

**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
)	
(Dewey-Burdock In Situ Uranium Recovery Facility))	Date: July 15, 2014
)	
)	
)	

**POWERTECH (USA), INC. REBUTTAL OF CONSOLIDATED INTERVENORS AND
OGLALA SIOUX TRIBE INITIAL STATEMENTS OF POSITION**

I. INTRODUCTION

Pursuant to 10 CFR § 2.1207(a)(2), the Atomic Safety and Licensing Board’s (Licensing Board) Scheduling Order dated February 20, 2014, and the Licensing Board’s Order addressing compliance with pre-filed evidentiary material dated June 2, 2014, Powertech (USA), Inc. (Powertech) hereby submits this Rebuttal of Consolidated Intervenor’s (hereinafter “CI”) and the Oglala Sioux Tribe’s (hereinafter the “Tribe”) Initial Statements of Position (hereinafter the “Rebuttal Statement”) regarding seven (7) admitted contentions in this proceeding. This Rebuttal Statement is supported by rebuttal testimony offered by witnesses already identified in Powertech’s June 20, 2014, Initial Statement of Position, exhibits submitted with this Statement, and all additional exhibits accompanying this Rebuttal Statement.

This Rebuttal Statement, along with the aforementioned rebuttal expert testimony and exhibits, addresses each of the arguments and supporting materials offered by the Tribe in its June 20, 2014, Initial Statement of Position and CI’s July 7, 2014 Initial Statement of Position. This Rebuttal Statement also addresses NRC Staff’s June 20, 2014, Initial Statement of Position.

For the reasons set forth below, Powertech again respectfully requests that the Licensing Board find that all contentions admitted to this proceeding from CI and the Tribe are without merit and are insufficient to warrant a modification of NRC's record of decision (ROD) for the Dewey-Burdock ISR Project (the "Project"), as the Project poses no credible threat to human health or the environment.

II. BACKGROUND AND PROCEDURAL HISTORY

Background and procedural history for this proceeding is discussed in Powertech's Initial Statement of Position (Initial Statement) dated June 20, 2014 and, in part, in Powertech's expert witness testimony (Exhibits APP-001, 003, 010, 013, 037, 046, & 053). This portion of Powertech's Initial Statement is hereby incorporated by reference into this Rebuttal Statement.

Powertech's Initial Statement also addressed relevant applicable legal standards to this proceeding and the review and issuance of NRC 10 CFR Part 40 combined source and 11e.(2) byproduct material licenses for ISR projects. This summary of legal standards includes an overview of NRC 10 CFR Part 40 regulations and appropriate guidance for safety reviews of ISR license applications, as well as a discussion of how regulations such as the 10 CFR Part 40.32(e) construction rule and 10 CFR Part 40, Appendix A, Criteria 5 and 7 influence the preparation of license applications and the review and approval of such applications. These regulations and guidance culminated in the preparation and finalization of NRC Staff's Safety Evaluation Report (SER) issued on March 18, 2013 and final license conditions issued April 8, 2014. To date, no contentions admitted to this proceeding migrated to or were amended to reflect a challenge to the safety conclusions reached by NRC Staff in the SER or final license conditions.

Additionally, this summary includes an overview of NRC's 10 CFR Part 51 environmental review regulations and associated guidance. These regulations and guidance

culminated in the preparation of a draft supplemental environmental impact statement (DSEIS) which was issued for public comment on November 26, 2012. Public comments were received on the DSEIS up to March 5, 2013 and NRC Staff finalized its SEIS (hereinafter “FSEIS”), including its response to these public comments on January 31, 2014. As stated in Powertech’s Initial Statement, NEPA requires that an agency take a “hard look” at the potential environmental impacts of a proposed action. *See La. Energy Servs., L.P.* (Claiborne Enrichment Ctr.), CLI-98-3, 47 NRC 77, 87-88 (1998). This “hard look” requirement is subject to a “rule of reason” which is inherent in the NEPA statute and its implementing regulations. *See La. Energy Servs.* (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006), *citing Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973).

III. SUMMARY OF THE ARGUMENT

Powertech’s Initial Statement sets forth its position on each of the admitted contentions, with respect to the safety components of Contentions 2 and 3 and the environmental aspects of all seven contentions. This Rebuttal Statement continues to espouse the statements in that Initial Statement and provides additional rebuttal of analyses and conclusions offered by both CI and the Tribe in their respective position statements and testimony.

A. CONTENTION 1A/B

With respect to each of the contentions, CI and the Tribe both fail to offer any credible testimony regarding potential safety or environmental impacts at the Project site. With respect to Contention 1A/B, CI and Tribe witnesses fail to demonstrate that Powertech’s Level III Archeological Study did not provide NRC Staff with adequate information to evaluate potentially affected sites. Dr. Hannus demonstrates that his team conducted a Level III Study that complies with state-of-the-art standards for such studies and applicable State Historic

Preservation Office (SHPO) requirements based on federal standards, and Mr. Michael Fosha's initial testimony (Powertech Exhibit APP-010) concurs with the high level of quality of the Archeology Laboratory at Augustana College (ALAC) Study. Dr. Lynne Sebastian has demonstrated that there is no "scientific" methodology that should be used to determine the value of historic and cultural resources when typical practice and ACHP guidance both identify Tribes or other traditional communities and their respective knowledge as the primary resource for conducting tribal field identification surveys of places of religious and cultural significance to Tribes. The need for subsurface testing and the extent to which it is used is also addressed by Dr. Hannus and is shown to have been used properly to the extent appropriate for Powertech's NRC license application. This "subsurface testing" also is not always used immediately at a project site unless it is determined that there are areas that will be disturbed by the project itself, which is standard archeological and historic preservation practice.

On Contention 1B, neither CI nor the Tribe have offered any evidence that NRC Staff did not comply with NHPA regulatory requirements for the Section 106 process found at 36 CFR Part 800. The Tribe failed to participate in the Section 106 process and only participated to a limited extent in the development of the programmatic agreement (PA) for the Powertech NRC license. The PA was executed by all mandatory signing parties, including the United States Bureau of Land Management (BLM), the State of South Dakota Historic Preservation Officer (SHPO), and the ACHP. As discussed by Dr. Sebastian in her initial testimony, the execution of this PA by the ACHP demonstrates beyond any question that NRC satisfied the Section 106 requirement of a "reasonable and good faith effort" to consult. CI and Tribe witnesses can offer no credible evidence that the ACHP's judgment in executing the PA is flawed, as the ACHP is the expert agency that promulgates and interprets the NHPA's implementing regulations. Dr.

Sebastian's rebuttal testimony specifically addresses claims levied by CI and the Tribe in their position statements and declarations/testimony and again reaches the conclusion that NRC fully complied with NHPA Section 106 requirements.

B. CONTENTIONS 2, 3, & 4

CI's and the Tribe's claims regarding Contentions 2, 3 and 4 regarding the adequacy of baseline groundwater quality, adequacy of site-specific data to demonstrate hydrological confinement and the ability to prevent migration of recovery solutions, and adequacy of data to assess groundwater quantity impacts equally lack merit. As a general matter, it is important to note that Contentions 2 and 3 both carry "safety-related" components in this proceeding, and both CI and the Tribe have failed to migrate or amend their original Contentions 2 and 3 to address the analyses and conclusions in NRC's SER. As such, any challenges to NRC Staff's safety conclusions on groundwater in its SER should be considered outside the scope of this proceeding.

Both parties' allegations on these contentions initially demonstrate a fundamental misunderstanding of NRC's ISR regulatory program for groundwater quality at ISR project sites. These allegations ignore the fact that NRC's ISR regulatory program through the 10 CFR Part 40.32(e) construction rule and 10 CFR Part 40, Appendix A, Criterion 7 for "baseline" groundwater quality" and Criterion 5 for "Commission-approved background" only require, and indeed, only permit the gathering and analysis of limited general site characterization data in the Criterion 7 "baseline" phase involving a *license application*. This regulatory program *does not* permit the gathering and analysis of groundwater quality data sufficient to reach a finding of "Commission-approved background" groundwater quality for operations. This is also true regarding the gathering of data to support a determination of upper control limits (UCL) for

excursion monitoring during operations and restoration. Further, this regulatory program also does not allow the gathering of sufficient data to test groundwater quantity impacts during operations as the license applicant is not permitted to install an entire wellfield, including monitor well network(s), prior to receiving an NRC license.

CI's and the Tribe's allegations also fail to account for the fact that a party is not permitted to challenge NRC regulations in this administrative hearing. Several claims levied by the parties' expert witnesses relate to the credibility of NRC's ISR regulatory program, including specifically the distinction between the aforementioned "baseline" versus "Commission-approved background" as embodied in 10 CFR Part 40, Appendix A and ISR Commission-approved guidance in NUREG-1569 entitled *Standard Review Plan for In Situ Leach Uranium Extraction License Applications*.¹ Regardless of whether CI and the Tribe believe that NRC's ISR regulatory program is insufficient, NRC regulations specifically prohibit challenges to Commission regulations in adjudicatory proceedings. *See* 10 CFR § 2.335.

CI's and the Tribe's allegations on each of these three (3) contentions also are based on mischaracterization, misinterpretation or incorrect data and/or facts. In several instances, most specifically Contention 4 related to groundwater quantity usage, the data or facts supporting the conclusions in the ROD are mischaracterized so as to comport with the parties' expert testimony. For example, Dr. Robert Moran insists that Powertech's Dewey-Burdock ISR Project will consume approximately 8,500 gallons per minute (gpm) during operations, which fails to account for the fact that all but one (1) to three (3) percent of such water, which constitutes the "bleed," is recirculated and, therefore, not consumed. Both CI's and the Tribe's expert testimony are rife with mischaracterizations such as this and cannot serve as grounds to modify the ROD.

¹ *See* United States Nuclear Regulatory Commission, *NUREG-1569: Standard Review Plan for In Situ Leach Uranium Extraction License Applications*, (June 2003) (NRC Staff Exhibit NRC-013).

As will be shown below, several examples of these mischaracterizations are discussed in this Rebuttal Statement and its accompanying testimony.

C. CONTENTION 6

The allegations levied in Contention 6 regarding analysis of mitigation measures also are without merit. Powertech's expert witnesses' initial testimony provide a wide range of examples of how the FSEIS extensively addresses mitigation measures in substantially more detail than what CI and the Tribe have referred to as a simplistic list of mitigation measures. This initial testimony focuses specifically on several resource areas assessed in Chapter 6 of the FSEIS, including but not limited to mitigation measures related to groundwater usage and restoration, land application, and wildlife protection. Each of Powertech's expert witnesses continue to rely on their initial testimony to refute initial allegations levied by CI and the Tribe regarding evaluation of mitigation measures. Powertech's Rebuttal Statement and testimony also address the fact that the Tribe alleges that historic and cultural resource assessments were incomplete by the time the FSEIS was issued and conclude that the development of Section 106-related mitigation measures need not be included in a NEPA document; but rather, it can be included in a Section 106 agreement document such as the Dewey-Burdock PA. This Rebuttal Statement and testimony concur with the position and testimony offered by NRC Staff and concludes that Contention 6 cannot result in a modification of the ROD.

