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In the Matter of: CROW BUTTE RESOURCES, INC. (License Renewal for the In Situ Leach Facility, Crawford, Nebraska)	
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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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	)	Docket No. 40-8943
CROW BUTTE RESOURCES, INC.	)	
	)	ASLBP No. 08-867-02-OLA-BD01
(License Renewal)	)	

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REBUTTAL TESTIMONY OF CROW BUTTE RESOURCES  
WITNESS LARRY TEAHON ON CONTENTION 1

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**REBUTTAL TESTIMONY OF CROW BUTTE  
RESOURCES WITNESS LARRY TEAHON ON CONTENTION 1**

**EXPERT WITNESS**

**Q1. Please state your full name, your employer, and your position.**

A1. Larry Teahon. I am employed by Crow Butte Resources as the Safety, Health, Environment, and Quality (SHEQ) Manager at the Crow Butte facility. A copy of my qualifications statement was previously provided as Exhibit CBR-006.

**Q2. What is the purpose of your testimony?**

A2. The purpose of my testimony is to address the issues raised in Contention 1 and, in particular, to respond to the initial testimony filed by intervenors and the NRC Staff.

**Q3. What documents have you reviewed to prepare your testimony?**

A3. I am fully familiar with the Crow Butte Resources, Inc. (“CBR”) license renewal application (“LRA”), the NRC Staff review documents, including the Environmental Assessment (“EA”) and the final Safety Evaluation Report (“SER”), and the testimony and exhibits filed in this proceeding.

**BACKGROUND**

**Q4. What is your understanding of Contention 1?**

- A4. Contention 1, which was merged with Contention 2, addresses “[w]hether the cultural surveys performed and incorporated into the EA formed a sufficient basis on which to renew Crow Butte’s permit.”

**ASSESSMENT OF CULTURAL RESOURCE TESTIMONY**

- Q5. Can you briefly summarize your approach to responding to the issues raised in the contention in your direct testimony?**

- A5. Yes. In my direct testimony on cultural resources (Exh. CBR-007), I described the various surveys and reports relating to cultural resources that have been prepared with respect to the Crow Butte site since it was first permitted and licensed. I also described the steps that Crow Butte has taken, and will continue to take, to protect cultural resources at the Crow Butte site. And, I discussed the various restrictions on ground disturbance activities associated with Crow Butte’s NRC license and permit from the State of Nebraska.

- Q6. Can you briefly summarize your response to the intervenors’ testimony on Contention 1?**

- A6. Yes. The intervenors’ testimony on Contention 1 does not change any of the testimony that I provided previously or my conclusions therein. The intervenors’ witness testimony ignores the substantial and detailed information on cultural resources identified at the Crow Butte site through prior surveys, as well as the fact that Crow Butte is required to avoid impacts to known cultural resource sites. The intervenors also ignore the fact that there are no plans for additional construction or significant ground disturbance activities at the site. Overall, the intervenors have not shown any deficiencies in the surveys that have been

performed or any impacts that have been overlooked by Crow Butte or the NRC Staff.

**A. Redmond Letter**

**Q7. Does Dr. Redmond identify any specific deficiency in the cultural resource investigations performed for the Crow Butte site in the letter included in the intervenors' exhibit list?**

A7. No, he does not. In his letter to intervenors' counsel (Exh. INT-022), he does not point to any impact to cultural resources that Crow Butte allegedly overlooked. Nor does he dispute any of the conclusions in the Bozzell and Pepperel report on identified cultural resources. Dr. Redmond does not even indicate what materials he reviewed in preparing his letter. For example, he does not indicate whether he reviewed either the Bozzell and Pepperel report or the 1998 RTG TCP report (Exh. CBR-029). I see nothing in his letter to suggest a deficiency in consideration of cultural resources at Crow Butte.

**Q8. In his letter to counsel for the intervenors, Dr. Redmond questions the credentials of the persons performing the surveys. Can you please respond?**

A8. As I explained in my initial testimony, Crow Butte engaged qualified archeological contractors to conduct a cultural resource survey prior to beginning site operations — specifically, a Class III inventory, which is the standard for locating and recording archaeological resources having exposed indications in an area of potential effect. Intensive (100-percent coverage) field surveys for historical and archaeological sites within the CBR license area were conducted in two phases. The University of Nebraska conducted in-field identification and assessment of cultural resources in the CBR research and development area in

March and April 1982. The Nebraska State Historical Society surveyed the remainder of the license area during April and May 1987. The results of the two surveys were presented in a single report. *See* Bozell and Pepperl, “A Cultural Resources Study of the Crow Butte Uranium Prospect, Dawes County, Nebraska,” Main Report (September 1987) (Exh. CBR-027); *see also* Bozell and Pepperl, “A Cultural Resources Study of the Crow Butte Uranium Prospect, Dawes County, Nebraska,” Appendices (September 1987) (Exh. CBR-028). The report explains that the surveys followed standards (36 C.F.R. § 1210) for data recovery and reporting requirements and were conducted under provisions of the Secretary of Interior’s Professional Qualifications and Standards and Standards for Archaeology and Historic Preservation (48 Fed. Reg. 22716 and 48 Fed. Reg. 44716-42, respectively). Exh. CBR-027 at 1; Exh. NRC-001 at 71.

