



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

POWERTECH USA, INC.

(Dewey-Burdock
In Situ Uranium Recovery Facility)

Docket No. 40-9075-MLA

ASLBP No. 10-898-02-MLA-BD01

Revised Hearing Exhibit

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PREFILED DIRECT TESTIMONY OF DIANA DIAZ-TORO AND JERRY SPANGLER

I. INTRODUCTION

Q.1 Please state your name, position, and employer, and briefly describe your role in the Staff's efforts to address the outstanding issues in Contention 1A.

A.1a My name is Diana Diaz-Toro and I am a Project Manager in the Nuclear Regulatory Commission's (NRC's) Office of Nuclear Material Safety and Safeguards (NMSS), Division of Fuel Cycle Safety, Safeguards and Environmental Review, Environmental Review Branch. My responsibilities include environmental project management of licensing and regulatory actions (e.g., applications for new licenses, license renewals, and license amendments) involving nuclear materials and waste (e.g., applications associated with uranium recovery, spent fuel storage and transportation, uranium enrichment, uranium conversion, and fuel fabrication facilities).

I have served as co-Project Manager for the environmental review associated with the materials license application for the Dewey-Burdock in-situ uranium recovery (ISR) project to be located in Fall River and Custer Counties, South Dakota, since 2015 and as lead Project Manager since 2017. In these roles, I have been responsible for leading the Staff's efforts to develop and implement an approach to obtain additional information about historic, cultural, and religious resources of significance to the Lakota Sioux Tribes to remedy the Atomic Safety and Licensing Board (Board)-identified deficiency in the Staff's National Environmental Policy Act of 1969 (NEPA) review. As the designated contracting officer's representative for the Dewey-Burdock project, I have also coordinated the assistance of the Staff's contractor, SC&A, Inc. (SC&A), in support of those efforts. My Statement of Professional Qualifications is provided as Exhibit NRC-177.

A.1b My name is Jerry Spangler. I am an associate and cultural resource specialist with SC&A. I was brought on board to assist NRC Staff in the design and implementation of a Tribal cultural survey to resolve outstanding issues regarding the Tribal cultural resource Contention 1A as it relates to the Dewey-Burdock ISR project. In this role, I have provided guidance and advice to NRC Staff, researched previously conducted cultural resources survey methodologies, and assisted the Staff in developing a proposed draft site survey methodology. My Statement of Professional Qualifications is provided as Exhibit NRC-178.

Q.2 Are you familiar with the admitted contention in this proceeding?

A.2a (D. Diaz-Toro) Yes. As the lead Project Manager for the environmental review associated with the materials license application for the Dewey-Burdock ISR project, I am familiar with Contention 1A.

A.2b (J. Spangler) Yes. As NRC Staff contractor I have reviewed previous correspondence and Board Orders relevant to Contention 1A.

A.2c (J. Spangler, D. Diaz-Toro) The Board's order dated April 29, 2019, established this hearing on Contention 1A to resolve the disputes of fact over "the reasonableness of the NRC Staff's proposed draft methodology for the conduct of a site survey to identify sites of historic, cultural, and religious significance to the Oglala Sioux Tribe, and the reasonableness of the NRC Staff's determination that the information it seeks to obtain from the site survey is unavailable." (Order (Granting NRC Staff Motion and Scheduling Evidentiary Hearing) (April 29, 2019) at 5). The Board also stated that the evidence should "address the criteria of 40 C.F.R. § 1502.22 pertaining to incomplete or unavailable information." (*Id.*)

Q.3 Please provide a summary of your relevant qualifications.

A.3a (D. Diaz-Toro) I have seventeen years of experience as a project manager, technical reviewer, and regulator at the NRC. My work in the NEPA and National Historic Preservation Act (NHPA) environments extends over nine years. I am responsible for planning, coordinating and executing NEPA environmental reviews and NHPA Section 106 reviews for complex materials licensing projects. As part of these reviews, I am responsible for preparing environmental review documents, consultation correspondence, and conducting outreach activities and meetings with license applicants, other Federal government agencies, State, local, and Tribal government agencies, and other interested stakeholders. I also provide technical advice on policy and programmatic matters to NRC management related to environmental review matters, and guidance to NRC Staff. I also have extensive experience in managing technical review teams, formulating budgets, and developing, executing, and monitoring contract requirements.

A.3b (J. Spangler) I have thirty years' experience developing cultural resource methodologies related to archaeological, historical, and oral history projects. My work in this area includes extensive experience working with Tribes and facilitating the protection of Tribal interests. I also have previous experience with the Lakota Sioux in an archaeological-ethnographic research capacity.

My professional expertise is in designing and implementing research approaches that maximize the protection of all cultural resources through collaboration. My preservation-oriented approaches encourage engagement and participation by federal agencies to fully embrace their responsibilities under NEPA and NHPA. My work includes dozens of small- and medium-scale NHPA Section 106 compliance projects involving public-private land trades, water development projects, road improvements, and mining projects. My research designs have incorporated exhaustive literature reviews, pedestrian survey and eligibility testing methods, and in limited circumstances data recovery (excavation). I have worked closely with multiple conservation groups to develop and implement research designs intended to foster cultural resource preservation on a landscape scale. These efforts contributed to, for example, the establishment of Bears Ears National Monument. I received the 2019 President's Recognition Award from the Society for American Archaeology for my efforts to preserve Grand Staircase-Escalante National Monument. I have written National Register evaluations for more than 1,000 archaeological and historic sites.

I have also assisted private clients with NEPA compliance by evaluating cultural resource impacts, writing the relevant cultural resources sections of required NEPA environmental assessments and environmental impact statements, and supporting associated close collaboration in the NEPA process with various federal agencies.

My work in these areas includes extensive experience working with Tribes and facilitating the protection of Tribal interests. On diverse projects, I have advocated and supported tribal positions during consulting party meetings, provided technical analyses to tribal officials to assist in their own formal comments on specific undertakings, and accompanied tribal officials on tours of areas where cultural resources may be impacted. I also manage the Southern Utah Oral History Project that resulted in the collection of more than 200 oral histories of local ranching families and Indian Tribes with cultural roots in southern Utah and northern Arizona.

Since becoming the staff contractor to the NRC Staff, I have immersed myself in scholarly publications related to the Lakota, including their archaeology, ethnology, history, Tribal cosmology, and relevant treaties to better understand Lakota perspectives and the significance of the Lakota cultural landscape.

Q.4 What topics are covered in your testimony?

A.4 (J. Spangler, D. Diaz-Toro) Our testimony explains why the Staff has satisfied its duty under NEPA to take a “hard look” at Tribal cultural resources that may be impacted by the Dewey-Burdock project. As the Board found in LBP-18-5, the Staff, in what has been referred to in this proceeding as the “March 2018 Approach,” developed a reasonable approach for obtaining additional information on specific cultural, historic, or religious resources of importance to the Oglala Sioux Tribe. We explain that, consistent with the procedures established by the Board in LBP-18-5 for the resolution of Contention 1A, the Staff once more offered the Tribe an opportunity to participate in the March 2018 Approach, and again initiated discussions with the Tribe on a methodology for the Tribal site survey component of the approach that would fit within the constraints of the March 2018 Approach.

We explain why the draft methodology the Staff developed was reasonable and appropriately considered and responded to the concerns of the Tribe. We explain why the Staff reasonably determined that the negotiations with the Tribe would not result in an agreement with the Tribe, most crucially because the Tribe constructively rejected the fundamental terms of the March 2018 Approach, which the Board and Tribe previously agreed was reasonable. We explain why the Staff reasonably determined that the information it has sought from the Tribe from the implementation of the March 2018 Approach is unavailable. Finally, we explain why the record, including our testimony and the analysis already in the NRC’s final supplemental environmental impact statement (FSEIS) for the Dewey-Burdock ISR project, shows that the Staff has met the standards of 40 C.F.R. § 1502.22 and fulfilled its NEPA responsibilities.

Q.5 How is your testimony organized?

A.5 (J. Spangler, D. Diaz-Toro) We first describe the purpose and conduct of cultural resource site surveys, including some key definitions, principles, and relevant guidance. We describe information that was gathered during previous site surveys for the Dewey-Burdock project and how that is reflected in the FSEIS. Next, we summarize certain key aspects of the March 2018 Approach, including how it addressed the central concerns raised by the Tribe.

We then explain the development of the Staff’s proposed draft methodology and how it specifically accounted for the Tribe’s input, consistent with the March 2018 Approach. In particular, we explain why it is a scientific methodology that balances the unique considerations of Tribal self-determination and expertise. We demonstrate why it is sufficiently detailed to provide a basis for meaningful discussion and agreement, and is not an “open site survey” as the Tribe claims. And we explain why the draft methodology is both compatible with the March 2018 Approach and provides the flexibility for Tribal input. We then describe why the Tribe’s response to the draft methodology constitutes a repudiation of the March 2018 Approach, and why that supports the Staff’s determination

to discontinue negotiations because the information sought from the site survey is unavailable.

Finally, we explain why the unavailability of the information meets the criteria of 40 C.F.R. § 1502.22, and why the record in this proceeding supports the conclusion that the Staff has taken the necessary reasonable steps to demonstrate the “hard look” required by NEPA.

Q.9 Please explain whether your testimony will reference or rely on any supporting documentary evidence.

A.9 Yes, in addition to this prefiled testimony (designated as Ex. NRC-176), we rely on and reference a number of documents that were already admitted as exhibits in this proceeding, including the Staff’s FSEIS (Ex. NRC-008-A-1 through NRC-008-B-2). Additionally, the attached documents submitted as new exhibits (listed in the Staff’s exhibit list Exhibits NRC-176 to NRC-224) are authentic copies of the respective correspondence, meeting summaries, reports, scholarly articles, or other documents. For these new exhibits, where the identified document has an Agencywide Documents Access and Management System (ADAMS) number, that number is provided in the exhibit list. For materials not placed in ADAMS that are subject to copyright, the exhibit list identifies the location with a citation or link to the information. Our testimony also references two exhibits that remain non-public (Ex. NRC-197, Oglala Sioux Tribe’s June 12, 2018, Cultural Resources Survey Methodologies Proposal (Non-Public); Ex. NRC-198, Oglala Sioux Tribe’s June 15, 2018 Updated Cultural Resources Survey Methodologies Proposal (Non-Public)), but the relevant facts we describe in this testimony regarding those documents are limited to those that have previously been discussed in public NRC filings and decisions of the Board.

II. PRINCIPLES AND GUIDANCE FOR CULTURAL RESOURCES SITE SURVEYS

Q.6 What is the purpose of a Tribal cultural resources site survey?

A.6 (J. Spangler) “Tribal cultural survey” is generally a term used to describe federal efforts to incorporate Tribal views and perspectives into the planning and implementation of various undertakings that fall within the domain of NHPA and NEPA. However, the term does not yet have an explicit definition or defined parameters in federal guidance; the term is not found anywhere in National Park Service’s National Register Bulletin 38 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. (Exs. NRC-145-A and NRC-145-B). In the NHPA and NEPA context, the level of formality and scale of the Tribal cultural survey can vary depending on the specific project’s circumstances. The purpose of the survey is, quite simply, to augment cultural resource inventory data by including Tribal perspectives on the nature and significance of cultural resources. These can include perspectives related to physical resources identified during the course of archaeological survey (sites), but can also include sacred locations

that are intangible or not readily identifiable as archaeological sites, such as landforms or places of worship and ceremony.

Q.7 What is a “traditional cultural property” (TCP)?

A.7 (J. Spangler) The term is defined in U.S. Department of Interior, National Park Service’s Bulletin 38 as a property “that is eligible for inclusion in the National Register [of Historic Places] because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community.” (Ex. NRC-145-A at 1). The National Park Service administers the National Register program, and Bulletin 38 provides the National Park Service’s guidelines for identifying and evaluating traditional cultural properties, including properties that may be of traditional religious and cultural significance to an Indian tribe.

It is important to note here that under that definition a TCP is one that is eligible for listing on the National Register. The Bulletin later goes on to specifically exclude cultural resources that are purely intangible or have no property referents. In other words, there must be physical remains of place to be eligible.

Q.8 As part of the Staff’s efforts to implement the March 2018 Approach and resolve the Board-identified NEPA deficiency, why did the Staff consider NHPA guidance when developing a Tribal site survey methodology?

A.8 (J. Spangler, D. Diaz-Toro) Given the limited federal guidance available under NEPA, the proposed draft methodology referenced federal guidance available related to the NHPA because of its content and value in developing survey methodologies. “Eligibility” is defined in 36 C.F.R. § 60.4, and “significance” is defined in federal guidance prepared by the National Park Service. (Ex. NRC-179, U.S. Department of Interior, National Park Services, National Register Bulletin 15, “How to Apply the National Register Criteria for Evaluation” (Rev. 1997) at 5). This guidance is typically applied to NHPA, but it is also applicable to NEPA. The standards or guidance is the same across federal agencies. Although NEPA and NHPA have common goals with respect to historic and cultural resources, there are differences between the two laws. For example, NHPA applies only to sites that are eligible for inclusion in the National Register of Historic Places (NRHP or National Register), whereas NEPA allows consideration of sites that are not eligible. (See Ex. NRC-048-00-BD01, Council on Environmental Quality’s “NEPA and NHPA: A Handbook for Integrating NEPA and Section 106” at 4).

Federal guidance related to cultural resources comes from the National Park Service in the form of bulletins that are applicable to all federal agencies. That guidance is then used in both the NHPA and NEPA processes, most commonly when the two laws are coordinated. Neither NHPA nor NEPA provide specific federal guidance on how cultural

resources are to be identified and evaluated. Instead, this guidance is found in the National Park Service bulletins, none of which address Tribal cultural surveys.

Q.10 Can one obtain information on sites of cultural, religious, and historic significance during a Tribal cultural resources survey without the involvement of relevant Tribes?

A.10 (J. Spangler) No. The intent of a Tribal cultural survey is to allow Tribal members with traditional knowledge to identify locations of cultural and sacred significance to the tribes, which can only be identified and evaluated by the Tribes. Archaeologists might be able to identify physical remains of certain activities, but only Tribal members can assign significance to those sites. This bears directly on the issue of intangible Tribal cultural values. Only a Tribal member with traditional knowledge can commune with the ancestors, identify places where spirits dwell, or evaluate the spiritual power of an individual location.

Q.11 Generally, how are Tribal cultural resources site surveys conducted?