D. CONTENTION 9

Contention 9 allegations that NRC Staff's FSEIS fails to adequately address connected actions is equally without merit. Neither CI nor the Tribe have offered any evidence that NRC Staff's consideration of federal actions such as the inclusion of the United States Bureau of Land Management (BLM) as a cooperating agency for the FSEIS' preparation, and the continuous

interaction with the United States Environmental Protection Agency (EPA) on drafts of what eventually became the FSEIS and receipt of EPA's comments both during the comment period and the post-FSEIS issuance concurrence period is inadequate. As Powertech's experts have stated, the FSEIS repeatedly and thoroughly addresses the issuance of relevant EPA permits such as Class III and V wells and aquifer exemptions. Indeed, neither party offers any expert testimony regarding flaws in NRC Staff's FSEIS analysis of connected actions. Further, Powertech concurs with the argument offered by NRC Staff on this Contention and, thus, Contention 9 cannot result in a modification of the ROD.

E. CONTENTION 14

By Order dated July 15, 2014, the Licensing Board granted Powertech's June 30, 2014, Motion to Dismiss Contention 14A/B based on the Tribe voluntary withdrawal of such Contentions. Thus, no argument is registered here.

IV. POWERTECH REBUTTAL WITNESSES

Powertech's Rebuttal Statement is supported by six (6) of the seven (7) witnesses² whose testimony was submitted as Exhibits APP-001, 003, 013, 037, 046, and 053 accompanying Powertech's Initial Statement. These exhibits include *curriculum vitae* (CV) that demonstrate Powertech's rebuttal witnesses' expert qualifications. See Exhibit APP-002, 004, 014, 038, 047, and 054. Powertech's first rebuttal witness, Dr. Lynne Sebastian, offers expert testimony on the National Historic Preservation Act (NHPA) Section 106 Tribal consultation process discussed in Contention 1A/B. Dr. Sebastian is an expert member of the federal Advisory Council on Historic Preservation (ACHP)³ and currently serves as a member of the SRI Foundation and the

² For the Licensing Board's reference, Mr. Michael Fosha will not be offering rebuttal testimony in this proceeding.

³ Dr. Sebastian recused herself from any ACHP actions addressing the Section 106 process and the PA for the Project, as she was a consultant to Powertech before her appointment to the ACHP.

supervising member of the Foundation's continuing professional education and regulatory compliance and technical assistance programs.

Powertech's second witness, Dr. Adrien Hannus, currently serves as the Director of the Archeology Laboratory and a Professor of Anthropology at Augustana College in Sioux Falls, South Dakota and has served in this role since 1982. Dr. Hannus and his ALAC team performed the Level III archaeological study submitted by Powertech in support of its license application resulting in issuance of NRC License No. SUA-1600.

Powertech's third witness, Mr. Hal Demuth, is a senior engineer/hydrologist and principal of Petrotek Engineering Corporation. He currently serves as Team Leader at Petrotek for aquifer testing operations throughout the U.S. Mr. Demuth also has served as project manager for groundwater modeling studies related to TDS and radionuclides/metals plume remediation and restoration operations and regulatory compliance for uranium ISR operations.

Powertech's fourth witness, Mr. Errol Lawrence, currently serves as a senior hydrologist employed by Petrotek Engineering Corporation. Mr. Lawrence has worked on nine (9) Wyoming and two (2) Texas ISR projects and also served as a lead groundwater consultant for the Dewey-Burdock Project.

Powertech's fifth witness, Mr. Doyl Fritz, is a senior technical advisor employed by WWC Engineering. Mr. Fritz has served as primary author of numerous NEPA compliance documents (Environmental Impact Statements and Environmental Assessments) working as a third-party contractor for various federal agencies, including the BLM and the Interstate Commerce Commission.

Powertech's final rebuttal witness, Ms. Gwyn McKee, is the President of and Principal Wildlife Biologist for Thunderbird Wildlife Consulting, Inc. Ms. McKee is considered a

Qualified Third Party NEPA Contractor by the BLM, USFS, and USFWS, a Qualified Wildlife Biologist by the USFWS, USFS, BLM, WGFD, SDGFP, and MFWP, and qualified by the USFWS to conduct black-footed ferret surveys.

V. ARGUMENT

A. CONTENTION 1A: Alleged Failure to Meet Applicable Legal Requirements Regarding Protection of Historical and Cultural Resources

As stated previously, Contention 1A addresses allegations regarding the process by which Powertech and NRC Staff complied with appropriate laws regarding identification and assessment of historic and cultural resources, including the preparation of the Level III Archeological Study performed by ALAC and the methodologies used when conducting site-specific assessments of such resources at the Project site. As in its Initial Statement, Powertech relies on the totality of its Rebuttal Testimony to refute claims offered by CI and the Tribe. However, for purposes of this Rebuttal Statement, Powertech will highlight key claims offered by these parties and the expert testimony refuting such claims.

1. NRC Staff's Initial Statement of Position and Testimony

For Contention 1A, Powertech also will rely on the rebuttal testimony of Dr. Lynne Sebastian (Powertech Exhibit APP-063) and Dr. Adrien Hannus (Powertech Exhibit APP-064),⁴ both of whom offered expert testimony accompanying Powertech's Initial Statement (Powertech Exhibits APP-001 & 003). First, with respect to NRC Staff's Initial Statement of Position and Testimony, Powertech concurs with the positions and testimony offered respecting compliance with applicable laws pertaining to historic and cultural resources. While Powertech concurs with all of NRC Staff's positions and testimony, it is worth highlighting one particular provision of its testimony regarding the scope of tribal field surveys at the Project site. In response to an

⁴ While he does not offer any rebuttal testimony, Mr. Michael Fosha's initial testimony is referenced in this Section.

allegation from the Standing Rock Sioux Tribe that a survey of the entire Project site would have negated the need for a PA, NRC Staff makes clear, and Powertech agrees, that the entire Dewey-Burdock ISR Project site was made available for field identification efforts. As stated by Dr. Sebastian in Exhibit APP-063 at ¶ A.22, “the decision as to whether to develop a memorandum of agreement or a programmatic agreement for the undertaking did not have to do with what had or had not been done to identify properties of religious and cultural significance.” Instead of this and, as will be discussed in greater detail in Section V(B)(1-2) below, the “phased” nature of ISR projects and the future utility corridor unknowns are the primary factors in NRC Staff deciding to use a PA. *See* Powertech Exhibit APP-063 at 11-12, ¶ A.22. Thus, Powertech concurs with NRC Staff’s position and testimony on the adequacy of the scope of Tribal field surveys.

2. CI and the Tribe’s Initial Statements of Position and Testimony

With respect to the rebuttal of CI and the Tribe, Powertech will address allegations from both parties as contained in their Initial Statements of Position and Testimony and will identify the offering party or expert as appropriate. Given that several of the allegations offered by both parties overlap, Powertech requests that the Licensing Board recognize that all refutation offered herein applies to the same allegations offered by multiple sources.

Initially, there are several allegations proffered in Contention 1A that have been addressed in Powertech’s Initial Statement and accompanying testimony. First, Dr. Redmond alleges that the ALAC report is nothing more than an “inventory of cultural resources” and “primarily avoids the required analyses directed by the State of South Dakota.” CI Exhibit INT-018 at 9. Dr. Hannus specifically refutes this allegation by stating that the Level III Study was conducted as prescribed by the SHPO pursuant to applicable federal standards, which is further

supported by Mr. Michael Fosha (Powertech Exhibit APP-010). *See* Powertech Exhibit APP-064 at 3, ¶ A.1.

Second, the Tribe’s Initial Statement alleges that the Level III Study was conducted by students, which is directly refuted by Dr. Hannus in his initial testimony and reiterated here: “[t]hese include qualified supervising personnel with experience ranging from almost 20 years to 45 years and field crew with appropriate education, training and experience.” *Id.* at 3, ¶ A.2. This Level III Study conducted by ALAC also was a one-hundred (100) percent Project Study and was in compliance with SHPO standards. *Id.* at 3-4, ¶¶ A.2-3 & A.5.

Third, CI’s claims that no subsurface testing has been done and that several historic and cultural resources have not been identified also is directly refuted by Dr. Hannus: “the statement...is inaccurate. Subsurface testing was performed as appropriate as described in A.16 through A.17 and Table 1 of my initial testimony.” *Id.* at 3, ¶ A.4. Dr. Sebastian also explains why subsurface testing is only carried out at particular sites:

“The subsurface investigations in question involve archaeological excavation, which destroys a portion of the historic fabric of the site....it is standard conservation archaeology and historic preservation practice to carry out subsurface testing only at sites that will be directly impacted by development activities, and to leave other sites unevaluated until or unless they may be affected by development activities.”

Powertech Exhibit APP-063 at 3, ¶ A.1.

Fourth, Mr. Wilmer Mesteth (OST Exhibit OST-15 at 4, ¶ 20) alleges that the “numbers and density of cultural resources” at the Project site indicate that the Project will adversely affect such resources. Dr. Hannus refutes this allegation by stating that only properties eligible for inclusion on the National Register of Historic Places (NRHP) will potentially be affected and that “[d]ue to the highly erodible landscaping in the Dewey-Burdock Project area, a large number (approximately half of the total number of identified sites in the project area) of sites

were recommended by ALAC as *not eligible* for listing on the NRHP....” Powertech Exhibit APP-064 at 4, ¶ A.6.

With respect to other allegations levied by both CI and the Tribe, both Dr. Hannus and Dr. Sebastian’s rebuttal testimony refute their substance and demonstrate that they are without merit. Dr. Redmond opines that there is an “implication by omission” that most unevaluated sites are ineligible for the NRHP. CI Exhibit INT-17 at 6. Dr. Sebastian specifically notes that this opinion fails to note the existence of a PA and the manner in which “unevaluated” properties will be treated during the lifecycle of the Dewey-Burdock ISR Project. Generally speaking, Dr. Sebastian notes that *all* “unevaluated” properties are protected from disturbance for the duration of the Project. *Id.* at 3, ¶ A.2. In the event that a previously “unevaluated” property would be subject to disturbance, the PA requires that Tribes be consulted about “protection, evaluation, and treatment plans for all unevaluated sites.” *Id.* After this consultation is complete and if the property is found to be eligible to the NRHP, “a treatment plan will be prepared, indicating how adverse effects to the property will be resolved.” *Id.* Powertech’s NRC license (NRC License No. SUA-1600, License Condition 9.8) also includes a condition specifically tailored towards “unanticipated discovery” of historic or cultural resources, which will address any properties previously unidentified. Thus, “unevaluated” properties are adequately addressed by Powertech’s NRC license and the PA.

