



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

Hearing Exhibit

Exhibit Number:

Exhibit Title:

July 17, 2019

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POWERTECH (USA) INC.,)	Docket No. 40-9075-MLA
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Facility))	

REPLY TESTIMONY OF DIANA DIAZ-TORO AND JERRY SPANGLER

Q.1 Please state your name, position, employer, and briefly describe role in the Staff's efforts to resolve 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 response testimony and exhibits filed by the Oglala Sioux Tribe (Tribe) and Consolidated Interveners in this proceeding?

A.2 (D. Diaz-Toro, J. Spangler) Yes. We have reviewed the testimony provided by Kyle White (Ex. OST-042-R), Dr. Kelly Morgan (Ex. OST-043-R), and Dr. Craig Howe (Ex. OST-045-R) on behalf of the Tribe, as well as Consolidated Interveners' testimony (Ex. INT-023). We have also reviewed any relevant supporting information cited by the Tribe and Consolidated Interveners, including the exhibits filed with their initial testimony.

Q.3 In its Response Statement of Position, the Tribe appears to assert that non-Native archaeologists are not qualified to "prepare methodologies or carry out cultural resources studies." Tribe's Response Statement of Position (RSOP) at 18. Do you agree? Why or why not?

A.3 (J. Spangler) If the Tribe's position is interpreted as broadly as that statement suggests, and is indeed directed to **all** cultural resources studies, then the statement is simply untrue. There are thousands of non-Native archaeologists, ethnographers, and historians who are extremely qualified, are recognized by the profession (and Tribes) as experts, and who are deemed qualified by the federal government through the cultural resource permitting process. To broadly disparage that cumulative expertise because the experts are the wrong ethnicity is both contrary to well-established practice in this field and disturbing for the precedent that endorsing such a view would set with cultural resources studies across the nation. It would also appear to require agencies to have extensive and direct experience with any and all Tribes potentially affected by a project, in effect demanding as many methodologies as there are Tribes.

However, to the extent that the statement is intended to apply much more narrowly to the identification of intangible Tribal cultural resources or specify the significance of TCPs to a particular Tribe or group of people, the statement is correct. Yet that understanding is fully consistent with the Staff's position: the importance of Tribal input and expertise does not indicate any deficiency in either the reasonableness of the Staff's methodology or the Staff's qualifications to develop it and work with Tribes to implement it. As the Staff stated in its proposed draft methodology, only Tribal members steeped in traditional knowledge have the ability to identify TCPs that are intangible or ascribe significance to previously identified TCPs. The methodology was structured specifically to allow Tribal input into each phase, from the initial identification of objectives to the establishment of definitions to on-the-ground implementation of the pedestrian survey. Because Ball, et al. emphasize that Tribes should provide input to the objectives of a

Tribal cultural resources methodology, the Staff incorporated the suggestion from the Tribe's June 15, 2018 proposal as a starting point for discussions on objectives. (Ex. NRC-214 at 7). Likewise, the Staff put forward the LeBeau methodology as a starting point for discussions on definitions. We took great care not to dictate to the Tribes the terms and parameters of a pedestrian survey, but rather offered a proposed draft methodology whereby the Tribes could implement their own standards based on their own priorities.

As to my own experience working with Tribes, my initial testimony already thoroughly explains why my background and skills demonstrate my qualifications for the task involved in this proceeding. My experience has largely been behind the scenes of government-to-government relationships, offering advice and expertise that Tribes could cite in their own consultation process. I developed close personal relationships with some of the elders over the years who would offer their perspectives on various research projects, review written materials, and tutor me in the Native world view. As a director of an NGO since 2005, I have made it a standard practice to (1) always have Tribal representation on my board of directors, and (2) always invite Tribal members to participate on field research projects. Their perspective has allowed me to offer unofficial advice to Tribal officials whenever an undertaking might threaten important Tribal values.