A.11 (J. Spangler) Because each Tribe has different ideologies and cultural values, each Tribal cultural survey inherently reflects different methods unique to the desires and needs of each Tribe. I will summarize some representative examples of various ways that agencies, both federal and state, have engaged with Tribes to tailor the cultural survey methodology to those needs, which I researched as part of the Staff's efforts to develop a methodology for conducting a Tribal cultural resource survey at the Dewey-Burdock project:

- In a Minnesota case study, the state wanted to catalog Dakota sacred sites in the Minneapolis-St. Paul urban area. (Ex. NRC-180, Branum, Kelly M. et. al., *Survey to Identify and Evaluate Indian Sacred Sites and Traditional Cultural Properties in the Twin Cities Metropolitan Area* (2010)) enlisted Dakota informants to help identify sacred sites and then described them on standardized forms, which were then cataloged in a confidential state database.
- In the southern Nevada models (Ex. NRC-181, Stoffle, Richard W., et al., *The Land Still Speaks: Traditional Cultural Property Eligibility Statements for Gold Strike Canyon, Nevada and Sugarloaf Mountain, Arizona* (2000); Ex. NRC-182, Toupal, Rebecca S., et al., *Cultural Landscapes and Ethnographic Cartographies: Scandinavian-American and American Indian Knowledge of the Land* (2001)), the Tribal cultural survey involved traveling with Tribal elders to specific areas where sacred sites were known to exist and then interviewing the elders as to the site's significance and its relationship to other TCPs in the region, again documenting the significance on standardized forms.
- In a North Dakota DOT example (Ex. NRC-183, North Dakota Department of Transportation, *Design Manual, Chapter II, "Environmental and Public Involvement," Section 5, "Cultural Resources"* (2017)), Tribal members are involved in the initial Class III archaeological inventory, and when indigenous sites are

identified, Tribal elders are brought to that location to immediately assess their significance.

- In the Bureau of Ocean Energy Management model (Ex. NRC-184, Ball, David, et al., *A Guidance Document for Characterizing Tribal Cultural Landscapes* (2015)), federal officials sought to identify TCPs on a broad landscape. To that end, they enlisted members from multiple Tribes in the region with traditional knowledge to identify sacred sites, and then the Tribal members described the sites and their significance according to their own standards and definitions.

Consistent with differences among Tribes' needs and preferences, and because the concept of Tribal cultural surveys is relatively new, there is no uniform federal guidance as to how they should be designed and implemented. However, based on my review of the methodologies used by other federal agencies, there is a clear deference to Tribal wishes: 1) The Tribes define their own TCPs, 2) The Tribes use their own language and nomenclature to describe TCPs, and 3) the Tribes identify their own TCPs according to their own traditional knowledge (*cf.* Ex. NRC-184; Ex. NRC-185, Odess, Daniel, *A Landscape-Scale Approach to Mitigating Adverse Effects on Historic Properties*, U.S. Department of the Interior draft document (2016)). In other words, any approach that considers sites of traditional significance can be considered reasonable if it embraces the underlying principles of Tribal self-determination, e.g., that it is designed to enable the Tribes to define their own TCPs, using their own language and nomenclature, according to their own traditional knowledge.

In effect, my review of agency practices reflects a consistent understanding that a Tribal cultural survey should be established with input from the Tribe.

Q.12 How is a Tribal cultural resources site survey different from a non-Tribal cultural resources site survey?

A.12 (J. Spangler) Non-Tribal cultural resource surveys are conducted by cultural resource specialists (usually archaeologists meeting Department of Interior standards) using scientific methods. The surveys are standardized, and those standards are established by each individual State Historic Preservation Officer (SHPO). These standards establish minimum transects (the distance between individuals that will move (walk) in the same direction (in a straight line) and at the same time along a specific defined path to inspect the ground surface of a prescribed area), mandate uniform recording of observable sites, and clearly define what is and is not a site. These minimum standards can be enhanced due to unusual circumstances. It is important to note that each state has its own standards for archaeological survey, but the profession also has its standards that provide the framework for the state standards. The intent of a non-Tribal cultural resource survey is to document visible cultural resources using standardized instruments.

By comparison, a Tribal cultural resource survey is intended to identify and ascribe significance to intangible cultural phenomena known only to the Tribe. However,

intangible cultural phenomena are not measurable, and therefore the process of identifying and ascribing significance to intangible resources is outside the scope of the scientific process. Notwithstanding, as further discussed in A.37–A.40, it is feasible to develop a cultural resource survey in a manner that appropriately integrates scientific principles with the intangible aspects of Tribal views and beliefs. There are only a handful of Tribal cultural resource surveys that are publicly available, and without exception these emphasize the importance of Tribal participation in Tribal cultural resource surveys because the intangible values are known only to the Tribes.

Q.13 Do Tribal cultural resources site survey methods typically use a transect-based survey? If not, what types of methods have been used?

A.13 (J. Spangler) Only a handful of Tribal cultural resource surveys are publicly available; there might be others that are not publicly available. Of those that are publicly available, none of them incorporated pedestrian surveys with prescribed transects. Rather, the approaches involved Tribal members identifying sites and TCPs known to the Tribes, and then describing how those known sites relate to one another and the larger cultural landscape. In my research I did not identify any prior Tribal cultural survey that involved a comprehensive (100 percent) pedestrian survey of a project area anywhere near the size of the Dewey Burdock area of potential effects (APE) that was intended to identify unknown Tribal traditional cultural properties.

Q.14 Is it possible to construct mitigation measures for Tribal cultural resources without conducting a Tribal cultural resources site survey?

A.14 (J. Spangler, D. Diaz-Toro) No, not that would specifically consider the Lakota perspective. As discussed below in Section III, the Staff's previous Tribal surveys in 2013 identified numerous Tribal cultural resources in the project area. We could design mitigation measures for the Tribal cultural resources that have been previously identified, but without knowing the significance of those Tribal cultural resources to the Oglala Sioux Tribe and invited Tribes, it is difficult to assess the value of such measures for mitigating impacts. And without the Tribes' participation it is not possible to identify additional Tribal cultural resources of significance only to the Lakota or to or evaluate the significance the Lakota Tribes would ascribe to those resources. It is impossible to design mitigation measures for something that has not yet been identified.

The Staff anticipated that participation by the Oglala Sioux Tribe and other invited Tribes in a Tribal cultural resources site survey would identify additional Tribal cultural resources and evaluate the significance of identified Tribal cultural resources to these Tribes, and these identifications and evaluations could then facilitate preservation of those resources through avoiding, minimizing, or mitigating adverse effects.

III. THE EXISTING NEPA RECORD

Q.15 What information was collected during previous surveys of the Dewey-Burdock site?

- A.15 (D. Diaz-Toro) Beginning in April 2007, a Class III cultural resource investigation and evaluative testing was conducted by the Archaeology Laboratory, Augustana College (ALAC) on behalf of Powertech for the proposed Dewey-Burdock ISR Project. Field investigations of the proposed project area were conducted by pedestrian surveys between April and August 2007 and between July and September 2008. The field investigation results were documented in a report prepared by ALAC. (See Ex. NRC-073, A Level III Cultural Resources Evaluation of Powertech USA Inc.'s Proposed Dewey-Burdock Uranium Project Locality within the Southern Black Hills, Custer and Fall Rivers, Vol. I (Mar. 2008) (ML14245A273)).

As part of the NRC Staff's review of the license application, in the spring of 2013, the Dewey-Burdock ISR project site was opened to each consulting Tribe. Each Tribe was invited to conduct a field survey implementing a survey methodology that each Tribe deemed culturally appropriate. The NRC invited 23 Tribes to investigate any areas within the 4,282 ha [10,580 ac] Dewey-Burdock ISR site. Seven Tribes participated: Northern Arapaho Tribe, Northern Cheyenne Tribe, Turtle Mountain Band of Chippewa Indians, Crow Creek Sioux Tribe, Cheyenne and Arapaho Tribes of Oklahoma, Crow Nation, and Santee Sioux Tribe. The results of this Tribal cultural survey were summarized in the "Summary Report Regarding the Tribal Cultural Surveys Completed for the Dewey-Burdock Uranium In-Situ Recovery Project," dated December 2013. (Ex. NRC-019-00-BD01).

Finally, during the license application review, in consultation with the South Dakota SHPO and other consulting parties, the NRC Staff completed an assessment of the project's potential visual impacts on historic properties (i.e., properties of any type listed in or considered eligible for listing on the NRHP). This assessment considered whether the construction of the central processing plant and satellite facility would have a visual effect on historic properties. The study assessed whether the introduction of new visual changes in the form of new processing facilities could diminish the aspects of integrity that qualify an historic property for inclusion on the NRHP. Although these previous archaeological investigations identified sites that could have been identified as sites of significance to Indian Tribes, the investigations did not include any information directly from the Oglala Sioux Tribe members themselves regarding the sites' significance to the Tribe.

Q.16 Where does the FSEIS describe information concerning Tribal cultural resources that may be impacted by the Dewey-Burdock project?

A.16 (D. Diaz-Toro) The FSEIS describes information concerning Tribal cultural resources that may be impacted by the Dewey-Burdock ISR project in Chapter 3 and 4. Specifically, Chapter 3 describes the historic, cultural, and archaeological setting of the geographic region where the Dewey-Burdock ISR facility would be constructed, and the NRC Staff's efforts to gather information on cultural resources of significance to the Tribes that may be impacted by the Dewey-Burdock ISR project. Chapter 4 of the FSEIS discusses the NRC Staff's evaluation of the potential impacts to the Tribal cultural sites identified through the previously-conducted cultural resource investigations discussed above, as well as potential mitigation measures, regardless of the sites' eligibility to the NRHP.

Q.17 What information concerning Lakota Sioux cultural resources is described in the FSEIS?

A.17 (D. Diaz-Toro) In Chapter 3 of the FSEIS, the Staff described the historic, cultural, and archaeological setting of the geographic region where the Dewey-Burdock ISR facility would be constructed (Ex. NRC-008-A-1, FSEIS, at 173–288). The FSEIS explained that the Dewey-Burdock ISR project would be located on the southwestern edge of the Black Hills Uplift, which is considered a place of utmost spiritual importance to Tribal groups in the region (*Id.* at 245–57). Chapter 3 of the FSEIS also described the cultural history of the Black Hills with reference to the Lakota Sioux's connection to the area, including the religious and cultural significance of the Black Hills to the Lakota Sioux (*Id.* at 247–57).

Also in Chapter 3, the FSEIS documented previously conducted cultural resources investigations for the proposed Dewey-Burdock ISR project, which included: (i) a review of available archaeological, ethnographic and ethnological literature; (ii) a search and evaluation of archaeological records and collections maintained by the South Dakota Archaeological Research Center (ARC); (iii) archaeological field investigations including evaluative testing; (iv) a visual effects assessment; (v) preparation of an ethnohistoric background study; and (vi) Tribal consultation, including the 2013 Tribal field survey, to assist in the identification of places of religious or cultural importance to Indian Tribes (Ex. NRC-008-A-1, FSEIS, at 245).

In Chapter 4, the Staff discussed its evaluation of the potential impacts to sites of significance to the Tribes and potential mitigation measures, regardless of the sites' eligibility to the NRHP. The Staff also completed an assessment of potential visual impacts on historic properties (i.e., properties of any type listed in or considered eligible for listing in the NRHP) in consultation with the SHPO and other consulting parties (Ex. NRC-008-A-1, FSEIS, at 263–65; Ex. NRC-008-A-2, FSEIS, at 483–92).

With respect to information about Lakota Sioux cultural resources, the Staff was not able to obtain specific input from the Lakota Sioux Tribes regarding sites of significance to them at the Dewey-Burdock ISR project, despite the Staff's outreach efforts. The FSEIS, however, evaluated information on sites and features that the Staff obtained without the Lakota Sioux Tribes' input. For example, in Chapter 3 of the FSEIS, the Staff described various types of features and sites that could be considered places of religious and cultural importance to the Northern Plains Tribes (Ex. NRC-008-A-1, FSEIS, at 257–59). Without specific input from the Lakota Sioux Tribes, however, information about specific sites of significance to Lakota Sioux Tribes is not included in the FSEIS.

Q.18 How did the Staff evaluate the potential impacts from the Dewey-Burdock ISR project on these cultural resources?

A.18 (D. Diaz-Toro) In the FSEIS, the Staff evaluated potential impacts on historic and cultural resources from construction, operations, aquifer restoration, and decommissioning associated with the Class V injection well disposal option and with the land application liquid waste disposal option. The Staff evaluated how these activities could impact all of the sites that had been identified during previous site surveys and field investigations within the area of potential effects, not merely those sites that were determined to be eligible for listing on the NRHP. The Staff presented its impact determinations in Tables 4.9-1 through 4.9-5 in the FSEIS, along with recommended measures to avoid or mitigate these impacts (Ex. NRC-008-A-2, FSEIS, at 466–82). Table 4.9-7 in the FSEIS summarized the NRC Staff's overall impact determinations to historic and cultural resources from construction (potential impacts would range from SMALL to LARGE), operations (potential impacts would range from SMALL to MODERATE), aquifer restoration (potential impacts would range from SMALL to MODERATE), and decommissioning (potential impacts would be SMALL) of the Dewey-Burdock ISR project (Ex. NRC-008-A-2, FSEIS, at 495).

Q.19 In its Partial Initial Decision (LBP-15-16), the Board found that the Staff's FSEIS was deficient because it did not contain an adequate evaluation of impacts to sites of cultural, historic, or religious significance to the Oglala Sioux Tribe. Following that decision, how did the Staff seek to obtain information from the Oglala Sioux Tribe on these sites so that they could be evaluated in the FSEIS?

A.19 (D. Diaz-Toro) After the Board's decision in LBP-15-16, the NRC reached out to the Oglala Sioux Tribe inviting the Tribe to meet with the NRC Staff on a government-to-government basis, and requesting information and the Tribe's views regarding sites of historic, cultural, and religious significance to the Lakota Sioux Tribes that may be impacted by the Dewey-Burdock ISR project, in an effort to work toward remedying the deficiencies identified in the Board's decision. The Tribe requested that other Lakota Sioux Tribes that have expressed similar concerns with the project also be involved in a meeting, which the NRC Staff did not object to.

After the NRC Staff attempted for eight months to establish dates for a government-to-government meeting with the Oglala Sioux Tribe, the meeting was held on May 19, 2016, in Pine Ridge, SD, also at the Tribe's request. At this meeting, the Tribe shared its objections to and concerns with the PA, the continued effectiveness of Powertech's license, and the Tribal cultural survey of the Dewey-Burdock ISR site conducted in 2013. (Ex. NRC-186, Summary of May 19, 2016 meeting with the Oglala Sioux Tribe, at 1–2 (ML16182A069)). The Oglala Sioux Tribe stated that the Tribal cultural survey conducted in 2013 was incomplete and the survey methodology lacked scientific integrity. The Oglala Sioux Tribe asked that additional comprehensive and meaningful surveys be conducted and that other Tribes should also be involved. The Oglala Sioux Tribe also stated that Tribal ordinances prohibit nuclear activities within Treaty lands and asked that these be taken into consideration.

