LBP-08-24

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman
Dr. Richard F. Cole
Brian K. Hajek

In the Matter of CROW BUTTE RESOURCES, INC. (License Renewal for the In Situ Leach Facility, Crawford, Nebraska)	Docket No. 40-8943 ASLBP No. 08-867-02-OLA-BD01 November 21, 2008

MEMORANDUM and ORDER
(Ruling on Hearing Requests)

I. Introduction

Before this Board is an application by Crow Butte Resources, Inc. ("Crow Butte"), requesting renewal of its Source Materials License No. SUA-1534 for continued operation of its in-situ leach (ISL) uranium mine in Crawford, Nebraska.[1] In response to a May 27, 2008 notice of opportunity for a hearing in the Federal Register,[2] petitions to intervene and requests for hearing were timely filed on July 28, 2008, by (1) the Oglala Sioux Tribe (the "Tribe"),[3] (2) several individuals and organizations sharing common counsel ("Consolidated Petitioners"),[4] and (3) the Oglala Delegation of the Great Sioux Nation Treaty Council ("Delegation Treaty Council").[5]

In this Memorandum and Order, we find that Consolidated Petitioners Beatrice Long Visitor Holy Dance, Debra White Plume, Thomas Kanatakeniate Cook, Loretta Afraid of Bear Cook, Afraid of Bear/Cook Tiwahe, Joe American Horse, Sr., American Horse Tiospaye, Owe Aku/Bring Back the Way, and the Western Nebraska Resources Council (WNRC) have standing to participate in this proceeding and we admit four of their contentions. We also find that the Tribe has standing to participate in this proceeding and we admit all five of its contentions. Finally, we find that the Delegation Treaty Council does not have standing to participate in this proceeding as a party pursuant to 10 C.F.R. § 2.309, but that it may participate as an interested local governmental body pursuant to 10 C.F.R. § 2.315(c).

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[1] Application for 2007 License Renewal USNRC Source Materials License SUA-1534 Crow Butte License Area [hereinafter LRA] (Nov. 2007).

[2] 73 Fed. Reg. 30,426, 30,426 (May 27, 2008).

[3] See Request for Hearing and/or Petition to Intervene, Oglala Sioux Tribe (July 28, 2008) [hereinafter Tribe Pet.].

[4] Consolidated Petitioners include Beatrice Long Visitor Holy Dance, Joe American Horse, Sr., Debra White Plume, Loretta Afraid of Bear Cook, Thomas Kanatakeniate Cook, Dayton O. Hyde, Bruce McIntosh, Afraid of Bear/Cook Tiwahe, American Horse Tiospaye, Owe Aku/Bring Back the Way, and Western Nebraska Resources Council. See Consolidated Request for Hearing and Petition for Leave to Intervene (July 28, 2008) [hereinafter Cons. Pet.].

[5] See Request for Hearing and Petition for Leave to Intervene, Oglala Delegation of the Great Sioux Nation Treaty Council (July 28, 2008) [hereinafter Delegation Pet.].

Based on these rulings, we grant the hearing requests of Beatrice Long Visitor Holy Dance, Debra White Plume, Thomas Kanatakeniate Cook, Loretta Afraid of Bear Cook, Afraid of Bear/Cook Tiwahe, Joe American Horse, Sr., American Horse Tiospaye, Owe Aku/Bring Back the Way, WNRC and the Tribe and admit them as parties in this proceeding.

II. Background

Crow Butte currently operates an ISL uranium mine in Crawford, Nebraska. Crow Butte's current license authorizes the operation of its ISL uranium mine, which involves injecting a leach solution into wells drilled into an ore body, allowing the solution to flow through the ore body to extract uranium, capturing the pregnant solution, and then removing the uranium from the solution by ion exchange and ultimately precipitation, drying, and packaging into solid yellowcake uranium.[6] On November 27, 2007, Crow Butte requested that the NRC renew its materials license,[7] approval of which would extend Crow Butte's license for operation of its ISL uranium mine for another ten years.[8] The NRC Staff formally accepted Crow Butte's application for technical review on March 28, 2008,[9] and subsequently published the notice of opportunity to request a hearing in the Federal Register.[10]

On July 28, 2008, the Tribe, Consolidated Petitioners, and the Delegation Treaty Council each timely filed requests for a Hearing and Petition to Intervene, and on August 15, this Atomic Safety and Licensing Board was established to preside over this proceeding.[11] Responses to

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[6] LRA at 1-12.

[7] See LRA.

[8] 73 Fed. Reg. at 30,426.

[9] Id.

[10] See id.

[11] Licensing Board Order (Establishment of Atomic Safety and Licensing Board) (Aug. 15, 2008) (unpublished). On August 21, 2008, this Board issued an order providing guidance for the proceeding. See Licensing Board Order (Regarding Schedule and Guidance for Proceedings) (Aug. 21, 2008) (unpublished).

each hearing request were filed by Crow Butte[12] and the NRC Staff[13] on August 22 and 25, 2008, respectively.[14] Consolidated Petitioners and the Tribe each replied separately to Crow Butte and the NRC Staff's responses on September 3, 2008,[15] and the Delegation Treaty Council submitted a motion to join Consolidated Petitioners in their contentions as filed on September 4, 2008.[16]

The Board heard oral argument on petitioners' standing and contentions on September 30 and October 1, 2008.[17] Following oral argument, the Board and all the parties participated in a site visit to the Crow Butte ISL mine in Crawford, Nebraska, and the Pine Ridge Indian

[12] Applicant's Response to Petition to Intervene Filed by Oglala Sioux Tribe (Aug. 22, 2008) [hereinafter App. Resp. Tribe]; Applicant's Response to Petition to Intervene filed by Consolidated Petitioners (Aug. 22, 2008) [hereinafter App. Resp. Cons. Pet.]; Applicant's Response to Petition to Intervene Filed by Oglala Treaty Council of the Great Sioux Nation Treaty Council (Aug. 22, 2008) [hereinafter App. Resp. Treaty Council].

[13] NRC Staff's Response in Opposition to Petitioner's Request for Hearing and/or to Intervene of the Oglala Sioux Tribe (Aug. 25, 2008) [hereinafter NRC Resp. Tribe]; NRC Staff Response in Opposition to Petitioners' Consolidated Request for Hearing and Petition for Leave to Intervene of Debra White Plume, Thomas K. Cook, Loretta Afraid of Bear Cook, Dayton O. Hyde, Bruce McIntosh, Joe American Horse, Sr., Beatrice Long Visitor Holy Dance, Owe Aku/Bring Back the Way, Afraid of Bear/Cook Tiwahe, American Horse Tiospaye and Western Nebraska Resources Council (Aug. 25, 2008) [hereinafter NRC Resp. Cons. Pet.]; NRC Staff's Response in Opposition to Petitioner's Request for Hearing and/or to Intervene of the Delegation of the Great Oglala Sioux Nation Treaty Council (Aug. 25, 2008) [hereinafter NRC Resp. Delegation].

[14] The Oglala Sioux Tribe filed on behalf of all petitioners a request for an eight-day extension to reply to the NRC Staff and Crow Butte's responses. Joint Motion for Extension of Time (Aug. 26, 2008) at 1. We granted the request for an extension of time. Licensing Board Order (Granting Joint Motion for Extension of Time) (Aug. 27, 2008) (unpublished).

[15] Oglala Sioux Tribe's Reply to Applicant's Response to Petition to Intervene Filed by Oglala Sioux Tribe (Sept. 3, 2008) [hereinafter Tribe Reply App.]; Oglala Sioux Tribe's Reply to NRC Staff's Response to Petition to Intervene Filed by Oglala Sioux Tribe (Sept. 3, 2008) [hereinafter Tribe Reply NRC]; Petitioner's Consolidated Reply to Applicant and NRC Staff Answers to Consolidated Petition to Intervene (Sept. 3, 2008) [hereinafter Cons. Pet. Reply].

[16] Petitioner Oglala Delegation of the Great Sioux Nation Treaty Council's Reply to Applicant and NRC Answers to Petition for Leave to Intervene (Sept. 4, 2008).

[17] Tr. at 14-426.

Reservation in South Dakota.[18] Because the Board posed several questions the NRC Staff was unable to address fully during oral argument, on October 22, 2008, the NRC Staff filed answers in response to those questions.[19]

It should be noted that this is one of two proceedings involving Crow Butte's Source Materials License, SUA-1534. Pending in another proceeding is Crow Butte's application for a license amendment to permit development of a satellite facility for additional ISL uranium mining resources in a nearby location.[20] This satellite facility, known as the "North Trend Expansion," is on a tract of land approximately 4.5 miles northwest of Crow Butte's licensed ISL uranium mine.[21] The application for license renewal was filed with the NRC on May 30, 2007, and a notice of opportunity for hearing regarding the North Trend Expansion was published on the NRC public website on September 13, 2007.[22]

The Board in the License Amendment proceeding ("Amendment Board") granted standing to Owe Aku/Bring Back the Way (Owe Aku) and WNRC as organizations, and to Debra White Plume as an individual.[23] That Board also admitted three of the petitioner's six contentions.[24] We note that all the petitioners admitted as parties in the Amendment Proceeding are also requesting intervention here. Indeed, Consolidated Petitioners have

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[18] Licensing Board Order (Regarding Tour of Reservation) (September 24, 2008) (unpublished). The Board scheduled these site visits after suggestion by the Consolidated Petitioners and Crow Butte that such tours would provide the Board with additional familiarity with both the Crow Butte mine and the Pine Ridge Indian Reservation, where many petitioners reside. Id. at 2.

[19] NRC Staff's (1) Response to the Board's "Follow Up" Questions During the September 30-October 1, 2008 Oral Argument and (2) Statement of Clarification Relating to the Scope of NRC's Jurisdiction to Regulate the Release of Non-radiological Contaminants (Oct. 22, 2008).

[20] Crow Butte Res., Inc. (License Amendment for the North Trend Expansion Project), LBP-08-06, 66 NRC __ (May 21, 2008) (slip op.).

[21] Id. at __ (slip op. at 4).

[22] See id. at 3.

[23] Id. at 3.

[24] Id. at 4.

incorporated by reference herein several affidavits and other documents used to support their claims of standing and contentions in the License Amendment proceeding.[25]

III. Standing of Petitioners to Participate in this Proceeding

A. Legal Requirements for Standing in NRC Proceedings

A petitioner's participation in a licensing proceeding hinges on a demonstration of the requisite standing. The requirements for standing are derived from section 189a of the Atomic Energy Act of 1954 (AEA)[26], which instructs the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."[27] The Commission's implementing regulation, 10 C.F.R. § 2.309(d), directs a licensing board, in ruling on a request for a hearing, to consider (1) the nature of the petitioner's right under the AEA or the National Environmental Policy Act (NEPA)[28] to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest.[29] In that regard, the Commission has long applied the test employed in the federal courts in resolving standing issues – i.e., the petitioner must allege "a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed

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[25] See Cons. Pet. at 5-6. Because of the potential overlapping issues between this proceeding and the Amendment Proceeding, we posed questions at oral argument regarding the appropriate scope of the present hearing. See Tr. at 216. It is worth noting that the NRC Staff stated that its assessment of the license renewal currently before the Board will not concern the ISL uranium mining activities at the proposed North Trend Expansion except to the extent that these activities affect the licensed mining activities. See id. at 216-217.

[26] 42 U.S.C. § 2011 et seq.

[27] Id. § 2239(a)(1)(A).

[28] Id. § 4321 et seq.

[29] 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

by a favorable decision."[30] In addition, the claimed injury must be arguably within the zone of interests[31] protected by the governing statute.[32] In order to determine whether an interest is in the "zone of interests" of a statute, "it is necessary 'first [to] discern the interests "arguably…to be protected" by the statutory provision at issue,' and 'then to inquire whether the [petitioner's] interests affected by the agency action are among them.'"[33]

For an organizational petitioner to establish standing, it must show "either immediate or threatened injury to its organizational interest or to the interest of identified members."[34] An organization seeking to intervene in its own right – i.e., claiming "organizational" standing – "must demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the AEA or NEPA."[35] An organization seeking to intervene on behalf of

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[30] See, e.g., Yankee Atomic Elec. Co. (Yankee Nuclear Power Station), CLI-98-21, 49 NRC 185, 195 (1998); Georgia Inst. of Tech. (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995); Cleveland Elec. Illuminating Co. (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993) (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992)).

[31] Yankee Atomic, CLI-98-21, 48 NRC at 195-96.

[32] Although the Commission customarily follows judicial concepts of standing, it is not bound to do so given that it is not an Article III court. See Quivira Mining Co. (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 n.2 (1998), petition for rev. denied; Envirocare of Utah, Inc. v. NRC, 194 F.3d 72 (D.C. Cir. 1999). Federal courts have recognized that because federal agencies are neither constrained by Article III nor governed by judicially created standing doctrines, "[t]he criteria for establishing 'administrative standing' therefore may permissibly be less demanding than the criteria for 'judicial standing.'" See Envirocare of Utah, at 74 (citing Pittsburgh & W. Va. Ry. v. United States, 281 U.S. 479, 486 (1930)).

[33] U.S. Enrichment Corp. (Paducah, Kentucky), CLI-01-23, 54 NRC 267, 273-273 (2001) (citing National Credit Union Administration v. First National Bank, 522 U.S. 479, 492 (1998). Generally, the AEA and NEPA are the statutes that govern proceedings before the Licensing Board. In this case, however, interests protected by the National Historic Preservation Act (NHPA) are at issue as well, and our analysis will include a discussion of whether issues before the Board fall within the "zone of interests" of the NHPA. See also Ambrosia Lake, CLI-98-11, 48 NRC at 6 ("the actual breadth of the applicable zone of interests will vary according to the particular statutory provisions at issue.").

[34] Georgia Tech, CLI-95-12, 42 NRC at 115; see also Sierra Club v. Morton, 405 U.S. 727 (1972); Yankee Atomic, CLI-98-21, 48 NRC at 195.

[35] Florida Power and Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 528-30 (1991); see also Hydro Res., Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261 (1998), rev'd on other grounds, CLI-98-16, 48 NRC 119 (1998).

one or more of its members – i.e., asserting "representational" standing – must (1) demonstrate that the interest of at least one of its members will be so harmed, (2) identify that member by name and address, and (3) show that the organization is authorized to request a hearing on behalf of that member.[36] The organization must show that the member has individual standing in order to assert representational standing on his or her behalf, and "the interests that the representative organization seeks to protect must be germane to its own purpose."[37]

B. Collateral Estoppel

As previously noted, the Licensing Board for the Amendment Proceeding (the "Amendment Board") granted standing to two organizations – Owe Aku and WNRC, and one individual – Debra White Plume, each of whom also filed here as petitioners. These three petitioners argue that collateral estoppel requires this Board to adopt the findings of the Amendment Board "if they are identical or if they are based on the same facts and circumstances provided that they have been litigated so that each side has an opportunity to be heard,"[38] and accord them standing here.[39]

Certainly, there is some licensing board precedent to suggest that where a petitioner is accorded standing in one proceeding, that petitioner need not make a separate demonstration of standing in another proceeding regarding that same facility and the same parties.[40] Nonetheless, given that a Board in one proceeding is not constrained to follow the rulings of

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[36] See GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 202 (2000).

[37] Consumers Energy Co. (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 409 (2007).

[38] See Cons. Pet. Reply at 3.

[39] Id. at 4.

[40] See U.S. Army (Jefferson Proving Ground Site), LBP-04-1, 59 NRC 27, 29 (2004); Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-23, 42 NRC 215, 217 (1995).

another Board absent explicit affirmation by the Commission,[41] the Amendment Board's ruling on standing is not dispositive of our determination here. Moreover, the facts at issue here are not identical to those at issue in the other pending proceeding involving Crow Butte, and so collateral estoppel may not attach.[42] Accordingly, collateral estoppel does not attach at this stage of the proceeding.

C. Licensing Board's Rulings on Standing of Petitioners

1. Hydrogeologic Considerations

In contrast to power reactor license proceedings, where proximity within 50 miles of a plant is often enough on its own to demonstrate standing,[43] the Commission has held that proximity alone is not sufficient to establish standing for a petitioner's proximity to a source materials activity.[44] In cases involving ISL uranium mining and other source materials licensing, a petitioner must independently establish the requisite elements of standing, i.e., injury in fact, causation, and redressibility.[45] Thus, the Board's analysis of each petitioner's claim in this proceeding must be assessed on a case-by-case basis to determine whether it meets these requisite elements for standing to intervene.

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[41] See Cleveland Elec. Illuminating Co. (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 125-26 (1992), rev'd on other grounds, CLI-93-21, 38 NRC 87 (1993); see also PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19 n.9 (2007) ("[T]he better practice for a petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings.").

[42] See United States v. Stauffer Chem. Co., 464 U.S. 165, 169 (1984) (collateral estoppel applies to another case involving "virtually identical facts").

[43] See, e.g., Sequoyah Fuels Corp. and Gen. Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994); Florida Power and Light Co. (Turkey Point, Units 3 and 4), LBP-01-06, 53 NRC 138, 148-49 (2001).

[44] See Consumers Energy Co. (Big Rock Point ISFSI), CLI-07-19, 65 NRC 423, 426 (2007); see also Int'l Uranium (USA) Corps. (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 117 n.1 (1998).

[45] See Exelon Generation Co. and PSEG Nuclear (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580 (2005).

One basis on which many of the petitioners here seek to establish standing is the possibility that contaminants from Crow Butte's licensed ISL uranium mining site ("the Crow Butte mining site") either have contaminated, or will contaminate, the aquifer from which many petitioners obtain their water. This assertion is based on several essentially undisputed technical facts. In situ leach, or uranium solution, mining is a process that takes place underground by injecting an oxidizing solution (lixiviant) into an aquifer where the uranium ore body is present, and then recovering these solutions when they are rich in uranium. The oxidation process converts the uranium from a solid state to a form that is easily dissolved by the leach solution. ISL uranium mining also re-solubilizes other elements that are typically associated with uranium in nature including arsenic, selenium, vanadium, iron, manganese and radium. After removing the uranium, the used lixiviant is re-injected with carbonate/bicarbonate and oxidant and the solution with the remaining solubilized metals is returned through the injection wells to dissolve additional uranium.[46]

Because the Commission has placed the burden on the petitioner to show a "specific and plausible means" of how proposed licensed activities may affect him or her,[47] we must look to whether petitioners demonstrate "specific and plausible means" by which Crow Butte's licensed ISL uranium mining operation will affect them. As far as we can discern, the Commission has addressed standing in ISL uranium mining cases in only one proceeding, Hydro Resources, Inc. (HRI).[48] It is plain from this decision that standing can be accorded where a petitioner "use[s] a substantial quantity of water personally or for livestock from a source that is reasonably contiguous to either the injection or processing sites," because such a

[46] NUREG-1910, Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities – Draft Report for Comment, Vol. 1, at 2-16, 2-17 (July 28, 2008).

[47] Id.

[48] Hydro Res., Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261 (1998), rev'd on other grounds, CLI-98-16, 48 NRC 119 (1998).

showing demonstrates an "injury in fact."[49] Stated otherwise, to the extent contaminants can plausibly[50] migrate to the aquifer from which a petitioner obtains his or her water, a petitioner would have a claim of a cognizable injury and could be accorded standing. On the other hand, if it were not plausible for contaminants to leave the area of the aquifer that is being mined, petitioners generally could have no cognizable injury, and hence could not be accorded standing. Our standing determination in this regard requires that we consider those geographical areas that could potentially be affected by ISL uranium mining operations, which, in turn, is largely dependent on the characteristics of the underground aquifers.