Ultimately, nothing in the Tribe's statements about who is qualified to identify TCPs, or ascribe significance to them, refutes the reasonableness of the staff's approach or the content of the methodology.

Q.4 The Staff relied on Dr. LeBeau's methodology in formulating the proposed draft methodology. Can you address the Tribe's criticism of Dr. LeBeau's methodology?

A.4 (J. Spangler) The Tribe's RSOP criticizes the Staff for having heavily relied on the LeBeau methodology, but curiously makes almost no reference to the fact that the framework of the Staff's proposed draft methodology is based largely on Ball et al., with LeBeau's work informing the definitions. At the February meeting in Pine Ridge, the Tribes took great offense at LeBeau's methodology (and LeBeau personally), indicating it was inaccurate, contained information not authorized by the Tribes, and that we needed to start over. (Ex. NRC-218 at 2). That criticism is repeated, if somewhat softened, in their RSOP. The fact of the matter is the LeBeau methodology was developed by a Lakota (an enrolled member of the Cheyenne River Sioux Tribe) in consultation with Tribal elders and was intended to help non-Lakota individuals understand the nature and importance of Lakota TCPs. Not only is it directly applicable to cultural resources in the Dewey Burdock project area, but it represents a reasonable starting point for Tribal participation in finalizing a methodology specific to Tribal priorities.

Q.5 The Tribe appears to criticize the staff's methodology on the basis that it does not involve an "interdisciplinary" approach. Does NEPA have a substantive "interdisciplinary" requirement, and is there any merit to this aspect of the Tribe's challenge?

A.5 (D. Diaz-Toro, J. Spangler) In its RSOP, the Tribe has puzzlingly made this term a focus of its challenge, although the Tribe does not provide any specific explanation for its understanding of the term. However, the Tribe's vague suggestion that this term from the statute represents a basis for challenging the Staff's methodology reflects a misunderstanding of the concept and does not show any deficiency in the Staff's approach.

There is an interdisciplinary requirement in NEPA, but not how the Tribes are using the term. NEPA requires the use of a systematic, interdisciplinary approach in planning and decision-making. (42 U.S.C. § 4332(A)). But to understand the intent of "systematic, interdisciplinary approach," it is important to place that policy in proper context. Congress was concerned that each federal agency, if left to its own devices, would develop its own approach, each one different from another federal agency, and that would create a web of inconsistent rules and regulations. (See S.Rep.No.91-296, 91st Cong., 1st Sess. 6 (July 9, 1969)). Congress left it up to the Council on Environmental Quality (CEQ) to develop the "systematic" approach to be used by all federal agencies, and in fact, a co-equal term would be "uniform." That is why all environmental impact statements (EISs) look the same and address the same topics in the same prescribed order. The system CEQ implemented is the EIS. (43 Fed. Reg. 55,979 (Nov. 29, 1978)).

Additionally, CEQ's regulations at 40 C.F.R. § 1502.6 require that environmental impact statements "be prepared using an inter-disciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts." Section 1502.6 continues to explain that the "disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process."

Thus, the term "interdisciplinary" is a directive to federal agencies to consider impacts to all aspects of the environment: air, land, water, communities, etc. In other words, the environmental analysis, to be complete, cannot be limited to a single component of the environment, but rather federal agencies must incorporate the expertise of experts in multiple fields. The interdisciplinary component involves biologists weighing in on impacts to wildlife, botanists discussing impacts to rare and endangered species, hydrologists opining on impacts to groundwater, archaeologists discussing impacts to cultural resources, air quality experts addressing impacts to air quality, and so on. This is not a mandate that biologists and botanists and archaeologists each use interdisciplinary approaches. It is a mandate that the environmental analysis (EIS) as a whole be interdisciplinary. (See, e.g., S.Rep.No.91-296, 91st Cong., 1st Sess. 20 (July 9, 1969); 43 Fed. Reg. 55,984 (Nov. 29, 1978).)

