the liquid effluent using IX columns, reverse osmosis, and barium/radium sulfate precipitation is typically incorporated into the surface water discharge process to decrease uranium and radium levels in the wastewater.”); *Id.* at 4-41 and 4-42 (“The NPDES permit requirements for discharges to surface water, as established in ARSD 74:52, will control the amount of pollutants below the permitted discharge limits that can enter surface water bodies, such as streams, wetlands, and lakes.”).

⁵¹ *E.g.*, Ex. NRC-008-A-2 at 4-43 through 4-49, 4-54, 4-57, 4-58, 4-70 through 4-72, 4-76, 4-93.

⁵² See *Vermont Pub. Interest Research Group v. United States Fish & Wildlife Serv.*, 247 F. Supp. 2d 495, 525 (D. Vt. 2002) (“To the extent that Plaintiffs fault the reliance on future state permitting requirements for mitigation, such reliance does not invalidate otherwise reasonably complete discussion of mitigation measures.”); *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 477 (9th Cir. 2000) (explaining that, when assessing impacts under NEPA, an agency may rely on other specialized agencies with jurisdiction to enforce related permits and measures), *aff'd on other grounds*, 236 F.3d 468 (9th Cir. 2000).

⁵³ In fact, groundwater restoration measures do not even need to be enforceable for the Staff to consider them in an EIS. *Hydro Res.*, 64 N.R.C. 417, 426–427 (2006).

⁵⁴ Ex. NRC-012 at License Condition 11.3.

In sum, the Staff properly considered these legally enforceable requirements as mitigation measures.

The Tribe further claims that the Staff violated NEPA because it did not analyze the effectiveness of each mitigation measure identified in the FSEIS. Initial Statement at 28, 30–33, 37-38. The Staff addressed this issue at length in its initial statement of position and testimony.⁵⁵ To summarize, an agency considers the effectiveness of mitigation measures by describing how those measures will reduce environmental impacts in a resource area. “The discussion of effectiveness of mitigation measures does not need to be highly detailed.”⁵⁶ There is no requirement that an agency’s discussion of each mitigation measure be “supported by scientific studies,” as the Tribe argues. Initial Statement at 31, 38.⁵⁷ Nor must the agency assign an effectiveness rating to each mitigation measure.⁵⁸

In the Dewey-Burdock FSEIS, the Staff discusses the effectiveness of mitigation measures to the extent required under NEPA. The Staff does not merely “list” mitigation measures, as the Tribe alleges. Initial Statement at 32, 37. Rather, for each measure the Staff explains how it will reduce or avoid impacts in a particular resource area. The Staff’s approach is reflected in the FSEIS sections cited at pages 44–45 of the Staff’s initial statement. In its initial testimony the Staff further explains how it evaluated the effectiveness of mitigation measures.⁵⁹ The Staff did not need to assign an effectiveness rating to these measures, as the

⁵⁵ Staff’s Initial Statement at 43-47; Ex. NRC-001 at A6.4, A6.5.

⁵⁶ *Moapa Band of Paiutes v. United States BLM*, 2011 U.S. Dist. LEXIS 116046 (Oct. 6, 2011).

⁵⁷ *Hydro Res.*, 64 NRC 417, 426-427 (NRC 2006). In arguing that mitigation measures needed to be supported by scientific studies, the Intervenor in *Hydro Resources* relied on the same case the Tribe cites on page 31 of its initial position statement: *Wyoming Outdoor Council v. Corps of Engineers*, 351 F. Supp. 2d 1232 (D. Wy. 2005). The Commission, however, rejected the Intervenor’s argument.

⁵⁸ See *North Alaska Env’tl. Ctr. v. Norton*, 361 F. Supp. 2d 1069, 1080 (2005) (citation omitted) (“While it is true that the BLM did not rank the effectiveness of the mitigation measures . . . this Court is nonetheless convinced that the BLM did ‘ensure that the environmental consequences [were] fairly evaluated.’”).

⁵⁹ Ex. NRC-001 at A6.4, A6.5.

Tribe argues, nor did it need to cite scientific studies relevant to each measure. In conclusion, the Staff complied with NEPA when evaluating the effectiveness of mitigation measures.

The Tribe makes several other arguments related to mitigation measures, none of which has merit. The Tribe argues that because the Staff issued the FSEIS before finalizing the Programmatic Agreement for the Dewey-Burdock Project, the Staff did not fully consider mitigation measures for cultural resources in its NEPA review. Initial Statement at 32. The Staff did not conclude its NEPA review with the FSEIS, however, but with the Record of Decision for the Dewey-Burdock Project. The Staff did not issue the Record of Decision until *after* it finalized the Programmatic Agreement, and it thus considered the mitigation measures specified in the Programmatic Agreement during its NEPA review.⁶⁰

The Tribe also argues that the Staff needed to consider how impacts to “environmental justice” communities could be mitigated. Initial Statement at 29. The Staff, however, found that for environmental justice communities, and American Indian communities in particular, the impacts of the Dewey-Burdock Project will generally not differ from the impacts experienced by other communities in the vicinity of the project.⁶¹ Accordingly, the mitigation measures the Staff identifies throughout the FSEIS—measures that reduce impacts to groundwater, surface water, vegetation, and other resources—will limit impacts to both the general population and American Indian communities. The exception is cultural resources.⁶² To address impacts to cultural resources, however, the Staff developed the Dewey-Burdock Programmatic Agreement, which

⁶⁰ The Tribe claims that the present case is similar to *Hydro Resources*, where the Commission allegedly excused the Staff’s failure to complete its NHPA review before licensing. Initial Statement at 36 (citing *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), 50 N.R.C. 3, 14 (1999)). In fact, in *Hydro Resources* the Commission found no fault with the Staff continuing its NHPA review after it finalized the EIS, because the Staff had not yet issued a license to the applicant. *Id.* The same situation is involved here, where the Staff issued Powertech a license only *after* it completed its NHPA review.