While no petitioner here claims to reside, or own property, immediately contiguous to an ISL injection or processing well, all assert that "[d]ue to inter-connections between the aquifer being mined ([Basal] Chadron) and other aquifers being used for drinking and other purposes" near Crawford and Chadron, Nebraska, and on the Pine Ridge Indian Reservation, the contaminants from Crow Butte's mining site are "flowing into pathways to human ingestion" where petitioners reside.[51] They therefore argue that petitioners who "rely on water supplies adjacent to [the Crow Butte mining site] have a right to a hearing."[52]

The Amendment Board found that, due to past undisputed excursions and spills from Crow Butte's mining site and the lack of precise characterization of the hydrogeology of the area in question, it was at least plausible to conclude that contaminated water could mix with groundwater ultimately used by at least some of the petitioners.[53] That Board also noted that

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[49] Id. at 275.

[50] Nuclear Fuel Serv., Inc. (Irwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004).

[51] See Cons. Pet. Reply at 10; see also Tribe at 7; Delegation at 4.

[52] Id. at 15 (citing Hydro Res., Inc. (Crown Point, NM), LBP-03-27, 58 NRC 408, 413 (2003)).

[53] Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at 42).

the asserted harm for standing "need not be great" and that a showing for standing has always been considerably less than for demonstrating an acceptable contention.[54]

This Board has before it a number of expert opinions alleging a sufficient link to find the requisite standing at more considerable distances than what was found in the Amendment proceeding.[55] In particular, Hannan LaGarry, Ph.D., opined that the "layer cake" concept applied to the local geology by 1990s researchers, and relied on by Crow Butte, is incorrect and overestimates the thickness and areal extent of many units by a factor of 40 to 60 percent.[56] Dr. LaGarry further opines that contaminants could migrate away from Crow Butte's mining site and

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[54] Id. (citing Sacramento Mun. Util. Dist. (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 249 (1993), petition for rev. denied, CLI-94-2, 39 NRC 91 (1994)).

[55] The Amendment Board held that "potential groundwater contamination from ISL mining at the North Trend Expansion [site] might mix with surrounding aquifers and affect private wells at some distances from the ISL mining location," and that Board was presented with evidence to support standing based on contamination of aquifers that might be affected by mining at the proposed North Trend Expansion site. While this proceeding involves the same applicant and some of the same underlying factual considerations as the Amendment Proceeding, the petitioners' submissions are in some instances remarkably different in the two proceedings. The Amendment Proceeding concerns an area approximately five miles north of the Crow Butte mining site, Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at 4), and the primary support for granting petitioners standing in that proceeding is not applicable here. In the Amendment proceeding, Crow Butte's argument that the subject aquifers were not hydrologically connected conflicted with a letter from the Nebraska Department of Environmental Quality analyzing hydrogeologic data relating to the North Trend Expansion site ("Exhibit B"). See id. at ___ (slip op. at 41); see also id. at __ (slip op. at 36). The Amendment Board held that Exhibit B lent credibility "to the doubts and uncertainty regarding various hydrogeological issues." Id. at __ (slip op. at 41). Moreover, the Amendment Board noted that the Amendment Application itself acknowledged that the "geology and hydrology of the area connecting the Brule, Chadron and High Plains Aquifers is not completely understood." Id. Accordingly, two organizational petitioners (Owe Aku and WNRC) were granted representational standing in the License Amendment proceeding based on plausible connectivity of aquifers leading to potential groundwater contamination. The farthest representative whose well was found to support the standing of an organization was David Alan House, who lives in Crawford, approximately 8 miles from the proposed North Trend Expansion area. Id. at __ (slip. op. at 47). The Amendment Board was careful to note, however, that its determination was "not to say that any given distance would automatically confer, or result in a denial of, standing in a case involving ISL mining; many different variables, including the characteristics of the hydrogeology of a particular region and of aquifers in it, could inform any standing decision." Id. at __ (slip. op. at 50).

[56] See Expert Opinion Regarding ISL Mining in Dawes County, Nebraska (Hannan E. LaGarry, Ph. D.) at 3 [hereinafter LaGarry Opinion]; see also Tr. at 35.

into adjacent areas.[57] In addition to contaminants being transmitted through the White River alluvium,[58] Dr. LaGarry's primary concern is that the licensed mining operations at Crow Butte are creating a vertical transfer of water through intersecting faults and joints that can extend for tens of miles.[59] Specifically, although Crow Butte maintains it is mining uranium that was deposited in a "roll-front" geologic process,[60] Dr. LaGarry opines that such uranium may instead lie within the faults themselves.[61] If Dr. LaGarry is correct, then the risk of "spilling" contaminants into these faults increases with additional mining so that "contamination by chemically altered waters is a virtual certainty."[62]

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[57] See LaGarry Opinion at 3.

[58] Dr. LaGarry opines that contaminants may enter the White River through surface spills, through transmission via the Chamberlain Pass Formation, and through faults. Dr. LaGarry further opines that, once in the White River, such contaminants might be transmitted into the areas where the alluvium intersects faults downstream of Crawford. Such contamination could then affect residential and agricultural users, wildlife, and the city of Crawford water supplies. See id. at 3.

[59] See id.; see also Tr. at 36. Dr. LaGarry notes that prior researchers have reported faults in the area that could transmit contaminants from Crawford to both Chadron, Nebraska, and Pine Ridge, South Dakota, where many petitioners use water. See LaGarry Opinion at 3.

[60] "A roll-front deposit is a uranium-ore body deposited at the interface of oxidizing and reducing groundwater. Roll fronts occur where water infiltrates from the surface and flows through an aquifer with slight amounts of uranium. Near the surface, oxidizing conditions cause the minerals and volcanic ash to weather (or dissolve) and release minute quantities of uranium into the groundwater. As groundwater continues to flow, it can encounter reducing conditions where the uranium is no longer stable in solution. In an aquifer, a reducing environment is characterized by the presence of hydrogen sulfide (H_2S), iron sulfides, or organic material. As a result, uranium precipitates from the groundwater and forms mineral coatings on the sediment grains in the formation." NUREG-1910 at 2-2, 3.1.2 (internal citations omitted).

[61] See LaGarry Opinion at 4. Dr. LaGarry adds that this situation could be further aggravated by the problem of artesian flow, which occurs along the Pine Ridge of Nebraska where there is a hydrologic connection (through faults or highly permeable strata) between the Chamberlain Pass Formation and the High Plains Aquifer. In such a situation, the weight of water in the topographically higher High Plains Aquifer exerts pressure downward into the Chamberlain Pass Formation, which can be released as artesian water flow. Such artesian flow "could transmit the most mineral-laden of waters onto the land surface (and into the White River alluvium) and discharge large amounts of contaminants into aquifers or faults in a very short time." Id.

[62] Id.

Crow Butte and the NRC Staff argue that none of the petitioners describes how any alleged harm will occur,[63] that they do not establish a concrete and particularized injury traceable to the licensed mining operations, and that in the absence of a mechanism or pathway for contamination of water sources that petitioners use, "injury and causation are 'unfounded conjecture.'"[64] Specifically, Crow Butte notes that the "Arikaree Formation . . . is not present at Crow Butte; it does not begin for several miles to the east of the existing operation."[65] Therefore, Crow Butte asserts, more detailed studies and geological information are needed to demonstrate plausibility.[66] Crow Butte and the NRC Staff both argue that Dr. LaGarry provides nothing more than an overview of regional hydrology, which "is no substitute for the detailed, site-specific investigation performed by Crow Butte."[67] Crow Butte further argues that without a more detailed standing inquiry including "an assessment of matters such as the geological makeup of the area, the direction of flow of water from the licensed facility, and the time it takes for water to flow a certain distance," this Board "cannot properly assess whether an alleged

[63] See App. Resp. Cons. Pet. at 9 (citing Int'l Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-02, 4 NRC 247, 254 (2001)) (mere conclusory allegations about potential harm to petitioner or others insufficient to confer standing); see also NRC Resp. Cons. Pet. at 7.

[64] App. Resp. Tribe at 10 (citing White Mesa, CLI-01-21, 54 NRC at 253); see also NRC Resp. Tribe at 24 ("Petitioner has presented no information to support the position that the hydraulic flow would be as assumed by petitioner in order to make its claim.").

[65] App. Resp. Cons. Pet. at 10 (citing LRA at 2-105, 2-84). Crow Butte also asserted at oral argument that the Basal Chadron Aquifer, which is where the mining is occurring, "pinches out" five or six miles east of the existing mine location and so does not reach the Pine Ridge Indian Reservation. Tr. at 53.

[66] App. Resp. Cons. Pet. at 10. See also id. at 9 ("a standing inquiry includes a threshold, fact-based question as to whether the alleged injury and causation are realistic or even plausible."); NRC Resp. Cons. Pet. at 4-5.

[67] App. Resp. Cons. Pet. at 39; see also NRC Resp. Cons. Pet. at 40. At oral argument, Crow Butte added "[t]o the extent they're positing some connection based on . . . regional interpretations, those are no substitute for the detailed site-specific pump tests, hydrologic tests, baseline sampling, [and] geographic profiles that have been done at Crow Butte." Tr. at 54. However, offsite geologic data that would support Crow Butte's assertion is not part of the License Renewal Application.

injury or causal chain is realistic or plausible."[68] According to Crow Butte, "the geologic, hydrologic, and geographic differences between the mining area and the aquifers used for well water at the Pine Ridge Reservation undermine any claims of plausible injury or causation."[69]

We note, first, that many of Crow Butte's arguments address various alleged facts as if they were already proven. However, factual arguments over such matters as the geological makeup of the area, the direction of flow, and the time required for water to flow a certain distance, go to the merits of the case.[70] We also note that a licensing board's review of a petition for standing is to "avoid 'the familiar trap of confusing the standing determination with the assessment of a petitioner's case on the merits.'"[71] We recognize that the distances from Crow Butte's mining site to many of the petitioners' residences are considerable; however, neither Crow Butte nor the NRC Staff advances arguments refuting the plausibility that potential groundwater contamination from the Crow Butte mining site may travel through pathways of faults and joints and affect private wells at greater distances from the Crow Butte mining site, including petitioners at the Pine Ridge Indian Reservation. Petitioners are not required to demonstrate their asserted injury with "certainty," nor to "provide extensive technical studies" in support of their standing argument.[72] These determinations are reserved for adjudicating the

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[68] App. Resp. Cons. Pet. at 10.

[69] Id.

[70] Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at 40-41). Crow Butte argues that the horizontal distance of 30-40 miles between the Basal Chadron formation at Crow Butte and the Arikaree formation at Pine Ridge is not a trivial hydrogeologic distance particularly when the horizontal flow rate in the Basal Chadron is roughly 10 feet per year. In addition to being farther away horizontally, the elevation of the mining unit at Crow Butte is such that an Arikaree well would be several hundred vertical feet above the mining units. If Crow Butte were correct, contamination would have to travel a distance of 30-40 miles horizontally in an aquifer with a flow rate of 10 feet per year and flow several hundred feet vertically – against the natural groundwater flow direction. App. Resp. Cons. Pet. at 10-11.

[71] Hydro Res., Inc., LBP-98-9, 47 NRC at 272 (citing Sequoyah Fuels Corps. (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-5, 39 NRC 54 (1994)).

[72] Carolina Power and Light Co. (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25, 31 (1999) (citing Sequoyah Fuels, CLI-94-12, 40 NRC at 72).

ultimate merits of a contention. We decline to burden the petitioners, at this preliminary stage, with the need to conduct extensive technical studies that may be required to meet their burden at a hearing. A determination that "the injury is fairly traceable to the challenged action . . . does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible."[73]

While no petitioners in this proceeding can be accorded standing through collateral estoppel, we are persuaded that the Amendment Board properly conferred standing on those petitioners because of plausible migration of contaminants via subsurface aquifers that appear to be interconnected.[74] We likewise agree with the Amendment Board that "'upon further analysis it may turn out that there is no way' for the radioactive materials and byproducts from the ISL mining operation . . . to cause harm to persons living nearby."[75] However, at this early stage of the proceeding, we simply cannot decide that there is no reasonable possibility that such harm could occur.[76]

With the foregoing in mind, we find that petitioners here have demonstrated that some level of interconnection between aquifers is plausible. We therefore grant standing to those petitioners with claims based on the use of well water for domestic or other related purposes (i.e., gardening, ranching, and other agrarian uses). Specifically, the Board grants representational standing to Owe Aku and WNRC through individuals Dr. Francis E. Anders[77]

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[73] Sequoyah Fuels, CLI-94-12, 40 NRC at 75 (emphasis added). See also id. at 74 ("It is enough that [petitioner] has demonstrated a realistic threat…of sustaining a direct injury as a result of contaminated groundwater flowing from the [site at issue] and his property".).

[74] Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at 43).

[75] Crow Butte, LBP-08-06, at __ (slip op. at 43) (citing Armed Forces Radiobiology Research Inst. (Colbalt-60 Storage Facility), ALAB-682, 16 NRC 150, 155 (1982)).

[76] See Sequoyah Fuels, CLI-94-12, 40 NRC at 74 ("we conclude that [petitioner] is not required to go further at this threshold stage to establish injury in fact").

[77] The Amendment Board also accorded representational standing to WNRC through Dr. Francis E. Anders who purports to live in Crawford, Nebraska, within one mile of the existing mining operations, which is much closer to his residence than is the North Trend Expansion Area. Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at 44) (citing Anders Affidavit ¶ 3, 6-8).

and David Alan House,[78] respectively. Anders' and House's affidavits from the Amendment proceeding, incorporated by reference here, demonstrate that both use their wells for drinking, bathing, irrigation, and stock water. Moreover, we also grant standing to individuals Beatrice Long Visitor Holy Dance, Debra White Plume, Loretta Afraid of Bear Cook, Thomas Kanatakeniate Cook, and Joe American Horse, Sr. These individual petitioners demonstrate standing through claims of water use from wells that draw from the Arikaree Aquifer on their property on the Pine Ridge Indian Reservation for drinking, bathing, gardening and other uses.[79] As Thomas Kanatakeniate Cook and Joe American Horse, Sr. are the authorized representatives of Afraid of Bear/Cook Tiwahe[80] and American Horse Tiospaye,[81] respectively, we accord these organizations (Tiwahe and Tiospaye) representational standing in the proceeding. Petitioners Dayton O. Hyde and Bruce McIntosh do not claim any actual or threatened cognizable injury attributable to Crow Butte's licensed ISL uranium mining operations, and so we deny standing for them.

2. Treaties and Related Native American Issues

In addition to hydrogeologic issues, some of the petitioners claim standing through treaty-based rights. The Tribe alleges the Crow Butte mining site lies on its recognized aboriginal territory, and asserts standing based on treaty rights and cultural resources

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[78] David Alan House has indicated that he resides outside Crawford, approximately 8 miles from the mining operation, and that he gets his water from a well in the Brule Aquifer. Id. at __ (slip op. at 47) (citing House Affidavit at 1-2); see also Tr. at 144.

[79] At oral argument several of these petitioners indicated that they draw water from the Mni Wiconi project, which pipes water in from deep wells four miles north of Pine Ridge and also from the Missouri River. Tr. at 25-26. However, all of the petitioners drawing water from the Mni Wiconi pipeline also use well water from the Arikaree for agrarian purposes. Thus, these petitioners have demonstrated a threatened injury – pathway for ingestion of contaminants – from the use of potentially contaminated groundwater.

[80] The Afraid of Bear/Cook Tiwahe ("family") constitutes the organization of the married couple Thomas Kanatakeniate Cook and Loretta Afraid of Bear Cook, Loretta's mother, Beatrice Long Visitor Holy Dance, and their children, including Sakakohe Afraid of Bear Cook. Cons. Pet. at 13.

[81] The American Horse Tiospaye ("extended family") constitutes the organization of the related families, or Tiwahe, to Joe American Horse, Sr., and his brothers.

associated with these lands.[82] The Delegation Treaty Council claims a treaty-based ownership interest in the land where Crow Butte mines.[83] For the reasons set forth below, the claim of standing based on asserted treaty rights must fail. The Tribe's cultural resource claims do, however, provide a basis for its standing.

a. Treaty Rights Claims

Both the Tribe and the Delegation Treaty Council maintain that the Crow Butte mining site is located in aboriginal territory. The Tribe would have it that "the mere fact that [Crow Butte] is building, excavating, etc. within the aboriginal land of the Tribe gives standing to the Tribe."[84] For its part, the Delegation Treaty Council claims actual ownership of the land where the Crow Butte mining site is located.[85] Both petitioners rely upon the terms of the 1868 Fort Laramie Treaty, which delineated, inter alia, the Crow Butte mining site as belonging to the Sioux Nation.[86]

In response, Crow Butte and the NRC Staff insist that the Board has no jurisdiction to adjudicate matters related to treaties made by the United States government with other nations. Therefore, they argue, the Tribe's and the Delegation Treaty Council's treaty-based claim of standing may not be entertained in this proceeding.[87] We do not agree.

In addressing these arguments, we first turn to the Fort Laramie Treaties. The initial Fort Laramie Treaty, entered in 1851, guaranteed the Sioux Nation[88] exclusive control over the entire Great Plains region. In exchange, non-Indians were allowed to pass through tribal land via the

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[82] Tribe Pet. at 6.

[83] Delegation Pet. at 3.

[84] Tribe Reply App. at 2.

[85] Delegation Pet. at 3.

[86] Id.; see also 15 Stat. 635, 636 (1868).

[87] See App. Resp. Delegation at 9; App. Resp. Tribe at 12-13; NRC Resp. Tribe at 13.

[88] 11 Stat. 749 (1851).

Oregon Trail.[89] The Fort Laramie Treaty of 1868 abrogated the Treaty of 1851.[90] It relegated the Lakota[91] nation, along with other Sioux tribes, to the Great Sioux Reservation, permitted the tribes to retain hunting rights on non-reservation land, and provided that the Lakota owned the Black Hills area of the reservation. The Treaty of 1868 also provided that any further cession of land to the United States would not be valid unless approved by three-fourths of all adult Sioux males.[92]

When gold was discovered in the Black Hills, the United States entered into yet another treaty with the Sioux Nation that provided for the cession of seven million acres belonging to the reservation. This Fort Laramie Treaty of 1877 included the Black Hills. The United States did not obtain the signatures of three-fourths of all adult Sioux males when entering into this treaty[93] and it has been argued that the Indians who did sign the Treaty did so under duress.[94] The treaty was then codified by Congress in the Act of 1877.[95]

A mechanism for Native Americans to assert claims against the United States government was established in 1946 with the passage of the Indian Claims Commission Act.[96] The Sioux Nation sued the United States government under this Act to recover compensation for the asserted unlawful taking of the Black Hills.[97] In United States v. Sioux Nation of Indians,[98] the Supreme Court determined that the 1877 Treaty was an unconstitutional taking of

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[89] Id.

[90] 15 Stat. at 640.

[91] "Lakota" refers to a band of seven individual Sioux tribes. The Oglala Sioux Tribe is one of the tribes that belong to the Lakota Nation. See Joe American Horse Aff. at 1 (July 28, 2008).

[92] 15 Stat. at 639.