Q.6 Given this context, has the NRC Staff met the NEPA directive to use “a systematic, interdisciplinary approach in planning and decision-making”?

A.6 (D. Diaz-Toro, J. Spangler) Yes. First, the FSEIS itself is interdisciplinary in that it incorporates multiple disciplines into a holistic analysis of all environmental impacts. Cultural resources are but one component of an EIS but part of a larger interdisciplinary approach. The NRC Staff evaluated environmental impacts on different environmental resource areas (e.g., land use, geology and soils, air quality, water resources, ecological resources, historic and cultural resources, socioeconomics, etc.) using a variety of specialists with different disciplines. Chapter 10 of the FSEIS provides a list of individuals involved in the preparation of the FSEIS including the individual’s role, education, and experience. (Ex. NRC-008-B-2, FSEIS, at 129-131). Specifically, the NRC’s FSEIS was prepared by an interdisciplinary team that included specialists with education and experience in environmental science, engineering, biology, geology, archeology, anthropology, and health physics, among other disciplines. (*Id.*). Additionally, in evaluating the impacts to historic and cultural resources, the NRC Staff consulted with Indian Tribes to identify resources of significance to them. The Tribes’ contributions led to the identification of Tribal cultural resources, assessment of impacts to the identified resources, and potential mitigation measures.

The Staff’s draft methodology is also “interdisciplinary,” in that it uses two or more disciplines in the course of a particular study: (1) history/ethnography, (2) oral interviews to be conducted at the time of the pedestrian survey, and (3) Tribal Cultural Survey using traditional ecological knowledge. (Granted, there is no consensus on how the third component should be conducted. But it is a discipline in the sense that its intent is to identify traditional cultural and spiritual values.) Finally, the draft methodology is predicated on the very precise goal of identifying and evaluating the Tribes’ sacred sites using the Tribes’ traditional cultural knowledge in a scientifically rigorous manner (Ex. NRC-214 at 3; Ex. NRC-176 at A.11, A.12, A.39, A.40). Even though the Tribe states that the Staff used a “stilted and outmoded” application of the scientific method (RSOP at 19), the basic components of the scientific method have remained the same for more than 200 years. They do not become outmoded.

Q.7 The Tribe and Consolidated Intervenors assert that information could have been gathered through means other than a pedestrian site survey, including by conducting the oral interviews that were contemplated by the March 2018 Approach. (RSOP at 42; CI RSOP at 2). The Tribe also states that the methodological approaches that the Staff considered in developing the draft methodology rely on information gathered through oral interviews. (RSOP at 42-44). Similarly, the Consolidated Intervenors introduce affidavits from a number of individuals with whom they assert the NRC Staff could have gathered information. Why didn’t the Staff carry out the oral interview portion of the proposed draft methodology?

A.7 (D. Diaz-Toro, J. Spangler) The Tribe introduces its claims about the need for oral interviews with the vast understatement that the pedestrian survey is the means “upon which most of the parties’ efforts have been spent.” (RSOP at 42). As explained at length in the Staff’s initial testimony, the March 2018 Approach was carefully crafted to address the Tribe’s concerns and requests, in particular the fundamental importance of a pedestrian site survey. And it was as a result of those concerns and requests, and the Tribe’s agreement that the proposed approach was reasonable, that the Staff focused its efforts on implementing that approach. The Tribe seems to now be saying that the Staff is obligated to defend a range of other options (including those the Tribe has consistently said would be incomplete) as if the process were at square one. The Staff has explained why the time and effort committed to implementing the March 2018 Approach, and the Tribe’s constructive rejection of it, is under these circumstances more than sufficient to meet 40 C.F.R. § 1502.22 and NEPA’s rule of reason.