On November 23, 2016, the NRC Staff invited the Tribe (via letter) to engage in further consultation on the parameters of an additional survey of the Dewey-Burdock ISR site. (Ex. NRC-187, NRC November 23, 2016 Letter to the Oglala Sioux Tribe Regarding an Invitation for Teleconference and Continued Consultation, at 1 (ML16327A549)). The parties met on a January 31, 2017 teleconference call. During the meeting, the NRC Staff offered its "preliminary Tribal survey approach," consisting of (1) an open site survey of the license area; (2) an opportunity to conduct the survey as early as April or May 2017; (3) per diem and mileage reimbursement for up to three Tribal representatives conducting the survey; and (4) an honorarium of \$10,000 paid to the Oglala Sioux Tribe. (Ex. NRC-188, Summary of NRC Staff and Oglala Sioux Tribe Teleconference Call on January 31, 2017 at 1–2 (ML17060A260)). The Tribe expressed its disappointment with the NRC Staff's proposal and instead proposed a survey methodology similar in nature to the Makoche Wowapi proposal submitted to the NRC Staff in September 2012. (*Id.*; see also Ex. NRC-199, Makoche Wowapi / Mentz-Wilson Consultants, *Proposal with Cost Estimate for Traditional Cultural Properties Survey for Proposed Dewey-Burdock Project* (Public redacted version) (2012) (ML15244B360)). The NRC Staff requested information from the Tribe on "the survey methodology/approach, number of participating Tribal representatives, cost/reimbursement, and timeframe," and the Tribe committed to provide the information by mid-March 2017.

On April 14, 2017, having not received information from the Oglala Sioux Tribe, the NRC Staff offered a second opportunity to participate in a field survey of the Dewey-Burdock ISR site (with similar parameters as those discussed with the Tribe on January 31), and requested the Tribe's acceptance or rejection of the offer by May 5, 2017. (Ex. NRC-189, NRC Staff April 14, 2017 Letter to Oglala Sioux Tribe - Coordination of Tribal Survey to Identify Cultural Resources, at 3 (ML17103A500)). On May 31, 2017, the Oglala Sioux Tribe rejected the NRC Staff's offer. (Ex. NRC-190, Oglala Sioux Tribe May 31, 2017 Letter Responding to NRC's April 14, 2017 Letter at 1 (ML17152A109)).

After the Board's decision in LBP-17-9 denying the Staff's motion for summary disposition of Contention 1A, the NRC Staff transmitted a proposed approach for identifying sites of historic, cultural, and religious significance to Tribes via letter on December 6, 2017. (Ex. NRC-191, NRC Staff December 6, 2017 Letter to Trina Lone Hill, Oglala Sioux Tribe, Regarding US Nuclear Regulatory Commission Proposal to Identify Historic, Cultural, and Religious Sites (ML17340B365)). The proposed approach incorporated several of the requests made by the Oglala Sioux Tribe in its May 31, 2017 letter. The NRC Staff also requested: (i) input from the Tribes on their preferred survey methodology (e.g., conventional transect, a landscape-based assessment, or a combination, and (ii) the Tribe's assistance in facilitating the implementation of the final approach with the Lakota Sioux Tribes and confirming the identity of the remaining Lakota Sioux Tribes potentially impacted by the Dewey-Burdock project. The NRC Staff also enclosed a preliminary schedule for implementing the proposed approach.

After receiving responses to the approach from all parties, a status teleconference call between the Board and parties, and a counsel-to-counsel teleconference, the NRC Staff finalized its proposed approach and transmitted it to the Oglala Sioux Tribe on March 16, 2018. (Ex. NRC-192, NRC March 16, 2018 Letter to Oglala Sioux Tribe Transmitting NRC's Approach to Identify Historic, Cultural, and Religious Sites (ML18074A396)). For simplicity, it has since been referred to as the "March 2018 Approach." The NRC Staff finalized the proposed approach based on the Tribe's statements of general support in its written communications to the NRC Staff (see Ex. NRC-193, Oglala Sioux Tribe January 19, 2018 Response to NRC's December 6, 2018 Letter at 1 (ML18019B267); Ex. NRC-194 Oglala Sioux Tribe's February 15, 2018 Responses to NRC Counsel Questions at 3–5 (ML18046A171)) as well as statements made by the Tribe at status teleconference calls with the Board (see, e.g., Transcript of Proceedings (Tr.) at 1273).

IV. MARCH 2018 APPROACH AND SITE SURVEY PARAMETERS

Q.20 What were the elements of the March 2018 Approach?

A.20 (D. Diaz-Toro) The parties reached an agreement that the NRC Staff's March 2018 Approach was reasonable, as observed by the Board in its October 30, 2018, Order. (See *Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-18-5, 88 NRC 95, 125 (2018)). Implicit in the March 2018 Approach is the understanding that Tribes have "...sacred places here in this country and we are the only ones that can determine those things... We are the ones, and the only ones, that are qualified" and are the best authorities (experts) to identify, evaluate, and ascribe significance to cultural resources. (Tr. at 764–66). The March 2018 Approach additionally incorporated elements that the Oglala Sioux Tribe identified as necessary for accomplishing a comprehensive cultural resources survey. (Ex. NRC-190 at 3, 4, 6). The March 2018 Approach specifically incorporated the following elements:

- *Onboarding a contractor with the experience to facilitate implementation of the March 2018 Approach.* As explained in the NRC Staff's November 21, 2018, letter to the Oglala Sioux Tribe, Tribes have the unique expertise to identify, interpret, and ascribe significance to resources and, accordingly, the NRC Staff did not presume to hire a contractor to perform this important role as there is no substitution for the Tribes' expertise. (Ex. NRC-195, NRC November 21, 2018 Letter to Oglala Sioux Tribe Resuming Implementation of the NRC Staff March 16, 2018 Approach, at 2, 3, (ML18325A029)). The NRC Staff, however, awarded a contract to a contractor experienced in planning, performing, and reporting surveys to assist in the development and implementation of the site survey methodology and survey report.
- *Involving other Lakota Sioux Tribes.* In response to the Oglala Sioux Tribe's requests for the involvement of other Lakota Sioux Tribes, the NRC Staff invited other Tribes to participate in the implementation of the March 2018 Approach, including in the development of the methodology to be used to carry out the Tribal cultural survey. Specifically, the NRC Staff invited the Cheyenne River Sioux Tribe, the Rosebud Sioux Tribe of Indians, the Standing Rock Sioux Tribe, the Lower Brule Sioux Tribe, the Flandreau-Santee Sioux Tribe, Yankton Sioux Tribe, and the Crow Creek Sioux Tribe.
- *Holding meetings with Tribal Leaders of the Lakota Sioux Tribes, based on their availability and the timeframe for implementing the March 2018 Approach.* Additionally, the NRC Staff accepted all invitations from the Oglala Sioux Tribe's Tribal Historic Preservation Advisory Council, which consists of Tribal Elders and Leaders, and attended two meetings of the Advisory Council to provide information, answer questions, and listen to the input from the Tribal Leaders and Elders. The NRC Staff attended meetings at the Pine Ridge reservation during the week of June 11, 2018, and February 22, 2019.
- *Involving Tribal Elders via oral history interviews and during the site survey.*
- *Providing an opportunity for a Tribal cultural field survey of the Dewey-Burdock ISR project site.* Specifically, the March 2018 Approach provided iterative opportunities to survey the site by providing two non-contiguous, two-week periods for conducting the field survey and access to the entire project site with a focus on the areas of land disturbance. To the extent possible, the goal was to identify potential project areas to be examined in coordination with the Lakota Sioux Tribes and NRC contractor prior to the field survey.

Additionally, Powertech committed to providing the following reimbursement and honoraria that all parties agreed was reasonable:

- \$136.00 per day for lodging and \$59.00 per day for meals and incidental expenses for each Tribal representative for up to three Tribal

representatives for each of the seven Tribes invited to participate in the Tribal field survey

- \$0.535 per mile for one round trip for each phase of the field survey for up to two vehicles for each participating Tribe from the Tribal representatives' point of origin to Edgemont, South Dakota; seven Tribes were invited to participate in the Tribal field survey
- \$10,000 honorarium to each participating Tribe; seven Tribes were invited to participate in the Tribal field survey (i.e., up to \$70,000 total in honoraria, should each Tribe choose to participate)
- *Supplementing the analysis in the final supplemental environmental impact statement (FSEIS, NUREG-1910, Supplement 4) to reflect information obtained from the Tribal cultural site survey and oral history interviews concerning sites of historic, cultural, and religious significance to the Lakota Sioux Tribes.*

Q.21 How did the views the parties expressed regarding the reasonableness of the March 2018 Approach, in particular the Tribe's, influence the Staff's decision to select and proceed with the March 2018 Approach?

A.21 (D. Diaz-Toro) The Staff moved forward with implementation of the March 2018 Approach based on the clear understanding that the parties, including the Tribe, supported the components and parameters of the approach, including the duration of the site survey, compensation and reimbursement for the Tribes, and the timeline. The Board's subsequent findings (*Powertech*, LBP-18-5, 88 NRC at 111–112) confirm the Staff's understanding.

The Board observed that “all the parties accepted the March 2018 Approach as reasonable, and the NRC Staff began to move forward with its implementation, in accordance with the parties' expressions of support for the March 2018 Approach and its included timeline.” (*Id.*) With respect to the included parameters—and in particular the Staff's hiring of an expert contractor to facilitate the survey, the number of tribes invited to participate in the survey, the length of time provided for the survey including iterative opportunities to survey the site, and compensation and reimbursement for participating Tribes in the amount the Tribe had previously considered “appropriate”—the Board further found that “Each of these elements was repeatedly asked for by the Oglala Sioux Tribe, and once these Oglala Sioux Tribe-requested elements were finally included in NRC Staff's plan to resolve Contention 1A, the parties agreed the March 2018 Approach was a reasonable method for the NRC Staff to satisfy its NEPA obligation.” (*Id.* at 112). As the Board further held, “The NRC Staff's March 2018 Approach, as agreed to by the parties, constituted a valid and reasonable approach for resolving Contention 1A.” (*Id.* at 125).

Q.22 Once the March 2018 Approach was selected, what next steps did the Staff take in order to implement the approach?

A.22 (D. Diaz-Toro) After the parties to the adjudicatory proceeding had agreed that the March 2018 Approach was reasonable, the methodology to carry out the site survey was the only remaining detail that still needed to be worked out, as the Board determined in LBP-18-5. (*Id.* at 135–36). As such, on June 1, 4, and 5, 2018, the NRC Staff held teleconference calls and webinars to collaboratively develop and establish a methodology to be implemented during the survey. During these meetings the NRC Staff contractor (Dr. Paul Nickens) presented potential options for methodologies, and followed up with a proposed plan of work consisting of an initial methodology for conducting the Tribal field survey. The NRC Staff contractor also shared proposed documentation forms to be used during the site survey to record (i) the geographic location and physical description of the Tribal sites and (ii) the ethnographic description and context. However, after the conclusion of these three teleconference meetings, the Tribe and Staff had not yet reached agreement on the methodology to be used.

At the request of the Tribe, the Staff traveled to Pine Ridge, South Dakota to continue discussions on the methodology and to begin implementation of the March 2018 Approach during the week of June 11, 2018. That week the NRC Staff contractor re-visited the sites identified during the 2013 Tribal field survey efforts that lie within the designated area of potential effects to precisely identify the coordinates of Tribal sites and document basic descriptive information about these known Tribal sites. The contractor also conducted a viewshed analysis, and re-visited the bald eagles' nest. The contractor documented its field observations in "Summary of the Tribal Cultural Heritage Resources Data Acquired in June 2018 at the Dewey-Burdock In Situ Uranium Recovery Project, Fall River and Custer Counties, South Dakota." (Ex. NRC-196, Summary of Tribal Cultural Heritage Resources Data Acquired in June 2018 at the Dewey-Burdock In Situ Uranium Recovery Project – Fall River and Custer Counties, South Dakota (ML18211A560)).

On June 12, 2018, with no prior indication to the Staff, the Oglala Sioux Tribe abruptly provided the Staff with its own alternative cultural resource survey proposal. (Ex. NRC-197). As the Staff indicated in its August 17, 2018 Motion for Summary Disposition, the Tribe's proposal was significantly different and fundamentally incompatible with the March 2018 Approach. (See NRC Staff's Motion for Summary Disposition of Contention 1A at 28–29 (Aug. 17, 2018) (ML18229A343)). The Tribe revised the June 12, 2018 proposal and provided it to the NRC Staff on June 15. (Ex. NRC-198). Given how far apart the Tribe's proposal was from the selected approach, the Staff determined that it could not reach alignment with the Tribe and moved for summary disposition.

Q.23 What about the Oglala Sioux Tribe's June 15, 2018, proposal led the Staff to discontinue its efforts in June 2018?

A.23 (D. Diaz-Toro) The Staff considered the Oglala Sioux Tribe's June 15, 2018, proposal to be a constructive rejection of the March 2018 Approach. The duration, cost, number of participants, and geographic scope included in the Tribe's proposals were far in excess of the agreed-upon March 2018 Approach.