[93] See United States v. Sioux Nation of Indians, 448 U.S. 371, 381-382 (1980).

[94] Id. at 388.

[95] 19 Stat. 254 (1877).

[96] 60 Stat. 1049, 25 U.S.C. § 70 et seq.

[97] Sioux Nation of Indians v. United States, 601 F.2d 1157 (Ct. Cl. 1979).

[98] 448 U.S. 371, 423-24 (1980).

tribal property, and ordered just compensation to be paid to the Indians. However, the Court also confirmed that Congress' plenary power with respect to Native Americans entitles it to abrogate treaties with Native American nations.[99] Therefore, while the taking was unlawful, the Act of 1877 was not an unlawful abrogation of the 1868 Treaty, and, accordingly, the United States is no longer bound by the terms of the 1868 Fort Laramie Treaty.[100]

Though the Sioux Indians were awarded $17.1 million plus interest, they have refused to accept this award and instead continue to demand the return of their lands.[101] The United States v. Sioux Nation of Indians[102] holding is controlling here, however, and plainly requires us to reject such treaty-based claims of ownership. As a consequence, any claims to ownership of the land upon which the Crow Butte mining site sits cannot support standing here.

b. Cultural Resource Claims

The Tribe additionally asserts standing on the basis of an interest in identified cultural resources and artifacts at the Crow Butte mining site, which is indisputably located within the Tribe's aboriginal lands, i.e. lands to which the Tribe previously held aboriginal title under the

[99] Id. at 410-11. See also Lone Wolf v. Hitchcock, 187 U.S. 553, 565 (1903) ("Plenary authority over the tribal relations of the Indians has been exercised by Congress from the beginning, and the power has always been deemed a political one, not subject to be controlled by the judicial department of the government.").

[100] Sioux Nation of Indians, 448 U.S. at 382-83, 410-11.

[101] See Delegation Pet. at 3.

[102] In the face of the Supreme Court ruling, the Oglala Sioux people continue to raise the argument that the terms of the 1868 Fort Laramie Treaty are still effective. In at least three other federal court proceedings, this argument has failed. See The Oglala Sioux Tribe of the Pine Ridge Indian Reservation v. United States, 650 F.2d 140 (8th Cir. 1981); The Oglala Sioux Tribe of the Pine Ridge Indian Reservation v. Homestake Mining Co., 722 F.2d 1407 (8th Cir. 1983); Oglala Sioux Tribe v. Army Corps of Eng'rs, 537 F. Supp. 2d 161 (D.D.C. 2008).

Fort Laramie Treaty of 1868.[103] The Supreme Court has recognized that Native Americans have tribal rights to, and interests in, aboriginal lands.[104] Furthermore, several federal statutes have recognized the cultural and religious importance to Native Americans of artifacts and natural landscapes and have established mechanisms and procedures to protect these cultural resources.[105]

In short, the preservation of cultural traditions is thus a protected interest under federal law. If this interest is endangered or harmed,[106] it qualifies as an injury. In the case before us, the Crow Butte mining site is within the boundaries of the 1868 Fort Laramie Treaty and was occupied by the Lakota people. Moreover, the Tribe ascribes cultural and religious significance to this land and it is likely that artifacts are to be found there.[107] In fact, Crow Butte has

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[103] Aboriginal title is a term of art used to describe an Indian possessory interest in land inhabited since time immemorial. It is a permissive right of occupancy granted by the federal government and may be extinguished by Congress at any time. See United States v. Gemmill, 535 F.2d 1145, 1147 (9th Cir. 1976); cf. Lipan Apache Tribe v. United States, 180 Ct.Cl. 487, 491-92 (Ct. Cl. 1967) ("continuous and exclusive use of property is sufficient, unless duly extinguished, to establish Indian or aboriginal title"). The Board notes a difference between "aboriginal title" and "aboriginal lands." Aboriginal title, a possessory interest to aboriginal land, can be granted and repudiated by Congress. Here, while the Tribe no longer has "aboriginal title" under United States v. Sioux Nation of Indians, 448 U.S. 371 (1980), the Crow Butte mining site is located on the Tribe's aboriginal lands, as set forth in the Fort Laramie Treaties.

[104] See Havasupai Tribe v. United States, 752 F. Supp. 1471 (Dist. Ariz. 1990); United States ex rel. Chunie v. Ringrose, 788 F.2d 638 (9th Cir. 1986); United States v. Pend Oreille County Pub. Util. Dist. No. 1, 585 F. Supp. 606, (D. Wash. 1984); Ute Indians v. United States, 28 Fed. Cl. 768 (Fed. Cl. 1993).

[105] See Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. § 3001 et seq. (providing notification and inventory procedures so that Indian cultural objects and burial remains found on federal lands will be repatriated to the appropriate Tribe); National Historic Preservation Act, 16 U.S.C. § 470 et seq. (providing notification and consultation procedures federal agencies must follow prior to a federal "undertaking" to consider the undertaking's effect on historic properties); Archaeological Resources Protection Act (ARPA), 16 U.S.C. § 470aa et seq. (providing criteria and procedures pursuant to which a Federal land manager may issue excavation permits for federal lands; and providing for notification to Indian Tribe if permits may result in harm to cultural or religious sites).

[106] But see Crow Creek Sioux Tribe v. Brownlee, 331 F.3d 912, 916 (D.C. Cir. 2003) ("Tribe does not have standing merely because it has statutory rights in burial remains and cultural artifacts . . . Rather, to establish standing, the Tribe must show . . . some actual or imminent injury.").

[107] See Tr. at 108-109; Tribe Pet. at 15.

identified eight Native American artifacts on the Crow Butte site, at least two of which have been identified as burial remains.[108]

In the National Historic Preservation Act (NHPA),[109] Congress declared that this Nation's historical heritage "is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans."[110] Section 106 of the Act, inter alia, requires a federal agency, prior to the issuance of any license, to "take into account" the effect of the federal action on any area eligible for inclusion in the National Register of Historic Places.[111]

Detailed regulations, developed to give substance to the requirements of section 106, provide a complex consultative process that must be followed to comply with the NHPA.[112] As part of this process, a tribe may become a consulting party where its property, potentially affected by a federal undertaking, has religious or cultural significance.[113] A consulting tribe is entitled to a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties (including those of traditional religious and cultural importance), articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.[114] Moreover, the regulations under NHPA provide that the federal agency "should be sensitive to the special concerns of Indian tribes in historic preservation issues, which often extend beyond Indian lands to other historic

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[108] LRA at 2-48.

[109] 16 U.S.C. § 470 et seq.

[110] Id. § 470(b)(4).

[111] Id. § 470f; see also 16 U.S.C. § 470a(a) (National Register Guidelines).

[112] 36 C.F.R. § 800; see 65 Fed. Reg. 77,698 (Dec. 12, 2000).

[113] See 36 C.F.R. § 800.2(c)(2)(ii).

[114] See id. § 800.2(c)(2)(ii)(A).

properties," and should "invite the governing body of the responsible tribe to be a consulting party and to concur in any agreement."[115]

In short, section 106 of the NHPA provides the Tribe with a procedural right to protect its interests in cultural resources. The Supreme Court has held that a party claiming violations of this procedural right is to be accorded a special status when it comes to standing: "The person who has been accorded a procedural right to protect his concrete interests can assert that right without meeting all the normal standards for redressability and immediacy."[116] To establish an injury in fact, a party merely has to show "some threatened concrete interest personal" to the party that NHPA was designed to protect.[117] Here, the Tribe's concrete interest is clear: there are cultural resources on the Crow Butte site that have not been properly identified and may be harmed as a result of mining activities. Without consultation with the Tribe, culturally significant resources will go unidentified and unprotected. As a result, development or use of the land might cause damage to these cultural resources, thereby injuring the protected interests of the Tribe.

As we noted earlier,[118] the Tribe has alleged that, for years, the NRC Staff has failed to fulfill its clear statutory obligation to consult with the Tribe regarding the cultural resources that Crow Butte itself has acknowledged encountering on its mining site. Federal law not only recognizes that Native American tribes have a protected interest in cultural resources found on their aboriginal land, but as well has imposed on federal agencies a consultation requirement under the NHPA to ensure the protection of tribal interests in cultural resources. The Tribe's threatened injury is therefore within the zone of interests protected by the NHPA, and is beyond

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[115] See id. § 800.1(c)(2)(iii).

[116] Lujan, 504 U.S. at 572 n. 7.

[117] Nulankeyutmonen Nkihtaqmikon v. Impson, 503 F.3d 18 (1st Cir. 2007) (citing Lujan, 504 U.S. at 572-73 nn. 7-8).

[118] See, supra, pp. 29-35,

cavil that the failure of consultation provides a definite and concrete threat of injury to the interests of the Tribe, and so the Tribe is accorded standing here.[119]

c. Delegation Treaty Council as Governmental Entity

Although not possessing standing as a party, the Delegation Treaty Council may nonetheless participate in this proceeding as a unit of local government[120] under 10 C.F.R. § 2.315(c). By virtue of section 2.315(c), an interested local governmental body that is not a party to the proceeding must be accorded a reasonable opportunity to participate, through a single representative, in the hearing of one or more of the admitted contentions. As such, it may introduce evidence, interrogate witnesses in circumstances where cross-examination by the parties is allowed, advise the Commission without being required to take a position on any issue, file proposed findings where such are allowed, and seek Commission review on admitted contentions.[121]

Accordingly, if it so elects, the Delegation Treaty Council may participate as a non-party in this proceeding. As contemplated by § 2.315(c), should it so elect, its representative will be required to "identify those contentions on which it will participate in advance of any hearing held."[122]

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[119] The cases that have addressed procedural violations of NHPA have uniformly granted standing to tribes under this relaxed standard and have proceeded directly to the merits of the NHPA claim. See, e.g., Naragansett Indian Tribe v. Warwick Sewer Auth., 334 F.3d 161 (1st Cir. 2003); Muckleshoot Indian Tribe v. United States Forest Serv., 177 F.3d 800 (9th Cir. 1999); Snoqualmie Indian Tribe v. Fed. Energy Regulatory Comm'n, 2008 WL 4478591 (9th Cir. 2008). See also Duncan's Point Lot Owners Ass'n, Inc. v. Fed. Energy Regulatory Comm'n, 522 F.3d 371 (D.D.C. 2008).

[120] At oral argument, the Board verified that no parties objected to the Delegation Treaty Council participating in this proceeding as an interested governmental participant. See Tr. at 425.

[121] 10 C.F.R. § 2.315(c).

[122] Id.

IV. Standards for Admissibility of Contentions

In order to participate as a party in this proceeding, a petitioner for intervention must not only establish standing, but must also proffer at least one admissible contention that meets the requirements of 10 C.F.R. § 2.309(f)(1).[123] The requirements for an admissible contention include a specific statement of the issue of law or fact to be raised or controverted, a brief explanation of the basis of the contention, and a concise statement of the alleged facts that support the contention, together with references to those specific sources, expert opinions and documents on which the petitioner intends to rely to prove the contention. Additionally, the petitioner must present sufficient information to show a genuine dispute with the applicant on a material issue of law or fact. Proffered contentions generally must fall within the scope of the issues set forth in the notice of the proposed licensing action.[124] Failure of a contention to meet any of the requirements of section 2.309(f)(1) renders it inadmissible.[125]

V. Board Analysis and Rulings on Petitioners' Contentions

A. Oglala Sioux Tribe

1. Environmental Contention A

The Tribe states in Environmental Contention A:

> There is no evidence based science for [Crow Butte's] conclusion that ISL mining has "no non radiological health impacts" (see Table 8.6-1 of application), or that non radiological impacts for possible excursions or spills are "small" (see 7.12.1 of application).[126]

The Tribe contends that Crow Butte provided no scientific evidence in support of its conclusion in the License Renewal Application that its mining operations present no significant

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[123] See 10 C.F.R. § 2.309(a) and (f)(1).

[124] See 10 C.F.R. § 2.309(f)(1)(i)-(vi).

[125] See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); Arizona Pub. Serv. Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

[126] Tribe Pet. at 6.

risk to the health of residents at the Pine Ridge Indian Reservation.[127] To demonstrate the possibility of "environmental and other effects beyond the confines of the mine itself,"[128] the Tribe cites to a 1989 letter to the NRC[129] and to Dr. LaGarry's opinion. The Tribe asserts these documents demonstrate that spills from Crow Butte's mining site would likely reach the Pine Ridge Indian Reservation through surface and subsurface migration of contaminants.[130] In addition, the Tribe questions the adequacy of Crow Butte's spill contingency plans identified in the License Renewal Application. The Tribe claims that the identified "biweekly" scheduled testing of the monitoring wells is inadequate to ensure that leaks have not occurred.[131] And more specifically, the Tribe asserts that Crow Butte's License Renewal Application lacks a reliable scientific basis for excluding uranium from its monitoring well testing.[132] Finally, the Tribe contends that Crow Butte failed both to produce any scientific data to substantiate Crow

[127] Id. at 7.

[128] Id.

[129] The letter was sent to Mr. Gary Konwinski, NRC Uranium Recovery Field Office, from an exploration geologist, John Petersen. At that time, Peterson was familiar with Uranerz and Ferret Exploration Company of Nebraska during the Research and Development stage of what is now the Crow Butte mining site.

[130] Tribe Pet. at 7.

[131] Id. (citing LRA at 5-28). The Tribe claims Crow Butte's spill plan does not recognize that there could be leaks that would be undetected if the scheduled testing does not coincide with a leak. Id.

[132] Id. (citing LRA at 5-88). In support of its argument, the Tribe cites to a report submitted by Richard Abitz, Ph.D., Principal Geochemist for Geochemical Consulting Services, which states: "As uranium is mobilized and transported by the high oxygen and alkalinity in the lixiviant, there is no valid scientific reason to exclude it from the list of excursion monitoring parameters . . . Uranium is a key indicator of lixiviant excursions because its concentration in baseline wells is generally two or three orders of magnitude lower than the lixiviant . . . [and] there is no rational basis to exclude the best excursion indicator." Id. at 7-8 (citing Letter from Richard J. Abitz, Ph.D., Geochemical Consulting Services, LLC, to David Frankel, Counsel for Consolidated Petitioners at 6 (July 28, 2008) [hereinafter Abitz report]).

Butte's claim in the License Renewal Application of "no non radiological health effect," and to address possible health hazards of ingesting drinking water contaminated with uranium.[133]

Crow Butte and the NRC Staff respond that the Tribe's references in support of its contention do not show a genuine dispute with the application, that the Tribe failed to provide expert or factual support to refute the adequacy of Crow Butte's monitoring program,[134] and that the Tribe has not shown how Crow Butte's choice of parameters to detect excursions is inadequate.[135] Crow Butte and the NRC Staff together assert that, because the State of Nebraska, rather than the NRC, establishes monitoring requirements for non-radiological parameters in a state-issued permit, any challenge to those requirements is outside the scope of this proceeding.[136] Finally, Crow Butte and the NRC Staff claim that the Tribe fails to point to any regulatory or statutory requirement to conduct a literature review regarding the non-radiological impacts of ISL mining.[137]

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[133] Id. at 8. To support this argument, the Tribe cites to two studies regarding the health consequences of nonradiological exposure to uranium in drinking water, and one study suggesting higher than average cancer rates experienced by the Oglala Sioux Tribe. Id. at 9-11.

[134] Crow Butte claims that undetected excursions are highly unlikely and that past experience at ISL mining facilities has shown that Crow Butte's monitoring system is effective in detecting leachate migration. App. Resp. Tribe at 16.

[135] App. Resp. Tribe at 16-17; NRC Resp. Tribe at 18-19.

[136] App. Resp. Tribe at 18; NRC Resp. Tribe at 19.

[137] App. Resp. Tribe at 19; NRC Resp. Tribe at 20.

We note first that the NRC has the authority to regulate the release of non-radiological contaminants,[138] and therefore, a challenge to the analysis (or lack thereof) of non-radiological contaminants in the License Renewal Application is within the scope of this proceeding. The Tribe provided sufficient factual allegations and expert opinions to support its position that migration of contaminants from one aquifer to another is plausible in this area, and that contaminants associated with the current mining operations may produce non-radiological health effects "beyond the confines of the mine itself."[139] The Tribe has identified a genuine dispute with the License Renewal Application by raising sufficient questions as to whether Crow Butte's spill contingency plan adequately addresses non-radiological contaminants. Specifically in this regard, the Tribe challenges the monitoring frequency for contaminants, and the Tribe's expert, Dr. Abitz, opines that certain portions of the License Renewal Application related to ground water monitoring are deficient.[140]

We find the Tribe has shown this contention to be within the scope of the proceeding and has provided expert opinion establishing a genuine dispute with Crow Butte and its License Renewal Application on material issues of fact. The Board is satisfied that the Tribe's contention meets all the requirements of 10 C.F.R. § 2.309(f)(1). We therefore find the Tribe's Environmental Contention A admissible.

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[138] Initially, the NRC Staff took the position at oral argument that it does not have such authority to regulate non-radiological contaminants. See Tr. at 73; see also NRC Staff's (1) Responses to the Board's "Follow Up" Questions During the September 30-October 1, 2008 Oral Argument and (2) Statement of Clarification Relating to the Scope of NRC's Jurisdiction to Regulate the Release of Non-Radiological Contaminants (Oct. 22, 2008) at 8 [hereinafter NRC Resp. to Board]. Subsequently, the NRC Staff retracted this assertion, advising that the Uranium Mill Tailings Radiation Control Act of 1978 (which amended the AEA), authorizes the NRC Staff to ensure that management of certain byproduct material would be carried out in a manner to protect public health and safety. Specifically, that statute authorizes the NRC Staff to take appropriate steps "to protect the public health and safety and the environment from radiological and non-radiological hazards associated with such material." Id. at 8-9 (citing 42 U.S.C. § 2114(a)(1) (2008)) (emphasis in original).

[139] Tribe Pet. at 7.

[140] See id. (citing LRA at 5-88).

2. Environmental Contention B

The Tribe states in Environmental Contention B:

> The Oglala Sioux Tribe has not been consulted with [sic] regarding the cultural resources that may be in the license renewal area. [Crow Butte] has identified what it believes to be cultural resources in the area, but the Tribe has had no input on this list, and it therefore cannot be complete. Furthermore, [Crow Butte] has provided that it will work in conjunction with the Nebraska State Historical Society to avoid the identified resources, but this ignores mandated participation of the Oglala Sioux Tribe.

The Tribe supports this contention by asserting that, because the Crow Butte mining site is part of the land granted to the Sioux Nation in the 1851 Treaty, any artifacts or cultural resources found there would be connected to the Tribe.[141] The Tribe further contends that Crow Butte is not equipped to identify, to evaluate, or to preserve these artifacts, and that consultation with the Tribe is therefore essential.[142]

Crow Butte maintains that the Tribe fails to take issue with any specific part of the application and that the Tribe "[does] not assert that the significance of any identified resources was underestimated or ignored."[143] Further, Crow Butte asserts that the Tribe fails to point to any legal requirement that it consult with the Tribe. According to Crow Butte, this duty rests with the NRC Staff, not Crow Butte as the Applicant.[144]

The NRC Staff concedes that section 106 of the NHPA imposes a duty, not on Crow Butte in preparation of its application, but rather on the NRC to consult with the Tribe regarding cultural resources. Because this duty does not lie with Crow Butte, the NRC Staff asserts the Tribe's claim against Crow Butte's failure to consult is misdirected. Therefore, the NRC Staff concludes this contention is not ripe for consideration,[145] and does not present an issue material

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[141] Id. at 13.