As discussed in Q.45 of the Staff’s initial testimony, the oral interviews were meant to supplement the pedestrian survey because, in response to the Tribes’ assertion that the “only level of effort sufficient for identifying historic properties would be an on-the-ground 100-percent survey of the entire licensed boundary by tribal personnel from participating tribes” (Tr. at 814-815), the Staff committed to conduct a pedestrian site survey with Tribal participation. The record reflects how consistently the Tribe has emphasized that as its position: “As an initial matter, it is important to recognize that a physical survey of the site must be conducted in order to allow for identification of cultural resources, and that a simple literature review, background check, or some similar effort is not sufficient.” (Ex. NRC-190 at 3). Likewise, as discussed in LBP-18-5, during the January 24, 2018, teleconference call with the Board discussing “the parties’ respective positions on the NRC Staff’s December proposal,” the Oglala Sioux Tribe “continued to assert its general approval, noting that the physical site survey is a fundamental requirement.” (LBP-18-5 at 109). Additionally, in his declaration, Mr. Kyle White stated that “while some tribes have reviewed the site, these are not sufficient to identify cultural resources significant to the Oglala Sioux Tribe or other Oceti Sakowin nations.” (Ex. OST-042-R ¶ 28).

As part of the Staff’s proposed draft methodology, the oral interviews, therefore, would have provided an opportunity to gather additional information from Tribal elders about the sites identified during the pedestrian site survey. The oral interviews were intended to be supplementary to the survey, not provide contextual information about the importance of the region to the Tribe. Carrying out the oral interviews without the pedestrian survey would not have yielded information about intangible Tribal cultural resources or specify the significance of TCPs to a particular Tribe or group of people. Notably, testimony in the 22 attached declarations to the Consolidated Intervenor’s Response does not address actual TCPs in the project area. (Ex. INT-023). Pursuing interviews with an unspecified set of Tribal individuals, whatever the potential cost, would not only involve further delays but ultimately still not provide the comprehensive information that the Tribe has consistently asserted is necessary to resolve its concerns and must be obtained from a systematic site survey. The oral interviews were not

proposed as an academic research study, but rather as a component of the March 2018 Approach to be carried out in conjunction with the pedestrian site survey. Because the discrete purpose of the oral history interviews was to provide a Lakota perspective on the Tribal cultural sites identified during the pedestrian site survey, they would not be viable as a stand-alone initiative.

Moreover, as a practical matter, the Tribe's previous proposals regarding oral interviews conflicted with the March 2018 Approach. Notably, when Staff traveled to Pine Ridge in June 2018 to begin implementing the March 2018 Approach, the Oglala Sioux Tribe requested that Tribal members be trained by the NRC Staff's contractor to conduct the oral interviews themselves (i.e., the Staff and Staff's contractor would not conduct the interviews). (Ex. NRC-198 at 3). The scope and level of effort of the oral interviews proposed by the Oglala Sioux Tribe is beyond the scope of the March 2018 Approach. Specifically, the level of effort to provide training to Tribal members to conduct the oral interviews themselves would require additional time and resources not previously discussed or considered. Finally, although the Consolidated Intervenor submitted the declarations of 22 individuals who state that they have "personal knowledge concerning Oglala Lakota cultural resources that may be at the Dewey Burdock site," the Consolidated Intervenor has not previously shared this information. (INT-023). Further, to the extent that the Consolidated Intervenor suggests that the Staff should reach out to individuals like the 22 whose declarations they attach, this is inconsistent with the systematic, scientific approach to cultural resource information the Tribe and other intervenors have insisted is required.

In sum, because the Staff designed the proposed draft methodology – and the entire March 2018 Approach – around the idea of a physical site survey, only conducting oral interviews in a manner similar to the Tribe's June 2018 proposal would not only cause further delay and significant practical challenges, but ultimately still not provide the information that the Tribe had previously asserted is necessary to resolve their concerns.