- As described in A.20 above, the March 2018 Approach provided iterative opportunities to survey the site by providing two non-contiguous, two-week periods for conducting the field survey. In contrast, the Tribe's June 15 proposal would require more than a year to complete the fieldwork associated with the Tribal cultural field survey and the oral history research and interviews. (Ex. NRC-198 at 6). For example, the proposal called for Tribal elder encampments during different seasons of the year, and 10-meter transects over the entire 10,000-plus acre site. (*Id.* at 3–4). Neither of these activities can be physically accomplished in two two-week periods.
- Under the June 2018 proposal, by the Tribe's estimation, the "full budget to carry out the required survey" would exceed \$2 million to implement. (*Id.* at 6). The cost estimate for the Tribe's proposal did not include (i.e., would be in addition to) the costs directly billable to Powertech for the Staff's time and contractor support. Additionally, the Tribe's June 15, 2018 proposal did not take into account the involvement of other Tribes in the approach, which would further escalate the cost. Earlier in this proceeding, the Board had described the cost of a different site survey methodology previously advocated by the Tribe, referred to as the Makoche Wowapi proposal, as "patently unreasonable." (*Powertech*, LBP-15-16, 81 NRC at 656–57 & n.229). The Makoche Wowapi proposal was estimated to cost approximately \$818,000. (Ex. NRC-199 at 1; *see also Powertech*, LBP-17-9, 86 NRC at 177, n.33). The Staff considered the OST's June 15 proposal in light of this Board determination, and concluded that a proposal that more than doubled the cost of the Makoche Wowapi proposal was not a good faith starting point for negotiation but rather a constructive rejection of the March 2018 Approach in its entirety.
- As described in A.20 above, the March 2018 Approach contemplated reimbursement for up to three Tribal representatives per Tribe for each of the seven Tribes invited to participate in the Tribal cultural survey. By contrast, the Tribe's June 15, 2018 proposal calls for remuneration of several dozen Oglala Sioux Tribe technical staff, spiritual leaders, elders, and warrior society leaders. Additionally, the Tribe's June 15, 2018 proposal does not take into account or make provision for the involvement of other Tribes in the approach.
- The Tribe's proposal required the examination of locations approximately 20 miles from the Dewey-Burdock ISR site. This exceeds the geographic scope of the March 2018 Approach because the site survey aspect of the March 2018 Approach was only intended to cover the APE for the Dewey-Burdock project.

In sum, these terms were not only incompatible with the March 2018 Approach the Tribe had deemed reasonable but well exceeded the costs of a proposal the Board had already characterized as “patently unreasonable.” After considering the Oglala Sioux Tribe’s pattern of continually increasing demands, the Staff concluded in June 2018 that the appropriate course of action was to discontinue its efforts to implement the selected approach. (See Ex. NRC-200, NRC Staff July 2, 2018 Letter to the Oglala Sioux Tribe Regarding June 2018 Proposals, at 1–2 (ML18183A304)).

Q.24 After the Board denied the Staff’s summary disposition motion in October, 2018, the Staff, in a letter dated November 21, 2018, chose to reinitiate negotiations on a site survey methodology with the Oglala Sioux Tribe. Explain the reasoning behind the Staff’s revised timeline in that letter.

A.24 (D. Diaz-Toro) The Oglala Sioux Tribe had stated that the timeline of the March 2018 Approach was reasonable. (Tr. at 1389, 1395; Ex. NRC-194 at 4). The timeline included in the NRC Staff’s November 21, 2018 letter was simply adjusted to account for the elapsed time since the original schedule. It was also designed to be consistent with the Board’s direction that the only aspect of the negotiations open for discussion would be the site survey methodology that would fit into the two-week periods set out in the March 2018 Approach. (*Powertech*, LBP-18-5, 88 NRC at 135). Finally, it balanced several important and practical considerations such as the Sun Dance ceremonies and weather conditions. Specifically, the revised timeline focused the negotiations regarding the site survey during the months of December 2018 through February 2019 (months during which ground visibility could be impacted by the weather) to support a site survey starting in early April 2019 and concluding before the Sun Dance ceremonies.

Q.25 Please describe the Staff’s subsequent efforts to develop the proposed draft methodology.

A.25 (D. Diaz-Toro) In November 2018, the NRC Staff resumed its negotiations with the invited Tribes to develop the methodology for the Tribal cultural survey. In the November 21, 2018 letter, the NRC Staff provided additional information to help clarify the purpose and scope of the NRC Staff and contractor’s efforts to date, and requested that the Tribe provide specific written input regarding the Staff’s proposal or an alternative proposal acceptable to the Tribe that would also fit within the parameters of the March 2018 Approach. On December 5, 2018, Powertech re-confirmed its agreement to provide reimbursement and support for the field survey as discussed in its letter dated April 11, 2018 for the participating Tribes (Ex. NRC-202, Powertech’s December 5, 2018 Response to NRC Staff’s November 21, 2018 Letter Confirming Reimbursement and Honoraria at 1 (ML18345A265)).

On January 11, 2019, the Oglala Sioux Tribe provided a response to the NRC Staff, which raised concerns on a variety of matters including, but not limited to, the Tribal site survey methodologies provided to date, roles of the Tribe and NRC Staff contractor, confidentiality and protective order, involvement of the NRC’s Tribal liaison, and the

Tribal cultural site survey report. (Ex. NRC-203, Oglala Sioux Tribe's January 11, 2019 Response to NRC's November 21, 2018 Letter Proposing to Resume Negotiations (ML19011A459)). The NRC Staff responded by letter on January 25, 2019. (Ex. NRC-204, NRC January 25, 2019 Letter in Response to Oglala Sioux Tribe Letter dated January 11, 2019 (ML19025A297)). The NRC Staff observed that some of the topics "raised in the Tribe's January 11, 2019, response appear[ed] to fall outside of that scope or otherwise appear[ed] incompatible with the adjusted timelines underpinning the March 2018 Approach" and were not within the scope of discussions as defined by the Board's October 30, 2018 order. (*Id.* at 4). In that letter, the NRC Staff responded to several of the Tribe's concerns, but also expressed the Staff's concerns regarding the lack of detail and input provided by the Tribe on the Tribal site survey methodology and the absence of specific "input on amendments to the protective order that would resolve the Tribe's views regarding confidentiality." (*Id.* at 2).

The NRC Staff also proposed a meeting to introduce the NRC Staff to the Tribe's new Tribal Historic Preservation Officer and discuss the framework for future negotiation meetings during the week of January 28, 2019 or the first week of February 2019, as well as weekly meetings, thereafter, to discuss and develop the site survey methodology. (*Id.* at 5).

The NRC held the introductory meeting on February 8, 2019, facilitated by an NRC Tribal liaison, as the Oglala Sioux Tribe had requested. In addition to the Oglala Sioux Tribe, representatives of the Rosebud Sioux Tribe joined the teleconference near the end of the meeting. Based on the availability of the Oglala Sioux Tribe, the group agreed to meet again on February 19 (Ex. NRC-205, February 8, 2019 Teleconference Call Summary with Oglala Sioux Tribe Comments, at 1, 3 (ML19079A398)).

V. FEBRUARY 2019 PROPOSED DRAFT SITE SURVEY METHODOLOGY

Q.26 In February 2019, the Staff provided a document entitled "Proposed Draft Cultural Resources Site Survey Methodology for the Dewey-Burdock *In-Situ* Uranium Recovery Project in Fall River and Custer Counties, South Dakota," to the Oglala Sioux Tribe and other Tribes invited to participate in the Tribal field survey component of the March 2018 Approach. Please briefly explain what this document is and what it was intended to accomplish.

A.26 (D. Diaz-Toro, J. Spangler) The document, provided to the Tribe on February 15, 2019, is the Staff's proposed survey methodology for carrying out the Tribal cultural site survey aspect of the March 2018 Approach. (See Ex. NRC-214, Proposed Draft Cultural Resources Site Survey Methodology (ML19058A153)). It is based on representations by the Oglala Sioux Tribe's counsel regarding the reasonableness of the March 2018 Approach and the Board's decision in its October 30, 2018, Order, which stated that "...the only aspect of the Approach that is open for discussion is the site survey methodology. That is, any Tribal negotiating position or proposal should only encompass

the specific scientific method that would fit into the two-week periods set out in the March 2018 Approach for visiting the physical site, i.e., how the contractor and the Tribe members will walk the site and mark or record located Tribal resources the NRC Staff and contractor developed the February 15, 2019, draft site survey methodology.” (*Powertech*, LBP-18-5, 88 NRC at 135–36). The proposed draft methodology builds upon information previously shared and discussed with the invited Tribes (e.g., Ex. NRC-192; Ex. NRC-195).

In particular, the draft methodology responded to the Tribe’s repeatedly-expressed concerns regarding the need for a “scientifically defensible” survey methodology, while also seeking to balance the unique role and expertise of the Tribe in identifying its own traditional cultural resources. The document was constructed in a manner that attempts to reconcile traditional Tribal perspectives and values (through Tribal self-determination and participation) with a scientifically-based methodology. In the context of the proposed draft methodology, the NRC Staff and contractor consider Tribal self-determination to mean that the Tribes themselves would provide their own research objectives, they would describe the TCPs within the context of their own world views and indigenous nomenclature, and they would assign their own significance to TCPs (*cf.* Ex. NRC-184; Ex. NRC-206, LeBeau, Sebastian, *Reconstructing Lakota Ritual in the Landscape: The Identification and Typing System for Traditional Cultural Property Sites* (2009)). The proposed draft methodology offered definitions and processual structure, and invited the Tribes to accept, modify, or offer their own definitions and structure.

This draft survey methodology was also intended to arrive at uniform descriptions that would be understandable to federal (non-Lakota) decisionmakers. In this way, the draft methodology also responded to the Tribe’s objections to an “open-site survey” by providing an essentially complete framework for the survey that still incorporates opportunities for the Tribe to provide input or suggest alternatives at every stage.

Q.27 Who developed the draft methodology?

A.27 (D. Diaz-Toro, J. Spangler) The draft survey methodology was developed and drafted by Mr. Jerry Spangler in collaboration with Ms. Diana Diaz-Toro, who modified it to be consistent with NRC format and presentation.

Q.28 What expertise do you have in developing Tribal field survey methodologies and facilitating Tribal field surveys?

A.28 (J. Spangler) As stated in A.3a above, I have been developing cultural resource surveys for thirty years. In developing a Tribal cultural resources survey that would implement the reasonable March 2018 Approach and resolve the Board-identified NEPA deficiency, I performed extensive research and drew from the handful of experts in the field, reflecting the best expertise available. This is entirely consistent with the scientific method, drawing from previous researchers to develop an approach tailored to the case-

specific circumstances. It is serendipitous that one of the identified experts is a member of the Lakota Sioux who designed a Lakota-specific methodology. I have extensive expertise in structuring scientific methodologies and am very familiar with how to identify and utilize the best information available.

Although I do not have prior experience designing a pedestrian Tribal cultural survey (only a handful of scholars have ever attempted it), my experience with these other diverse cultural resource methodologies provides a broad experience base for working collaboratively with Tribes for that purpose. Tribal cultural surveys are a new phenomenon in federal management and administrative proceedings, and there are, as yet, no uniform standards or approaches, and therefore there is no federal guidance. In effect, there are no experts because there is no standard as to what constitutes a Tribal cultural survey or how it should be implemented. But I want to emphasize that neither the Staff nor I need to be experts in the culture of an individual Tribe in order to develop a reasonable methodology for a tribal cultural resources survey that fulfills NEPA. As we have explained, for such a survey to produce meaningful results for a NEPA impact assessment, the Tribe's ultimate participation in the site survey is indeed crucial. That is because only the Tribe can identify intangible cultural resources and ascribe significance to cultural resources in order to inform the Staff's resulting assessment of potential impacts. But the site survey methodology itself remains reasonable if it provides appropriate opportunities for the Tribe to provide input and to assess the significance of the TCPs in light of its own Tribal values. And that is very much my expertise – working collaboratively to design cultural resource survey methodologies that provide the necessary structure to incorporate those perspectives and protect cultural resources.

Because I have experience doing so in a wide range of settings and experience working with Tribes, my experience is readily applicable to working with the Oglala Sioux Tribe in this case to develop a reasonable proposed draft methodology.

Q.29 What were the fundamental parameters for the draft methodology?

A.29 (D. Diaz-Toro, J. Spangler) The proposed draft methodology was specifically developed to be consistent with the March 2018 Approach (as described in A.20 above) and the Board's October 30, 2018 Order.

Q.30 Please summarize the NRC Staff's efforts to respond to specifically-raised concerns of the Oglala Sioux Tribe, and describe how those are accounted for in the draft methodology.

A.30 (D. Diaz-Toro, J. Spangler) Throughout this entire proceeding, the NRC Staff has gone to great lengths to address the Oglala Sioux Tribe's concerns. The Staff's proposed draft methodology incorporates numerous specifically-raised concerns by the Tribe, and is consistent with the March 2018 Approach, which had already been extensively negotiated, agreed upon, and endorsed as reasonable by the Board in LBP-18-5.

The Tribe's concerns and requests have encompassed numerous topics, among them the Tribe's unique qualification to identify and ascribe significance to TCPs, the importance of an on-the-ground survey and its timing (and the Tribe's opposition to an "open site survey"), the use of a contractor, the need for scientific integrity, the value of in-person engagement, and the compensation and reimbursement for Tribes' participation.

We will summarize several of the most significant examples of how the draft methodology is both consistent with the March 2018 Approach and responsive to the Tribe's concerns.

- Because the Oglala Sioux Tribe has affirmed that an on-the-ground survey of the full licensed area by Tribal personnel from participating tribes is the only level of effort sufficient for identifying historic properties (Tr. at 814), the NRC Staff agreed to conduct a pedestrian site survey as part of the March 2018 Approach. The purpose of the Staff's proposed draft methodology is to conduct an on-the-ground Tribal cultural resources survey.
- In response to the Oglala Sioux Tribe's request to involve a contractor to carry out and facilitate a survey (Ex. NRC-190 at 4), the NRC Staff hired SC&A to facilitate development and implementation of the Tribal cultural resources survey methodology. In developing the proposed draft methodology, the NRC contractor (Mr. Jerry Spangler) conducted comprehensive research regarding established methodologies for a Tribal cultural survey. He then blended the definitions and field identifications found in a Lakota-specific methodology from Dr. LeBeau, who is a member of the Cheyenne River Sioux Tribe (Ex. NRC-206), and the scientific framework found in the Bureau of Ocean Energy Management (BOEM) methodology (Ex. NRC-184) to arrive at a reasonable, essentially complete methodology that could be implemented if the Tribe accepted the Staff's proposal.
- Because the Tribes emphasized the importance of surveying the Dewey-Burdock ISR site at different times of the year (Ex. NRC-190 at 6), but also to account for the Oglala Sioux Tribe's limited availability during Sun Dance ceremonies (Ex. NRC-207, July 22, 2015 Letter from Dennis Yellow Thunder, Oglala Sioux Tribe, Responding to NRC's June 23, 2015 Letter at 2–3 (ML15203A108)), the March 2018 Approach provided two two-week non-contiguous periods to carry out the site survey during different times of the year.
- As the Oglala Sioux Tribe stated that the cultural resources survey "must include the other Lakota Sioux Tribal governments" (Ex. NRC-190 at 4), the NRC Staff invited seven Tribes, in addition to the Oglala Sioux Tribe, to participate in the implementation of the March 2018 Approach. As stated in the proposed draft methodology, the NRC Staff's goal is to collaborate with the Tribes on the working document to elicit, encourage, and understand the Tribes' input in order to discuss and finalize a site survey methodology.