[142] Id.

[143] App. Resp. Tribe at 20.

[144] Id.

[145] NRC Resp. Tribe at 21-22.

to the findings the NRC must make in support of the action involved in this proceeding.[146] We disagree.

Recently, a Licensing Board determined that the commitment of one party to fulfill its statutory duties in the application process was not enough to demonstrate that the issue would be properly addressed.[147] That Board stated "[i]f the presumptive intent of the Applicant [or the NRC Staff] were enough, there would be no role for the hearing process – an applicant [or the NRC Staff] could vitiate hearing opportunities simply by committing to do everything required of it."[148] However laudable the NRC Staff's assurance to the Board that it will involve the Tribe in its NEPA review of cultural resources at the Crow Butte mining site,[149] such assurances are no substitute for enabling the Tribe to prosecute its contention here. In fact, the NRC Staff notes that "the NRC has not yet even begun the required section 106 evaluation process."[150] The Board must afford the Tribe a way to ensure its interests are protected; if we were to deny all claims because an adverse party promises to fulfill its duties, we would subvert the hearing process. Therefore, we reject the NRC Staff's argument that this contention is not ripe.

This is doubly the case in light of the consequences that would flow from denying the Tribe's contention for lack of ripeness. If the Board denies a contention as being premature, the petitioner sponsoring that contention will suffer adversity in two distinct ways: (1) once such a contention subsequently becomes "ripe" under the severe admissibility test the NRC Staff seeks to employ, the NRC Staff could then seek to characterize it as a "late-filed contention" subject to

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[146] Id. at 22.

[147] Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3), LBP-08-13, 68 NRC __,__ (slip op. at 41) (2008).

[148] Id. at __ (slip op. at 41) (citing Shaw Areva Mox Serv. (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 205-06 (2007) (defect in an application can give rise to a valid "contention of omission" and cannot therefore be rejected as unripe)). Petitioners "must have the opportunity to challenge the adequacy of the [the action] in the context of the hearing process…." Id.

[149] See Tr. at 365.

[150] NRC Resp. Tribe at 22.

much more rigorous admissibility standards;[151] and, (2) in the interim period (between the date a contention is denied and the date it eventually becomes ripe), the NRC Staff views itself as having no obligation to provide the Tribe, contemporaneously, with copies of any communications between the NRC Staff and Crow Butte—and by logical extension, NRC communications with anyone else, which in the case of this contention, would include the State of Nebraska Historical Preservation Officer—regarding these cultural resources.[152] Procrustes could not have devised a more odious method of frustrating petitioners than NRC proposes here. The United States Court of Appeals for the D.C. Circuit has instructed the NRC Staff that imposing such hardships on a petitioner will tilt the balance in favor of determining that a matter is ripe for adjudication: "In determining ripeness, we assess 'both the fitness of the issue for judicial decision and the hardship to the parties of withholding court consideration.'"[153]

Recent NRC communications in this proceeding make clear that this issue is fit for judicial decision.[154] The NRC Staff asserts that it met section 106 requirements during the process for its prior license renewal in 1995 by consulting, not with the Tribe, but with the Nebraska State Historical Preservation Officer (SHPO) regarding the cultural sites identified at that time in Crow Butte's License Renewal Application.[155] As a result of this "consultation," the NRC Staff concluded that it would be sufficient if Crow Butte followed its plan to avoid the identified sites by not mining near them and to "consult" with the SHPO before mining in the

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[151] Tr. at 299; see also 10 C.F.R. § 2.309(c)(1)(i)-(viii).

[152] Tr. at 401.

[153] Nuclear Energy Inst., Inc. v. Env. Prot. Agency, 373 F.3d 1251, 1312-3 (D.C. Cir. 2004) (citing AT&T Corp. v. FCC, 349 F.3d 692, 699 (D.C. Cir 2003) (quoting Abbott Labs. v. Gardner, 387 U.S. 136, 149 (1967))) (emphasis added).

[154] The NRC Staff filed answers in response to Board questions posed during oral argument. NRC Resp. to Board at 5.

[155] The Board asked the NRC Staff if a Section 106 Consultation was performed relating to Crow Butte's 1995 license renewal application. The NRC Staff claims that when Crow Butte initially applied for a Materials License in 1987, the NRC Staff did not conduct a Section 106 consultation with the Tribe because the NHPA did not set forth such a consultation requirement until 1992. See 16 U.S.C § 470(a) (1990); NRC Resp. to Board at 5-6.

vicinity of any cultural sites.[156] When the NRC Staff renewed Crow Butte's Materials License in 1998, the NRC Staff stated that it required Crow Butte "to conduct a cultural inventory prior to engaging in any developmental activity not previously assessed by NRC."[157] Crow Butte retained Resource Technologies Group, Inc. (RTG) to survey the Crow Butte mining site and "identify properties of cultural significance to Native American Tribes who once inhabited the area."[158] RTG allegedly attempted to contact a number of tribes, but the Tribe alleges that no actual communication regarding these cultural resources appears to have reached the Tribe.[159]

The regulations that implement NHPA[160] require federal agencies themselves to consult with a tribe if that tribe ascribes cultural or religious significance to properties not on tribal lands.[161] When Crow Butte applied for a license renewal in 1995, it identified eight sites of potential significance to the Oglala Sioux Tribe.[162] The Tribe claims that, in direct violation of NHPA regulations, the NRC Staff failed to consult with the Tribe about known cultural resources on the site.[163] While the NRC Staff alleges that it had some limited communication with

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[156] Letter from Joseph J. Holonich, Chief Uranium Recovery Branch, U.S. NRC, to Lawrence J. Sommer, Director, Nebraska State Historical Society (Dec. 31, 1997).

[157] NRC Resp. to Board at 6 n.19 (citing Application for 1995 License Renewal USNRC Source Materials License SUA-1534 Crow Butte License Area (December 1995) (ADAMS Accession No. ADAMS ML082140217) [hereinafter Original Licensing Application]).

[158] Letter from Bartley W. Conroy, Vice President, Resource Technologies Group, Inc., to L. Robert Pushendorf, Deputy Nebraska State Historic Preservation Officer, Nebraska State Historical Society (Apr. 3, 1998).

[159] Id.

[160] 36 C.F.R. § 800 et. seq.

[161] Id. § 800.2(c)(2)(ii)(D): "When Indian tribes . . . attach religious and cultural significance to historic properties off tribal lands, section 101(d)(6)(B) of the act requires Federal agencies to consult with such Indian tribes . . . in the section 106 [i.e., consultation] process. Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes . . . and should consider that when complying with the procedures in this part." See also Pit River Tribe v. United States Forest Serv., 469 F.3d 768, 787 (9th Cir. 2006).

[162] See Original Licensing Application at 2.4-1.

[163] "The Staff was unable to find any documentation reflecting a direct NRC contact with any Indian tribe." NRC Resp. to Board at 7.

Nebraska's SHPO, such discussions are no substitute for direct consultation with the Tribe. The regulations clearly require that each federal agency consult with the Indian tribe(s) whose interests are at stake as a result of agency action – such as the issuance, renewal or amendment of a license – that may affect a tribe's cultural resources.[164] Certainly, because the duty to consult with tribes lies with the Agency, not the Applicant, inserting a condition into Crow Butte's license requiring Crow Butte to consult with the Tribe does not absolve the NRC Staff of its duty to consult. Moreover, the NRC Staff's mention of RTG's apparently unsuccessful attempts to contact the Oglala Tribe, and the NRC Staff's subsequent determination that RTG made "a good faith effort in attempting to identify [Traditional Cultural Properties],"[165] also does not excuse the NRC Staff of its duty to contact and consult with the Tribe itself.[166] Although it is permissible for a federal agency to rely upon an applicant or an applicant's contractor to collect

[164] See 16 U.S.C. § 470(f): "[T]he head of any Federal department or independent agency having authority to license any undertaking shall, . . . prior to the issuance of any license, . . . take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under part B of this subchapter a reasonable opportunity to comment with regard to such undertaking." See also USEC, Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

[165] NRC Resp. to Board at 7 (citing Letter from Joseph J. Holonich, Chief Uranium Recovery Branch, U.S. NRC, to L. Robert Puschendorf, Deputy State Historic Preservation Officer, Nebraska State Historical Society (June 26, 1998)).

[166] "In initiating the Section 106 process, the agency is required to make a 'reasonable and good faith effort" to identify Indian tribes who may attach "'religious and cultural significance' to historic properties that may be affected by the proposed undertaking and invite them to participate as consulting parties in the Section 106 process." Comanche Nation v. United States, 2008 WL 4426621 (Sept. 23, 2008) (slip op. at 4) (emphasis added). See also 36 C.F.R. § 800.2(c)(2)(ii)(A)-(D); Id. § 800.3(f)(2).

data and make recommendations regarding cultural resources, it may not delegate its duty to consult under section 106 of the NHPA.[167]

The fact that there appear to have been no consultations between the NRC Staff and the Tribe for at least thirteen years after the NRC Staff was alerted to these Native American cultural resources makes this matter more than ripe for adjudication. The Tribe's interests in its cultural resources must be protected, and the Tribe should not be precluded from trying to protect them through these proceedings. Contrary to the NRC Staff's argument, ensuring that it meets its consultation obligations under section 106 of the NHPA is indeed "an issue material to the findings the NRC must make in support of the action involved in this proceeding."[168]

Finally, the Board is satisfied that the Tribe's contention meets all the requirements of 10 C.F.R. § 2.309(f)(1). We find the Tribe has shown this contention to be within the scope of the proceeding and has demonstrated the issues raised in this contention are material to the findings the NRC must make to support the action. The Tribe also has established a genuine dispute with Crow Butte and its License Renewal Application on a material issue of fact. It has done so by alleging the legal requirement of consultation did not occur, and by specifically disputing Crow Butte's finding in the License Renewal Application that there will be no significant impacts to cultural resources as a result of the continued operation of the ISL uranium mine. The Tribe disputes this finding by arguing that Crow Butte is not qualified to make representations regarding cultural resources found on the site.[169] It argues that in order for Crow Butte to state that no significant impacts will occur to cultural resources as a result of

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[167] "It is the statutory obligation of the Federal agency to fulfill the requirements of section 106…." Id. § 800.2(a). Furthermore, "the agency official may use the services of applicants, consultants, or designees to prepare information, analyses and recommendations under this part. The agency official remains legally responsible for all required findings and determinations. If a document or study is prepared by a non-Federal party, the agency official is responsible for ensuring that its content meets applicable standards and guidelines." Id. § 800.2(a)(3) (emphasis added).

[168] See 10 C.F.R. § 2.309(f)(1)(iv).

[169] Tribe Pet. at 13. See also Tribe Reply App. at 2, 6; Tr. at 159.

mining activities, it must rely on the NRC having first consulted with the Tribal Historic Preservation Officers [THPOs], as those officers are singularly qualified to identify the cultural resources and to determine their importance and how they should be protected.[170] Because these THPOs were not consulted by the NRC, the Tribe raises a legitimate challenge to Crowe Butte's finding in the License Renewal Application that no significant impact to cultural resources will occur as a result of mining activities. We therefore find the Tribe's Environmental Contention B admissible.

3. Environmental Contention C

The Tribe states in Environmental Contention C:

> In 7.4.2.2 in its application for renewal, [Crow Butte's] characterization that the impact of surface waters from an accident is "minimal since there are no nearby surface water features," does not accurately address the potential for environmental harm to the White River.[171]

Despite the fact that Crow Butte's License Renewal Application identifies Squaw and English Creeks, as "small tributaries of a 'major regional watercourse, the White River'"[172] that cross the tract on which it conducts its mining operations, Crow Butte asserts that no surface water would be affected in the event of an accident.[173] Presumably, to make this assertion, Crow Butte is banking on its ability to prevent accidental releases from ever reaching surface waters. On the other hand, the Tribe contends that because the White River runs through the Pine Ridge Indian Reservation, reliable scientific evidence (documented excursions and leaks) demonstrates the potential for contamination of the White River from, inter alia, surface spills

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[170] Id.

[171] Tribe Pet. at 16.

[172] See LRA at 7-17; see also Tribe Pet. at 16.

[173] LRA at 7-17; see also Tribe Pet. at 16.

and subsurface migration.[174] The Tribe also has submitted expert opinion suggesting the White River alluvium (a potential pathway for such contamination) should be evaluated for contaminants.[175] The Tribe claims this expert opinion directly contradicts Crow Butte's characterization of an impact from an accident as ". . . minimal since there are no nearby surface water features."[176]

Crow Butte's response details affirmative steps it has taken to protect "surface water quality in the event of a wellfield accident."[177] Crow Butte asserts the Tribe must show deficiencies or errors in the License Renewal Application and must establish a significant link between such claimed deficiencies and either the health and safety of the public or the environment which, Crow Butte asserts, the Tribe fails to do.[178] The NRC Staff responds that the Tribe's alleged factual support is nothing more than speculation that the subject aquifers are interconnected and therefore does not provide a valid basis for its contention.[179] We disagree.

As with the Tribe's Environmental Contention A, we find the Tribe has supplied sufficient expert opinion to draw into question whether these aquifers are interconnected and so could be the potential pathway for contaminant migration to surface waters. The Tribe provided the

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[174] Tribe Pet. at 16; the Tribe references Dr. LaGarry's opinion that the White River alluvium can receive contaminants from three sources: (1) surface spills at the Crow Butte mine site, (2) water transmitted through the Chamberlain Pass Formation where it is exposed at the land surface, and, (3) subsurface faults. Id. (citing LaGarry Opinion at 3).

[175] Three expert reports (from Paul Ivancie, W. Austin Crewell, and Dr. LaGarry) all agree that the White River alluvium (as a potential pathway for contamination) should be evaluated for possible contamination from the Crow Butte mining site. Tribe Pet. at 17.

[176] Tribe Pet. at 17 (citing LRA at 7-9).

[177] App. Resp. Tribe at 21. Crow Butte points to License Renewal Application Section 7.4.2.2 where Crow Butte acknowledges the potential to impact surface water quality, but then provides measures, such as the installation of dikes or berms in wellfield areas to prevent spilled solution from entering surface water features. Crow Butte also notes measures included in the License Renewal Application to protect against contamination of the shallow aquifer including the use of high density polyethylene pipe with butt welded joints and leak testing. Id. (citing LRA at 7-9, 7-13 to 7-14).

[178] App. Resp. Tribe at 21 (citing Pacific Gas & Elect. Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002)).

[179] NRC Resp. Tribe at 24.

opinion of several experts in support of its position that the White River alluvium is a potential pathway for contamination.[180] There are clear factual differences between the positions of Crow Butte and the Tribe regarding whether such pathways exist; thus, the Tribe presents a genuine factual dispute with the results of Crow Butte's technical analyses in the License Renewal Application. Moreover, the Tribe points to the License Renewal Application wherein Crow Butte identifies surface waters near the Crow Butte mining site but then concludes that an accident would result in minimal impacts because "there are no nearby surface water features."[181] We agree with the Tribe that this illustrates a clear factual dispute that warrants further inquiry.

The Tribe has provided a concise statement of alleged facts that are within the scope of this proceeding. Moreover, the Tribe has established a genuine dispute with Crow Butte on a material issue, and has provided supporting expert opinions that directly controvert the License Renewal Application. Therefore, we find the Tribe's Environmental Contention C admissible.

4. Environmental Contention D

The Tribe states in Environmental Contention D:

> In 7.4.3 [Crow Butte's] Application incorrectly states there is no communication among the aquifers, when in fact, the Basal Chadron aquifer, where mining occurs, and the aquifer, which provides drinking water to the Pine Ridge Indian Reservation, communicate with each other, resulting in the possibility of contamination of the potable water.[182]

The Tribe challenges Crow Butte's conclusion in the License Renewal Application that the subject aquifers are not interconnected, and that, as a result, ISL uranium mining is not a threat to water resources near the Crow Butte mine.[183] Specifically, the Tribe argues that these aquifers in this area are interconnected, and, as a result, there is a potential pathway for

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[180] See Tribe Pet. at 17.

[181] See id. at 16-17 (citing LRA at 7-9).

[182] Id. at 18.

[183] Id. at 19.

contamination of the Pine Ridge Indian Reservation water supply. To support this contention, the Tribe cites to Dr. LaGarry's opinion:

> [M]any of the ancient river deposits of the Arikaree and Ogallala Groups, along with the alluvium deposited by modern rivers, follow the fault zones because fractured rock erodes more easily. Swinehart & Others (1985) and Diffendal (1994) reported faults that could transmit contaminants from Crawford to Chadron, and from Crawford to Pine Ridge, South Dakota. In its license amendment for the North Trend expansion, Crow Butte Resources reports a fault along the White River that could transport contaminants from the ISL mine to the White River, and from the river directly to Pine Ridge, South Dakota.[184]

Dr. LaGarry's opinion contradicts Crow Butte's claims in the License Renewal Application that the Basal Chadron Sandstone is a deep confined aquifer, and therefore that no surface water impacts are expected from the continuation of ISL mining in the Crawford area.[185] The Tribe also points to a November 8, 2007 letter from the Nebraska Department of Environmental Quality (NDEQ) to Crow Butte expressing concern that there was inadequate scientific support for Crow Butte's claim of no hydraulic connection between the Basal Chadron Sandstone and the White River.[186] Finally, the Tribe contends that Crow Butte failed to consider the White River Fault/Fold (located in the southern portion of the North Trend expansion area) "which may affect the control of any migrations outside the mining area."[187]

Crow Butte and the NRC Staff both respond that the Tribe has failed to offer any evidence that the subject aquifers are interconnected.[188] Crow Butte adds that Dr. LaGarry merely "posits a potential link to the White River," and that his opinion provides nothing more than "an overview in regional geology."[189] The NRC Staff further asserts that Dr. LaGarry fails to confirm or to provide data to support that such faults exist in the area of the Crow Butte

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[184] Id. at 20 (citing LaGarry Opinion at 3).

[185] Id. at 20-21 (citing LRA at 7-10).

[186] Id.

[187] Id. at 21.

[188] App. Resp. Tribe at 22; NRC Response to Tribe at 26.

[189] App. Resp. Tribe at 22

mining site.[190] The NRC Staff and Crow Butte maintain that Dr. LaGarry's propositions are no substitute for the detailed, site-specific investigation performed by Crow Butte in the License Renewal Application, which, they claim, establishes that no faults exist at the site.[191] Crow Butte also challenges the Tribe's use of the November 8, 2007 NDEQ letter to support this contention, arguing that the letter is analogous to an NRC Staff Request for Additional Information (RAI), and that "a contention cannot simply be based on comments by a state agency regarding a permitting issue separate from the NRC's review."[192]

We find that the Tribe proffers sufficient supporting documentation and expert opinion to demonstrate that a genuine dispute exists with Crow Butte on a material issue of fact. Dr. LaGarry's opinion is, as Crow Buttes argues, an overview of the regional geology and not the detailed data collected at the current mining location by Crow Butte. What Crow Butte and the NRC Staff choose to ignore, however, is that the Tribe is concerned with potential migration "outside the mining area."[193] Dr. LaGarry notes a fault along the White River that, based on the regional geology, could act as a pathway to transport contaminants to the White River from the current ISL mining location.[194] The importance of this claim is substantiated by NDEQ in its November 8, 2007 letter wherein its scientists dispute Crow Butte's assertion that there is no hydraulic connection among regional aquifers and the White River. These NDEQ scientists assert that Crow Butte's claim is "lacking scientific support," and that Crow Butte "fails to account for the White River Fault" that may affect the control of any migration outside the mining area.[195] We do not find persuasive Crow Butte's characterization of the NDEQ letter as a

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[190] NRC Resp. Tribe at 26.