**Q9. Do you have any comments on Dr. Redmond’s assertion that the lack of subsurface testing when large scale ground disturbances are being contemplated is a violation of TCP survey standards and protocols?**

A9. His concern has no relevance for license renewal at Crow Butte. As noted previously, there are no plans for any large-scale ground disturbances at Crow Butte. No more wellfields are planned. As a result, his concerns, even if valid, have no applicability to the license renewal area. Moreover, I am not aware of any requirement to perform subsurface testing whenever large scale ground disturbances are contemplated.<sup>1</sup> Instead, subsurface testing may be necessary to

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<sup>1</sup> As discussed in my direct testimony (Exh. CBR-007 at ¶12), extensive field documentation, such as test unit excavation, collection of select surface specimens, and cutbank profiling, was carried out during investigations of potentially significant sites.

assess specific identified cultural resources if construction activities may affect those resources. For example, Crow Butte's qualified contractors performed subsurface testing on one site that was to be disturbed by construction activities (e.g., Exh. CBR-032). For identified sites that are not going to be impacted, it is enough to avoid impacts to those resources. Moreover, as I explained, Crow Butte is required by license condition (and permit condition) to stop construction activities if previously-unidentified cultural resources are discovered during ground disturbance activities.

***B. Michael CatchesEnemy and Dennis Yellow Thunder***

**Q10. In their testimony, Mr. CatchesEnemy and Mr. Yellow Thunder make a number of claims regarding the process applied by the NRC Staff with respect to compliance with NEPA and Section 106. Can you respond generally to their claims?**

A10. I have reviewed their testimony (Exhs. INT-031 and INT-032). Generally speaking, their claims of harms to cultural resources are general, rather than site- or application-specific. The witnesses do not identify any particular cultural resource – much less identify future activities at the site that would harm such resources. Instead, they state that “it can be reasonably presumed that many sites and artifacts of significant historic and cultural importance to the Tribe exist in the area that encompasses the existing Crow Butte facility and the surrounding Crow Butte and Crawford area.” While cultural resources undoubtedly exist in the region, it would be pure speculation to presume that additional sites exist at Crow Butte (beyond those identified and protected already).

**Q11. Can you respond to the claims by the two witnesses that no draft EA was circulated that might have provided an additional opportunity to resolve these disputes between the tribes, including the Oglala Sioux Tribe, the NRC Staff, and Crow Butte?**

A11. The Tribe had an opportunity to respond to a draft of the EA's discussion of impacts to cultural resources, as well as the Section 106 consultation documents, but chose not to respond. As the NRC Staff explains in the EA (at 87), the NRC posted a draft of its Section 106 documentation for the project on the NRC's public website on September 30, 2013, and requested public comment. E-mails were sent notifying the consulting parties, including the Oglala Sioux Tribe, of the website. And, a specific notice of the availability of this information was provided to the parties in this proceeding. The website and comment solicitation included the NRC Staff's documentation of its Section 106 review findings that formed the basis for NHPA compliance and the cultural resource evaluation in the EA.

**Q12. Can you address the witnesses' claim that the EA does not describe any scientifically-verified methodology employed by past surveys or explain any methodology or scientific basis for the selection of certain cultural resources as significant or eligible for listing on the National Register?**

A12. Yes. Information on the survey methodology is (and has been) available to the intervenors. *See, e.g.*, Exhs. CBR-027 and CBR-028. It is neither necessary nor warranted to include in the LRA or EA every data point or decision related to preparation or review of an application. Instead, it is sufficient for the LRA or



EA to provide references to documents containing that discussion. This is precisely what Crow Butte and the NRC have done here.

**Q13. The witnesses claim that Crow Butte (not the NRC Staff) visited the remaining potentially eligible sites at Crow Butte to confirm that there were no impacts. They also questioned the time period covered by the claim of no impacts. Can you respond?**

A13. As I explained in my initial testimony, Crow Butte has been able to avoid each of the remaining “potentially eligible” archaeological sites during the construction and operation phases of the project — from the outset of the project through the present day. Documented field visits by the NRC — not Crow Butte — made to each of the five “potentially eligible” sites in August 1995, and again in 2010, 2011, and 2012, confirmed that the sites did not incur any impacts during construction and operation.

**Q14. Can you respond to the assertion that the surveys failed to identify “sign or starve” Lakota encampments of the 1880s?**

A14. While I am generally familiar with the existence of the encampments that the witnesses are referencing, there is no indication that such encampments were present on the Crow Butte site. Nor have the witnesses identified such sites on the Crow Butte site. Such sites, had they existed, would have been detected during prior surveys. Consequently, this unsupported claim provides no basis for disputing the conclusions in the LRA or EA.