- Because the Oglala Sioux Tribe stated that involvement of Tribal elders and spiritual leaders was essential (see, e.g., Ex. NRC-190 at 4), the March 2018 Approach and the Staff's proposed draft methodology incorporated oral history interviews of Tribal elders and invited their participation during the Tribal cultural survey. Additionally, at the request of the Oglala Sioux Tribe (Ex. NRC-208, June 8, 2018 Letter from Travis Stills, Oglala Sioux Tribe, to the NRC Staff, Proposed Schedule for Cultural Resources Survey at 3 (ML18159A621); Ex. NRC-209, January 29, 2019 Letter from President Julian Bear Runner, Oglala Sioux Tribe, "Invitation to February 22, 2019, Meeting of the Tribe's Tribal Historic Preservation Advisory Council" at 3 (ML19035A108)), the NRC Staff has met with Tribal elders and leaders from the Tribes' Tribal Historic Preservation Advisory Council on two occasions – the week of June 11, 2018 and on February 22, 2019.
- In response to the Oglala Sioux Tribe's requests (see, e.g., Ex. NRC-190 at 2), Powertech committed to provide reimbursement and honoraria for each participating Tribe, including all seven Tribes invited to participate in the Tribal site survey (Ex. NRC-210, April 11, 2018 Powertech Response to NRC Staff's March 16, 2018 Letter Confirming Reimbursement and Honoraria at 2 (ML18101A223); Ex. NRC-202 at 1).
- The Oglala Sioux Tribe has rejected "open-site surveys" on the grounds that they have "no...protocols or approaches identified for making or documenting observations," (Ex. NRC-190 at 2, 8) and that they "lack[] scientific integrity" (Tr. at 1431). As we explain in more detail below in A.32–A.40, the Staff's proposed draft methodology addresses this critique by, for example, providing contractor support and proposing protocols for documenting observations.
- The Oglala Sioux Tribe has repeatedly emphasized—and the NRC Staff agrees—that Tribes "are the ones, and the only ones, that are qualified" and are the best authorities (experts) to identify, evaluate, and ascribe significance to sites of historic, cultural and religious significance to them. (Tr. at 764–66). Accordingly, as A.26 explains, the Staff's proposed draft methodology relies heavily on the concept of Tribal self-determination and participation, meaning that the Tribes themselves would provide their own research objectives, describe the TCPs within the context of their own world views and indigenous nomenclature, and assign their own significance to TCPs.
- The Tribe previously recommended that the Staff consider the methodology created by Dr. Sebastian LeBeau. (Ex. NRC-203 at 3). However, once the Staff incorporated Dr. LeBeau's methodology into the proposed draft methodology, the Tribe confusingly appeared to disclaim its own suggestion: "With respect to NRC Staff's assertions in the March 1 letter regarding the reliance on Dr. Sebastian LeBeau's methodology, the Oglala Sioux Tribe's position has never been that the Dr. LeBeau method was sufficient in and of itself for development of a cultural resources survey methodology. The Oglala Sioux Tribe has also never stated that the Dr. LeBeau methodology is completely irrelevant." (Ex. NRC-211, Oglala Sioux Tribe March 12, 2019 Response to NRC's March 1, 2019 Letter at 6 (ML19074A235)). In any event, as explained below in A.37–40, the Staff appropriately incorporated Dr. LeBeau's insights in proposing a methodology that balances the Tribe's demand for

scientific integrity with the need to account for the Tribe's unique knowledge and perspective on spiritual significance.

- As explained below in A.31, the NRC Staff incorporated elements of the Tribe's June 15, 2018 proposal into the proposed draft methodology, where doing so could be accomplished consistent with the parameters of the March 2018 Approach.
- The Oglala Sioux Tribe has also repeatedly reiterated the importance of face-to-face meetings (Ex. NRC-190 at 8). The Staff has traveled to the Pine Ridge reservation at the Tribe's request on May 19, 2016; June 11–13, 2018; and February 22, 2019. (See Ex. NRC-212, September 24, 2015 Letter from Oglala Sioux Tribe (ML15267A377)); Ex. NRC-208 at 3; and Ex. NRC-209 at 3).
- The Oglala Sioux Tribe has frequently asserted the need to ensure the protection of sensitive information (Ex. NRC-203 at 5–6), and the Tribe's June 15, 2018 proposal stated that no information from field surveys and oral history interviews would be collected until confidentiality agreements were in place (Ex. NRC-198). In an effort to address the Tribe's confidentiality concerns, the NRC Staff provided proposed amendments to the protective order governing this proceeding on June 7, 2018 (See Tr. at 1482–83). In LBP-18-5, the Board ruled that filing a request for a revision to the Protective Order is the appropriate method to address confidentiality concerns (*Powertech*, LBP 18-5, 88 NRC at 136). The Tribe committed to providing feedback on January 29, 2019. (Tr. at 1535). However, to date, the Tribe has never provided any input on the NRC Staff's proposed amendments.
- After the Tribe's request to engage a representative of the Federal, State, and Tribal Liaison Branch (Ex. NRC-213, Oglala Sioux Tribe's Counsel December 5, 2018 E-mail to NRC Counsel (ML18344A098)), the NRC Staff provided a qualified Tribal Liaison to facilitate negotiation meetings.

In sum, in developing its proposed draft methodology the Staff has gone to great lengths to accommodate the Oglala Sioux Tribe's requests. The draft methodology incorporates numerous specifically-raised concerns of the Oglala Sioux Tribe, where doing so could be accomplished within the parameters of the March 2018 Approach.

Q.31 When developing the proposed draft methodology, did you consider the Tribe's June 15, 2018 proposal?

A.31 (D. Diaz-Toro, J. Spangler) Yes, but many aspects of the Tribe's June 15, 2018 proposal sought Tribal activities well beyond the scope of—and fundamentally incompatible with—the March 2018 Approach, as discussed in A.23 above. However, where doing so was compatible with the March 2018 Approach, the Staff incorporated some aspects of the proposal.

For instance, Section 6.1 of the proposed draft methodology recognizes the Oglala Sioux Tribe's objective of the survey to "preserve and revitalize our Lakota culture through our Grass Roots Communities. These communities are working actively to bring back our traditional way of life by teaching our *wakanyeja* (children) our culture and

traditional way of life. Our children are the ones who will bring back our *Tiyospaye* systems and language, which our ancestors sacrificed their lives for.” (Ex. NRC-198 at 2; Ex. NRC-214 at 9). As such, this objective informs the development of the data collection and documentation process.

Additionally, the NRC Staff addressed the Oglala Sioux Tribe’s concern that “locations of TCPs which have been overlooked in past archaeological surveys” and the location of “view sheds and landscapes where TCPs are present [that] have the potential to be adversely effected [sic]” have not been addressed. (Ex. NRC-198 at 4). Specifically, the proposed draft methodology states that the NRC will not dictate the information to be collected. Additionally, the proposed draft methodology not only incorporates the traditional cultural knowledge unique to Tribal experts, but also repeatedly encourages Tribal input. For instance, Section 4, “Objectives and Goals of Discussions,” articulates that the survey would be conducted “with Tribal members with traditional knowledge who assign their own traditional cultural significance to traditional landscapes, properties, and sites.” (Ex. NRC-214 at 8). As discussed in A.12 and A.26 above and A.39 and A.40 below, this methodology provides for Tribal members to identify and describe unobservable cultural significance only known to the Tribes, and allows them to describe the significance of Tribal cultural resources without outside skepticism.

Furthermore, the Tribe expressed concerns in the June 15, 2018 proposal that TCPs need to be recorded and evaluated for NRHP from a Lakota cultural perspective. In Section 6.0 of the proposed draft survey methodology, the NRC Staff and contractor explain that the types of information to be collected will not be limited, and the information collected would include the Tribes’ recommendations regarding eligibility following the National Register criteria evaluation. To that end, as discussed in A.6 and A.7, guidance in the National Register Bulletin 38 explains that there must be physical remains of TCP to be eligible for listing in the National Register as explained. With the goal of reconciling a scientific method with the Tribes’ traditional cultural knowledge, Section 6.2 of the proposed draft methodology contains questions intended to elicit specific information relevant to NRHP eligibility.

Q.32 Does the draft methodology propose an “open-site survey” of the Dewey-Burdock site?

A.32 (J. Spangler, D. Diaz-Toro)

No, not in the way the Tribe has used that term. As the Board stated in LBP-18-5, an open-site survey “as the term has been used throughout the proceeding and described by counsel for the Oglala Sioux Tribe, is a survey ‘where there is no support from NRC Staff or contractor...[a]nd it is essentially opening the site to the tribes to go out and do what they will do and be totally responsible for providing all the data and the analysis with no set protocol or methodology.’” (*Powertech*, LBP-18-5, 88 NRC at 117). The Staff, however, defines the term as an approach that recognizes the special expertise

that each individual Tribe possesses. It does not impose or limit the method a Tribe chooses to implement; instead, each Tribe may choose a method that it deems culturally appropriate.

The Oglala Sioux Tribe has rejected “open-site surveys” on the grounds that they have “no...protocols or approaches identified for making or documenting observations,” (Ex. NRC-190 at 2, 8) and that they “lack[] scientific integrity” (Tr. at 1431). However, as described in A.33–A.37 (following series of questions), the Staff’s proposed draft methodology is not an open site survey, as the term has been defined by the Oglala Sioux Tribe and adopted by the Board.

Q.33 Does the proposed draft methodology provide for support from the NRC Staff or contractor?

A.33 (D. Diaz-Toro, J. Spangler) Yes. An integral element of the March 2018 Approach was onboarding a contractor to facilitate development and implementation of a site survey methodology. Consistent with the March 2018 Approach, the NRC hired SC&A to develop the proposed draft methodology provided to the Tribes on February 15, 2019. The contractor’s role is to work with the participating Tribes to develop a survey methodology and conduct the pedestrian site survey with the Tribes. (Ex. NRC-214 at 7).

Q.34 Under the proposed draft methodology, are the Tribes totally responsible for providing all the data and the analysis?

A.34 (D. Diaz-Toro, J. Spangler) No. As the Oglala Sioux Tribe has continually stated, the Tribes have “...sacred places here in this country and we are the only ones that can determine those things... We are the ones, and the only ones, that are qualified” and are the best authorities (experts) to identify, evaluate, and ascribe significance to sites of historic, cultural and religious significance to them. (Tr. at 764–66). Given the Tribe’s unique knowledge, the input and participation of the Tribe is of course essential to the purpose of the site survey and to inform the resulting analysis. However, as explained further in A.36–A.37, Section 6.2 of the proposed draft methodology specifies that the NRC Staff and contractor will collaborate with the Tribes to develop methods used to ensure data uniformity and quality, and Section 6.4 specifies that the NRC contractor will work in coordination with the invited Tribes to prepare a report that accurately reflects the significance ascribed to the sites identified by the Tribes. (Ex. NRC-214 at 11–12, 13).

Q.35 Does the proposed draft methodology contain a set protocol or methodology?

A.35 (D. Diaz-Toro, J. Spangler) Yes, the proposed draft methodology contains well-defined protocols to identify TCPs using the Tribes’ own traditional knowledge and expertise, while still providing appropriate means to adjust the methodology as appropriate.

Recognizing previous concerns the Oglala Sioux Tribe has raised with respect to previously proposed methodologies, each step of the proposed draft methodology contains opportunities for the Tribe to provide input or suggest changes.

Contrary to the Tribe's assertions that the proposed draft methodology does not contain a set protocol, Section 8.0 "Implementation Schedule," for example, suggests a reasonable set of prescriptive steps to accomplish the site survey within two two-week periods. It describes activities to be conducted on a daily basis during the Tribal cultural site survey, including opportunities to adjust the methodology, as appropriate. Specifically, Section 8 proposes a "windshield tour" of the entire site on Day 1 to familiarize the Tribes with the Dewey-Burdock ISR site, the landscape, and scope of the proposed construction and operation activities. The survey team would traverse the site, using transects, prioritizing known burial sites and Tribal cultural resources, project areas surrounding the previously identified resources, and areas proposed for ground disturbance (Ex. NRC-214 at 15). This section intentionally did not prescribe the length of survey transects to allow for Tribal input and factors such as terrain, visibility, landscape, and topographical features.

Q.36 Does the proposed draft methodology propose protocols or approaches for making or documenting observations?

A.36 (D. Diaz-Toro, J. Spangler) Yes. The proposed draft methodology offered means to collect and evaluate cultural resource information identified during the Tribal site survey and the formats to be used for recording the information collected (Ex. NRC-214 at 9–14). The proposed content of these site formats is intended to elicit the type of information to be observed and recorded, and includes site type, activity, intrinsic nature, location, natural site features, physical attributes, construction, investigation, associated physical features, and a cultural reference section. (*Id.* at 10–11). It highlights the importance of the uniformity and quality of the data and information gathered, documented, and evaluated to a scientific method, specifically, to be measurable and replicable.

Q.37 How does the Staff's proposed draft methodology address the Oglala Sioux Tribe's concern that the Staff's proposals lacked "scientific integrity" or an "identifiable scientific methodology for a cultural resources survey"?

A.37 (J. Spangler, D. Diaz-Toro) The Tribe's stated concern, as articulated by the Board order, was that earlier methodologies lacked scientific integrity. According to Tribal wishes, the Staff and contractor modified the methodology to reflect the scientific method while retaining Tribal self-determination as to how that methodology would be implemented and how TCPs would be described.

The Tribe has not elaborated on what it means by "scientific integrity." However, as discussed in section 3.1 of the proposed draft methodology, the "scientific process

requires the use of defined and articulated instruments to test a hypothesis or series of hypotheses by gathering observable, empirical evidence, and it calls for rigorous adherence to standards and practices accepted by scientific disciplines, such that results are measurable and replicable.” (Ex. NRC-214 at 3). The fundamental principles or ideals of the scientific method are empirical observation (sometimes referred to as empiricism), skepticism about what is being observed, deduction, and replication of the results. These principles are the same regardless of the specific scientific field (i.e., social, physical).