[191] See App. Resp. Tribe at 22; see also NRC Resp. Tribe at 26 (citing LRA at 2-113).

[192] App. Resp. Tribe at 23.

[193] Tribe Pet. at 21.

[194] Id. at 20 (citing LaGarry Opinion at 3).

[195] Id. at 21.

document analogous to an RAI. To the contrary, the NDEQ letter is an expert source that directly supports the Tribe's proffered contention.

The Tribe makes a specific statement of fact that is clearly within the scope of this proceeding, and provides supporting documentation and expert opinion that controverts findings in the License Renewal Application and thus establishes a genuine dispute warranting further inquiry. The Tribe's contention satisfies the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1); thus, we find the Tribe's Environmental Contention D admissible.

5. Environmental Contention E

The Tribe states in Environmental Contention E:

> [Crow Butte's] application incorrectly states in 7.11 that "Wastes generated by the facility are contained and eventually removed to disposal elsewhere."[196]

Referencing a complaint in a lawsuit alleging that Crow Butte violated its NDEQ-issued Underground Injection Control Permit, the Tribe notes an incident wherein Crow Butte released well development water "upon the surface of the ground" during its well development and drilling process.[197] The Tribe claims that these noncompliant activities directly contradict statements provided in Crow Butte's License Renewal Application that all generated wastes from the Crow Butte mining operations are contained and disposed of elsewhere.[198] The Tribe asserts that Crow Butte has disposed of wastewater in a manner that is inconsistent with its application, and

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[196] Id.

[197] Id.; see also NDEQ Complaint ¶ 2 (State of Nebraska, Nebraska Dept. of Env. Quality v. Crow Butte Res., Inc., Dist. Ct. of Lancaster, NE Case No: CI08-2248) ("Crow Butte recycled its well development water as a conservation measure, rather than treating it as a waste stream and collecting and retaining such water in Crow Butte's lined evaporation ponds, contrary to the terms of its UIC permit."). The NDEQ Complaint states that the violation occurred from July 1, 2003, until March 31, 2006. The Complaint also notes that Crow Butte discovered the violation and self-reported it to the NDEQ on-site inspector. Id.

[198] Tribe Pet. at 22.

therefore, its procedures do not meet the requirements for a license renewal because they do not protect public health or minimize danger to life or property.[199]

Crow Butte and the NRC Staff both respond that this contention is outside the scope of this proceeding because it involves an issue of state law.[200] Crow Butte further maintains that the basis of an admissible contention must relate directly to the proposed licensing action and not be based on allegations of improprieties of only historical interest.[201]

Contrary to Crow Butte's position, a license renewal proceeding is "an appropriate occasion for apprais[ing] . . . the entire past performance of [the] licensee."[202] The Tribe's allegations of historical improprieties concern the integrity of Crow Butte's on-going management of its ISL mining operations. The Commission has found that such allegations are relevant in a license renewal proceeding because NRC must ensure the public that "the facility's current management encourages a safety-conscious attitude" and must provide "reasonable assurance that the [ ] facility can be safely operated."[203] Furthermore, we do not agree that the Tribe's concerns are outside the scope of this proceeding simply because the basis for the contention relies on a question of state law.

The Tribe's allegations create a genuine dispute with the application on a material issue of law or fact. It has also demonstrated how these past violations support a challenge to the statement in the License Renewal Application that all wastes generated during Crow Butte's licensed ISL uranium mining operations are disposed elsewhere. Accordingly, we find the Tribe's Environmental Contention E admissible.

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[199] Id.

[200] App. Resp. Tribe at 24; NRC Resp. Tribe at 28 (citing Northern States Power Co. (Tyrone Energy Park, Unit 1), ALAB-464, 7 NRC 372, 275 (1978)).

[201] App. Resp. Tribe at 25 (citing Dominion Nuclear Connecticut (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 365 (2001)).

[202] Georgia Inst. of Tech. (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 120 (1995) (citing Hamlin Testing Laboratories, Inc., 2 AEC 423, 428 (1964)).

[203] Georgia Tech, CLI-95-12, 42 NRC at 121.

B. Consolidated Petitioners

1. Environmental Contention A and B

Consolidated Petitioners state in Environmental Contentions A and B:

> Environmental Contention A: [Crow Butte's] License Application does not accurately describe the environment affected by its proposed mining operations or the extent of its impact on the environment as a result of its use and potential contamination of water resources, through mixing of contaminated groundwater in the mined aquifer with water in surrounding aquifers and drainage of contaminated water into the White River. [204]
>
> Environmental Contention B: [Crow Butte's] proposed mining operations will use and contaminate water resources, resulting in harm to public health and safety, through mixing of contaminated groundwater in the mined aquifer with water in surrounding aquifers and drainage of contaminated water into the White River.[205]

Rather than providing specific factual allegations or expert statements in support of Contention A,[206] Consolidated Petitioners contend simply that Environmental Contention A is admissible "for the reasons found by the Amendment Board in LBP-08-06."[207] With respect to Contention B, Consolidated Petitioners urge its admission for the same reason, although they make two additional allegations: (1) that the License Renewal Application fails to disclose results of baseline pre-operational sampling, and (2) that the License Renewal Application fails to compare existing data with pre-operational levels.[208] The only factual support Consolidated Petitioners offer in support of Contention B is a 1982 Baseline Report discussing the water quality of wells in an area encompassing twelve townships in Northwest Nebraska, which Consolidated Petitioners deem to be illustrative of their claim of elevated concentrations of uranium in English and Squaw creeks.[209]

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[204] See Cons. Pet. at 21.

[205] Id.

[206] Id.

[207] Cons. Pet. Reply at 50 (citing Crow Butte, LBP-08-06, 66 NRC at __ (slip op. at __)).

[208] Cons. Pet. at 26.

[209] Id. at 25.

Crow Butte and the NRC Staff provide multiple arguments asserting procedural deficiencies in these two contentions.[210] The NRC Staff argues that Consolidated Petitioners fail to establish the relevance of the 1982 Baseline Report to Contention B, pointing out that the License Renewal Application discusses pre-operational baseline groundwater sampling and restoration information for each mine unit and private well sampling information from 1991-2007.[211] Crow Butte adds that water quality samples in the mining area taken in 1998 (prior to mining operations beginning there), detected "elevated uranium concentrations upstream from the current operations."[212] Crow Butte then argues this demonstrates that its licensed ISL uranium mining operations are not the cause of surface water contamination.

Unlike federal court practice, the Commission does not accept mere notice pleading in support of an admissible contention.[213] Moreover, it has made clear that a Board is not to permit "incorporation by reference where the effect would be to circumvent NRC-prescribed . . . specificity requirements."[214] Our review of Consolidated Petitioners' argument, and the Amendment Board's ruling on these identical contentions for the Amendment proceeding, requires that we find these contentions inadmissible.

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[210] App. Resp. Cons. Pet. at 27-30; NRC Resp. Cons. Pet. at 29-31.

[211] NRC Resp. Cons. Pet. at 30 (citing LRA at 2-166, 5-107) (emphasis in original).

[212] App. Resp. Cons. Pet. at 30 (citing Crow Butte's Semi-Annual Radiological Effluent and Monitoring Report for Third and Fourth Quarters 2008 (ADAMS Accession No. ML080710479) at 4); see also LRA at 5-87.

[213] See Entergy Nuclear Operations, Inc. (James A. Fitzpatrick Nuclear Power Plant and Indian Point Nuclear Generating Unit No. 3), CLI-00-22, 52 NRC 266, 296 (2000) (Commission's standards do not allow mere notice pleading); see also Palisades, CLI-07-18, 65 NRC at 408-09; Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2, Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428 (2003); Amergen Energy Co. (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 119 (2006); American Centrifuge Plant, CLI-06-9, 63 NRC at 437.

[214] Entergy Nuclear Operations, Inc. (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 132-33 (2001); see also Commonwealth Edison Co., (Braidwood Nuclear Power Station, Units 1 and 2), LBP-85-20, 21 NRC 1732, 1741 (1985), rev'd on other grounds, CLI-86-8, 23 NRC 241 (1986) ("The Commission expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference to a specific point. The Commission cannot be faulted for not having searched for a needle that may be in a haystack.").

The aquifer connectivity issues before us, while similar to those facing the Amendment Board, nevertheless involve two separate proceedings addressing two separate applications, as well as two different licensing actions by the NRC covering two different mining site locations. What is at issue here is Crow Butte's License Renewal Application, which involves the continued operation of Crow Butte's licensed ISL uranium mine, as opposed to the proposed expansion of that mine that is before the Amendment Board at a location nearly 5 miles away from Crow Butte's current ISL mining operations. The request for hearing and petition to intervene in the Amendment Proceeding includes direct citations to the Application for the North Trend Expansion and controverts statements provided in that application as bases for the contentions presented therein.[215] Here, in contrast, Consolidated Petitioners merely refer to the Amendment Proceeding and facts relating to another site than that at issue in the License Renewal Application.

We find that Consolidated Petitioners have provided insufficient explanation of the foundation for these two contentions, they have provided no concise statement of alleged fact or expert opinion supporting their position, and they have not demonstrated a genuine dispute with the License Renewal Application at issue in this proceeding.[216] Accordingly, Consolidated Petitioners' Environmental Contention A and Environmental Contention B are inadmissible.

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[215] See Crow Butte, LBP-08-06, 67 NRC at __ (slip op. at 94) ("Contentions A and B of the Petition consists largely of references to, quotations from, and comparisons between language from various sections of the [North Trend Expansion Application], noticing some inconsistencies and pointing out some statements they challenge by reference to other statement therein.").

[216] See 10 C.F.R. § 2.309(f)(1)(ii),(v), and (vi). In denying these two contentions, we express no opinion regarding the reasoning provided by the Amendment Board. To the contrary, we agree that aquifer connectivity issues are present in both proceedings and have said as much through our admission of the Tribe's Environmental Contentions A, C, and D. But those issues are not properly raised or supported by Consolidated Petitioners Environmental Contentions A and B, and we therefore find them inadmissible here.

2. Environmental Contention C

Consolidated Petitioners state in Environmental Contention C:

Failure of CBR to consider Climate Change.[217]

Although invoking "climate change," Consolidated Petitioners' Environmental Contention C, challenges only Crow Butte's description of tornado frequency in the License Renewal Application.[218] Consolidated Petitioners assert that Crow Butte uses old data in its License Renewal Application regarding the weather and tornadoes and that such data needs to be updated in light of known factors related to climate change.[219] Consolidated Petitioners further maintain that climate change may be appropriate for consideration under 10 C.F.R. § 51.45 for reasons found by the Amendment Board in LBP-08-06.[220]

Crow Butte and the NRC Staff both respond that Consolidated Petitioners do not explain what information in the License Renewal Application is incorrect or inaccurate and fail to demonstrate that the issues related to climate change cannot be addressed through the NRC's normal regulatory process.[221] The NRC Staff further asserts that, because a discussion of climate change is not required for inclusion in an application, it would be more appropriate to challenge the adequacy of the meteorological information contained in the License Renewal Application, which Consolidated Petitioners did not do.[222] At oral argument, the NRC Staff noted that Consolidated Petitioners did not put forward any factual foundational support to controvert, or claim a deficiency in, the meteorological data submitted by Crow Butte in the

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[217] Cons. Pet. at 26.

[218] Id. (citing LRA at 2-57).

[219] Id.

[220] Cons. Pet. Reply at 52 (citing Crow Butte, LBP-08-06, 66 NRC __ (slip op. at 99) ("climate change would clearly fall within any reasonable consideration of the concepts expressed" in 10 C.F.R. § 51.45(b)(1) and (b)(4)").

[221] App. Resp. Cons. Pet. at 30-31.

[222] NRC Resp. Cons. Pet. at 32; see also Tr. at 238.

License Renewal Application, but it also added that "[the NRC S]taff's meteorological review has not yet been finished."[223]

We can envision circumstances when climate change would be a legitimate subject of inquiry.[224] However, the contention as proffered is far too broad. Petitioners must address alleged deficiencies in the License Renewal Application in a specific and well-supported contention. While Consolidated Petitioners have alleged that Crow Butte generally failed to mention "climate change" in its application, it does not supply supporting facts or expert testimony sufficient to raise a factual dispute. When afforded an opportunity to explain their position at oral argument, Consolidated Petitioners could not provide any specific impact climate change would have on the meteorological conditions at Crow Butte mining site,[225] other than a possible increase in the frequency of tornados that Crow Butte classified as being "rare."[226] Moreover, Consolidated Petitioners were unable to identify, assuming that the worst case scenario of a tornado occurring at the Crow Butte mining site would be a power outage, any adverse health and safety impacts.[227]

For the foregoing reasons, we find Consolidated Petitioners' Environmental Contention C is inadmissible.

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[223] Tr. at 254.

[224] See Official Transcript, Duke Energy Carolinas William States Lee III Nuclear Station Units 1 and 2 [hereinafter Duke Tr.] at 58-59 (NRC Staff responded, when asked, that it was considering global warming issues in its NEPA analysis); see also Tr. at 238.

[225] See Tr. at 240-52.

[226] Tr. at 249-51.

[227] Tr. at 256-57. This failure to supply any legitimate amplification for its climate change contention is particularly noteworthy because almost two weeks earlier, the Board advised the parties they should be prepared to address this global warming contention during oral argument. See Licensing Board Order (Regarding Oral Argument) at 4 (Sept. 18, 2008) (unpublished).

3. Environmental Contention D

Consolidated Petitioners state in Environmental Contention D:

> Changing the geo-chemistry of the water is equivalent to adulteration of the water. It takes many generations for the adulterated water to recover so that it can once again be used for traditional medicines and ceremonies, and before it can be healthy again for drinking and irrigation. This causes environmental and cultural impacts, lack of environmental justice, depletion of the aquifer at a time of drought, and economic detriments to property owners as a result of the lowering of the water table.[228]

In support of Environmental Contention D, Consolidated Petitioners point to several affidavits describing the spiritual nature of water and include excerpts from an article making the same claim.[229] Consolidated Petitioners further assert that, because the License Renewal Application acknowledges that the water is "geo-chemically changed by the ISL mining," such change supports Consolidated Petitioners' environmental justice and cultural impact claims because "it takes many generations before the water can once again be used."[230]

Crow Butte maintains that, to the extent Consolidated Petitioners are challenging (a) actions permitted under its state-issued aquifer exemption, (b) actions permitted under its state-issued Safe Drinking Water Act Class III permit, or (c) already-authorized activities under its current NRC license, this contention raises issues outside the scope of this license renewal proceeding.[231] Crow Butte further maintains that a license renewal proceeding is not the proper forum to challenge NRC regulations that purportedly allow an ISL uranium mine to change the geochemistry of groundwater.[232] Those issues aside, Crow Butte would have it that the Consolidated Petitioners do not meet any of the contention admissibility criteria for this contention.[233] The NRC Staff asserts that this contention fails to raise a genuine dispute on a

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[228] Cons. Pet. at 26-27.

[229] Id. at 27-28.

[230] Cons. Pet. Reply at 53.

[231] App. Resp. Cons. Pet. at 31-32.

[232] Id. at 32.

[233] Id.

material issue of fact or law,[234] and that the affidavits provided in support of this contention "fail to demonstrate qualifications sufficient to address technical or environmental analysis related to the geochemical chemistry and the adulteration of water."[235]

While these waters may well have spiritual significance for Consolidated Petitioners, and concomitantly, while they desire these waters to be pristine for traditional tribal practices, we have not been provided with facts or expert opinion adequate to support such a claim. Instead, Consolidated Petitioners allege generalized concerns regarding statements in the License Renewal Application that the "water is geo-chemically changed by the ISL mining."[236] While we do not dispute the sincerity of Consolidated Petitioners' claims, generalized statements of concern and personal accounts from "several reputable indigenous Grandmothers"[237] describing the "spiritual nature of the water"[238] regarding these religious and cultural impacts does not raise a genuine dispute with Crow Butte on its application. Likewise, Consolidated Petitioners have failed to supply factual or legal support for their environmental justice claims. Accordingly, we find Consolidated Petitioners' Environmental Contention D inadmissible.

4. Environmental Contention E

Consolidated Petitioners state in Environmental Contention E:

> Cost Benefits as discussed in the [License Renewal Application] Fail to Include Economic Value of Environmental Benefits.[239]

In support of Environmental Contention E, Consolidated Petitioners reference a University of Adelaide (Australia) study placing an economic value on wetlands. More

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[234] NRC Resp. Cons. Pet. at 33.

[235] Id.

[236] Cons. Pet. Reply at 53.

[237] Id. at 53.

[238] Cons. Pet. at 27.

[239] Id. at 28.

specifically, this study highlights the ramifications of cutting off water flows in times of drought.[240] At oral argument, Consolidated Petitioners stressed that Environmental Contention E "goes to value not cost, in the sense that there is a recognized value to an operating [wetland] system."[241] They urge that the value of the wetlands lost due to potential contamination should also be considered.[242] For example, in evaluating the "no action alternative" under NEPA, Consolidated Petitioners maintain that the economic benefits from full-functioning wetlands potentially affected by ISL mining operations in the area should be balanced against the potential loss of jobs and economic loss to the surrounding community.[243]

Crow Butte responds that Consolidated Petitioners do not cite a regulatory or statutory requirement to consider the economic value of environmental benefits, and further insists that Consolidated Petitioners do not dispute any portion of the calculation of costs or benefits in the License Renewal Application.[244] For its part, the NRC Staff acknowledges that Crow Butte's License Renewal Application identifies no impacts to wetlands,[245] but asserts that Consolidated

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[240] Id. (citing www.adelaide.edu.au/adelaidean/issues/23221/news23241.html). Consolidated Petitioners assert that the University of Adelaide study concluded that every hectare of permanent wetland provides more than $7,000 worth of water purification each year.

[241] Tr. at 270-71. Consolidated Petitioners conceded at oral argument that the NRC Staff accepts environmental costs measured in terms of damage and remediation, and environmental benefits in terms of job dollars and economic growth in the community. Id. at 271.

[242] Tr. at 271.

[243] Tr. at 271-72. Although Consolidated Petitioners urge additional support for Environmental Contention E, we were unable to discern that these other matters have any significant relationship to the proposed contention. At oral argument, Consolidated Petitioners made it clear to the Board that their primary concern regarding environmental benefits was related to the valuation of wetlands. Accordingly, we have made wetlands our exclusive focus here.

[244] App. Resp. Cons. Pet. at 33.

[245] Tr. at 272. See also NRC Resp. Cons. Pet. at 34.