Mr. Michael Catches Enemy alleges that no comprehensive study of historic and cultural resources was conducted to identify all such resources at the Project site and that Tribal field surveys conducted by other Tribes were insufficient to identify resources significant to the Tribe. Tribe Exhibit OST-14, ¶ 9. As stated by Dr. Sebastian, “[t]here is no requirement that an agency identify all possible historic properties that may be affected by an undertaking....” Powertech

Exhibit APP-063 at 4, ¶ A.4. Several Tribes chose to participate in the surveys, and the Tribe chose not to participate. *Id.* Thus, since the NHPA only requires a “reasonable and good faith effort” on the part of agencies and not that it secure a Tribe’s assessment on non-Tribal lands, the Tribe’s failure to participate in these surveys does not support a legal flaw in NRC Staff’s assessment of historic or cultural resources.

The comprehensive nature of the site-specific assessment is also shown in Dr. Sebastian’s rebuttal testimony regarding the “scientific” nature of the assessment. This rebuttal testimony stems from allegations by the Tribe that no “scientifically verified methodology” was utilized during the Project site surveys. Tribe Exhibit OST-14 at 2, ¶ 9. As discussed in Powertech’s Initial Statement, the proposed use of “scientific” methods for determining the status of resources or properties whose significance is based on tradition or culture is not a valid concept. Dr. Sebastian reiterates from her initial testimony that “[i]dentification of such places depends on the knowledge of traditional cultural practitioners, not on the exercise of some scientific discipline or method.” Powertech Exhibit APP-063 at 7, ¶ A.9. This is supported by the ACHP’s guidance that:

“stresses the unique nature of historic properties of religious and cultural significance, in that the information about their significance, use, meaning, and location is maintained within the traditional knowledge system of the communities that ascribe value to these properties.”

Id.

This ACHP guidance also states that each Tribe will have its own views on appropriate identification methods, and NRC Staff did not try to impose a methodology on the tribes; but rather, NRC assumed each Tribe would conduct the survey the way it sees fit. *Id.* This approach was supported financially by Powertech and several Tribes chose to do so. *Id.* Thus, any claim

that there was a “scientific” methodology required for a Dewey-Burdock ISR Project site-specific cultural survey is without merit.

Therefore, based on the above-discussed items and the entirety of Powertech’s Initial and Rebuttal Statements and Testimony, it is Powertech’s submission that Contention 1A and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

B. CONTENTION 1B: Alleged Failure to Involve or Consult All Interested Tribes as Required by Federal Law

As stated in Powertech’s Initial Statement, Contention 1B addresses allegations regarding NRC Staff’s conduct of the NHPA Section 106 Tribal consultation process. As was the case in CI’s and the Tribe’s statements of contentions previously submitted, the focus of this Contention is on the process followed by NRC Staff in identifying historic and cultural resources at the Project site and in developing the aforementioned PA. These allegations include issues such as the execution of the PA despite objections by the Tribe and failure to properly consult Tribes during this process. *See e.g.*, Tribe Exhibit OST-14 at ¶ 15. As in its Initial Statement, Powertech relies on the totality of its Rebuttal Testimony to refute claims offered by CI and the Tribe. However, for purposes of this Rebuttal Statement, Powertech will highlight key claims offered by these parties and identify expert testimony refuting such claims.

1. NRC Staff’s Initial Statement of Position and Testimony

For purposes of Contention 1B, Powertech will rely on the rebuttal testimony of Dr. Lynne Sebastian (Powertech Exhibit APP-063), who offered initial testimony accompanying Powertech’s June 20, 2014 Initial Statement of Position. First, with respect to NRC Staff’s Initial Statement of Position and Testimony, Dr. Sebastian offers answering testimony in support of several aspects of this Statement and Testimony and finds that it is in accord with her expert opinion on Contention 1B’s substance. Dr. Sebastian begins her Rebuttal Testimony by agreeing

with NRC Staff's selection of a PA for the Dewey-Burdock Project and its site-specific Section 106 process. As a consultant for Powertech, Dr. Sebastian participated in the Section 106 process and the development of the PA on its behalf. *See* Powertech Exhibit APP-063 at 10, ¶ A.18. Dr. Sebastian agrees with NRC Staff's statement that a PA was deemed the appropriate Section 106 (36 CFR Part 80014(b)) agreement document due to the "phased nature" of the Project (indeed of all ISR projects). *See id.* at 10, ¶ A.17. This "phased" process is indicated, in part, by the fact that the "utility line corridor into and through the project area will not be determined for some time and because there are two alternatives being permitted for disposal of treated wastewater from the project." *Id.* Based on these factors and the inherently "phased" nature of ISR projects,⁵ Dr. Sebastian concludes that the Dewey-Burdock PA is the appropriate mechanism for completing the Section 106 process.⁶

Dr. Sebastian also agrees that NRC Staff appropriately followed NHPA regulations for the Section 106 process and the legal standard of a "reasonable and good faith effort" for its completion. With respect to whether the Section 106 process was improperly severed from the NEPA (FSEIS) process, Dr. Sebastian states:

"[i]n 2013, CEQ and ACHP jointly published guidance for federal agencies that provides information about both coordination of NEPA and Section 106 and substitution of NEPA for Section 106. An agency is free to use either of these approaches to comply with the two laws, but in my experience, the substitution approach is rarely chosen. *Most agencies, for most projects, do what NRC did--- follow the "coordination" path.*"

Id. at 11, ¶ A.21 (emphasis added).

Dr. Sebastian also concurs with NRC Staff's final determination to issue the PA as part of the ROD *after* issuance of the FSEIS:

⁵ *See also* Powertech Exhibit APP-063 at 11 at ¶ A.22 for a discussion of how tribal field surveys were conducted in response to a cited Standing Rock Sioux Tribe objection to such surveys.

⁶ *See e.g., In the Matter of Hydro Resources, Inc.* (Crownpoint Uranium Project), LBP-05-26, 62 NRC 442 (2005), *reviewed declined* CLI-06-11 (April 3, 2006).

“the signed agreement document, whether it is a memorandum of agreement or a programmatic agreement, should be included in either the FEIS or in the Record of Decision. The signed programmatic agreement for Dewey-Burdock is part of the Record of Decision for the project.”

Powertech APP-063 at 11, ¶ A.21.

Dr. Sebastian then concludes: “it is my opinion that the NRC process...not only met the specific regulatory requirements for NEPA and Section 106 coordination, but is also consistent with the guidance provided by CEQ and ACHP.” *Id.*

With respect to whether the Section 106 process itself and its legal standard (“reasonable and good faith effort”) is satisfied, Dr. Sebastian concurs with NRC Staff’s position. *See generally id.* at 12, ¶ A.23. Most importantly, Dr. Sebastian notes that “NRC has a very substantial record of tribal consultation for this project, involving multiple media and venues from emails and letters and individual phone calls to conference calls and webinars to face-to-face meetings” as well as “many days in the field with tribal personnel who took advantage of the opportunity to do applicant-supported field work to identify properties of religious and cultural significance within the license area.” *Id.* Based on this opinion and Dr. Sebastian’s opinion in Powertech Exhibit APP-001 citing ACHP’s decision to sign the PA, NRC Staff’s position that a “reasonable and good faith effort” was exercised to complete the Section 106 process is correct.

2. CI and Tribe Initial Statements of Position and Testimony

For purposes of this Rebuttal Statement, Powertech will address three separate documents submitted by CI and the Tribe: (1) the Tribe’s Initial Statement of Position; (2) the April 14, 2014 Declaration of Michael Catches Enemy and (3) CI’s Initial Statement of Position. First, in its Initial Statement of Position, the Tribe argues that NRC Staff should have included the Tribe and other Tribes in the Section 106 process instead of “hurriedly” developing and executing a

PA. Tribe Initial Statement at 17. This allegation includes a statement that the PA should have been finalized before the FSEIS was issued. *Id.* Dr. Sebastian takes issue with this allegation when she states:

“All of the tribes had the same opportunities to participate in the crafting of and revisions to the programmatic agreement that the other consulting parties...had. This process went on over many months.”

Powertech Exhibit APP-063 at 8, ¶ A.11.

Dr. Sebastian also disagrees with the Tribe’s assertion that NRC should have included the Tribe and other tribes in the process prior to finalizing the PA and completed all actions under the PA before issuing the FSEIS: “execution of the agreement document [PA] by the required signatories completes the agency’s Section 106 process. In no case is the agency required to carry out all the provisions in the agreement document prior to finalizing an EIS or issuing a Record of Decision.”⁷ *Id.* at 8, ¶ A.12. Dr. Sebastian also concurs with Powertech’s and NRC Staff’s final conclusion that the Tribe was not, in any way, excluded from the Section 106 process: “[t]he process for developing this programmatic agreement did not exclude the Oglala Sioux Tribe; they had every opportunity to participate in developing it but for the most part chose not to do so.”⁸ *Id.* at 9, ¶ A.15. Thus, based on this testimony, Dr. Sebastian concludes that the Tribe’s allegation that the PA must have been issued and its actions completed prior to the FSEIS’ issuance is without merit.

Dr. Sebastian’s testimony also refutes the Tribe’s attempt to invalidate the PA and NRC’s approach to licensing ISR facilities while complying with the NHPA. In response to the Tribe’s allegation that the PA undermines the NHPA and the Section 106 process, Dr. Sebastian states

⁷ This testimony also refutes the Declaration of Mr. Michael Catches Enemy (Tribe Exhibit OST-14 at ¶ 22) which states that the PA was improperly issued after the FSEIS was issued.

⁸ It is also important to note that the current PA does not exclude the Tribe from further participation in the execution of the provisions of the PA, including the designing and execution of its provisions going forward. *See* Powertech Exhibit APP-063 at 9, ¶ A.15.

that “[n]ot only is there nothing contrary to the requirements of Section 106 about using a programmatic agreement in this way, it is not even an unusual approach to compliance.”⁹ *Id.* at 8, ¶ A.13. Dr. Sebastian also disputes that there should be relief accorded to the Tribe by invalidating the PA and NRC License No. SUA-1600:

“There are no grounds in any of the arguments presented by the Oglala Sioux Tribe for ‘invalidating’ this Section 106 agreement document, nor, as far as I am aware, would the Board have the authority to do so, even if there were.”

Id. at 9, ¶ A.16.

As the final step in the Section 106 process, Dr. Sebastian concludes:

“[t]he ACHP signed this document, which is a clear statement, by the recognized authority on compliance with Section 106, that NRC has appropriately completed the Section 106 requirements and that this agreement document is valid.”