⁶¹ Ex. NRC-008-A-2 at 4-213.

⁶² *Id.*

contains numerous mitigation measures.⁶³ In brief, contrary to the Tribe’s argument, the Staff considered both impacts to environmental justice communities and measures to reduce those impacts.

2. Consolidated Intervenors’ Arguments

The Consolidated Intervenors state that they “adopt the evidence, authority, and argument” of the Oglala Sioux Tribe on Contention 6. Initial Statement at 9. They also refer to testimony from Peggy Detmers concerning the presence of whooping cranes in the Dewey-Burdock area. Initial Statement at 10 (citing Ex. INT-010). As with Contention 4, however, Contention 6 is not the Consolidated Intervenors’ contention. The Oglala Sioux Tribe submitted Contention 6, and the Consolidated Intervenors have not followed NRC procedures for co-sponsoring or adopting the Tribe’s contention. Accordingly, the Board should not accept Ms. Detmers’ testimony to the extent she addresses mitigation measures.⁶⁴

F. Contention 9: The Staff Independently Reviewed Impacts from Powertech’s Related Licensing Actions and Analyzed those Impacts in the FSEIS

1. Oglala Sioux Tribe’s Arguments

The Tribe argues that the FSEIS inadequately considers certain actions connected to Powertech’s application for an NRC license, including various EPA and South Dakota State permits that Powertech is seeking. Initial Statement at 38–41.⁶⁵ The Tribe claims that, although

⁶³ Ex. NRC-018-A.

⁶⁴ *Prairie Island*, ALAB-244, 8 AEC at 869 n.17; *Louisiana Energy Servs.*, CLI-04-35, 60 NRC at 626. Although the Consolidated Intervenors refer to Ms. Detmers’ testimony when stating their position on Contention 6, Ms. Detmers does not specifically mention mitigation measures in her testimony. If Ms. Detmers testifies during the oral portion of the hearing, however, the Board should not consider any testimony she offers on Contention 6.

⁶⁵ The Tribe continues to refer to Powertech’s other permit applications as “connected actions.” As the Staff explained in its initial position statement, however, the “connected action” rule at 40 C.F.R. § 1508.25(a)(1) exists to ensure that “proposals for . . . actions that will have cumulative or synergistic environmental impact upon a region . . . pending concurrently before an agency . . . be considered together.” *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) (emphasis added). In Contention 9, the Tribe refers to actions that do not meet this definition of a “connected action.” In any event, as the Staff explains above, it fully considered impacts related to these other actions, regardless of whether or not they are “connected” to the Dewey-Burdock licensing action.

the Staff mentions these other applications in the FSEIS, the Staff does not independently analyze the environmental impacts related to these other actions. The Tribe claims that, instead, the Staff merely defers to the future analyses of other agencies.

The Staff addresses the Tribe's claims at length in its initial testimony.⁶⁶ The Staff specifically addresses each of the actions the Tribe cites on page 39 of its initial statement of position. As the Staff explains, in no instance did it defer assessing the environmental impacts related to other permits Powertech is seeking. Rather, the Staff independently assessed these impacts, taking into account the regulations and permitting processes of other agencies. While on page 39 of its initial statement the Tribe cites FSEIS sections that allegedly support its position, the Tribe ignores language in these same FSEIS sections where the Staff describes the impacts related to Powertech's other permitting actions.⁶⁷ In other words, the Tribe ignores the very analysis that it claims the Staff needed to include in the FSEIS.

Because the Tribe did not submit any testimony in support of Contention 9, the Staff is not submitting rebuttal testimony on this contention. The Staff's initial testimony addresses all of the Tribe's claims to date, and this testimony shows that the Staff complied with NEPA.

2. Consolidated Intervenor's Arguments

The Consolidated Intervenor's state that they "adopt the evidence, authority, and argument" of the Oglala Sioux Tribe on Contention 9. Initial Statement at 11. They do not offer any additional argument on this contention. For the same reasons stated above, the Consolidated Intervenor's do not show any violation of NEPA.

⁶⁶ Ex. NRC-001 at A9.1 through A9.11.

⁶⁷ See *also* Ex. NRC-001 at A9.2 through A9.7 (addressing Tribe's claim that the Staff did not independently analyze impacts related to a number of specific licensing actions).

VII. Conclusion

The Board should dismiss each of the Intervenor's contentions and affirm that the Staff's review of the Dewey-Burdock application complied with NEPA and the NHPA.

Respectfully submitted,

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

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

Dated at Rockville, Maryland
This 15th day of July 2014