Petitioners fail to cite supporting documentation or information to the contrary.[246] When we inquired at oral argument whether the economic benefits of wetlands would be considered as part of the NRC Staff's "no action alternative" analysis under NEPA, the NRC Staff responded that, if an impact to wetlands is found, the NRC Staff would conduct the value assessment proposed by the Petitioners.[247]

In essence, Consolidated Petitioners contend that Crow Butte's License Renewal Application is flawed because it does not place an economic value on the environmental benefits of wetlands located near the Crow Butte mining site that would be realized only if the license was not renewed, i.e., the "no action" alternative under NEPA does not account for the economic value of environmental benefits.[248] Crow Butte and the NRC Staff would have it that Consolidated Petitioners have not raised a genuine dispute with the application because they have not challenged Crow Butte's claim in the License Renewal Application that there are no impacts to wetlands on the Crow Butte mining site.[249] We disagree. Consolidated Petitioners have effectively raised a genuine issue regarding whether wetlands are being degraded by virtue of the migration of contaminants from Crow Butte's licensed mining operations, and thus

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[246] NRC Resp. Cons. Pet. at 34 (citing LRA at 7-17). The NRC Staff also argues that the University of Adelaide online article "should be ignored" because Consolidated Petitioners fail to "set forth an explanation of its significance" making it inadequate to support the admission of the contention. Id. (citing Fansteel, CLI-03-13, 58 NRC at 205). We disagree. Consolidated Petitioners specifically summarized the portions of the Adelaide article that were relevant to this assertion including the overall value of wetlands for natural water purification, as well as the economic value of approximately $7,000 per hectare per year. See Cons. Pet. at 28.

[247] Tr. at 272. Although the NRC Staff states that it would undertake such a value assessment of the loss or diminution of wetlands on the ecosystem if it found that an impact on ecological resources was likely to occur, it was not able to provide a specific methodology for calculating that value. Tr. at 273. Moreover, the NRC Staff stated it was not taking a definitive position with regard to this contention as it relates to wetlands, but that it is currently engaged in that review process and has not come to any conclusions regarding information submitted in the License Renewal Application. Tr. at 281.

[248] See Tr. at 270-72.

[249] See Tr. at 282; see also Tr. at 269.

the License Renewal Application improperly fails to account for such migration.[250] Therefore, we find that, solely as it relates to allegations of wetland impacts and the economic value of the environmental benefits from those wetlands in a non-degraded condition, the Consolidated Petitioners' Environmental Contention E is admissible.

5. Technical Contention B[251]

Consolidated Petitioners state in Technical Contention B:

> [Crow Butte's] proposed mining operations will use and contaminate water resources, resulting in harm to public health and safety, through mixing of contaminated groundwater in the mined aquifer with water in surrounding aquifers and drainage of contaminated water into the White River.[252]

Consolidated Petitioners' Technical Contention B is identical to their Environmental Contention B. Consolidated Petitioners confirmed at oral argument that these two identical contentions were asserted to ensure that this contention would address both environmental and safety issues under NEPA and the AEA, respectively.[253] Regardless of the reasons for restating the contention under the auspices of the AEA or NEPA, we remain unable to admit this contention. For the reasons previously stated for denying admission of Consolidated Petitioners' Environmental Contention B,[254] we also find Technical Contention B inadmissible.

6. Technical Contention C

Consolidated Petitioners state in Technical Contention C:

> Failure of CBR to consider Climate Change.[255]

This contention, as well, is identical to one submitted as an environmental contention. Nothing additional has been supplied to support it as a technical contention. Thus, for the

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[250] See Tr. at 269-70.

[251] Consolidated Petitioners did not submit any contentions under the title "Technical Contention A." See Cons. Pet. at 30.

[252] Cons. Pet. at 30.

[253] Tr. at 282-83.

[254] See, supra, at pp. 42-45.

[255] Cons. Pet. at 30.

reasons previously stated for denying admission of Consolidated Petitioners' Environmental Contention C,[256] we also find Technical Contention C inadmissible.

7. Technical Contention D

Consolidated Petitioners state in Technical Contention D:

Failure to follow statistical analysis protocols.[257]

In support of Technical Contention D, Consolidated Petitioners merely reference an opinion provided by Dr. Abitz, and assert that it goes into great detail concerning specific inadequacies in the License Renewal Application, including a list of omissions and areas that he considers warrant more detailed evaluation.[258] The contention fails on its face to meet the contention admissibility requirements set forth in 10 C.F.R. § 2.309(f)(1). Rather than articulate any support or adequate factual explanation for the contention or describe some dispute with the application on a material issue, Consolidated Petitioners simply refer to Dr. Abitz's report. Whatever value Dr. Abitz's analysis and expertise might have his list of omissions and alleged inadequacies do not support the contention as stated. The assertion that Crow Butte fails "to follow statistical analysis protocol" on its own, with no supporting statement or foundation, is vague, overly broad, and does not conform to the contention admissibility requirements. Accordingly, we find this contention inadmissible.

8. Technical Contention E

Consolidated Petitioners state in Technical Contention E:

Failure to use best available technology such as 3D computer modeling, SCADA… Failure to maintain back-up power in case of power outages.[259]

Consolidated Petitioners offer nothing in support of Technical Contention E other than a reference to an opinion of JR Engineering, which, in turn, offers alternative methods to

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[256] See, supra, at pp. 45-47,

[257] Cons. Pet. at 30.

[258] Cons. Pet. Reply at 55.

[259] Cons. Pet. at 30.

characterize the nature and extent of the potentially contaminated area and to mitigate such contamination, but does not itself raise any specific dispute with the License Renewal Application.[260] Consolidated Petitioners added in their Reply and at oral argument that Crow Butte fails to maintain back-up power in the event of a power outage.[261] We note that Part 40 does not require ISL uranium mining facilities to maintain back-up power. If such a facility were to experience a power failure, uranium recovery operations simply cease.[262] Accordingly, Consolidated Petitioners still provide no support need to establish a genuine dispute of a material fact. We therefore find this contention inadmissible.

9. Technical Contention F

Consolidated Petitioners state in Technical Contention F:

Failure to include recent research.[263]

Consolidated Petitioners present Dr. LaGarry's opinion to support this contention, arguing that Crow Butte uses "old data and old research when there is more recent research" available. Consolidated Petitioners likewise note that Crow Butte's research was criticized in the November 8, 2007 NDEQ letter.[264] Both Crow Butte and the NRC Staff respond that Consolidated Petitioners fail to identify a specific regulatory requirement for the inclusion of recent research.[265] Crow Butte also asserts that Consolidated Petitioners have failed to demonstrate that incorporating new regional geologic research would undermine the site-

[260] Id.; JR Engineering Opinion at 1.

[261] Cons. Pet. at 30.

[262] NRC Resp. Cons. Pet. at 39-40; see Tr. at 256-57.

[263] Cons. Pet. at 30.

[264] See id. at 30 (citing to LRA at 2-76 to 2-128); see also NDEQ letter (Exhibit B in Amendment proceeding) (ADAMS Accession No. ML081090240).

[265] App. Resp. Cons. Pet. at 39; NRC Resp. Cons. Pet. at 40.

specific data used by Crow Butte or otherwise change the conclusions reached in the License Renewal Application.[266]

Crow Butte's and the NRC Staff's insistence that the regulations do not require Crow Butte to consider research or opinions of any particular alleged expert, while true, is also beside the point. The issue before us is the reliability of scientific evidence in order for Crow Butte's License Renewal Application to be complete and accurate.[267] What Crow Butte must consider is recent research that allegedly describes the geology more accurately than those sources Crow Butte references. Specifically, Consolidated Petitioners offer the comments and recommendations of Paul Robinson, Research Director for Southwest Research and Information Center, who notes that two of Crow Butte's references in the License Renewal Application were Environmental Protection Agency guidance documents for groundwater monitoring (from 1974 and 1977) that he claims are out of date and that more recent and appropriate guidance documents (from 1992 and 2000) should have been used.[268] It seems beyond dispute that EPA's updates reflect more reliable science than was contained in its earlier publications. As such, this more recent research likely represents more reliable science and thus there is a question regarding whether Crow Butte has simply cherry-picked its supporting data. [269]

Likewise, Consolidated Petitioners' references to Dr. LaGarry's opinion and the November 8, 2007 NDEQ letter are precise enough to provide the necessary support for this

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[266] App. Resp. Cons. Pet. at 39.

[267] See 10 C.F.R. § 40.9(a); see also Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 592-93 (1993) (reliability is verified by assessing whether the reasoning or methodology underlying the evidence is scientifically valid); Comments and Recommendations Regarding the "Application for 2007 License Renewal USNRC Source Materials License SUA-1534 Crow Butte License Area" by Paul Robinson, Research Director, Southwest Research and Information Center at 4 (July 28, 2008) [hereinafter Robinson Opinion.

[268] See Robinson Opinion at 4.

[269] Morgan Stanley Capital Group, Inc. v. Pub. Util. Dist. No. 1 of Snohomish County, 128 S.Ct. 2733, 2755 (June 26, 2008) (Justice Stevens' dissent discussing the dangers of cherry picking).

contention. Contrary to Crow Butte's statement at oral argument that Dr. LaGarry's opinion concerns only the overall regional geology of the area, and does not specifically challenge the site specific data collected by Crow Butte in the immediate vicinity of the Crow Butte mining site,[270] Dr. LaGarry's opinion includes research that both encompasses the location of Crow Butte's licensed ISL uranium mining operations and extends to those areas beyond the Crow Butte mining site.[271] Although nothing in Dr. LaGarry's Opinion counters a specific portion of the application, Consolidated Petitioners raise a material dispute with the fundamental scientific evidence relied on for the conclusions presented in the License Renewal Application. Paul Robinson's critique of Crow Butte's use of outdated EPA sources raises a similar material dispute by drawing into question the reliability of scientific evidence used in support of the License Renewal Application. Consolidated Petitioners' Technical Contention F has met requirements set forth in section 2.309(f)(1), and is therefore admissible.

10. Technical Contention G

Consolidated Petitioners state in Technical Contention G:

> Failure to analyze mine unit activities in correlation with excursions and radiological emissions.[272]

In support of Technical Contention G, Consolidated Petitioners merely pose a series of questions regarding a purported spike in radon levels and then suggest that these recorded "spikes" might somehow be related to the production of a particular mining unit at the facility.[273] A series of questions without any explanation as to how they support or otherwise provide a foundation for the proposed contention neither challenges the adequacy of the License Renewal Application nor contradicts statements that Crow Butte has made. Consolidated Petitioners' unsupported comments about the License Renewal Application cannot serve as a basis for a

[270] Tr. at 334.

[271] Tr. at 338.

[272] Cons. Pet. at 30.

[273] Id. at 30-31.

contention. Moreover, Crow Butte claims that it addresses the issue of the radon "spike" in multiple portions of the License Renewal Application, which Consolidated Petitioners do not dispute, and adds that "even though there were elevated measurements in 2003, the levels were still below levels considered protective of the public."[274] Accordingly, Consolidated Petitioners have not advanced a genuine dispute on a material issue of law or fact to support admissibility of this contention, and we find it inadmissible.

11. Miscellaneous Contention A

Consolidated Petitioners state in Miscellaneous Contention A:

> Reasonable consultation with Tribal Leaders regarding the prehistoric Indian camp located in the area surrounding CBR's proposed North Trend Expansion Project has not occurred as required under NEPA and the National Historic Preservation Act.[275]

Consolidated Petitioners "intentionally framed Miscellaneous Contention A to be identical with [ ] Contention C that was admitted in the [Amendment] proceeding by LBP-08-06."[276] No additional discussion has been provided in support of this contention. Crow Butte argues that this contention is outside the scope of these proceedings because it concerns the License Amendment for the North Trend Expansion, and not the current License Renewal Application.[277] The NRC Staff adds that, because this contention is outside the scope of this proceeding, it "fails to raise a dispute with [Crow Butte] on a genuine issue of law or fact related to the license renewal proceeding."[278]

While the Amendment Board found this identical contention admissible in LBP-08-06,[279] we do not find it admissible here. The prehistoric Indian camp referenced in this contention is

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[274] App. Resp. Cons. Pet. at 41.

[275] Cons. Pet. at 31.

[276] Cons. Pet. Reply at 58.

[277] App. Resp. Cons. Pet. at 42.

[278] NRC Resp. Cons. Pet. at 41-42.

[279] Crow Butte, LBP-08-06, 67 NRC at __ (slip op. at 111).

"located in the area surrounding [Crow Butte's] proposed North Trend Expansion Project,"[280] and not near the Crow Butte mining site at issue in this proceeding. The Amendment Board, not this Board, is concerned with the North Trend Expansion and its pertinent cultural resource study area, and so this contention is relevant only to those proceedings. We consequently find that the Consolidated Petitioners' Miscellaneous Contention A is outside the scope of this license renewal proceeding and, therefore, inadmissible.

12. Consolidated Petitioner's Miscellaneous Contention B, C, D, E and F

Consolidated Petitioners state in Miscellaneous Contentions B, C, D, E, and F:

Contention B: Failure to Consult with Tribal Authorities.[281]

Contention C: Failure to Abide Trust Responsibility.[282]

Contention D: Failure to respect Winters Rights.[283]

Contention E: Failure to respect Treaty Rights. Oglala Petitioners have asserted treaty rights concerning the Licensed Area.[284]

Contention F: Failure to respect Hunting and Fishing Rights[285]

Consolidated Petitioners have wholly failed to provide any discussion of the support for these contentions or point to any deficiencies in Crow Butte's application. For many of Consolidated Petitioners' other contentions, the Board has accepted simple references to documents where the foundational support was decipherable. However, Consolidated Petitioners have not provided the necessary information to satisfy the "brief explanation or basis" requirement for the admission of these contentions as required under 10 C.F.R.

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[280] Cons. Pet. at 31.

[281] Id.

[282] Id.

[283] Id.

[284] Id.

[285] Id. at 32.

§ 2.309(f)(1)(ii).[286] In their Reply, Consolidated Petitioners attempt to cure these deficiencies,[287] yet still fail to address the basic admissibility requirements, and instead provide only generalized statements of concern with the License Renewal Application without identifying genuine disputes on material issues of fact or law.

The contention admissibility requirements are strict by design to ensure "that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues."[288] These contentions, as pleaded, do not fulfill this purpose. From assertions advanced by Counsel at oral argument, we understand the nature of Consolidated Petitioners' concerns advanced in these contentions. As discussed below, these contentions fail to demonstrate a genuine dispute with Crow Butte on a material issue of fact or law.

First, with regard to concerns regarding Tribal consultation, the Tribe itself has advanced these concerns in its Environmental Contention B, which we determined is admissible. Although Crow Butte erroneously asserts that an individual tribal member cannot advance his or her rights on behalf of the Tribe,[289] in this instance, the Tribe itself has already advanced these rights and, as such, they will be addressed in this proceeding. Second, we recognize the trust responsibility that imposes a fiduciary duty on NRC, as a federal agency, to the Tribe and its members.[290] But Consolidated Petitioners wholly fail to demonstrate, in the context of

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[286] See Pub. Serv. Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 416-17 (1990) ("It is not the responsibility of the Licensing Board…to supply the basis information necessary to sustain a contention.").

[287] See Cons. Pet. Reply at 60-63.

[288] 69 Fed. Reg. 2182, 2189-90 (Jan. 14, 2004).

[289] See App. Resp. Cons. Pet. at 45; Tr. at 394.

[290] United States v. Mitchell, 463 U.S. 206, 224 (1983); Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942); see also Tr. at 368.

Miscellaneous Contention C, how a renewal of Crow Butte's license to continue operations at its mining site would violate such duties.

Third, Consolidated Petitioners allege that contamination of water on the reservation and depletion of their water sources as a result of Crow Butte's mining operations violate their Winters rights, under which the Tribe is to receive a sufficient quantity of quality water on the Reservation.[291] Certainly, both depletion and contamination of reservation groundwater can adversely affect water available for the Tribe, including water needed for agriculture. This interference with use and consumption can violate Consolidated Petitioners' Winters Rights. Accordingly, the Board recognizes that Consolidated Petitioners can assert Winters Rights as members of the Oglala Sioux Tribe.[292] We also note that this right is protected from adulteration by third parties and that any such adulteration is an injury to Consolidated Petitioners' interests.[293] Here, however, Consolidated Petitioners have failed to demonstrate a plausible causal nexus between the License Renewal Application and their Winters Rights.

Fourth, Consolidated Petitioners contend that Crow Butte's License Renewal Application fails to respect their Treaty Rights. This is essentially the same issue the Tribe and Delegation Treaty Council raised that has previously been discussed at length.[294] The Board is bound by United States v. Sioux Nation of Indians[295] and will not make a determination on treaty matters.

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[291] Winters v. United States, 207 U.S. 564, 567 (1908). See also Cappaert v. United States, 426 U.S. 128, 139 (1976) ("[W]hen the Federal Government reserves land, by implication it reserves water rights sufficient to accomplish the purposes of the reservation."). A tribe's protected right to this water is known as Winters rights.

[292] Individual petitioners may assert rights granted to the Tribe through treaties. The Supreme Court in United States v. Dion, 476 U.S. 734, 738 n.4 (1986), quoting United States v. Winans, 198 U.S. 371, 381 (1905), has held that a tribe member may assert treaty rights as an individual member of the tribe.

[293] Winters, 207 U.S. at 567 (". . . it is essential and necessary that all of the waters of the river flow down the channel uninterruptedly and undiminished in quantity and undeteriorated in quality [and] ... are to be fully protected against invasion by other parties."); see also id. at 564, 573.

[294] See, supra, at pp. 19-21.

[295] 448 U.S. 371 (1980).

Furthermore, Consolidated Petitioners fail to take issue with a specific part of the License Renewal Application; the statement that Crow Butte is not respecting Consolidated Petitioners' treaty rights is merely a statement of general concern, and does not raise a material dispute of law or fact for the Board to consider.

Finally, Consolidated Petitioners state that their hunting and fishing rights have been impaired in two separate ways. First, Consolidated Petitioners assert that possible arsenic contamination of the White River and Squaw Creek would render fish in those waters inedible.[296] Secondly, Consolidated Petitioners assert that an accumulation of contaminants in the soil and in the lower food chain affects animals higher in the food chain.[297] Consolidated Petitioners claim that contamination of food sources makes game dangerous to consume. As a result, Consolidated Petitioners claim their rights to hunt and fish for sustenance are compromised by contamination resulting from Crow Butte mining activities.[298]

Despite the fact that Consolidated Petitioners claim they have a protected right to hunt and fish on the Pine Ridge Indian Reservation,[299] they have not pointed to a specific deficiency in the License Renewal Application that raises a dispute on a material issue of fact or law. Consequently, Consolidated Petitioners' contentions B, C, D, E, and F do not meet the required contention pleading criteria set forth in 10 C.F.R. § 2.309(f)(1). Therefore, we find this contention inadmissible.

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[296] Tr. at 375.

[297] Tr. at 376.

[298] Tr. at 375-376.

[299] We note that the Tribe's hunting and fishing rights outside of the Pine Ridge Reservation were abrogated by the Black Hills Act of 1877. See United States v. Sioux Nation of Indians, 448 U.S. at 409-411.