Id.

This testimony conclusively demonstrates that the allegations made by the Tribe in its Initial Statement do not provide support for Contention 1B and which is, therefore, without merit.

With respect to the April 14, 2014, Declaration of Michael Catches Enemy, this Declaration alleges that the PA was improperly finalized over the objection of the Tribe. Tribe Exhibit OST-14 at ¶ 15. Noting that the Project does not occur on Tribal lands, Dr. Sebastian refutes this allegation by stating, “[t]here is no requirement that NRC secure tribal agreement with or approval of a Section 106 agreement document unless that undertaking takes place on tribal land, which the Dewey-Burdock Project does not.” Powertech Exhibit APP-063 at 4, ¶ A.5.a. Mr. Catches Enemy also claims that NRC Staff has not obtained the Tribe’s participation in the development of mitigation measures and other historic and cultural resource-related measures (Tribe Exhibit OST-14 at ¶ 15), a claim which Dr. Sebastian disputes:

⁹ Dr. Sebastian also states in support of this statement the following: “Nationwide, roughly 30-40 Section 106 undertakings a year are completed through the development and execution of programmatic agreements.” Powertech Exhibit APP-063 at 8, ¶ A.13.

“The Oglala Sioux Tribe was invited to participate in all discussions leading to the development of the programmatic agreement...Additionally, under the terms of the Programmatic Agreement, as the project moves forward all tribes will have the opportunity to participate in the development of treatment plans identifying measures to avoid, minimize, and mitigate adverse effects on historic properties.”¹⁰

Id. at 4-5, ¶ A.5.b.

It is Powertech’s position, based on this testimony, that if the Tribe chooses to participate in these *future* developments going forward, it is welcome to do so. However, Powertech is not responsible for the Tribe’s failure to actively participate in the Section 106 process during license application review.

Therefore, based on the above-discussed items and the entirety of Powertech’s Initial and Rebuttal Statements and Testimony, it is Powertech’s submission that Contention 1B and the offerings by CI and the Tribe thereon do not constitute grounds for modification of the ROD.

C. CONTENTION 2: Alleged Failure to Include All Necessary Information for Adequate Determination of Baseline Groundwater Quality

Contention 2 involves allegations regarding the adequacy of groundwater quality data gathered by Powertech and reviewed and approved by NRC Staff during the course of its review and issuance of Powertech’s NRC license. This Contention contains both safety and environmental-related components as discussed in the Licensing Board’s previous Orders admitting this Contention. However, while the environmental component of this Contention successfully migrated to the FSEIS, the safety component of this contention is strictly limited to Powertech’s license application and did not migrate to NRC Staff’s SER. Thus, any and all conclusions reached by NRC Staff in the SER and their supporting safety analyses are not subject to challenge within the scope of Contention 2. Further, Powertech intends to rely on the

¹⁰ The Tribe also cannot claim that the PA is invalid, because they did not sign it: “there is no requirement that the tribes be signatories to Section 106 agreement documents unless the project takes place on tribal lands.” Powertech Exhibit APP-063 at 5, ¶ A.5.e.

entirety of its expert witnesses' initial testimony to refute CI's and the Tribe's claims but also will highlight key issues and identify expert testimony refuting such claims. For purposes of this Contention, Powertech intends to rely on the testimony of Mr. Hal Demuth (Powertech Exhibit APP-065) and Mr. Errol Lawrence (Powertech Exhibit APP-066).

1. NRC Staff's Initial Statement of Position and Testimony

Prior to addressing the allegations offered by CI and the Tribe within the scope of Contention 2, Powertech will address the areas where it concurs with NRC Staff Initial Statement of Position and Testimony. As a general matter, Powertech concurs with NRC Staff's positions and their expert testimony, but finds it worthwhile to emphasize a critical item.

Powertech concurs with NRC Staff's general position regarding how Criterion 7 "baseline" groundwater quality data was gathered and assessed and the reasons for which such data are gathered. As stated by NRC Staff in its initial testimony at A.2.4 and concurred with by Mr. Lawrence, "the purpose of determining preoperational baseline water quality *is not to evaluate the impacts of past uranium mining or exploration activities or other potential sources of groundwater contamination. Rather, preoperational baseline water quality provides a description of the existing environmental conditions....*" Powertech Exhibit APP-066 at 4, ¶ A.2 citing NRC Staff Initial Testimony Exhibit NRC-001 at A.2.4 (emphasis added). As stated by Mr. Lawrence, this is necessary to determine when "corrective actions can be taken if impacts to groundwater quality are detected from the proposed action (ISR mining)." *Id.* The determination of "baseline" using *existing* resource conditions is consistent with the Commission's decision in *Hydro Resources, Inc.* where the Commission determined that site "background" for radiological conditions is determined using existing site conditions if the materials were not generated as part of the licensed operation. *See generally In the Matter of*

Hydro Resources, Inc. (Crownpoint Uranium Project), CLI-06-04 (May 16, 2006). Since past uranium *exploration/mining* is not an NRC-licensable activity and it does not generate AEA materials, Mr. Lawrence's and NRC Staff's conclusions on "baseline" groundwater quality are consistent with NRC regulations.

2. CI and Tribe Initial Statements of Position and Testimony

Initially, CI's and the Tribe's entire initial offering fails to account for the critical aspect of NRC's ISR regulatory regime regarding the gathering, submission, and review of groundwater quality data necessary for a competent license application and to support an initial NRC licensing decision. Indeed, the Tribe's expert witness, Dr. Robert Moran, alleges in Paragraph B (Page 16) of his initial testimony that the groundwater quality data submitted by Powertech are inadequate to satisfy NRC requirements for "baseline" groundwater quality. As discussed in Powertech's Initial Statement and by its experts in the accompanying Initial Testimony, NRC's 10 CFR Part 40, Appendix A Criteria for uranium recovery facilities (including Commission-approved, ISR-specific guidance at NUREG-1569 for ISR projects), specifically delineate two separate groundwater quality gathering phases for such projects. Pursuant to Criterion 7, an *ISR license applicant* is required to gather "baseline" groundwater quality data adequate to satisfy NRC requirements for license applications and sufficient to support an initial licensing decision (which issuance of NRC License No. SUA-1600 constitutes). This requirement is in accordance with the 10 CFR ¶ 40.32(e) "construction" rule which, in the case of ISR projects, prohibits the installation of a complete wellfield, including monitor well network(s), prior to the issuance of a license lest the license applicant risk denial of the requested license. *See* 10 CFR § 40.32(e). This regulatory requirement effectively precludes an ISR license applicant from gathering

enough groundwater quality data to satisfy Dr. Moran's concerns *prior to the issuance of a license*.

Essentially, by attempting to prescribe the types and level of groundwater quality data necessary for "Commission-approved background" groundwater quality prior to license issuance, Dr. Moran is either asking Powertech (as well as other ISR license applicants) to voluntarily risk denial of its requested license or is trying to unilaterally change the Commission's regulatory program. While the former is impractical and unrealistic, the latter is nothing more than a collateral attack on the Commission's regulations which is not permitted in these proceedings. *See* 10 CFR § 2.335. In addition, Dr. Moran's concerns will be addressed when Powertech proceeds to install its full wellfield and monitor well network(s) and gathers appropriate data to support a determination of "Commission-approved background," as permitted after license issuance. Thus, based on the Commission's ISR regulatory program for groundwater quality determinations and the prohibition on collateral attacks on Commission regulations, Contention 2 fails to modify the ROD based on the aforementioned allegation.

One of the Tribe's allegations levied by its witness Dr. Robert Moran is that "[t]he Final SEIS states repeatedly that the NRC will require Powertech to collect such detailed data /information after NRC license approval, because the Application lacked such data." Tribe Exhibit OST-1 at 17. This allegation is indicative of Dr. Moran's failure to understand the above-mentioned distinction between Criterion 7 "baseline" and Criterion 5 "Commission-approved background" and is further discussed by Mr. Demuth in his rebuttal testimony and Mr. Lawrence in his initial testimony. As a general proposition, ISR projects are "phased," meaning that there are separate stages at which data such as groundwater quality data will be gathered and assessed. In the case of ISR projects, as stated by Mr. Demuth, Powertech first is required prior

to license issuance to gather “site-wide baseline groundwater quality data and demonstrate the appropriate procedures for establishing Commission-approved background water quality for each wellfield.” Powertech Exhibit APP-065 at 3, ¶ A.1. These types of groundwater quality data are required by NRC regulations at 10 CFR Part 40, Appendix A, Criteria 7 and 5 respectively, when they refer to “baseline” groundwater quality, as opposed to the process of determining “Commission-approved background,” which continues post-license issuance and prior to operations. As stated by Mr. Lawrence in his initial testimony and reiterated by Mr. Demuth in his rebuttal testimony, “[f]ollowing license issuance but prior to operations, the licensee establishes Commission-approved background water quality and upper control limits (UCLs) for each wellfield.” *Id.* Based on this and the discussion above, Mr. Demuth concludes that, “[t]o state that NRC will require collection of future baseline groundwater quality information because ‘the Applicant lacked such data’ fails to recognize that a license applicant cannot construct a wellfield in order to obtain wellfield-specific Commission-approved background data until after license issuance.” *Id.* Thus, Dr. Moran’s allegation that Powertech should not be permitted to gather groundwater quality data post-license issuance and prior to operations because more is needed for the license application is inconsistent with NRC regulations. Accordingly, such allegation should be deemed without merit.

With respect to the allegation that Powertech did not adequately gather Criterion 7 “baseline” groundwater quality data for its license application, Mr. Lawrence states consistent with his initial testimony that Powertech’s submission was conducted in accordance with NUREG-1569 and, thus, in compliance with NRC regulations. *Id.* This allegation also includes claims that Powertech’s data were not gathered by a “financially-independent” party. Tribe Exhibit OST-1 at 18. Powertech responds to this allegation by stating that the entire AEA-

structured licensing process is based on a license applicant coming forward and submitting a license application which, in the case of the project, requires submission of data regarding a variety of resources areas including groundwater. As an independent regulatory agency, NRC is not empowered by Congress to promote nuclear power and cannot force an entity such as Powertech to apply for an NRC ISR license. Thus, Powertech is responsible for providing the appropriate information for a license application.

Based on this, companies such as Powertech follow NUREG-1569 guidance for submission of groundwater quality data. This guidance requires that an applicant shall provide the site-wide “baseline” water quality data pursuant to Section 2 (e.g., Acceptance Criterion 2.7.3(4)) which states that the characterization of site hydrology is acceptable if it contains “[r]easonably comprehensive chemical and radiochemical analyses of water samples, obtained within and at locations away from the mineralized zone(s). . . .” *See* NUREG-1569 at 2-24.