Specifically, the scientific method traditionally involves a series of steps that are applicable to all scientific inquiry:

- 1) A statement of the problem or question that is to be addressed through scientific inquiry.
- 2) A working hypothesis or articulation of expectations as to what will be observed and why
- 3) Unambiguous definitions of terms to ensure uniformity and discourage researcher bias
- 4) Development of means to document empirical observations, commonly referred to as instruments
- 5) Testing of the hypothesis through careful observation, or more simply put, are the observations consistent or inconsistent with expectations
- 6) Independent review of the results
- 7) Modification of the hypothesis
- 8) Independent replication of the results

After researching several different methodologies with Tribal components (Ex. NRC-214 at 8–9, A-1 through A-2), the NRC Staff contractor developed a methodology that established a tangible path for gathering and analyzing Tribal cultural resource information that considers Tribal traditional knowledge, values, and perspectives. A fundamental premise of the scientific method is empirical observation. However, Tribal cultural resources often encompass unobservable phenomena. For example, caves have particular spiritual significance to the Lakota as the abode of the spirits. The cave itself is observable; the spirits are not. An archaeologist might recognize a sacred hoop medicine wheel, but without traditional knowledge cannot fully comprehend that it is a sacred prayer place typically located on high plateaus overlooking sacred water sources, that it is a sacred place that embodies the very energy of life and is filled with power (*ton*).

It is in this context that Dr. LeBeau’s methodology is so relevant to the Staff’s proposed draft methodology. It carefully defined traditional activities that occur at specific Tribal cultural resources locations and how the physical evidence of those activities might be recognized, such as subtle depressions or certain configurations of rocks or a certain type of landform. In other words, the activities represented at a specific location can be

recognized by those with traditional knowledge. Dr. LeBeau's methodology frames Lakota sacred sites within a descriptive context that is understandable to non-Lakota decision-makers.

To the extent possible, the Staff's proposed draft methodology has incorporated the principles of the scientific method while reconciling traditional Tribal perspectives and values.

Q.38 What does the Staff mean by “traditional Tribal perspectives and values”?

A.38 (J. Spangler, D. Diaz-Toro) There are fundamental differences in how Tribes and non-Tribal individuals view the world around them. To Tribal members, “everything is sacred” and all sites are part of a larger whole without defined boundaries, whereas non-Tribal members delimit the designation of sacred place to specific locations identified on a particular landscape, usually identified by physical remains associated with sacred activities, such as a church, a shrine, or a cemetery. Tribes have unique expertise and are the best authorities to identify, evaluate, and ascribe significance to sites of historic, cultural and religious significance to them.

Q.39 Can the scientific method be applied to, or used to design, a Tribal cultural resources survey?

A.39 (J. Spangler, D. Diaz-Toro) Yes, but only to a point. Tribal cultural resources surveys can run counter to traditional scientific practices. Tribal surveys are intended to document what Tribal members *believe* to be significant, but these observations might not be measurable, replicable, or observable. As an example, certain landforms, such as a butte with buffalo-like humps, that are significant to the Lakota as a place to pray and make offerings. The landform is observable; the prayers and most likely the offerings themselves are not. While the Oglala Sioux Tribe has taken offense to the NRC's characterization of traditional cultural knowledge as “mere ‘belief,’” (Ex. NRC-211 at 5, n.2) the Tribe has also stated that traditional archaeological surveys do “not document something that's intangible, something that's specific to practices, beliefs, mores of a tribe or an indigenous group.” (Ex. NRC-190 at 5). While the NRC certainly wishes to avoid offending the Tribe, every effort has been made in the proposed draft methodology to reconcile traditional cultural values with the Tribe's request for an “identifiable scientific methodology.” (Oglala Sioux Tribe's August 2018 Response to NRC Staff's 2018 MSD at 8 (ML18264A346); *see also Powertech*, LBP-18-5, 88 NRC at 131).

Q.40 Does the draft methodology take Tribal perspectives and values into account? If so, how does it reconcile these traditional Tribal perspectives and values with a scientifically-based methodology?

A.40 (J. Spangler, D. Diaz-Toro) Yes, the proposed draft methodology reconciles traditional Tribal perspectives and values with a scientifically-based methodology. The scientific

method requires that evidence be observable and measurable. Only certain aspects of Lakota TCPs can be observable and measurable. Remnants of Lakota sacred sites can be observed on the landscape, sometimes in the form of constructed rock alignments, cairns, and depressions, and other times in the form of landforms, natural formations, and concentrations of certain biotic and geologic resources. *If* TCPs can be observed, they can be described, which is itself a form of measurement. Dr. LeBeau's methodology offers tremendous insight into how these TCPs might be recognized and where they might be found. Specifically, he succinctly organizes Lakota TCP site types in a hierarchical scheme with three overriding site types: Places where the Lakota go to pray, places where the Lakota go to make offerings, and places where the Lakota go to gather resources. Each broad category is then divided into specific activities that occur at those locations and describes how the physical evidence of those activities might be recognized. The identification and description of the physical remnants of Tribal spiritual activities can be accomplished within the constructs of the scientific method.

However, the intrinsic significance of TCPs is not observable and therefore it cannot be described or measured in the scientific sense. For example, Dr. LeBeau acknowledges that TCPs have different levels of power (*Ton*), and this power is recognizable only to those individuals with traditional knowledge. Power, therefore, can be measured only by a select few with the spiritual insight to recognize the extent of that power. It is therefore impossible for anyone without traditional knowledge (non-Lakota) to recognize or describe TCP significance since it is unobservable or unmeasurable. This problem is addressed in numerous publications with the consensus default position being: "It is significant if they say it is significant." But significance is not a scientific evaluation. It is a spiritual one.

To construct a Lakota-specific scientific methodology that recognizes and respects traditional cultural values, we established a two-pronged approach. First, we created a mechanism in which *observable* characteristics of Lakota sacred sites can be described, e.g., Lakota prayer places with evidence of alters and rock alignments, or distinctive landforms or concentrations of spiritually significant natural resources. This is patterned after Dr. LeBeau recommended site types and feature types. TCPs are empirically described according to their physical characteristics, their location, and their relationship to other TCPs. This is the scientific component of the proposed draft site survey methodology. In effect, we are describing the physical evidence of sacred activities. Sections 6.1–6.3 of the draft site survey methodology discuss the specific proposals for collecting this information.

Second, the proposed draft site survey methodology calls for descriptions of *unobservable* characteristics of Lakota sacred sites, something that can only be done by Lakota Tribal members steeped in traditional knowledge. Only Tribal members can recognize places where the spirits abide or the spiritual power of individual locations or landforms. Only Tribal members can commune with the ancestors, and only Tribal members can see significance where there is no surface evidence of the sacred

activities. This component is not measurable and is therefore not scientific. In effect, the proposed draft site survey methodology calls for the Lakota to describe the significance of a TCP within the context of traditional knowledge and without outside skepticism regarding their findings. If the Lakota say it is significant, then it is significant. But the Lakota must also describe that significance in a manner that non-Tribal individuals, in particular NRC decision-makers, can understand why it is significant.

The proposed draft site survey methodology endeavors to reconcile the Tribe's traditional perspectives and values with the scientific method by establishing a mechanism for empirical observations that meet the test of the scientific method, and then supplement those observations with Tribal perspectives that might not fit within the rigidity of the scientific method. In effect, the reconciliation takes several forms:

- 1) It allows for empirical evidence to be supplemented by non-empirical observation
- 2) It frames the problem within the context of Lakota language and nomenclature
- 3) TCP significance is determined entirely by the Tribes
- 4) Tribes identify and describe TCPs.

Q.41 What response from the Oglala Sioux Tribe would have been necessary in order to implement the draft site survey methodology?

A.41 (J. Spangler, D. Diaz-Toro) The NRC Staff and contractor have provided a reasonable, essentially complete methodology that could be implemented if the Oglala Sioux Tribe accepted the Staff's proposals. However, the proposed draft site survey methodology contemplates Tribal input throughout so that the Tribe can accept, modify, or propose alternatives (so long as the proposed alternative fits within the March 2018 Approach, as endorsed by the Board).

A key component of the Ball et al. approach is that a methodology should be driven by Tribal goals and objectives, such as site protection or educational opportunities for indigenous youth. (Ex. NRC-184). Beyond the Oglala Sioux Tribe's statements in its June 15, 2018 proposal, we have received no clear input from the Tribe regarding the Tribe's goals and objectives.

Additionally, to develop a valid instrument to collect TCP data, the NRC Staff and contractor offered Dr. LeBeau's definitions and nomenclature as a starting point in the discussion. However, the proposed draft site survey methodology contemplates the Tribe either providing its own definitions of the types of TCPs that will be documented, modifying the Dr. LeBeau definitions to its own satisfaction, or accepting the Dr. LeBeau definitions moving forward.

Even assuming the Staff had received the Oglala Sioux Tribe's acceptance, modification, or proposal of alternatives on these aspects of the proposed draft methodology, the Tribe's direct participation during the survey would be crucial. In other

words, executing the survey without the Tribe's participation would not be possible because non-Tribal members would not be able to collect any new information that could meaningfully inform an impact analysis. Although Dr. LeBeau describes how certain TCPs can be recognized by non-Tribal individuals, he also emphasizes that Lakota with traditional knowledge are the ones most qualified to make those identifications. The *only* ones with traditional knowledge are Tribal members (elders and spiritual leaders). In short, a Tribal cultural resource survey needs to be carried out by Tribal members with the expertise in identifying TCPs.

Finally, in order for the NRC to make relevant NEPA decisions, the Tribe must provide descriptions of the TCPs sufficient to allow non-Tribal members to recognize and understand the significance of them.

VI. DISCUSSIONS WITH THE OGLALA SIOUX TRIBE ON THE PROPOSED DRAFT METHODOLOGY

Q.42 Please summarize the Staff's engagement with the Oglala Sioux Tribe on the draft methodology since the Staff transmitted the methodology to the Tribe on February 15, 2019.

A.42 (D. Diaz-Toro, J. Spangler) On February 15, 2019, the NRC Staff transmitted via e-mail the proposed draft site survey methodology to the Oglala Sioux Tribe and other invited Tribes. The NRC Staff explained that it was a working document intended to elicit and encourage an open and collaborative discussion to modify and finalize the site survey methodology.

On February 19, 2019, the NRC Staff held the teleconference meeting to discuss the proposed draft site survey methodology, and on February 22, 2019, the NRC Staff met with the Oglala Sioux Tribe and other Invited Tribes (Cheyenne River Sioux Tribe, Standing Rock Sioux Tribe, and Rosebud Sioux Tribe) in Pine Ridge, SD. At both meetings, Tribal members raised numerous concerns and objections with the Staff's proposed draft methodology. Of particular concern to the Staff, the Tribe made several statements that appeared to repudiate the agreed-upon parameters of the March 2018 Approach, most notably the Tribe's agreement to the two two-week periods for the conduct of the site survey and the amount of compensation and reimbursement that the Tribe had deemed appropriate.

On March 1, 2019, after considering the Tribe's statements at the previous two meetings, the NRC Staff sent a letter to the Oglala Sioux Tribe. The letter summarized the concerns and objections the Tribes had expressed, stated that the Staff does not plan to renegotiate the parameters of the March 2018 Approach, and requested that the Tribe confirm whether it was "willing to proceed with finalizing the proposed methodology within the previously negotiated parameters." (Ex. NRC-215, NRC's March 1 Letter to

Oglala Sioux Tribe - Negotiations Regarding Development of a Methodology for a Tribal Site Survey to Identify Historic, Cultural, and Religious Sites, at 5 (ML19060A295)).

On March 12, counsel to the Oglala Sioux Tribe provided the Tribe's response to the NRC Staff's March 1 letter. Based on the Tribe's response, the NRC Staff determined that fundamental disagreements regarding the scope of the site survey methodology remained. Specifically, the Tribe asserted that it "never accepted a rigid application of the March 2018 proposal," that the "methodology required to meet NRC duties must be determined first, and only then could the costs be determined and agreed upon," and that "[o]nce a methodology is determined, the parties should then turn their attention to establishing a reasonable timeline to implement the methodology." (Ex. NRC-211 at 2, 4). The Tribe further asserted that "The methodology, as currently drafted, relies on "scientific method" and "empirical evidence" in a way that violates NEPA's mandate..." (*Id.* at 6). As such, on March 15, the NRC Staff informed the Oglala Sioux Tribe that based on the fundamental disagreements between the parties, the Staff supported "moving forward with the teleconference with the Board and parties next week [the week of March 18] to discuss next steps." (Ex. NRC-216, NRC Staff's March 15, 2019 E-mail to Oglala Sioux Tribe Regarding No Additional Meetings (ML19079A402)).

Q.43 What did the Oglala Sioux Tribe and other Tribes communicate to the NRC Staff regarding the Staff's proposed draft site survey methodology, and what conclusions did the NRC Staff reach based on those communications?

A.43 (D. Diaz-Toro, J. Spangler) Consistent with the Board's October 30, 2018, Order, the NRC Staff created the proposed draft methodology to be a "specific scientific method that would fit into the two-week periods set out in the March 2018 Approach for visiting the physical site." (*Powertech*, LBP 18-5, 88 NRC at 135). During the discussions regarding the NRC Staff's proposed draft methodology between the NRC Staff, the Oglala Sioux Tribe, and other invited Tribes, the Tribes have shared many concerns and objections regarding the agreed-upon parameters of the site survey methodology that were established in the March 2018 Approach and defined in the Board's October 30, 2018, Order. (Ex. NRC-203; Ex. NRC-217, February 19, 2019 Teleconference Call Summary with Oglala Sioux Tribe Comments (Draft) (ML19079A400); Ex. NRC-218, Oglala Sioux Tribe's Summary of the Meeting with NRC Staff on February 22, 2019 in Pine Ridge, SD (ML19074A247); Ex. NRC-211).

The Tribe's concerns with the proposed draft methodology have encompassed numerous topics, among them the Tribe's position that two noncontiguous two-week periods is insufficient to carry out an acceptable site survey, that the entire 10,000 plus acre project area must be surveyed using 10 m transects, and that the proposed amount of compensation and reimbursement for Tribes' participation is insufficient. We will summarize several of the most significant examples of how the Tribe's objections regarding the draft methodology are incompatible with the March 2018 Approach and why, ultimately, the Staff believes that further negotiation would not be successful.

1. The Tribes objected to the two non-contiguous two-week periods established in the March 2018 Approach for carrying out the Tribal site survey. Specifically, at the February 19, 2018 teleconference meeting, the Oglala Sioux Tribe indicated that the two two-week survey periods are “not sufficient and adequate, and noted that the timeframe for the survey should take into consideration the Oglala Sioux Tribe’s traditional knowledge, which is also based in spirituality and culture.” (Ex. NRC-217 at 2). The Tribes collectively conveyed the same concern to the Staff during the February 22, 2019 meeting in Pine Ridge, SD. The Tribes explained that the timeline for carrying out the March 2018 Approach as set forth in the NRC Staff’s November 21, 2018 did not provide the Tribes sufficient time to account for, for example, seasonal variations, traditional star knowledge, or opportunities for ceremonial activities at the site. The Tribes expressed that “The time frames...need to be flexible to allow for a credible methodology to be developed that includes traditional cultural knowledge and protocols, then a time frame...determined.” (Ex. NRC-218 at 2).