13. Miscellaneous Contention G

Consolidated Petitioners state in Miscellaneous Contention G:

> Failure to Disclose in violation of 40.9. There are several instances of intentional, reckless or negligent failures to disclose, including:
> (1) Concealment of Foreign Ownership, as described herein.
> (2) Suppression of Geologic Data - Whistleblower Letter/LaGarry, as described herein.
> (3) Failure to adequately disclose the flow of the White River towards Pine Ridge Indian Reservation.[300]

Consolidated Petitioners assert Crow Butte allegedly violated 10 C.F.R. § 40.9 by failing to disclose information in its License Renewal Application. Such lack of disclosure, Consolidated Petitioners classify as "reckless or negligent," including concealment of foreign ownership, suppression of geologic data, and disclosure of the flow of the White River towards Pine Ridge Indian Reservation.[301]

Prior to evaluating each of the individual parts of this contention, we consider whether an applicant's failure to disclose material information in its application is a violation of 10 C.F.R. § 40.9. Crow Butte argues that section 40.9 presents "no substantive standards or criteria for determining whether the applicable provisions of 10 C.F.R. Part 40 have been met," and that section 40.9 may not be used as an independent reason to deny the application.[302] Crow Butte further insists that 10 C.F.R. § 40.9 is tied to an enforcement mechanism that is within the sole discretion of the Commission through its Staff, and as such, is not within the Board's jurisdiction.[303] Finally, Crow Butte asserts that reliance on section 40.9 is Consolidated Petitioners' attempt to litigate the completeness of the application and the docketing of such by the NRC Staff, which is "not a matter that this Board should or can decide."[304]

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[300] Cons. Pet. at 32. Although Consolidated Petitioners advance several bases for this contention, in fact, none actually support it.

[301] Id.

[302] App. Resp. Cons. Pet. at 51.

[303] Id.

[304] Id. at 52.

While 10 C.F.R. § 40.9 might be more commonly utilized in the enforcement context, we disagree with Crow Butte that the alleged failure to disclose material facts in an application is beyond the appropriate scope of this proceeding. This provision is found in "General Provisions" of 10 C.F.R. Part 40 and is not obviously confined in application to enforcement proceedings. Through section 40.9, the Commission codified the obligations of applicants to provide "complete and accurate information," in recognition of "the NRC's need to receive complete, accurate, and timely communications" from its applicants, which, in turn, enables the NRC to fulfill its responsibilities "to ensure that utilization of radioactive material . . . [is] consistent with the health and safety of the public and the common defense and security."[305] This provision allows the Commission to revoke any license for any materially false statement in the application or any statement of fact required under [AEA] section 182.[306] Certainly, a violation of section 40.9 is subject to civil penalties and sanctions through an enforcement proceeding, but that does not mean that it is necessarily beyond consideration in a license proceeding.

At this stage of the proceeding, we are not to determine the merits of the case, but instead to apply the contention admissibility requirements set forth in section 2.309(f)(1)(i)-(vi). Based on the foregoing, we determine that this contention is within the scope of the proceeding, and contrary to Crow Butte's claim,[307] is material to the findings the NRC must make to support the action at issue here.[308] Keeping this in mind, and for the reasons set forth below, we admit in part and deny in part Consolidated Petitioners' Miscellaneous Contention G.

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[305] 52 Fed. Reg. 49,362, 49,362 (Dec. 31, 1987).

[306] Id.

[307] App. Resp. Cons. Pet. at 51.

[308] See 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

We begin first with Consolidated Petitioners' claim that Crow Butte concealed that it is 100 percent owned, controlled and dominated by foreign interests.[309] Crow Butte insists these allegations are "flatly inaccurate and consist of nothing more than baseless speculation."[310] Rather than concealing a change in ownership, Crow Butte maintains that, pursuant to section 40.46, it notified the NRC in May 1998 of the change in ownership of shareholders of Crow Butte Resources. Crow Butte further asserts that the NRC formally consented to the change of ownership and specifically determined that Crow Butte's "proposed change in shareholder ownership [was] acceptable."[311] Accordingly, Crow Butte argues Consolidated Petitioners lack any foundation for their contention.[312]

While Crow Butte might be factually correct about the events in question, its argument misses the point. Contrary to Crow Butte's characterization, Consolidated Petitioners' contention is not concerned with disclosure of the true ownership of Crow Butte, but rather with whether Crow Butte failed to disclose in the application itself that a foreign entity owns Crow Butte. Consolidated Petitioners specifically reference portions of the License Renewal Application wherein Crow Butte omits any statement disclosing its citizenship or control by a foreign entity. Moreover, Crow Butte has not disputed Consolidated Petitioners' allegation that Crow Butte is owned by Cameco, a Canadian corporation. Accordingly, for purposes of this contention, we must assume that Crow Butte is foreign-owned and that the License Renewal Application does not disclose this information. The NRC Staff extends Crow Butte's argument

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[309] Cons. Pet. at 36.

[310] App. Resp. Cons. Pet. at 53.

[311] Id. at 53. On May 13, 1998, Crow Butte informed the NRC by letter that Cameco had agreed to purchase all of the shares of Uranerz U.S.A., Inc. – 79 of 100 shares, which would give Cameco a controlling ownership interest in Crow Butte. See id., Exh. A, Letter to Joseph J. Holonich, NRC, from Stephen P. Collings, Crow Butte Resources, Inc. (May 13, 1998). The NRC consented to this change by letter, dated June 5, 1998, and indicated that the proposed change in shareholder ownership was acceptable and that no amendment to Crow Butte's Source Materials License was necessary. See id., Exh. B, Letter to Stephen Collings, Crow Butte Resources, Inc., from Joseph J. Holonich, NRC (June 5, 1998).

[312] See id. at 53-54.

further by arguing that neither the AEA itself nor NRC's implementing regulations require that Crow Butte disclose foreign ownership of its U.S. corporate owners, and therefore this part of the contention should be rejected.[313]

In contradistinction to the positions of both Crow Butte and the NRC Staff, Consolidated Petitioners assert, inter alia, that section 182 of the AEA requires the application for a source materials license[314] "specifically [to] state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant, the character of the applicant, the citizenship of the applicant, or any other qualifications of the applicant as the Commission may deem appropriate for the license."[315] The Commission's interpretation of the "citizenship" requirement for license applications, as promulgated throughout its regulations, appears to indicate that a corporate applicant must include the State where it is incorporated or organized; the citizenship of its directors and its principal officers; and whether it is owned, controlled or dominated by an alien, a foreign corporation, or a foreign government.[316] What is not clear, however, is whether such a requirement would apply to an application for a Source Materials License under Part 40 because the required contents for such an application do not appear to be specified.[317]

Crow Butte does not dispute that the information Consolidated Petitioners have identified regarding Crow Butte's alleged foreign ownership is not in the License Renewal Application. Instead, both Crow Butte and the NRC Staff maintain that such information is not a requirement for a Part 40 license application. However, even if Consolidated Petitioners are in error and there is no requirement to disclose foreign ownership under section 182 of the AEA, they still

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[313] See Staff Resp. Cons. Pet. at 44-45.

[314] See Cons. Pet. at 45-46.

[315] 42 U.S.C. § 2232(a) (emphasis added).

[316] See 64 Fed. Reg. 52,355, 52,357 (Mar. 1, 1999); 64 Fed. Reg. 44,635, 44,649 (Aug. 16, 1999); see also 10 C.F.R. §§ 50.33(3), 52.16, 76.33(a)(2).

[317] See 10 C.F.R. Part 40.

assert that there is a second ground to support this contention insofar as 10 C.F.R. § 40.9(a) requires that the information in the application must be "complete and accurate in all material respects," which Consolidated Petitioners maintain requires this disclosure of foreign ownership.[318] For both reasons, Consolidated Petitioners have therefore identified a genuine dispute on a material issue of law regarding the interpretation of the requirements set forth in section 182 of the AEA and 10 C.F.R. § 40.9(a).

Moreover, 10 C.F.R. § 40.32 (covering domestic licensing of source material) requires NRC to ensure, prior to granting a license renewal, that "the issuance of the license will not be inimical to the common defense and security or to the health and safety of the public";[319] thus, information Crow Butte asserts has not been disclosed is "material" because it has the capability to influence an agency decisionmaker. The Commission has held that the phrase "inimical to the common defense and security" refers to several factors including "the absence of foreign control over the applicant."[320] Accordingly, Consolidated Petitioners are asserting that the disclosure of foreign ownership both (1) is material to the findings NRC must make to support the action under 10 C.F.R. § 2.309(f)(1)(iv) and (2) meets the materiality requirement stated in 10 C.F.R. § 40.9.

Consolidated Petitioners identify this alleged material omission through specific references to the License Renewal Application, and further support this contention with evidence of foreign ownership and control of Crow Butte. More specifically, Consolidated Petitioners have identified a genuine dispute of material law regarding the required contents of an application for a Part 40 license with particular emphasis on the "citizenship" requirement identified in section 182 of the AEA. We therefore find Consolidated Petitioners Miscellaneous

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318 Cons. Pet. at 32.

319 10 C.F.R. § 40.32(d).

320 See Florida Power & Light Co. (Turkey Point Nuclear Generating Station, Units 3 and 4), 4 AEC 9, 12 (1967); see also Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-84-45, 20 NRC 1343, 1400 (1984).

Contention G admissible as a contention of omission insofar as it claims Crow Butte failed to disclose in its License Renewal Application that it is owned and controlled by a foreign corporation.

The second issue raised by Consolidated Petitioners in this contention is the alleged suppression of geologic data.[321] As pointed out by Crow Butte, Consolidated Petitioners "do not even cite any portion of the application that they allege to be deficient."[322] Consolidated Petitioners set forth a number of illustrations in support of their allegation that Crow Butte has suppressed geological data.[323] Crow Butte refutes each of these allegations with a specific reference to the License Renewal Application that addresses the alleged concerns or omissions.[324] It is fundamental that a contention of omission will fail where the allegedly missing information, in fact, is in the license application.[325]

In further support of their contention, Consolidated Petitioners reference Dr. LaGarry's opinion,[326] as well as what they refer to as the "Whistleblower Letter,"[327] presumably to suggest an omission in the geological analysis in the License Renewal Application. We decline to admit this contention regarding the allegations that Crow Butte suppressed geological data because Consolidated Petitioners fail to identify any specific alleged omission in the License Renewal Application itself. Thus, we do not admit Miscellaneous Contention G insofar as it relates to the alleged suppression of geological information.

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[321] Cons. Pet. at 32.

[322] App. Resp. Cons. Pet. at 54.

[323] Cons. Pet. at 32-35.

[324] See App. Resp. Cons. Pet. at 55-57.

[325] Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002) ("Where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant . . . , the contention is moot.").

[326] Cons. Pet. at 32.

[327] The Whistleblower Letter refers to the letter written by Petersen to the NRC in 1989, see, supra, n. 129.

Consolidated Petitioners' third issue in this contention concerns an allegedly inadequate disclosure of the flow of the White River. All parties agreed at oral argument that the White River flows directionally towards the Pine Ridge Indian Reservation.[328] While the directional flow of the White River is potentially material to the findings of the NRC, the omission of a statement to that effect is not particularly significant in light of the fact there is no dispute between Crow Butte and Consolidated Petitioners regarding the directional flow. Therefore, we fail to discern the materiality of such an alleged omission in the License Renewal Application to a violation of 10 C.F.R. § 40.9. As such, we do not admit Miscellaneous Contention G insofar as it alleges the License Renewal Application fails to disclose the flow of the White River.

In accordance with the foregoing, we admit in part and deny in part Consolidated Petitioners' Miscellaneous Contention G. The portion of Consolidated Petitioners' Miscellaneous Contention G that we admit (whether Crow Butte must disclose its alleged foreign ownership in its License Renewal Application) raises a substantive legal issue not heretofore briefed: "Whether the foreign ownership of an applicant must be disclosed in each and every source materials license renewal application." The Board is of the opinion that it is in the best interest in the management of this proceeding that this issue be segregated from the other contentions admitted here and briefed on the merits up front. Accordingly, Consolidated Petitioners, Crow Butte and the NRC Staff are to file, within thirty days of the date of this Order, briefing on the merits with respect to this legal issue. Responses to such briefing shall be due no later than twenty days following receipt of the initial briefing, with replies due no later than ten days after the responses are served.

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[328] See Tr. at 348-49.

14. Miscellaneous Contention H

Consolidated Petitioners state in Miscellaneous Contention H:

> Failure to Update in violation of Part 40, App. A; 51.45. There are many examples of failures to update to current information in the LRA.[329]

Consolidated Petitioners do not provide any additional basis in support of Miscellaneous Contention H other than that stated directly in the contention itself. Crow Butte insists that, nothing in 10 C.F.R. Part 40, Appendix A and 10 C.F.R. § 51.45 "requires an applicant to provide updated information as part of a license renewal in the absence of any indication of a new or significant change in the environment."[330] The NRC Staff notes that updated information is found throughout the License Renewal Application.[331]

Consolidated Petitioners' statement that "there are many examples of failures to update" the information in the License Renewal Application provides no specificity or direction for the Board to determine whether or not the issue warrants further inquiry. General statements that a matter ought to be considered without an explanation of how the application is deficient or how it should be changed are insufficient to support a contention. Accordingly, Contention H is inadmissible.

15. Miscellaneous Contention I:

Consolidated Petitioners state in Miscellaneous Contention I:

> Failure to Include Recent Research; Use of Obsolete Data and Information in violation of AEA 182 or 184.[332]

Consolidated Petitioners provide no supporting information for Miscellaneous Contention I. Accordingly, this contention fails to provide the requisite basis under 10 C.F.R.

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[329] Cons. Pet. at 35.

[330] App. Resp. Cons. Pet. at 57.

[331] The Staff alleges that information regarding the use of adjacent lands and water of the commercial study area is updated throughout License Renewal Application Section 2.2 through 2.28 beginning at page 2-9. NRC Resp. Cons. Pet. at 49.

[332] Cons. Pet. at 36.

§ 2.309(f)(1)(ii). Moreover, sections 182 and 184 of the AEA do not support the Petitioners' claim that the use of "obsolete data and information" would somehow be a violation of the Act.[333] For these reasons, we find this contention inadmissible.

16. Miscellaneous Contention J

Consolidated Petitioners state in Miscellaneous Contention J:

Missing pages – incomplete – violation of 40.9.[334]

Miscellaneous Contention J concerns the absence of page 3-22 from the License Renewal Application.[335] At oral argument, Consolidated Petitioners indicated they now have this missing information.[336] Accordingly, we find this contention moot and need not be admitted.

17. Miscellaneous Contention K

> Lack of Authority to Issue License to US Corporation which is 100% owned, controlled and dominated by foreign interests; voidability of mineral and real estate leases due to Nebraska Alien Ownership Act.[337]

The issues presented in Miscellaneous Contention K are two-fold. First, Consolidated Petitioners contest the legitimacy of Crow Butte's license "on grounds that [Crow Butte's] status as a foreign corporation violates the explicit terms of the [AEA], and the rules and regulations promulgated by the Commission thereunder."[338] Second, Consolidated Petitioners allege the

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[333] AEA § 182 states that applicants must include the information in an application that the Commission determines to be necessary. AEA § 184 is applicable only to licenses to posses or use special nuclear material, and therefore, does not apply to source material licensees such as Crow Butte Resources, Inc. 42 U.S.C. §§ 2232, 2234.

[334] Cons. Pet. at 36.

[335] Id.

[336] Tr. at 349-51.

[337] Cons. Pet. at 36.

[338] Id. at 37. Consolidated Petitioners support the claim that Crow Butte is foreign-owned by setting forth an overview of Crow Butte's relevant corporate history that they claim to have acquired through the public record. Cons. Pet. at 51-60. Crow Butte is purportedly wholly owned and controlled by a Canadian corporation, Cameco Resources, Inc. Id. at 38. Up to this point, Crow Butte has not disputed these facts in this proceeding.

voidability of mineral and real estate leases under the Nebraska Alien Ownership Act is dispositive on Crow Butte's Source Materials License for its ISL uranium mining operations.[339] As discussed below, we admit this contention insofar as it addresses foreign ownership, but deny it insofar as it relates to the Nebraska Alien Ownership Act.

Consolidated Petitioners maintain that the AEA and 10 C.F.R. § 40.32(d) clearly bar the issuance of a source materials license to a foreign-owned corporation.[340] They claim the NRC lacks authority under the AEA[341] to grant a license either where there is no benefit to the United States' national interest, common defense and security or where there is a detriment to the health and safety of the public.[342] Consolidated Petitioners further assert that mere technical compliance with NRC disclosure regulations does not satisfy the purposes stated in the AEA.[343] Consolidated Petitioners also claim that the NRC's regulations under section 40.32 prohibit the NRC from approving a source materials license unless, among other things, the "issuance of the license will not be inimical to the common defense and security or to the health and safety of the public."[344] Consolidated Petitioners claim that foreign ownership "is clearly inimical to the

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[339] See Cons. Pet. at 36.

[340] Id. at 37-38. Consolidated Petitioners also argue that a fair reading of 10 C.F.R. § 40.38 supports a bar on license issuance. 10 C.F.R. § 40.38 states: "A license may not be issued to the Corporation if the Commission determines that . . . [t]he Corporation is owned, controlled, or dominated by . . . a foreign corporation." Consolidated Petitioners are in error. The plain language of section 40.38 limits its reach to uranium enrichment facilities, not ISL mining. See USEC Privatization Act: Certification and Licensing of Uranium Enrichment Facilities, 62 Fed. Reg. 6,664, 6,666 (Feb. 12, 1997); see also 10 C.F.R. § 40.4 (defines "Corporation" as "The United States Enrichment Corporation or its successor").

[341] In support of this contention, Consolidated Petitioners cite to three sections of the AEA (i.e., §§ 61, 62, 103(d)), but their primary argument is focused on AEA § 69, which states: "[t]he Commission shall not license any person to transfer or deliver, receive possession of or title to, or import into or export from the United States any source material if, in the opinion of the Commission, the issuance of a license to such person for such purpose would be inimical to the common defense and security or the health and safety of the public." 42 U.S.C. § 2099.

[342] Cons. Pet. at 41.

[343] Id. A regulation "is not a reasonable statutory interpretation unless it harmonizes with the statute's 'origin and purpose.'" United States v. Vogel Fertilizer Co., 455 US 16, 26 (1982).

[344] 10 C.F.R. § 40.32(d); see also Cons. Pet. at 49.

common defense and security or public health and safety," and claim that federal courts have recognized that Congress' intent is to ensure that only U.S. entities control nuclear materials.[345] In further support of their claim of inimicality, Consolidated Petitioners refer to the 2007 Annual Information Form from Crow Butte's parent subsidiary, Cameco Resources, Inc., to demonstrate that "while Canada is subject to the Non-Proliferation Treaty, there are other aspects of legal control over source and nuclear materials that can be avoided by foreign owners of US uranium mines such as Cameco."[346]

Crow Butte and the NRC Staff both respond that Consolidated Petitioners fail to raise a genuine dispute with the application on an issue of fact or law and that Consolidated Petitioners fail to identify information or documentation to support their contention.[347] The NRC Staff disputes Consolidated Petitioners' citation to section 40.32(d) as prohibiting foreign ownership arguing this section does not require the License Renewal Application to discuss the foreign owners of an applicant.[348] The NRC Staff maintains that the only risk Consolidated Petitioners assert is "that natural uranium may end up in foreign hands."[349]

Crow Butte and the NRC Staff also claim that there are no NRC regulations prohibiting foreign entities from obtaining an ISL uranium mining license in the United States, and that

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[345] Cons. Pet. at 40 (citing Siegel v. Atomic Energy Comm'n, 400 F.2d 778, 784 (D.C. Cir. 1968) ("the internal evidence of the Act is that Congress was thinking of keeping such materials in private hands secure against loss or diversion; and of denying such materials and classified information to persons whose loyalties were not to the United States.")).