Further, Mr. Lawrence opines that “the frequency of sampling events, the distribution of sampling locations, the sampling methodology, the constituents analyzed, and the analytical methods and detection limits employed by Powertech for the Dewey-Burdock Project. . . .” are consistent with Criterion 7 and NUREG-1569. Powertech Exhibit APP-066 at 4, ¶ A.1; *see also* Powertech Exhibit APP-037 at 5-11, ¶¶ A.8-A.26.

Another of the Tribe’s allegations is levied by Dr. Moran, who attempts to characterize Powertech’s license application’s and NRC Staff’s FSEIS’ consideration of cumulative impacts from past uranium mining/exploration and the Black Hills Army Depot as “inadequate” to establish Criterion 7 “baseline” groundwater quality. *See* Tribe Exhibit OST-1 at 16. However, Mr. Lawrence finds Dr. Moran’s statements “misleading and without basis.” Powertech Exhibit APP-066 at 3, ¶ A.1.

First, Mr. Lawrence finds that Dr. Moran's presentation of groundwater quality data is flawed and does not show any actual degradation of site groundwater quality due to past uranium mining/exploration activities. Citing to his initial testimony, Mr. Lawrence states that "the comparison between historical and recent data sets provided in Sec. 2.7.3.2.2 of the revised TR (Exhibit APP-015-B at 2-217 through 2-230b) shows very little variation in groundwater quality between the data sets." *Id.* Additional data assessed by Mr. Lawrence in the revised TR "indicate very little change in the water chemistry over the past 25 years." *Id.* Based on these evaluations, Mr. Lawrence concludes that "[t]hese data do not provide any indication of widespread degradation within or near the Project area as a result of historical mining and exploration activities." *Id.*

Second, Mr. Lawrence refutes the viability of one of Dr. Moran's major exhibits, Keene's (1973) report on groundwater resources in the western half of Fall River County to show that the range of total dissolved solids (TDS) concentrations within the Project area "is consistent with the range observed in the Fall River and Chilson [aquifers] in other portions of the county." *Id.* Thus, once again, Mr. Lawrence has shown Dr. Moran's testimony to be unreliable regarding Powertech's demonstration of adequate Criterion 7 groundwater quality data at the Project site.

Mr. Lawrence also opines on the reference by Dr. Moran regarding the potential influence of the Black Hills Ordinance Depot on groundwater quality in the Project area. It is Powertech's position, which is supported by Mr. Lawrence's analysis, that the Depot has not contributed (and will not contribute) to Project site groundwater quality and should not be considered as a factor under Contention 2. Mr. Lawrence states that the Depot "is located approximately 14 miles south of, and hydraulically downgradient (downstream) of, the Dewey-Burdock Project area." *Id.* Mr. Lawrence also finds support for this premise in NRC's Staff

SER which notes that impacts from the Depot are “limited to shallow aquifers that are hydraulically separated from the Fall River formation by over 1,000 feet of low permeability shales.”¹¹ *Id.* These findings are supported in NRC Staff’s FSEIS as referenced in Exhibit NRC-008-A-2 at 600-601 and Exhibit NRC-008-B-2 at 610-611. Thus, based on these factors, the Depot should not be considered a supporting source of groundwater degradation at the Project site and Dr. Moran’s testimony on such allegation should be discounted.

The CI Initial Statement at 5 refers to “various concerns raised by Dr. Richard Abitz” in Exhibit INT-002. However, as stated by Mr. Lawrence in his Rebuttal Testimony, CI Exhibit INT-002 “consists of a letter from Dr. Abitz to the Coloradoans Against Resource Destruction (CARD) regarding a baseline study apparently conducted for a project in Colorado.” Powertech Exhibit APP-066 at A.10. Mr. Lawrence notes that “[t]hese ‘concerns’ seem to deal with groundwater monitoring, air particulate monitoring, monitoring of radionuclides in air, and radon in air.” *Id.* Neither the CI nor Dr. Abitz make any attempt to relate the “various concerns” expressed by Dr. Abitz in his 2009 report regarding the Colorado project to the Dewey-Burdock ISR Project in general or to Contention 2 specifically. Therefore, CI Exhibit INT-002 (Report of Dr. Abitz) should not be considered as relevant written testimony for any of the admitted contentions in this proceeding, especially Contentions 2-4 regarding groundwater.

Therefore, based on the above-discussed items and the entirety of Powertech’s Initial and Rebuttal Statements and Testimony, it is Powertech’s submission that Contention 2 and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

¹¹ Since Contention 2’s safety component did not migrate to the FSEIS, CI and The Tribe cannot challenge this SER conclusion in this proceeding.

D. CONTENTION 3: Alleged Failure to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration and Assess Potential Impacts to Groundwater

Contention 3 involves allegations regarding the adequacy of data and analyses to demonstrate that operation of the Dewey-Burdock Project will result in hydrogeological confinement and will prevent migration of recovery solutions to adjacent groundwater sources. As is the case with Contention 2, Contention 3 contains both a safety and environmental-related component, and this Contention also did not migrate to NRC Staff's SER. Thus, any and all conclusions reached by NRC Staff and their supporting analyses regarding public health and safety are not subject to challenge within the scope of Contention 3. Further, Powertech intends to rely on the entirety of its expert witnesses testimony to refute CI's and the Tribe's claims but also will highlight key issues and identify expert testimony refuting such claims.

As stated for Contention 2, NRC's ISR regulatory program sets forth two separate phases for groundwater quality data gathering and assessment: (1) Criterion 7 "baseline" groundwater quality and (2) Criterion 5 "Commission-approved background." *See* 10 CFR Part 40, Appendix A, Criteria 5 & 7. While Contention 2 deals with adequacy of "baseline" groundwater quality data, Contention 3 deals with adequacy of recovery solution migration protections at the Dewey-Burdock ISR Project site. However, as is the case with Contention 2, the same distinction between Criterion 7 "baseline" and Criterion 5 "Commission-approved background" applies. The primary risk to groundwater associated with ISR operations is the potential for excursions from the exempted recovery (ore) zone to adjacent, non-exempt aquifers or portions thereof. In order to mitigate, if not eliminate, this potential risk factor, NRC's ISR regulatory program has implemented a series of operational protections against recovery solution migration, including monitor well network(s) above, below, and around the recovery zone as early warning systems.

In order for a monitor well network to be effective, ISR operators must determine upper control limits (UCL), which are the numerical levels for identified site-specific constituents used to identify potential excursions. However, in order to determine a UCL (which is a “Commission-approved background” level), an ISR operator must have a complete understanding of groundwater quality conditions in an entire recovery (ore) zone. As stated in Contention 2, such a level of groundwater quality understanding cannot be determined without installing an entire wellfield, including the aforementioned monitor well network(s). Since the Part 40.32(e) “construction” rule does not allow this, it is impossible for Powertech to gather groundwater data sufficient to determine UCLs and, thus, establish the complete groundwater monitoring program. Hence, NRC Staff has imposed requirements for wellfield packages in Powertech’s license so that all necessary groundwater data will be gathered and evaluated *prior to licensed operations*. Therefore, any allegations regarding inadequate data to demonstrate control of recovery solutions must take into account the limitations imposed on license applicants by the aforementioned NRC ISR regulatory program.

This fact that gathering of “baseline” hydrogeologic data is based on this approach addresses Dr. Moran’s claim that “NRC Staff has delayed a full and credible hydrogeological analysis until after the licensing decision, without providing a credible reason for its incomplete analysis.” Tribe Exhibit OST-1 at 23. Reiterating his initial testimony, Mr. Demuth states:

“acquisition of hydrogeologic information is a phased process in which site-wide hydrogeologic characterization is performed prior to license issuance and the

procedures for establishing hydrologic information specific to each wellfield and for monitoring potential impacts are reviewed during the license application process.”¹²

Powertech Exhibit APP-065 at 4, ¶ A.3 (emphasis added); *see also* NRC Staff Exhibit NRC-001 at ¶ A 3.9.

Once again, Dr. Moran demonstrates his ignorance of NRC’s ISR regulatory program and the fact that what he prescribes would require a license applicant to run the risk of having its requested license denied or a change to the Commission’s regulations, neither of which is or should be permissible. *See* 10 CFR §§ 40.32(e), & 2.335. Thus, Dr. Moran’s allegation on this issue is without merit.

In several portions of his testimony, Dr. Moran continues to allege that NRC’s ISR regulatory program is essentially not credible with respect to the aforementioned hydrologic data gathering limitations. Indeed, Dr. Moran states, as noted above, that NRC Staff has not provided a “credible reason for its incomplete [hydrogeological] analysis. Tribe Exhibit OST-1 at 23. However, while Dr. Moran is entitled to his opinion, such opinion is irrelevant in the face of existing Commission regulations and the fact that they cannot be challenged in this proceeding. *See* 10 CFR § 2.335. 10 CFR Part 40, Appendix A has been through a full and complete rulemaking process, including public comment, prior to its promulgation and has the force and effect of law. NRC Staff’s Commission-approved guidance at NUREG-1569, which sets forth NRC’s interpretation of the ISR regulatory program, also was released on two (2) occasions for public comment and then finalized for release in 2003. Regardless of Dr. Moran’s opinion on the credibility of this program, the fact is that it cannot be challenged here and can only be altered by a petition for rulemaking, which Dr. Moran, CI, and/or the Tribe are free to submit.

¹² It is also worth noting that NRC License No. SUA-1600 imposes additional safeguards on wellfields to be located in partially saturated areas of the Project site, so that NRC Staff must “review and approve” wellfield hydrologic packages for such wellfields. In current NRC terminology, “review and approve” is the functional equivalent of a license amendment. *See* NRC License No SUA-1600, License Condition 10.10(B).

Until then, however, the Commission’s ISR regulatory program cannot be challenged in this proceeding.

Dr. Moran also alleges that “Dewey-Burdock uranium ore zones are not hydraulically-isolated from other geologic units, other aquifers, or zones outside the project area.” Tribe Exhibit OST-1 at 18. According Mr. Demuth, the data and analysis present in the ROD more than adequately demonstrate that “the production zone aquifers are isolated sufficiently that ISR operations can be conducted safely in accordance with the NRC license.” Powertech Exhibit APP-065 at 3, ¶ A.2 *citing* Powertech Exhibit APP-013 at 14-16, ¶¶ A.31-A.33; *see also* Powertech Exhibit APP-037 at 20-31, ¶¶ A.44-A.72. Powertech also concurs with NRC Staff’s initial testimony that “describes evidence presented in the FSEIS regarding hydraulic isolation of the production zone aquifers.” *Id.* at 4, ¶ A.2. This testimony directly addresses:

“continuity of the major confining units (Graneros Group, Fuson Shale and Morrison Formation), differing potentiometric water levels between the Fall River and Chilson aquifers and water quality differences between aquifers.”