Q.8 In his declaration, Mr. Kyle White states that the formal Tribal government “is not the ‘holder’ of all cultural resources information...Asking the Tribal government to provide information on cultural resources cannot substitute for asking the persons and entities to share that information[.]” (Ex. OST-042-R ¶ 75). Has the Tribe ever previously indicated that the NRC Staff should engage with entities or individuals other than Tribal governments to gather information about cultural resources of significance to the Tribe?

A.8 (D. Diaz-Toro) Although the Oglala Sioux Tribe has indicated that the Tribes themselves are the only ones qualified to identify, evaluate, and ascribe significance to cultural resources (Tr. at 764–66), the Tribe has never indicated that the Staff should have been engaging with entities and individuals other than the Tribal representatives during the course of negotiations. Because the Oglala Sioux Tribe is the party in this proceeding representing the interests of its members, it is reasonable for the Staff to rely on Oglala

Sioux Tribe representatives to conduct negotiations and engage individuals with relevant knowledge or other participating Tribes. Further, the Tribe emphasized the importance of engaging the governments of other participating Tribes. For example, the Staff sought the Oglala Sioux Tribe's input on which other Tribes to invite to the site surveys as part of the March 2018 Approach and followed their guidance in doing so. (Ex. NRC-194 at unnumbered pages 3-4). Accordingly, and in response to the Tribe's requests to coordinate the cultural resource survey with other Lakota Sioux Tribal governments (Ex. NRC-190 at 4), the NRC Staff invited seven other Tribes to participate in the pedestrian survey and oral history interviews.

Q.9 In its Response, the Tribe asserts that the Board found that \$3.3 million to survey the entire Dewey-Burdock site – not \$818,000 – was patently unreasonable. (RSOP at 41). However, the Staff still determined that the Tribe's \$2.2 million proposal is unreasonable. What led you to this determination?

A.9 (D. Diaz-Toro) There is no support for the Tribe's assertion in the record, and its assertion regarding the Board's characterization of the Makoche Wowapi proposal is purely speculative. However, whether the Board intended to say that \$818,000 was exorbitant on its face or simply that it was exorbitant for only a portion of the site is irrelevant. The NRC Staff found that the proposed cost of the pedestrian site survey and oral interviews in the amount of approximately \$2.2 million was exorbitant because it was significantly greater than the extensively negotiated parameters, including the compensation and reimbursement to participating Tribes, and therefore, fundamentally incompatible with the March 2018 Approach, which all the parties agreed to and found reasonable.

Q.10 The Tribe asserts that because the Staff has not provided cost estimates for alternatives to a pedestrian site survey, the Staff has not demonstrated that the cost to obtain the information is exorbitant. (RSOP 38-42). Why did the Staff not consider alternatives to a pedestrian site survey?

A.10 (D. Diaz-Toro) The NRC Staff has pursued a pedestrian site survey based on the numerous assertions from the Oglala Sioux Tribe that only an on-the-ground survey would be acceptable to identify and evaluate Tribal cultural resources at the Dewey-Burdock site. (E.g., Tr. at 814-15). In fact, Tribes with ties to the Dewey-Burdock site have insisted on physically surveying the site since discussions in 2012, which led the NRC Staff to conduct the Tribal (physical) site survey in 2013. The Oglala Sioux Tribe's insistence on a physical site survey is why the NRC Staff proposed a pedestrian site survey in its December 2017 proposal (Ex. NRC-191 at 2), which was finalized in March 2018, found reasonable by all parties, and endorsed by the Board. The Staff has consistently negotiated by responding directly to the Tribe's requests and with the understanding that the parties were conducting focused negotiations based on a mutually agreed upon approach. This is also consistent with the direction in the Board's orders, which have continued to narrow the focus of negotiations in an effort to reach

resolution. To say now that the Staff should have considered alternatives to a pedestrian site survey disregards the Board's direction and ignores years of negotiations.

Q.11 Does this conclude your testimony?

A.11 (D. Diaz-Toro, J. Spangler) Yes.

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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 July, 2019

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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 July, 2019