***C. Initial Statement of Position***

**Q15. Do you have any comments generally regarding the discussion in the intervenors’ Statement of Position on cultural resources.**

A15. Yes. As I noted at the outset of my rebuttal testimony, the intervenors presented no site-specific information to call into question the conclusions of the prior cultural resource surveys — despite being presented with multiple opportunities to weigh in during prior license renewal reviews and during the most recent Section 106 and NEPA processes for license renewal. In fact, a great deal of the intervenors’ testimony and statement of position relates to surveys performed to support other license applications (*e.g.*, Marsland, North Trend), rather than license renewal. Overall, the intervenors are apparently alleging that the process for cultural resource evaluations at Crow Butte was flawed because the Oglala Sioux Tribe did not participate in that process. But intervenors then take no responsibility for the fact that the Oglala Sioux Tribe was invited, yet declined, to participate in that process on multiple occasions. It would be a strange outcome if a party could simply refuse to participate in a process but then succeed in litigation based on their failure to participate.

**Q16. In their statement of position, the intervenors refer to a response by Standing Rock Sioux Tribe (ADAMS Accession No. ML13126A327) stating that that it disagreed with the interpretations in the Santee Sioux Report as to the stone circles. Is this relevant to license renewal?**

A16. No. The stone circles referenced by the intervenors is not located in the license renewal area. Instead, this site was located during the Marsland Expansion Area (“MEA”) survey. The MEA is the subject of a different licensing action and hearing. The concern therefore is irrelevant to the issues in Contention 1.

**Q17. On page 72-73 of their initial statement of position, the intervenors excerpt a discussion from an earlier Redmond letter. The excerpt alleges that there was little or no ground surface visibility when surveys were performed. Can you comment?**

A17. The reference is flawed for a couple of reasons. First, Dr. Redmond is referring to surveys performed for the Marsland site, not the license renewal area. So, there is no direct relevance to the issues in this proceeding. Second, the assertion is expressly contradicted by the survey report (Exh. NRC-054 at 21), which explains that:

E. Weather and Ground Conditions

Weather was cold and windy for most of the survey with a brief stint of snowfall and snow cover. Survey was not conducted when frost or snow cover exceeded 20 percent ground coverage. Other than delaying the ability to complete inventory before the 2010 year end, the weather and ground conditions did not alter field methods. Note-taking was abbreviated in the field at times due to extreme cold temperatures or during extreme wind, but daily field notes were supplemented and elaborated at each day's end.

The photographs accompanying the report also demonstrate the general absence of significant snow cover during the survey period. And, at page 10, the report notes that “[o]verall, conditions were very good for the discovery of cultural materials and fair for the documentation of cultural materials in northwestern Nebraska.”

The *Marsland Expansion Area Uranium Project Addition Cultural Resource Investigation*, dated March 5, 2012 (Exh. NRC-055), also describes the survey conditions:

E. Ground Visibility

Bare ground visibility varied from moderate to excellent throughout most of the MEAUP Addition area averaging 70 percent along the tree lined drainages and increasing to 90 percent along drainage cuts and rocky slopes above drainages. For most of the MEAUP Addition area, vegetation coverage provided good visibility for the discovery and documentation of cultural materials.<sup>2</sup>

The claims in the Redmond letter therefore are wholly unsupported and contrary to the contemporaneous assessments of survey conditions.

**Q18. The intervenors compare this proceeding to one involving Dewey-Burdock.**

**Do you have any comments?**

A18. Yes, there is a significant distinction between the Dewey-Burdock initial licensing proceeding and this license renewal proceeding. Dewey-Burdock is a new facility, and construction and operation will therefore entail some new ground disturbance. In contrast, Crow Butte is an existing facility that has been in operation for decades. Crow Butte has successfully avoided impacts to sites of potential or known significance during that time. And, as noted previously, Crow Butte has no plans to construct additional wellfields or engage in substantial ground disturbing activities in the main permit area.

### **CONCLUSIONS**

**Q19. What are your overall conclusions regarding the adequacy of the EA assessment of impacts to cultural resources?**

A19. Because the Crow Butte project area has been subjected to intensive cultural resources field surveys for archaeological and historical sites and because the five remaining properties evaluated as “potentially eligible” for the NRHP are being

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<sup>2</sup> *Id.* at 5.

actively avoided during all phases of the overall project, there will be no effects to the known and recorded cultural resource sites from license renewal. In addition, the license conditions mandating that Crow Butte stop work upon discovery of new cultural resources ensure that newly-discovered cultural resources will be treated appropriately. As a result, I concur with the NRC Staff's conclusion in the EA that there will be no effects to the known and recorded cultural resource sites if the operating license is renewed and that overall impacts to historic and cultural resources from the relicensing of the CBR facility would be SMALL.