Id. at 3, ¶ A.2.

This testimony and the ROD, taken together, provide sufficient evidence that the ore zones targeted for recovery at the Dewey-Burdock ISR Project site are adequately confined and that Dr. Moran’s allegation on this matter is without merit.

Dr. Moran goes on to allege that “[i]t is not unusual for the inter-fingering sands, shales, etc. of sedimentary uranium deposits to be hydrogeologically-interconnected, when pumped, long-term....” Tribe Exhibit OST-1 at 19. Mr. Lawrence addresses this allegation both in his initial and rebuttal testimony and determines that the *site-specific* nature of the Project and typical ISR operations are designed specifically to address any potential concerns such as those

of Dr. Moran.¹³ Mr. Lawrence describes the site-specific nature of the Fall River Formation and Chilson Member of the Lakota Formation to be “largely fluvial deposits and consist of channel sandstones and finer-grained overbank deposits” as well as the Fuson Shale which is a “laterally-continuous, low-permeability unit (ranging from 20 to 80 feet thick in the project area) that separates the Fall River from the Chilson.” Powertech Exhibit APP-066 at 5, ¶ A.2. Mr. Lawrence notes that these definitions of the Project site subsurface based on the fact that “[e]ach of these units has been extensively mapped using the thousands of exploratory boreholes drilled within the project area.” *Id.* These naturally existing conditions, along with the “interbedded clay units found locally within the Fall River and Chilson” can provide additional confinement “beyond the major confining units....” *Id.* Along with these naturally occurring systems, engineering controls on ISR well installation (e.g., mechanical integrity tests (MIT)) and controls on individual wells and header houses serve as license-mandated preventative measures against solution migration. Well patterns typically used for ISR projects such as the Project “are designed to ensure that the lixiviant that is injected...can be successfully recovered from extraction...wells.” *Id.* Thus, as concluded by Mr. Lawrence, “the scale of the well pattern is small enough to recognize and account for the effects of interfingering sands and shales and to design the injection and recovery rates and monitoring system accordingly.” Powertech Exhibit APP-066 at 5, ¶ A.2. Thus, Dr. Moran’s allegation on “interfingering sands and shales” is without merit.

This allegation continues with an attack on Powertech’s 2012 hydrogeologic model which Dr. Moran claims “does not consider presence of faults, fractures, breccia pipes or open boreholes etc. identified by available data.” Tribe Exhibit OST-1 at 23. Mr. Lawrence disagrees

¹³ For additional discussion on fluvial systems where ISR operations typically occur *please see* Powertech Exhibit APP-037 at 20-21, ¶ A.46, which describes how the fluvial depositional systems at the Project site are similar to those found at most, if not all, ISR sites.

with Dr. Moran's statements on a variety of levels, some of which will be discussed here with the remainder in Powertech Exhibit APP-066 at 6-7, ¶ A.43. Initially, Mr. Lawrence notes that available data does not indicate the presence of faults/fractures or breccia pipes that significantly affect the hydrogeology within the Project area; but rather, such data indicates that they are not present at all.¹⁴ *Id.* According to the detailed site-specific mapping prepared by Powertech, which is local to the Project site and not *regional* in nature, no faults or fractures are present in the Project area.¹⁵ Further, as stated in Mr. Lawrence's initial testimony and reiterated here, the occurrence of breccia pipes in the Project area that substantially impact groundwater flow is strongly disputed by the evidence. *See id., citing* Powertech Exhibit APP-037 at 23, ¶¶ A.52-A.55. Moreover, even if breccia pipes were present, the 2012 groundwater model "was used to simulate breccia pipe discharge into the Fall River and Chilson to assess how such a scenario would impact the groundwater flow system." *Id.* at 6, ¶ A.43. Mr. Lawrence notes that a breccia pipe would be recognizable in the potentiometric surface of the Fall River and Chilson aquifers. *Id.* In response to a similar allegation, Mr. Lawrence also addressed the various investigations conducted by Powertech looking for breccia pipes in the Project area, including conducting field surveys, mapping the subsurface using data from thousands of exploration boreholes, use of color infrared imagery, and considering U.S. Geological Survey mapping that shows that the limit of the dissolution front that causes breccia pipes "is more than 6 miles northeast of the project area." Powertech Exhibit APP-066 at 7, ¶ A.4.

Also related to potential breccia pipes and faults in the Project area, Dr. Moran alleges that "review of several forms of D-B satellite imagery by myself and senior remote-sensing

¹⁴ Mr. Lawrence also notes that "historical exploration holes were plugged in accordance with State standards at the time of drilling and there is only one isolated are where unplugged or improperly plugged boreholes are expected to occur." *See* Powertech Exhibit APP-066 at 6, ¶ A.43.

¹⁵ This conclusion was agreed upon by NRC Staff in its SER, a conclusion that cannot be challenged in this proceeding.

experts at Front Range Natural Resources, Ft. Collins, CO, shows clearly that this area is intersected by numerous faults and fractures [and] ... also shows evidence of circular geologic features ... indicating the presence of collapse structures.” Tribe Exhibit OST-1 at 21. Mr. Lawrence responds to this allegation with a series of questions not addressed in Dr. Moran’s testimony: “What does [Dr. Moran] mean by ‘D-B satellite imagery’? How is the ‘D-B area’ defined in this context? What is the resolution of the imagery and has it been submitted as evidence? Who are the ‘remote-sensing experts’ referred to and are they providing expert testimony in this proceeding? Has Dr. Moran made any attempts to field verify these proposed solution collapse structures?” Powertech Exhibit APP-066 at 7, ¶ A.4. Mr. Lawrence then describes extensive evidence presented by Powertech in the license application and supported by NRC Staff in the FSEIS and NRC Staff’s initial testimony that breccia pipes do not occur in the Project area. *Id.*

Mr. Lawrence addresses the regional studies that Dr. Moran relies heavily on to reach site-specific conclusions. In general, he notes that “Dr. Moran has frequently cited regional geologic and hydrologic reports to make gross generalizations about site conditions at the Dewey-Burdock Project area while ignoring the large amount of data that is present and available within the project area.” *Id.* at 7, ¶ A.5. Specifically, Mr. Lawrence notes that the Keene (1973) study frequently cited by Dr. Moran involves a very large study area (512,000 acres, compared to 10,580 acres in the Project area), of which approximately half of the Project area lies outside of the Keene study area. *Id.* at 8, ¶ A.5. Mr. Lawrence notes that the density of data used by Powertech in the Dewey-Burdock Project area was “more than 400 times the data density available to Keene.” *Id.* He concludes that “Keene’s work should be used with caution as the geologic and hydrologic setting for most of the study area potentially is quite different

than the Dewey-Burdock Project site, and Dr. Moran makes no demonstration of how the regional data in Keene and other studies are applicable to the Dewey-Burdock Project site.” *Id.*

In his rebuttal testimony Mr. Lawrence also responds to other allegations by Dr. Moran, including that “all of the relevant pumping tests indicated that the Dewey-Burdock sandstones behaved as leaky-confined aquifers” and that “[t]he Petrotek (2012) Model is Unreliable and Biased.” Tribe Exhibit OST-1 at 19 and 23. Mr. Lawrence explains that “the Fuson Shale is an effective confining unit except in limited areas where direct communication through the Fuson is caused by improperly screened wells or unplugged boreholes.” *Id.* at 9, ¶ A.6. He also describes the assumptions used to construct the numerical groundwater model and explains that NRC Staff reviewed the model and determined it “sufficient to use as a predictive tool.” *Id.* at 9-11, ¶ A.7, *citing* NRC Staff Exhibit NRC-001 at A3.27.

CI witness Dr. LaGarry alleges that “Powertech reports horizontal flows” within the Inyan Kara aquifer “of up to 35.5 meters/day” within the Chilson and “up to 6,000 ft/day elsewhere in the Black Hills region.” CI Exhibit INT-013 at 6-7. In his rebuttal testimony, Mr. Lawrence states that he does not know how Dr. LaGarry’s 35.5 meters/day figure was derived but “[t]he 6,000 ft/day number is actually a transmissivity value (and is correctly reported by Powertech as 6,000 ft²/day).” Powertech Exhibit APP-066 at 11, ¶ A.8. Mr. Lawrence then shows the calculations that used site-specific parameters to estimate the groundwater velocity of 6.1 feet per year in the Fall River and 7.3 feet per year in the Chilson. *Id.*

Mr. Lawrence concludes his testimony by addressing concerns raised by CI witness Susan Henderson in Exhibit INT-007 regarding the potential impacts from prior open-pit and underground uranium mines and exploration boreholes and by questioning the relevance of the report submitted by Dr. Abitz in CI Exhibit INT-002. *Id.* at 12, ¶¶ A.9 and A.10.

Powertech's expert witnesses have not addressed testimony submitted by CI that is outside scope of Contention 3. This includes testimony by Dr. Donald Kelley regarding public health issues (CI Exhibit INT-008), testimony by Marvin Kammera regarding unspecified threats of groundwater contamination and impacts to water use (CI Exhibit INT-011), testimony by Dayton Hyde that primarily involves potential surface water impacts (CI Exhibit INT-012), and testimony by Linsey McLean regarding potential heavy metal accumulation in wastewater (CI Exhibit INT-014). Powertech plans to file a motion *in limine* to exclude this testimony on July 22, 2014.

With respect to "open boreholes," Powertech is required under its license to demonstrate adequate confinement prior to operations, including the submission of wellfield hydrologic packages and detailed pump tests to identify if open boreholes will cause issues with operations. Thus, based on these analyses and regulatory requirements, Dr. Moran's allegation on this issue is without merit.

Accordingly, based on the above-discussed items and the entirety of its Initial and Rebuttal Statements and Testimony, it is Powertech's position that Contention 3 and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

E. CONTENTION 4: Alleged Failure to Adequately Analyze Groundwater Quantity Impacts

Contention 4 involves allegations regarding Powertech and NRC Staff analyses of potential groundwater quantity impacts from operation and restoration at the Project. While this is an environmental contention, CI and the Tribe have not successfully translated this Contention into a safety contention, including the conclusions reached in NRC Staff's SER. Thus, to the extent that any challenges are levied against conclusions reached in the SER, even if used in the

FSEIS, they should be dismissed as outside the scope of this Contention. For purposes of this Contention, Powertech intends to rely on the testimony of Mr. Hal Demuth and Mr. Doyl Fritz.