In LBP-18-5, the Board stated that “any Tribal negotiating position or proposal should only encompass the specific scientific method that would fit into the two-week periods set out in the March 2018 Approach for visiting the physical site.” (*Powertech*, LBP-18-5, 88 NRC at 135). As stated above, however, the Tribe has subsequently asserted that any methodology that fits within the two two-week periods is not sufficient. (Ex. NRC-217 at 2). Therefore, it was reasonable for the NRC Staff to conclude that further negotiations on this fundamental point would not be fruitful.

2. The Tribes present at the February 22, 2019, meeting in Pine Ridge stated that they “require survey of the entire project area.” (Ex. NRC-218 at 2). They also stated that the entire area must be surveyed using 10-meter transects. The NRC Staff has explained that the entire area will be available for examination. However, the NRC Staff has also explained that depending on the number of people participating, surveying the entire 10,000 plus acres using 10-meter transects could be difficult to accomplish within the bounds set by the Board and agreed upon by the parties. Given that the Oglala Sioux Tribe has stated this as a requirement for an acceptable survey (Ex. NRC-198 at 2; Ex. NRC-218), the Staff has reasonably concluded that further negotiations would not be productive.
3. At the February 22, 2019 meeting and in the Oglala Sioux Tribe’s March 12 letter, the Tribes also expressed concerns about the reasonableness of amount of reimbursement and honoraria to be provided to the participating Tribes. The amount of reimbursement – including for lodging, meals and incidentals, and mileage for up to three Tribal representatives per Tribe – as well as the \$10,000 honorarium to each participating Tribe (i.e., up to \$70,000 total, should each Tribe choose to participate), were decided on after several months of discussions with the parties as part of the March 2018 Approach. Despite previously stating that “[t]he Tribe would anticipate that an amount

on the order of what was proposed previously would be appropriate” (Ex. NRC-194 (Feb. 15, 2018 response ML18046A171) at 5), during negotiations in February 2019, the Tribe equivocated that “a credible methodology [should] be developed...then a time frame and budget determined” (Ex. NRC-218 at 2).

While the Tribe has appeared to avoid specifically referring to the cost estimates of its previous proposals, the Tribe’s continued advocacy for a methodology exceeding the parameters of the March 2018 Approach makes it necessary for the Staff to use these estimates for comparison. The estimated costs for the Tribe’s only two proffered proposals are approximately \$818,000 and over \$2 million, respectively. (*Powertech*, LBP-15-16, 81 NRC at 656-57 & n.229 (citing Tr. at 807, 810); *Powertech*, LBP-17-9, 86 NRC at 177, n. 33; Ex. NRC-198 at 6). Furthermore, the Tribe introduced its June 15, 2018 proposal, which the Tribe itself estimated would cost in excess of \$2 million, after a Board ruling that described the Makoche Wowapi proposal as “patently unreasonable.” (*Powertech*, LBP-15-16, 81 NRC at 657). The Staff was especially surprised by the Tribe’s over \$2 million proposal, considering the Tribe’s previous assertion that it would participate to some extent in a site survey even absent compensation. (Tr. at 1394, 1452). The Staff reasonably concluded that because the Tribe’s project estimates seem only to be escalating, further negotiations were not likely to be productive.

4. The Oglala Sioux Tribe also expressed concern with the proposed draft methodology’s reliance on a scientific approach at both the February 19 teleconference and the February 22, 2019 meeting, despite the fact that the Tribe had criticized previous NRC Staff proposals for “lack[ing] scientific integrity” (Ex. NRC-218 at 2; *Powertech*, LBP-18-5, 88 NRC at 117). Specifically, at the February 19 teleconference, the Oglala Sioux Tribe expressed concern with reliance on the “scientific method.” (Ex. NRC-217 at 2) Additionally, at the February 22 meeting in Pine Ridge, the Oglala Sioux Tribe and other invited Tribes explained that because the western concept of the scientific method does not align with the Tribes’ views of the world, they are concerned that “[u]se of phrase ‘scientific method’ in methodology...appears to provide a rigid approach and a basis to discount or relegate traditional cultural knowledge and experience to insignificance. An acceptable approach should include scientific principles from the physical and social sciences and must also ensure the survey method relies on traditional cultural knowledge.” (Ex. NRC-218 at 1).

Although the Tribe has previously requested “a scientifically sound cultural resources survey” (Ex. NRC-219, Oglala Sioux Tribe’s March 30, 2018 Response to NRC Staff’s March 16, 2018 Approach at 1 (ML18089A655)) and has rejected previous NRC Staff proposals that the Tribe described as containing “no identifiable scientific methodology for a cultural resources survey,” (Oglala Sioux Tribe’s Response in Opposition to NRC Staff’s Motion for Summary Disposition of Contention 1A, at 7-8 (Sept. 21, 2018)), the Tribe’s recent critiques of the Staff’s proposed draft methodology now criticize the very elements that the Tribe claimed were absent. Despite the fact that the entire structure of the Staff’s proposed draft methodology is predicated on reconciling a scientific method

with traditional cultural values and perspectives, as explained in A.37, the Tribe maintained its objections. The Tribe has articulated no reasonable basis to dispute the Staff's conclusion that the proposed draft methodology is fully consistent with the Tribe's request that "An acceptable approach should include scientific principles from the physical and social sciences and must also ensure the survey method relies on traditional cultural knowledge" (Ex. NRC-218 at 1). Given the Tribe's evolving position on the application of scientific principles in the proposed draft methodology, the NRC Staff reasonably concluded that further negotiations on this point would not be productive.

5. The Oglala Sioux Tribe again described the Staff's proposed draft methodology as an "open-site survey." At the February 22, 2019 meeting, the Tribes "expressed concern about any reliance on an 'open site survey' approach." The OST's February 22 meeting summary also claims that the Staff's proposed draft methodology "as yet does not include any on the ground methodology." (Ex. NRC-218 at 2). Further, in the Tribe's March 12, 2019 letter, the Tribe stated that the Staff's proposed draft methodology "essentially restates an 'open site survey' that was rejected on several occasions during these proceedings." (Ex. NRC-211 at 6). Notwithstanding the Tribe's assertions to the contrary, as explained in A.32–A.37, the proposed draft methodology is demonstrably not an open-site survey, as the term was defined by the Tribe and adopted by the Board. Therefore, having squarely addressed this issue, the Staff reasonably concluded that further discussions would not be productive.

6. During the February 22, 2019, meeting in Pine Ridge, the Tribes expressed that "Heavy reliance on Dr. LeBeau's methodology is problematic. Dr. LeBeau's work and methods are controversial, do not enjoy their Tribal Historic Preservation Officers' support, and it should not be used as the primary basis for a methodology." (Ex. NRC-218 at 2). However, in developing the draft methodology, the NRC Staff and contractor took into consideration the Oglala Sioux Tribe's request in its January 11, 2019 letter (Ex. NRC-203 at 3) to the NRC Staff indicating that "[t]he June 2018 Literature Review Report produced by Dr. Nickens identifies two methodologies associated with the work of Dr. Richard Stoffle and Dr. Sebastian LeBeau. While both methods have shortcomings, and there are other scientific and traditional methods of gathering and interpreting the necessary information, these methodologies should be considered in the upcoming discussions." After the Staff pointed out the Tribe's original direction to consider Dr. LeBeau, the Tribe proffered a third position regarding Dr. LeBeau's methodology in its March 12, 2019 letter: "...the Oglala Sioux Tribe's position has never been that the LeBeau method was sufficient in and of itself for development of a cultural resources survey methodology. The Oglala Sioux Tribe has also never stated that the LeBeau methodology is completely irrelevant". (Ex. NRC-211 at 6) The NRC Staff contractor considered but did not simply and solely adopt Dr. LeBeau's methodology as "sufficient in and of itself," which is precisely what the Tribe requested. Based on the Tribe's equivocation regarding the appropriateness of reliance on Dr. LeBeau's

methodology and the resulting inability for the Staff to discern the nature of the Tribe's objection, the Staff reasonably concluded that further negotiations would not be productive.

7. During the meeting on February 22, 2019, in Pine Ridge, the Tribes expressed that because the proposed draft methodology relies on NHPA guidance, it "necessarily raises issues with compliance with the identification and evaluation procedures and substantive requirements of the National Historic Preservation Act (NHPA)." (Ex. NRC-218 at 2) As such, the Tribal Historic Preservation Officers expressed their conclusion "that conducting the surveys required for the supplemental environmental impact statement process under NEPA triggers NHPA requirements. The document should incorporate and track the NHPA identification and evaluation process." (*Id.* at 2). However, because the NHPA contention has been adjudicated, the NRC Staff reasonably declined to reopen the Section 106 process.

Q.44 What was the basis for the Staff's decision that it was not going to reach agreement with the Oglala Sioux Tribe on a final site survey methodology?

- A.44 (D. Diaz-Toro) Despite the Staff's diligent efforts to incorporate the Oglala Sioux Tribe's previously raised concerns into both the March 2018 Approach and the proposed draft methodology, at each subsequent meeting the Tribe raised additional concerns that criticized the parameters of the March 2018 Approach—which the Tribe had previously agreed was reasonable and which had been previously endorsed by the Board. However, based on the nature and extent of the concerns expressed by the Tribe, including general opposition to the Dewey-Burdock ISR project and uranium mining generally (Ex. NRC-220, NRC Staff Comments on February 22, 2019 Meeting Summary at Enclosure p. 1 (ML19087A343)), the NRC Staff recognized that there were fundamental differences between the parties regarding the previously negotiated and agreed-upon parameters, and that a mutually agreeable arrangement was not feasible in order to carry out a tribal cultural resource survey in 2019. The Staff concluded that continuing to expend time and resources on negotiations would not be prudent, and therefore moved to proceed to an evidentiary hearing as the most appropriate method to resolve Contention 1A.

Q.45 Could the Staff have carried out other aspects of the March 2018 Approach, such as the oral history interviews?

- A.45 (D. Diaz-Toro, J. Spangler) No. The March 2018 Approach was constructed such that all elements of a cultural resource survey would work in harmony rather than in a compartmentalized manner. The success of each aspect of the March 2018 Approach was dependent on the success of the preceding milestones.

The purpose of the oral history interviews was to supplement the pedestrian site survey. The interviews would serve to inform the results of the site survey to better understand

and document the Tribal history to the ancestral lands, how the TCPs are related to the broader cultural landscape, and to get this understanding directly from the Tribes. Oral history interviews with Tribal Elders would be narrowly focused on the immediate region surrounding the Dewey Burdock ISR project area, not the entire Black Hills region. As such, the interviews were planned after the site visits to elicit site- and area-specific information.

Because the purpose of the oral history interviews was to supplement the pedestrian site survey, conducting oral history interviews alone without a site survey would not have served their intended purpose. Further, oral interviews can only be conducted with the cooperation of the Tribes, but access to the interviewees is currently limited by the Tribes themselves.

In short, given the Tribe's constructive rejection of the March 2018 Approach, pursuing other aspects of the March 2018 Approach was not feasible. And even if it were, such a compartmentalized approach would not have produced meaningful information for NEPA purposes.

Q.46 As a result of the Staff's efforts to implement the March 2018 Approach, has the Staff obtained information on sites of cultural, historic, or religious significance to the Oglala Sioux Tribe?

A.46 (D. Diaz-Toro) The NRC Staff was not able to identify new sites of historic, cultural, and religious significance to the Lakota Sioux Tribes or obtain information from the Oglala Sioux Tribe on the significance of the previously identified sites to the Tribes. The NRC Staff has sought this information since the beginning of the Staff's environmental review. In seeking this information, the Staff began its outreach efforts to the Oglala Sioux Tribe in 2009, and began formal consultation with the 23 Tribes on March 19, 2010. The Oglala Sioux Tribe has affirmed that an on-the-ground survey covering 100-percent of the entire license boundary by Tribal personnel from participating tribes is the only level of effort sufficient for identifying historic properties (Tr. at 814). However, because the Oglala Sioux Tribe chose not to participate in the 2013 Tribal site survey, and because the nature of the information is such that it can only be identified and evaluated by the Tribe itself, the NRC Staff has not been able to obtain such information. The Staff has repeatedly requested that the Tribe provide any information it may already possess regarding the possible presence of known sites at the Dewey-Burdock project (see, e.g., Ex. NRC-187 at 1; Ex. NRC-188 at 2), but the Tribe has not and continues to assert that an on-the-ground survey is the only way of obtaining this information.

VII. Determination of Unavailability and 40 CFR 1502.22 FACTORS

Q.47 Has the Staff determined that, as contemplated under the standards in 40 CFR § 1502.22, the information it sought to obtain from the site survey is incomplete or unavailable?

A.47 (D. Diaz-Toro) Yes.

Q.48 Please explain the basis for that determination.

A.48 (D. Diaz-Toro) As the Staff has explained in A.30 above, the Tribe has repeatedly expressed that the only way to obtain the information necessary to cure the Board-identified deficiency in the FSEIS is to conduct a Tribal site survey of the Dewey-Burdock site (e.g., Tr. At 814–15). That is why the Tribal site survey is, and has been, the key element of the March 2018 Approach. The other elements of the March 2018 Approach—namely, the oral history interviews, survey report, and FSEIS supplement—all depended upon the effectuation of the Tribal site survey component of the approach.

After the Tribe's rejection of multiple earlier site survey opportunities, and many months of negotiations to address the Tribe's concerns, all the parties, including the Tribe, agreed that the March 2018 Approach was reasonable. That understanding was crucial to the Staff's decision both to proceed with implementation of the March 2018 Approach and later to resume negotiations within the scope of the Board's decision in LBP-18-5. But as we have explained, the Tribe has continued to raise concerns that are fundamentally not compatible with the March 2018 Approach. Therefore, the Staff has no reasonable expectation that the information sought by the Tribal site survey can be obtained from the Tribe.

Q.49 In reaching its conclusion that the information is incomplete or unavailable, has the Staff determined that the “overall costs of obtaining it are exorbitant”?

A.49 (D. Diaz-Toro) Yes. Given that the Tribe has constructively rejected the March 2018 Approach that it previously agreed was reasonable, it is unclear that the Staff can obtain the information at all. However, the costs of the only alternatives that the Tribe has specifically proposed—the Makoche Wowapi approach and the Tribe's June 15, 2018 proposal—are demonstrably exorbitant, in terms of both time and expense.

Q.50 Please explain the basis for that conclusion.