One of the main allegations offered by CI's witness Susan Henderson and the Tribe's witness Dr. Moran is that Powertech will use approximately 8,500 gallons per minute (gpm) of water during its active ISR operations, and Dr. Moran's allegation that groundwater consumptive use estimate from the Inyan Kara aquifer of 89.4 billion gallons of water over a twenty (20) year period based on the alleged usage rate of 8,500 gpm. *See* CI Exhibit INT-007 at 3; *see also* Tribe Exhibit OST-1 at 26. These statistics are being used by Dr. Moran in his Tribe Exhibit OST-5 at 17 to allegedly illustrate that Powertech plans to consume "massive" amounts of groundwater. However, these allegations are only illustrative of these affiants' complete misrepresentation of the facts of Powertech's intended groundwater consumptive use, its requested Inyan Kara water rights application and how an ISR operation works.

As discussed in his rebuttal testimony, these affiants' testimony is factually incorrect and, as Mr. Fritz states, "[t]o keep claiming that Powertech will divert 8,500 gpm from the Inyan Kara is either dishonest or indicates an inability to understand the facts in this case." Powertech Exhibit APP-068 at 3, ¶ A.1. Mr. Fritz initially reiterates his initial testimony where he states that Powertech's anticipated water consumption is based on the its license application and license where the *circulation* of 8,500 gpm is the maximum gross diversion rate for operations and groundwater restoration, while the actual consumptive use of groundwater (net diversion rate) is only one (1) to three (3) percent of that total (up to 170 gpm). *See id.* This fact alone demonstrates that CI's and the Tribe's testimony is not credible.¹⁶

¹⁶ Dr. Moran's inability to understand how an ISR process works is illustrated by Mr. Fritz when he addresses his allegation that flow rates in the Petrotek groundwater model are "questionable" due to geologic features. Mr. Fritz notes that Dr. Moran assumes that "the various sand and shale units will be

Mr. Fritz’s testimony continues with a reiterated example of Mr. Dayton Hyde’s water right application that was approved by SDDENR for irrigation using a center pivot system. As stated in Mr. Fritz’s previous testimony, Mr. Hyde’s water right allows usage of up to 278 acre feet per year resulting in the allowance of up to 90.6 million gallons of water per year, which is “slightly more than what has been requested by Powertech and recommended by SDDENR for approval from the Inyan Kara aquifer for the Dewey-Burdock Project.” *Id.* Mr. Fritz then opines that “[s]ufficient water to irrigate 139 acres is generally not considered to be a ‘tremendous’ or ‘massive’ amount of water as has been characterized by [Mrs. Henderson and Dr. Moran].”¹⁷ *Id.* Thus, there should be no “massive” potential environmental impacts to groundwater quantity for an ISR operation that uses no more water than that applied for by an intervenor who utilizes similar amounts of water.

Mr. Fritz also addresses groundwater consumptive use in the context of Dr. Moran’s allegation that the FSEIS estimate for such groundwater use does not reflect the fact that aquifer water will have been contaminated and that land application waters will be lost to evaporation or evapotranspiration. *See* Tribe Exhibit OST-1 at 27. Mr. Fritz states that the waters consumed by land application are included in the water balance submitted for review by Powertech and evaporation will not result in additional consumptive use. *See* Powertech Exhibit APP-068 at 5, ¶ A.5. Further, Mr. Fritz states that “water levels will recover to pre-operational levels within about one year, as shown in the Petrotek digital modeling report....The water quality in the affected Inyan Kara aquifers will be restored in accordance with NRC license requirements before the financial assurance is released.” *Id.* As a result, Mr. Fritz concludes that “there will

dewatered” and does not understand that “the ISR process will only work if the units remain saturated so the fluids can flow through the units and remove the uranium.” Powertech Exhibit APP-069 at 5, ¶ A.4.
¹⁷ Powertech has included an exhibit (Powertech Exhibit APP-069) to illustrate that there are everyday operations such as irrigation where similar amounts of water are consumed and such use is not considered to be “tremendous” or “massive.”

be no volumes of water that are lost or contaminated through these processes after the ISR and mandatory aquifer restoration processes are completed.” *Id.*

Dr. Moran’s attack on the FSEIS continues with a claim that it relied on an “inadequate and unreliable analysis of water use, and failed to provide a water balance.” Tribe Exhibit OST-1 at 27. However, once again, Mr. Fritz demonstrates that Dr. Moran continues to rely on analysis that fails to account for elements of the ROD. Mr. Fritz cites to Powertech’s June 2011 TR RAI responses (Powertech Exhibit APP-016-A through APP-016-BB) “including provision of a project-wide water balance in support of the discussion on handling liquid waste.”

Powertech Exhibit APP-068 at 4, ¶ A.2. As stated by Mr. Fritz:

“[t]he water balance provides detailed information on production rates, aquifer bleed rates, reinjection rates, makeup water rates, and liquid waste disposal rates for the operation and aquifer restoration phases of the Dewey-Burdock Project.”

Id.

Mr. Fritz also refutes Dr. Moran’s allegation that Powertech’s water balance is inadequate, because it does not include items such as “detailed, measured data for volumes of water entering the system and losses (e.g., volumes of ground water available in the various aquifers....” Tribe Exhibit OST-1 at 27. Mr. Fritz notes that Dr. Moran once again fails to understand how the ISR process works. With respect to “detailed, measured data” of water balance, Mr. Fritz cites to Mr. Demuth’s testimony (Powertech Exhibit APP-013 at A.44) that it is not possible to have such data without first commencing active ISR operations and that the “volumes of groundwater available in the various aquifers” have no bearing on the process water balance.” Powertech Exhibit APP-068 at 4, ¶ A.3. Mr. Fritz also cites Dr. Moran’s misguided opinion of the makeup of a water balance in the context of a water rights application by stating:

“In this context, the water balance is a measure of the use of the water, not its availability, and is a necessary step in determining how much water to apply for in the water right permit application.”

Id.

Thus, based on Mr. Fritz’s rebuttal testimony at ¶¶ A.2, A.3, and A.5, Powertech’s position is that the Tribe’s witness, Dr. Moran, does not properly understand ISR water balance to render an opinion on this matter.¹⁸

Dr. Moran’s opinion on water balance is also contradicted by Mr. Demuth’s testimony. Where Dr. Moran states that the FSEIS water balance “did not follow...accepted methodologies,” (Tribe Exhibit OST-1 at 27) Mr. Demuth’s initial testimony specifically contradicts that statement. Mr. Demuth, citing in part Mr. Lawrence’s initial testimony, describes the process by which the FSEIS water balance diagram was developed, beginning with a request by NRC Staff for such diagram to satisfy NUREG-1569 requirements, then development of the diagram including “how production and restoration bleed will be maintained during production and groundwater restoration,” and ending with NRC Staff’s review and approval of it in the FSEIS. *See* Powertech Exhibit APP-065 at 4, ¶ A.4. Mr. Demuth also supports his water balance conclusions with an assessment of Powertech’s 2012 groundwater model developed by Petrotek and states that the model provided an assessment of water availability in the production zone aquifers and potential impacts of consumptive groundwater use on surrounding water users. *See id.* at 5, ¶¶ A.6-A.8. Thus, Dr. Moran’s claims regarding water balance are without merit.

¹⁸ Dr. Moran also demonstrates his inability to properly understand a groundwater model with respect to water balance as he either does not account for or ignores that NRC Staff’s “independent analysis of potential drawdowns in the Madison aquifer using a 3-layer model that the proposed project is not likely to affect the operation of the Edgemont water supply.” Powertech Exhibit APP-068 at 5, ¶ A.3.

Therefore, based on the entirety of Powertech's Initial and Rebuttal Statements and Testimony and NRC Staff's Initial Statement and Testimony, it is Powertech's submission that Contention 4 and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

F. CONTENTION 6: Alleged Failure to Describe or Analyze Proposed Mitigation Measures

Contention 6 involves allegations regarding the FSEIS' analyses of mitigation measures over a range of resources areas including groundwater, historic and cultural resources, air emissions, and wildlife protection. Powertech's Initial Statement and Testimony address a wide variety of allegations previously levied by CI and the Tribe, including the claim that NRC Staff merely listed mitigation measures with no subsequent analysis of proposed mitigation for ISR operations throughout the lifecycle of the Dewey-Burdock Project. For purposes of this Contention, Powertech intends to rely on the testimony of Mr. Hal Demuth, Mr. Doyle Fritz (Powertech Exhibit APP-068), and Ms. Gwynn McKee (Powertech Exhibit APP-070) in support of its Rebuttal Statement.

Initially, as stated by Mr. Fritz and Mr. Demuth in their rebuttal testimony, neither CI nor the Tribe has offered any expert testimony on the substance of Contention 6. Thus, the focus of this Contention will be on statements and conclusions offered by NRC Staff and the Tribe's Initial Statement of Position. The only exception is CI's allegation that the testimony of its witness, Ms. Peggy Detmers, applies to Ms. Detmers' testimony is addresses in the rebuttal testimony of Gwyn McKee as discussed below.

First, with respect to NRC Staff's Initial Statement of Position and Testimony, Powertech believes that it is permissible under CEQ regulations to use mitigation measures regardless of whether they have succeeded in the past. Mr. Fritz supports this conclusion by stating that "[i]f

this were not true, there could be no innovation or adoption of new technology in any endeavor under the auspices of NEPA.” Powertech Exhibit APP-068 at 7, ¶ A.9. Mr. Fritz also concurs with NRC Staff’s assessment of how the FSEIS not only summarized the mitigation measures in Chapter 6 of the FSEIS, but also described them and evaluated their effectiveness in the FSEIS Chapter 4 impact analysis and even in FSEIS Chapter 2. Referring to his initial testimony at ¶¶ A.21-A.25, Mr. Fritz states that, “A.22 [of his initial testimony] gives 16 specific examples of where the FSEIS addresses the implementation and effectiveness of each mitigation measure. In addition, A.23 gives at least 37 specific references throughout the license application where mitigation measures are described. *Id.* at 6, ¶ A.7. Mr. Fritz also refers back to his initial testimony showing that a variety of resource areas noted by the opposition, including air quality, waste disposal, and land application are specifically addressed in the ROD. Thus, Powertech’s position is that neither CI nor the Tribe has offered any evidence that mitigation measures were not addressed adequately in the ROD and that NRC Staff’s position comports with that offered by Powertech.

With respect to the Tribe’s allegation that the FSEIS provides nothing more than a list of mitigation measures without sufficient justification or evaluation/assessment, both Mr. Fritz and Ms. McKee address this allegation and find it to be without merit. As stated above and as concurred on by NRC Staff, Mr. Fritz states that “there are numerous locations in the FSEIS and various license application documents that describe the implementation and effectiveness of proposed mitigation measures.” *Id.* at 6, ¶ A.8. Ms. McKee concurs with Mr. Fritz with respect to this position by noting that Chapters 2, 4, and 6-7 all address mitigation measures for various resource areas, including wildlife protection. *See* Powertech Exhibit APP-070 at 3, ¶ A.1. Thus, the Tribe’s allegation on the FSEIS’ alleged “listing” of mitigation measures is without merit.

Mr. Demuth also finds this claim to be unfounded. As stated in his initial testimony, Mr. Demuth notes that there are extensive mitigation measures identified by Powertech and NRC Staff in the FSEIS addressing mitigation of potential impacts to groundwater resources, such as compliance with NRC regulatory requirements, identifying and plugging unplugged or improperly plugged boreholes, and standard industry practices. *See* Powertech Exhibit APP-065 at 6, ¶ A.10 *citing* Powertech Exhibit APP-013 at 14-16, 23-30, ¶¶ A.32-A.33, A.51-A.59. Mr. Demuth follows this with a strong statement disagreeing with the Tribe’s allegation that ISR facilities have a “very poor record” of groundwater restoration by stating, “[t]he allegation...is false....NRC has approved numerous wellfield restorations at NRC-licensed ISR facilities.” *Id.* at 7, ¶ A.11. Thus, Dr. Moran and the Tribe’s allegations on this issue are without merit.

With respect to mitigation measures for wildlife protection, Ms. McKee specifically addresses her support for NRC Staff’s FSEIS’ conclusion that mitigation measures specific to wildlife protection are described and evaluated in the FSEIS. Ms. McKee agrees with “the NRC Staff’s description of specific examples of mitigation measures for wildlife to which Powertech has committed...All of these mitigation measures are designed to reduce or eliminate potential impacts to wildlife.”¹⁹ Powertech Exhibit APP-070 at 4, ¶ A.2. These mitigation measures include development of an Avian Monitoring and Mitigation Plan (Avian Plan) and following State of South Dakota requirements for surface water ponds. *See id.*

Ms. McKee also addresses the Tribe’s allegation that the FSEIS lacks sufficient detail to address mitigation measures for wildlife protection and merely requires that plans be prepared and submitted in the future. Tribe Initial Statement at 34. Ms. McKee’s rebuttal testimony

¹⁹ Ms. McKee also agrees with NRC Staff’s conclusions that the approach to the Avian Plan is consistent with NEPA requirements. More specifically, Ms. McKee states, “I agree with the statement...of the NRC Staff’s initial written testimony that says, “NEPA does not require that all of the mitigation measures an agency specifies in an EIS be in final form.”” Powertech Exhibit APP-070 at 5, ¶ A.4.

reiterates from her initial testimony that the Avian Plan is a State permitting requirement and is not required by NRC and that NUREG-1569 does not require a specific mitigation plan such as the Avian Plan to be developed prior to license issuance. *See id.* at 4, ¶ A.3. This, according to her testimony, renders whether the Avian Plan is completed irrelevant. *See id.* Ms. McKee also concurs with NRC Staff’s conclusion that Powertech’s license application and the FSEIS adequately discussed potential and final mitigation measures for wildlife and that the incorporation of other State requirements, such as the Avian Plan, into its mitigation analysis is in keeping with CEQ regulations. *See id.*

CI attempts to use the testimony of its witness, Ms. Peggy Detmers, to support its allegation of “the failure of the FSEIS to adequately address the existence of whooping cranes during migration and other endangered species” under this Contention. CI Initial Statement at 9. In response, Ms. McKee’s rebuttal testimony reiterates her initial testimony regarding the confirmed absence of whooping cranes and other threatened and endangered (T&E) species in the Project area and specifically refutes the testimony proffered by Ms. Detmers. First, Ms. McKee describes how the FSEIS addresses the potential for impacts to each T&E species that could potentially occur in the Project area even though baseline inventories showed that no T&E species were documented in the Project area. Powertech Exhibit APP-070 at 5, ¶ A.5. Next, Ms. McKee cites her initial testimony and NRC Staff’s initial testimony confirming that “the Service advised the NRC in writing that the agency has no records of any federally listed species occurring in the area of the project.” *Id.* at 6, ¶ A.6. Finally, Ms. McKee refutes the statement in Ms. Detmers’ initial testimony (Exhibit INT-010 at 1) that “the whooping crane does indeed migrate through” the Project area. *Id.* at 6-9, ¶ A.7. Specifically, Ms. McKee describes how the maps provided with Ms. Detmers’ initial testimony were not “obtained from current Service

documents regarding whooping crane migrations and confirmed sightings across the central U.S.” and how Ms. Detmers failed to reference or acknowledge the 5-year Review of the Service’s recovery plan for the whooping crane, a document that was provided with Ms. McKee’s initial testimony and that shows that “none of the confirmed whooping crane sightings in the central flyway ... have been located in the Dewey-Burdock Project area.” *See id.* Ms. McKee also provides testimony and an annual wildlife monitoring report prepared for the Project that demonstrates that “no T&E species, including whooping cranes, have been documented in the survey area since annual monitoring was initiated in December, 2012.” *See id.*

Therefore, based on the above-discussed items and the entirety of Powertech’s Initial and Rebuttal Statements and Testimony, it is Powertech’s submission that Contention 6 and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

G. CONTENTION 9: Alleged Failure to Consider Connected Actions

Contention 9 involves a series of allegations regarding NRC Staff’s alleged failure to consider “connected actions” associated with Dewey-Burdock ISR Project and the ROD issued by NRC Staff. This Contention involves allegations regarding interactions with other agencies or decision-making authorities regarding aspects of the Project, including consultation with federal and State agencies and consideration of the actions they would be required to take for complete authorization of the Project. This is an environmental contention that has migrated from Powertech’s license application to the DSEIS/FSEIS. For purposes of this Contention, Powertech intends to rely on the testimony of Mr. Hal Demuth and Mr. Doyl Fritz. As will be shown below, the allegations offered in Contention 9 do not require modification of the ROD.

As is the case with Contention 6, both CI and the Tribe have failed to offer expert testimony regarding Contention 9’s substance. As such, Powertech, Mr. Demuth, and Mr. Fritz

will address the Tribe's Initial Statement of Position and NRC Staff's Initial Statement of Position and Testimony.

The Tribe alleges in its Initial Statement of Position that “the FSEIS fails to conduct any NEPA analysis” of SDWA Class III and V wells proposed for the Dewey-Burdock ISR Project. Tribe Initial Statement at 38. As discussed in Powertech's Initial Statement and Mr. Fritz's testimony, the Tribe continues to proceed from the assumption that a NEPA analysis is required for SDWA UIC permits. EPA SDWA regulations at 40 CFR § 124.9(b)(6) specifically preclude EISs in conjunction with a requested SDWA UIC permit. Further, as stated by Mr. Fritz, “[w]hile no separate NEPA analysis was conducted specifically for the UIC permit application...EPA was fully engaged in the license application process and NRC's NEPA analysis.” Powertech Exhibit APP-068 at 7, ¶ A.11. This is supported by Powertech's Initial Statement where the involvement of EPA in the FSEIS preparation process included exchanging multiple drafts of the DSEIS, comments submitted during the DSEIS public comment period, and the mandatory thirty (30) day concurrence period post-FSEIS issuance and pre-license issuance. Powertech's position is also supported by previous citations to the FSEIS where the issuance of permits for use of Class III and V wells at the Project site is analyzed.²⁰ See Powertech Exhibit APP-046 at 18-19, ¶ A.26; *see also* Powertech Initial Statement at 58. Thus, the Tribe's allegation on EPA SDWA Class III and V wells is without merit.

The Tribe also alleges that NRC Staff improperly defers to SDDENR permits for National Pollutant Discharge Elimination System (NPDES) for storm water releases from the Project to which NRC Staff responds that Powertech must obtain such a permit to proceed to operations. See Tribe Initial Statement at 39-40; *see also* NRC Staff Exhibit NRC-001 at A 9.4.

²⁰ It is worth reiterating Mr. Demuth's previous and current statements regarding Class V UIC wells that there “is no regulatory requirement that Class V wells must be above or below any USDW.” Powertech Exhibit APP-065 at 7, ¶ A.13.

Powertech concurs with NRC Staff on this issue because, as stated in its Initial Statement, NRC Staff incorporates other agency license/permit requirements to the extent that they satisfy NRC's AEA statutory mission of adequate protection of public health and safety. *See* Powertech Initial Statement at 59. To the extent that a SDDENR storm water permit adequately protects public health and safety, NRC will and has incorporated that into the FSEIS analysis as stated by Mr. Fritz. *See* Powertech Exhibit APP-068 at 8, ¶ A.14. This is the case for incorporation and description of any other agency authorization that meets NRC 's AEA statutory mission including, but not limited to, well plugging and abandonment from State requirements (SDDENR), use of Class II and V UIC wells (EPA), and storm water discharge (SDDENR). Thus, the Tribe's allegation on "improper deferral" to other agencies by NRC Staff is without merit.

Powertech concurs with NRC Staff's FSEIS analysis and their initial testimony (NRC Staff Exhibit NRC-001 at A.9.4) regarding storm water mitigation measures and management plans. As stated by Mr. Fritz, who has prepared, supervised, and reviewed such management plans for his company for more than twenty (20) years, states that NRC Staff's written testimony, as well as the descriptions in Chapter 4 of the FSEIS, adequately describe these measures.

Therefore, based on the above-discussed items and the entirety of Powertech's Initial and Rebuttal Statements and Testimony, it is Powertech's submission that Contention 9 and the offerings by CI and the Tribe therein do not constitute grounds for modification of the ROD.

H. CONTENTION 14A/B

As stated above, by Order dated July 15, 2014, the Licensing Board granted Powertech's June 30, 2014, Motion to Dismiss Contention 14A/B. Thus, no testimony is offered on this Contention here.

VI. CONCLUSION

Based on the argument and expert testimony discussed above and in concurrence with the arguments and expert testimony offered by NRC Staff, Powertech's position is that each of the Contentions offered by both CI and the Tribe should be dismissed and should not result in a modification to the ROD representing and supporting Powertech's NRC License No. SUA-1600.

Respectfully Submitted,

**/Executed (electronically) by and in
accord with 10 C.F.R. § 2.304(d)/
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Dated: July 15, 2014

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)	
)	
)	Docket No.: 40-9075-MLA
POWERTECH (USA), INC.)	
)	Date: July 15, 2014
)	
(Dewey-Burdock In Situ Uranium Recovery)	
Facility))	
_____)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **“POWERTECH (USA), INC.’S REBUTTAL OF CONSOLIDATED INTERVENORS AND OGLALA SIOUX TRIBE INITIAL STATEMENTS OF POSITION”** in the above captioned proceeding have been served via the Electronic Information Exchange (EIE) this 15th day of July 2014, 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.

Respectfully Submitted,

**/Executed (electronically) by and in
accord with 10 C.F.R. § 2.304(d)/
Christopher S. Pugsley, Esq.**

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Dated: July 15, 2014