A.50 (D. Diaz-Toro) In describing its understanding of costs within the provisions of 10 CFR § 1502.22, the CEQ acknowledged that “overall costs” encompasses not just financial costs, but also “costs in terms of time (delay) and personnel.” (51 Fed. Reg. 15,618, 15,622). CEQ also explained that it “intends that the agency interpret ‘overall costs’ in light of overall program needs.” (*Id.* at 15,622) For either of the Tribe's alternative

proposals, the financial expenditures alone would be of a magnitude that the Board has found to be “patently unreasonable.” And those alternatives would necessitate substantial time delays as well.

As we have testified in A.23 above, the Makoche Wowapi proposal was discussed in the 2014 evidentiary hearing and in LBP-15-16. It was estimated to cost approximately \$818,000, and would have entailed eight weeks of field work over two sessions to survey just a portion of the Dewey-Burdock site. (*Powertech*, LBP-17-9, 86 NRC at 177 n.33; Ex. NRC-199 at 1). The Board described its cost as “patently unreasonable,” and noted that the Tribe’s inflexible adherence to that approach in its negotiations with the Staff was partially responsible for the impasse in reaching agreement on an approach to conduct a Tribal site survey. (*Powertech*, LBP-15-16, 81 NRC at 656–57 & n.229).

With the June 2018 proposal, the Tribe estimated it would cost in excess of \$2 million, and over one year, to implement. (Ex. NRC-198 at 6). So the Tribe’s own estimated cost to implement its June 12 proposal would more than double the cost of the Makoche Wawapi proposal, and that proposal does not even contemplate or assess the costs associated with the participation of the other tribes it has stated are necessary to its efforts. The Tribe’s June 12 proposal also contemplates that the Tribe would require more than a year simply to complete the necessary fieldwork with an additional six months to prepare the survey report. (*Id.*).

In sum, because the time and resources involved in either of the Tribe’s alternative proposals entail expenditures and further delays that exceed what the Board has already deemed “patently unreasonable,” the Staff concluded that the overall costs of obtaining the information are exorbitant.

Q.51 Is the Staff’s consideration of the costs of the Tribe’s two proposals the only basis for the Staff’s determination that that the information is incomplete or unavailable and that the overall costs of obtaining the information are exorbitant?

A.51 (D. Diaz-Toro) No. At this stage of the process, the Tribe’s repudiation of the March 2018 Approach provides sufficient basis to conclude that the information is incomplete or unavailable and that the overall costs of further efforts to obtain the information would be exorbitant. In LBP-18-5, the Board found that the March 2018 Approach—which, by its very terms, incorporates the overall financial, time, and resource costs associated with its implementation—“constituted a valid and reasonable approach for resolving Contention 1A.” (*Powertech*, LBP-18-5, 88 NRC at 125). Further, the Board found that the Tribe agreed that it was reasonable: “The Oglala Sioux Tribe accepted the March 2018 Approach as reasonable to resolve Contention 1A and does not challenge the reasonableness of the March 2018 Approach as written.” (*Id.* at 131).

To develop that approach and negotiate its implementation involved extensive time, but even after the parties’ agreement, the Staff still met with new fundamental objections

from the Tribe, as evident from the Tribe's June 2018 proposal. When in November 2018 the Staff resumed implementation of the March 2018 Approach, the updated schedule already entailed a further 10 months delay in the schedule for implementing the March 2018 approach. (Ex. NRC-195 at 6). And even if the Tribe now supported the parameters of the March 2018 Approach, substantial additional time and delay would necessarily be involved in further negotiation of the terms of the site survey methodology, with the same uncertainty regarding the likelihood of being able to ultimately conduct the survey. The fact that the Tribe's position as reflected in its June 2018 proposal has moved even beyond its previous Makoche Wowapi proposal further reinforces the reasonableness of the Staff's determination.

Under these circumstances, the overall cost of now pursuing any alternative approach to obtain the missing information from the Tribe would be exorbitant in light of the agency's needs. The exorbitant overall cost of further pursuing such a path is reinforced by the FSEIS's disclosure of the range of potential impacts as well as the existing protections in the license—which are, in effect, mitigation measures—for as-yet unidentified cultural resources. (Ex. NRC-008; NRC-012 at 5–6).

There is no dispute that a reasonable, affordable approach for obtaining the necessary information exists, and has been represented by the Tribe as acceptable to it. Instead, because the Tribe has rejected the implementation of the negotiated parameters, and because the information sought is information that only the Tribe can supply, the issue is that the information simply cannot be obtained at those reasonable costs. It is these considerations, rather than solely the exorbitant cost of the Tribe's alternative proposals, that led the Staff to determine that the information it seeks is incomplete and unavailable. Whatever the hypothetical cost of obtaining the information might be, the reasonable steps the Staff has taken to obtain the information are more than sufficient under NEPA's rule of reason to show that the information sought from the site survey is not available.

Q.52 You have described the Staff's basis for concluding that the information sought from the site survey is incomplete or unavailable. Does the record show that the Staff has met the remaining criteria of 40 C.F.R. § 1502.22(b)?

A.52 (D. Diaz-Toro) Yes. As we discuss further below, the FSEIS, together with this testimony, explains the relevance of that information to the Staff's evaluation of impacts, summarizes the existing credible scientific information relevant to that impact evaluation, and provides the Staff's evaluation of the impacts.

Q.53 How would this incomplete or unavailable information, had it been obtained, have been relevant to the Staff's evaluation of the potential impacts of the Dewey-Burdock project on historic and cultural resources?

A.53 (D. Diaz-Toro) The missing information would have allowed the NRC Staff to conduct impacts analyses of, and identify any appropriate additional mitigation or avoidance measures for, newly or previously identified sites in its FSEIS. This information might have allowed the Staff to provide a more particularized assessment (including specific mitigation or avoidance measures) of Lakota Sioux-specific cultural resources.

Q.54 Please provide a summary of the existing credible scientific evidence which is relevant to evaluating the significant adverse impacts on the human environment at the Dewey-Burdock site.

A.54 (D. Diaz-Toro) The FSEIS described the results of the previously conducted cultural resources investigations and surveys for the proposed Dewey-Burdock ISR project, as described in A.17. These included a Level III cultural resources survey, evaluation of archeological records, an ethnohistoric background study, and Tribal field surveys by seven Tribes, including one Sioux Tribe (Ex. NRC-008-A-1, FSEIS, at 173–288).

In addition to examinations in the field, the NRC Staff contractor (Dr. Paul Nickens) prepared two reports describing his research and findings and provided them to the Staff. The first, a literature review report focused on information pertaining specifically to the Dewey-Burdock ISR project geographic area, as well as the immediate region and was provided to the invited Tribes on June 7, 2018. (Ex. NRC-196).

The second report, titled “Compilation and Evaluation of Existing Information for the National Environmental Policy Act Review of Lakota Historic, Cultural, and Religious Resources for the Dewey-Burdock In Situ Uranium Recovery Project, Fall River and Custer Counties, South Dakota,” covered topics including documentation of site coordinates and basic descriptive information for previously identified Tribal sites, results of viewshed analyses, and the status bald eagle nesting within the Dewey-Burdock ISR project area. (Ex. NRC-224).

These reports and results document the existing credible scientific evidence relevant to the evaluation of significant adverse impacts at the Dewey-Burdock ISR site.

Q.55 Does the information in these two reports affect the Staff’s conclusions in the FSEIS regarding impacts to cultural and historic resources?

A.55 (D. Diaz-Toro, J. Spangler) No. As described in A.18, the NRC Staff determined that the potential impacts to historic and cultural resources would range from SMALL to LARGE.

The two reports described in A.54 above do not identify any additional sites of historic, cultural, or religious significance to the invited Tribes that did not participate in the 2013 Tribal site survey. These reports also do not contain information from the invited Tribes regarding the significance of the already-identified Tribal sites at the Dewey-Burdock ISR project site to the invited Tribes. Accordingly, this information does not alter the NRC

Staff's evaluation and impact determinations for cultural resources of significance to Indian Tribes in the FSEIS would range from "SMALL to LARGE." The information described in the literature review report, as well as the information in the field observations report relating to the viewshed observations, re-visiting known Tribal sites, and an eagle's nest at the Dewey-Burdock ISR project site, do not provide materially different information from the information already assessed by the NRC Staff's FSEIS. The information described in the literature review report reinforces the NRC Staff's determination in the FSEIS that the region where the Dewey-Burdock ISR facility would be situated is of significance to the Lakota Sioux Tribes. It does not, however, alter the FSEIS's impact determinations, because it does not provide any additional information about the presence of sites of historic, cultural, and religious significance to the Lakota Sioux Tribes at the Dewey-Burdock ISR project site, or additional information about the significance of known Tribal sites to the Lakota Sioux Tribes.

With respect to the information in the field observations report, the viewshed observation did not result in a materially different understanding of the impacts of the Dewey-Burdock ISR project on cultural resources from the results of the previous assessment in the FSEIS. The information on known Tribal sites was basic descriptive information, including locational information, gathered to aid the Tribes in their participation in the Tribal field survey. The FSEIS also evaluated the presence of two bald eagle nests at the Dewey-Burdock ISR project site and associated mitigation measures; the field observation revealed that only one nest is now extant. Accordingly, the information obtained by the NRC Staff during the partial implementation of the March 2018 Approach does not alter the Staff's analysis and conclusions in the FSEIS regarding the potential impacts of the Dewey-Burdock ISR project on cultural resources.

In sum, without the input from the Tribes themselves, a literature review, ethnographic study, or other study or report would not take into account the traditional knowledge or perspectives unique to the Tribal members as to the nature and significance of the cultural resources of significance to the Tribes. Therefore, the information obtained by the Staff during the partial implementation of the selected approach complements but does not materially affect the Staff's analysis and conclusions in the FSEIS regarding the potential impacts of the Dewey-Burdock project on cultural resources. The FSEIS for the Dewey-Burdock project evaluates the information about Indian Tribes' cultural resources that the Staff was able to obtain without the specific input of the Lakota Sioux Tribes.

Q.56 If the Staff had been able to fully implement the March 2018 Approach, how would the information obtained from the site survey have affected the Staff's evaluation of cultural resources in the FSEIS?

A.56 (D. Diaz-Toro) Had the NRC Staff been able to implement the entirety of the March 2018 Approach, the survey would have potentially resulted in the participating Tribes' identification of new sites of historic, cultural, or religious significance to Lakota Sioux

Tribes, and the participating Tribes' perspective on the significance to the Lakota Sioux Tribes of known Tribal sites at the Dewey-Burdock site. This information would have allowed the Staff to evaluate potential impacts to the Tribal cultural resources identified and evaluated, and facilitate preservation of those resources through avoiding, minimizing, or mitigating adverse effects. However, because the Staff was unable to obtain such information, the environmental record of decision does not include any new and significant information on the presence of sites of historic, cultural, and religious significance to the Lakota Sioux Tribes at the Dewey-Burdock site; any changes to the discussion of potential adverse effects from the Dewey-Burdock project on sites of historic, cultural, and religious significance to the Lakota Sioux Tribes; or any changes to the discussion of potential measures to avoid, minimize, or mitigate adverse effects for such sites.

And ultimately, the information obtained from the survey would not have altered the NRC Staff's conclusion in the FSEIS that impact determinations for cultural resources of significance to Indian Tribes would range from "SMALL to LARGE." It follows then that since the Staff determined that the issuance of the materials license was the preferred alternative even where the potential impacts to cultural resources may be as great as "LARGE," new information would not have materially affected the Staff's ultimate NEPA decision.

Q.57 Has the Staff fulfilled its NEPA obligation to take a "hard look" at potential impacts to cultural resources?

A.57 (D. Diaz-Toro) Yes. As the foregoing testimony explains, the Staff has satisfied its duty under NEPA to take a "hard look" at Tribal cultural resources that may be impacted by the Dewey-Burdock project. The Board, having found in LBP-18-5 that the March 2018 Approach was a reasonable approach for obtaining additional information on specific cultural, historical, or religious resources of importance to the Oglala Sioux Tribe, provided the option to the parties to develop a methodology that fit within that reasonable approach. Our testimony has demonstrated that, consistent with the procedures established by the Board in LBP-18-5 for the resolution of Contention 1A, the Staff offered the Tribe an opportunity to participate in the March 2018 Approach, initiated discussions with the Tribe on a methodology for the Tribal site survey component of the approach that would fit within the constraints of the March 2018 Approach, and delivered to the Tribe a methodology that was reasonable and appropriately considered and responded to the concerns of the Tribe.

Additionally, we explained why the Staff reasonably determined that the negotiations with the Tribe would not result in an agreement with the Tribe, most crucially because the Tribe constructively rejected the fundamental terms of the March 2018 Approach, which the Board and Tribe previously agreed was reasonable. We further explained why the Staff reasonably determined that the information it has sought from the Tribe from the implementation of the March 2018 Approach is unavailable. Under these

circumstances, the fact that a survey could not be conducted and the information the Staff sought could not ultimately be obtained is fully consistent with a determination that the Staff has taken the necessary hard look. The Staff's NEPA compliance must ultimately be subject to the rule of reason. Our testimony demonstrates why the Staff's extensive efforts to obtain the information—most centrally the development of the March 2018 approach and the subsequent actions to implement it, including repeated engagement with the Tribe and meaningful opportunities for the Tribe's participation—have been objectively reasonable.

In sum, we have demonstrated that the record, including our testimony and the analysis already in the FSEIS, shows that the Staff has met the standards of 40 C.F.R. § 1502.22 and fulfilled its NEPA responsibilities.

Q.58 Does this conclude your testimony?

A.58 (D. Diaz-Toro, J. Spangler) Yes.

May 17, 2019

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

AFFIDAVIT OF DIANA DIAZ-TORO

I, Diana Diaz-Toro, do hereby declare under penalty of perjury that my statements in the foregoing testimony and in prefiled Exhibit NRC-177 (Statement of Professional Qualifications of Diana Diaz-Toro) are true and correct to the best of my knowledge and belief.

Executed in Accord with 10 CFR 2.304(d)

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Executed in San Juan, PR
this 17th day of May, 2019

May 17, 2019

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
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(Dewey-Burdock In Situ Uranium Recovery)	
Facility))	

AFFIDAVIT OF JERRY SPANGLER

I, Jerry Spangler, do hereby declare under penalty of perjury that my statements in the foregoing testimony and in prefiled Exhibit NRC-178 (Statement of Professional Qualifications of Jerry Spangler) are true and correct to the best of my knowledge and belief.

Executed in Accord with 10 CFR 2.304(d)

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Executed at Ogden, Utah
this 17th day of May, 2019