[346] Cons. Pet. at 51 (citing Cameco Corporation, Annual Information Form at 12-13 (March 28, 2008)). Cameco's 2007 Annual Information Form states: "[t]he US restrictions have no effect on the sale of Russian uranium to other countries. About 70% of the world uranium requirements arise from utilities in countries unaffected by the US restrictions. In 2007, approximately 48% of Cameco's sales volume was to countries unaffected by the US restrictions."

[347] App. Resp. Cons. Pet. at 59; NRC Resp. Cons. Pet. at 50.

[348] NRC Resp. Cons. Pet. at 51.

[349] Id. at 51-52 (citing In the Matter of Curators of the University of Missouri, CLI-95-1, 41 NRC 71, 165 (1995)).

issues raised in this contention are outside the scope of this license renewal proceeding.[350] Specifically, Crow Butte asserts that because the ownership of Crow Butte will not change as a result of license renewal, Consolidated Petitioners are effectively challenging NRC's prior approval of a change in the ownership share in Crow Butte back in 1998.[351] From this, Crow Butte avows that Consolidated Petitioners' remedy is instead to file a petition under 10 C.F.R. § 2.206 requesting the Commission to initiate enforcement action pursuant to 10 C.F.R. § 2.202.[352]

Contrary to arguments presented by Crow Butte and the NRC Staff, Consolidated Petitioners' concerns related to Crow Butte's foreign ownership are potentially material to the safety and environmental requirements of 10 C.F.R. Part 40. Moreover, a license renewal proceeding is an appropriate time to review "the adequacy of a licensee's corporate organization and the integrity of its management."[353]

Boiled down to its simplest form, we need only determine first whether the AEA and 10 C.F.R. § 40.32(d) prohibit a foreign entity from obtaining a NRC license to operate an ISL mine in the U.S. Although the prohibition against foreign control and ownership are clear with regard to uranium enrichment facilities[354] or nuclear power plants,[355] the regulations applicable to source materials licensing provide no such clarity. Next, if there is no absolute prohibition on NRC issuing a license for an ISL mine in the U.S. to a foreign corporation, we are called upon to determine whether issuance or renewal of a source materials license would be inimical the U.S. national interest and the common defense and security. Because the regulations clearly require the NRC Staff to take into consideration whether or not renewing Crow Butte's license would be

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[350] NRC Resp. Cons. Pet. at 52; see also App. Resp. Cons. Pet. at 60-61.

[351] App. Resp. Cons. Pet. at 61-62.

[352] Id.

[353] Georgia Tech, CLI-95-12, 42 NRC at 120.

[354] See 10 C.F.R. § 40.38.

[355] See id. § 50.38.

inimical to the common defense and security or the public health and safety,[356] this issue is material to our decision. In fact, the Commission has held that the phrase "inimical to the common defense and security" refers to, among other things, "the absence of foreign control over the applicant."[357] Moreover, "previous Commission decisions regarding foreign ownership or control did not appear to turn on which particular nation the applicant was associated with."[358]

The respective positions alleged by Consolidated Petitioners, Crow Butte, and the NRC Staff demonstrate there is a genuine dispute on material issues. Accordingly, Consolidated Petitioners' Miscellaneous Contention K is admissible in part as it relates to foreign ownership. In addition, this portion of the contention raises both legal and factual issues that would be best resolved before reaching the merits of the other admitted contentions herein.

We do not, however, find this contention admissible with regard to the voidability of real estate and mining leases due to the Nebraska Alien Ownership Act. As stated by both Crow Butte and the NRC Staff, this proceeding is confined to determining compliance with AEA and NRC regulations. Accordingly, the lease and proposed issues related to Nebraska laws on alien ownership of property are outside the scope of these proceedings and outside the jurisdiction of the NRC.[359]

Consolidated Petitioners' Miscellaneous Contention K raises substantive issues not heretofore briefed, and its resolution in this proceeding is potentially fatal to Crow Butte's proposed renewal of its license. The Board is of the opinion that it is in the best interest in the management of this proceeding that this issue be segregated from the other contentions and briefed on the merits up front. Accordingly, Consolidated Petitioners, Crow Butte and the NRC Staff are to file, within thirty days of the date of this Order, briefing on the merits with respect to

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[356] See 10 C.F.R. § 40.32(d).

[357] See Turkey Point, 4 AEC at 12; see also Shoreham, LBP-84-45, 20 NRC at 1400.

[358] 64 Fed. Reg. at 52,357.

[359] App. Resp. Cons. Pet. at 61; NRC Resp. Cons. Pet. at 52.

Consolidated Petitioners' Miscellaneous Contention K as so admitted. Any such briefing shall be accompanied by a supporting legal memorandum and such affidavits of fact and expert opinion as shall be necessary. Responses to such briefing shall be due no later than twenty days following receipt of the initial briefing, with replies due no later than ten days after the responses are served.

18. Miscellaneous Contention L

Consolidated Petitioners state in Miscellaneous Contention L:

> Calculation of Surety Bond Fails to Consider Reasonably Foreseeable Costs of Restoration and Decommissioning. The bond calculation fails to consider post-restoration, post-decommissioning monitoring, or related ecological monitoring. Cameco's subsidiary, Power Resources, Inc. was just required to increase its bond substantially by WY DEQ based on a similar theory.[360]

Consolidated Petitioners maintain that Crow Butte's surety bond is inadequate because it fails to include the costs associated with any health impacts or damages allegedly caused by contamination migrating from Crow Butte's licensed ISL mining operations.[361] Moreover, Consolidated Petitioners would have it that the current bond calculation fails to consider post-restoration, post-decommissioning monitoring, or related ecological monitoring.[362] In further support of this contention, Consolidated Petitioners note that a subsidiary of Cameco, Power Resources, Inc., was recently required to increase substantially its surety bond for similar reasons.[363]

Crow Butte and the Staff respond that Consolidated Petitioners fail to cite a regulatory requirement or supporting documentation that might bring into question the adequacy of the

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[360] Cons. Pet. at 41-42.

[361] Cons. Pet. Reply at 68.

[362] Cons. Pet. at 41-42.

[363] Id. at 42. Consolidated Petitioners state that the Wyoming Department of Environmental Quality required Power Resources, Inc., to increase its surety bond from $40 million to $80 million in July 2008. See id.; see also Cons. Pet. Reply at 69.

information contained in the License Renewal Application.[364] More specifically, Crow Butte asserts that its surety bond includes funds for groundwater restoration, decontamination and decommissioning, and surface reclamation costs for all areas to be affected by the installation and operation of the mine.[365] It further maintains that it employs detailed calculations to determine the bonding requirements that are submitted annually in compliance with Criterion 9 of 10 C.F.R. Part 40, Appendix A ("Criterion 9").[366] Still further, Crow Butte insists that the technical criteria in Appendix A do not require post-restoration, post-decommissioning, or related ecological monitoring.[367]

Criterion 9 requires an applicant to establish a surety arrangement that ensures sufficient funds will be available for decommissioning and decontamination of an NRC-licensed source materials site.[368] Crow Butte stressed at oral argument that the calculations of its surety bond are not developed from a set formula, but are instead comprised of enough monetary contingencies for an independent third party to perform the decommissioning and restoration.[369] It asserts that its surety bond calculations take into account, inter alia, the type of treatment processes used, the resulting volume of waste for disposal, and the removal of pipe and well structures.[370] These calculations are developed to a "finely-grained level of detail" for such items as equipment costs, labor costs, monitoring costs, and remediation costs.[371]

Crow Butte maintains that Consolidated Petitioners cite no statutory or regulatory authority that would require it to provide for post-restoration, post-decommissioning, or related

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[364] App. Resp. Cons. Pet. at 63; NRC Resp. Cons. Pet. at 53.

[365] App. Resp. Cons. Pet. at 63-64.

[366] See Tr. at 346.

[367] Id. at 63.

[368] See 10 C.F.R. Part 40, App. A, Criterion 9; see also, Hydro Res., Inc. (P.O. Box 15910, Rio Rancho, NM 87174), LBP-04-3, (Feb. 27, 2004) (unpublished) at 4.

[369] Tr. at 346.

[370] Tr. at 346.

[371] Tr. at 348.

ecological monitoring.[372] The fact is, however, Criterion 9 provides very little instruction with respect to making such calculations.[373] Because Criterion 9 addresses decommissioning and decontamination matters very generally, the Commission turned to NRC's guidance document on in situ uranium extraction facilities, i.e., the Standard Review Plan for a license application, NUREG-1569, for assistance with these issues.[374] Looking to NUREG-1569, we note that calculations for surety bonds are to be estimated "[t]o the extent possible," and based on the applicant's "experience with generally accepted industry practices" including "research and development at the site" or "previous operating experience in the case of a license renewal."[375] Additionally, Crow Butte disputes Consolidated Petitioners' assertion that its surety bond fails to include groundwater quality restoration, surface reclamation, and facility decommissioning.[376]

With the foregoing in mind, we remain unable to identify any specific inadequacies Consolidated Petitioners have raised with Crow Butte's surety bond estimates that would be sufficient to warrant further inquiry. At bottom, Consolidated Petitioners merely seek an increase in Crow Butte's surety bond similar to that imposed by the Wyoming Department of Environmental Quality on another of Cameco's subsidiaries, Power Resources, Inc.[377] Accordingly, Consolidated Petitioners offer us no foundational support for this contention.

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[372] App. Resp. Cons. Pet. at 63.

[373] See generally, 10 C.F.R. Part 40, App. A.

[374] See Hydro Res., Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-33, 60 NRC 581, 596 (2004) (Commission acknowledges such references are not legally binding, yet recognizes the usefulness in instances where legal authority is lacking).

[375] NUREG-1569 at 6-24; see also Hydro Res., Inc., CLI-04-33, 60 NRC at 596. Further, the Commission has held that "[i]t seems neither unreasonable nor inconsistent with [NUREG-1569], for an applicant that has had experience in the uranium recovery field--including experience in restoration activities--to draw upon its own prior experience as a basis in estimating restoration cost estimates." Id. at 597.

[376] Id. at 63-64. We note that NRC evaluates such considerations on a case-by-case basis, and its evaluation includes "comparing the proposed costs with standard industry guides, as well as consulting with local and state authorities on local and regional costs." Hydro Res., Inc., CLI-04-33, 60 NRC at 597.

[377] Cons. Pet. Reply at 63.

Consolidated Petitioners fail to dispute Crow Butte's methodology for conducting post-reclamation that underlies many of Crow Butte's surety estimates.[378] We therefore find Consolidated Petitioners' Miscellaneous Contention L inadmissible.

C. Oglala Delegation of the Great Sioux Nation Treaty Council

The Delegation Treaty Council did not specifically identify any contentions for admissibility in its petition. Instead, the Delegation Treaty Council advances its position regarding the Fort Laramie Treaties of 1851 and 1868 and its associated concerns regarding any impacts to the land and water resources, and any artifacts or historical evidence that has been, or may be, discovered at the Crow Butte mining site.[379] More specifically, the Delegation Treaty Council contends that many families obtain their water from wells or surface streams that have been contaminated by Crow Butte's mining site, which is adversely affecting the health of the Oglala Lakota people and the wildlife in the area. The Delegation Treaty Council also alleges Crow Butte's procedures to protect the land and water resources in the region are insufficient, and that Crow Butte's net consumption of water far exceeds the 500,000 gallons per year it claims in the application because the water returned to the aquifer is contaminated.[380]

Although these concerns are advanced by the Delegation Treaty Council in its petition, none of its arguments supply the detailed requirements needed for contention admissibility. It is unnecessary, however, for the Board to determine contention admissibility for the Delegation Treaty Council because we were unable to grant it standing to intervene in this proceeding. It would be permissible for the Delegation Treaty Council to join in this proceeding under 10 C.F.R. § 2.315(c) as noted supra.[381]

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[378] App. Resp. Cons. Pet. at 64.

[379] Delegation Pet. at 2-3.

[380] Id. at 4-6.

[381] See, supra, at p. 25; see also 10 C.F.R. § 2.315(c).

VI. Petitioners' Request for 10 C.F.R. Part 2, Subpart G Hearing

The Commission's regulations provide for two different sets of rules for adjudicating hearings: (1) formal adjudications under 10 C.F.R. Part 2, Subpart G; and (2) informal hearing procedures under 10 C.F.R. Part 2, Subpart L. The formal adjudicatory procedures outlined in Subpart G allow the parties to propound interrogatories, take depositions, and cross-examine witnesses without requesting leave from the Board. Subpart L instead provides for a more informal adjudicatory process in which discovery is prohibited except for certain mandatory disclosures. Subpart L also mandates that the Board conduct oral hearings during which it interrogates the witnesses, and any cross-examination by the parties is permitted only if the Board deems it necessary for the development of an adequate record.

A Board is to identify the specific hearing procedures to be used for a proceeding upon the admission of a contention. Such a determination is made on a contention-by-contention basis and selection of the hearing procedure is dependent on what is "most appropriate for the specific contentions before it."[382] Absent any mandatory hearing procedure, the Board must exercise its discretion and select the hearing procedure most appropriate for the newly admitted contention.

Consolidated Petitioners assert they are entitled to a Subpart G hearing because the contentions advanced necessitate resolution of issues of material fact[383] relating to the occurrence of past events.[384] Consolidated Petitioners request a formal hearing on the ground

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[382] Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations Inc. (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 705 (2004).

[383] A petitioner requesting a Subpart G hearing pursuant to Section 2.310(d) "must demonstrate, by reference to the contention and the bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures." 10 C.F.R. § 2.310(d). Therefore, although it is within the Board's discretion to select the appropriate hearing procedure upon request, the burden is on a petitioner to first demonstrate the need for the Board to choose a more formal adjudicatory process.

[384] Cons. Pet. at 60.

that Crow Butte has allegedly concealed material information regarding its alleged ownership by a foreign company. As a result of this alleged concealment, Consolidated Petitioners claim the veracity of Crow Butte's material statements are called into question, and that witnesses must be cross-examined to determine whether Crow Butte has perpetrated fraud.[385] They further assert the nature of the technical issues in this proceeding necessitates employing procedures not available under Subpart L.[386] Finally, Consolidated Petitioners insist Subpart G is essential for the development of an adequate record.[387]

Crow Butte maintains that Consolidated Petitioners' reliance on section 2.310(d) is misplaced, as it clearly applies only to nuclear power reactors and not to license renewal proceedings under 10 C.F.R. Part 40.[388] Crow Butte specifically points to the Commission's statements in promulgating section 2.310, that "unless one of the applications specified in paragraphs (b) through (h) are at issue, 'the listed proceedings are to be conducted under Subpart L,'"[389] and concludes therefore that "the only available hearing procedures in the instant case are those in Subpart L."[390] For its part, the NRC Staff adds that "the Commission strongly favors Subpart L" and that Subpart G is best used to resolve issues where "motive, intent, or credibility are at issue, or if there is a dispute over the occurrence of a past event."[391]

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[385] Id. at 61.

[386] Id. at 59.

[387] Id.

[388] App. Resp. Cons. Pet. at 65.

[389] Id. (citing 69 Fed. Reg. at 2206).

[390] Id. at 66. To the contrary, the Board in Vermont Yankee held a Licensing Board has authority to choose the hearing process most suitable for the contentions before it. LBP-04-31, 60 NRC at 705. The plain language of 10 C.F.R. Section 2.310(a) uses the permissive term "may" in describing a board's authority to select the appropriate hearing procedures. Id.

[391] NRC Resp. Cons. Pet. at 54-55 (citing 69 Fed. Reg. at 2205). The Commission has identified that "the central feature of a Subpart G proceeding is an oral hearing where the decision-maker has an opportunity to directly observe the demeanor of witnesses in response to appropriate cross-examination . . ." 69 Fed. Reg. at 2205.

We find that absent explicit Commission authority, there appears to be no provision in 10 C.F.R. § 2.700 for source materials licensing cases to be contested under Subpart G. [392] 10 C.F.R. § 2.700 provides in pertinent part:

> The provisions in this subpart apply to . . . enforcement proceedings . . ., proceedings conducted with respect to the initial licensing of a uranium enrichment facility, proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits for nuclear power reactors, . . . and any other proceeding as ordered by the Commission.

The doctrine of expressio unis est exclusio alterius "instructs that where a law expressly describes a particular situation to which it shall apply, what was omitted or excluded was intended to be omitted or excluded." [393] Even if we were to agree that section 2.310(d) allows the Board to choose a Subpart G hearing process, we would only be permitted to do so if "issues of motive or intent of the party or eyewitness material to the resolution of the contested matter" are in dispute;[394] the contentions we admitted in this proceeding do not implicate these concerns.

We see no reason why the additional discovery mechanisms of Subpart G are necessary for the full and fair disclosure of the facts facing us in this proceeding. Moreover, the Board has the discretion to allow parties to cross-examine witnesses in Subpart L proceedings if the Board deems this practice necessary to establish an adequate record, and we see no reason why the moderate limits on cross-examination under a Subpart L proceeding would

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[392] Rules for formal adjudications are to apply to the proceeding as enumerated in Section 2.700, "and any other proceeding as ordered by the Commission." 10 C.F.R. § 2.700.

[393] Reyes-Gaona v. North Carolina Growers Ass'n, 250 F.3d 851, 865 (4th Cir. 2001).

[394] 10 C.F.R. § 2.310(d). See also 69 Fed. Reg. at 2222: "[An] alternative criterion for determining whether Subpart G procedures should be used in a proceeding is whether the contention / contested matter necessarily requires a consideration and resolution of the motive or intent of a party or eyewitness. For example, a contention alleging deliberate and knowing actions to violate NRC requirements by an applicant's representative necessarily requires resolution of the motive or intent of the applicant and its representative. Application of Subpart G procedures should be considered in such circumstances."

hinder the development of an adequate record here.[395] We therefore conclude that the procedures of Subpart L are appropriate for the adjudication of admitted contentions.

VII. Conclusion and Order

Based, therefore, upon the preceding findings and rulings, it is, this 21st day of November, 2008, ORDERED as follows:

A. Petitioners Beatrice Long Visitor Holy Dance, Debra White Plume, Thomas Kanatakeniate Cook, Loretta Afraid of Bear Cook, Afraid of Bear/Cook Tiwahe, Joe American Horse, Sr., American Horse Tiospaye, Owe Aku/Bring Back the Way and the Western Nebraska Resources Council are admitted as parties in this proceeding and their Requests for Hearing and Petitions to Intervene are granted. A hearing is granted with respect to their Environmental Contention E and Technical Contention F. Consolidated Petitioners' Miscellaneous Contentions G and K are admitted in part and denied in part, as set forth herein. The Requests for Hearing and Petitions to Intervene of Dayton O. Hyde and Bruce McIntosh are denied, as are Consolidated Petitioners' Environmental Contentions A, B, C, and D; Technical Contentions B, C, D, E, and G; and Miscellaneous Contentions A, B, C, D, E, F, H, I, J and L.

B. The Oglala Sioux Tribe is admitted as a party in this proceeding and its Request for Hearing and Petition to Intervene is granted. A hearing is granted with respect to its Environmental Contentions A, B, C, D and E.

C. The Request for Hearing and Petition to Intervene of the Oglala Delegation of the Great Sioux Nation Treaty Council is denied. The Oglala Delegation of the Great Sioux Nation Treaty Council may, however, participate in the hearing pursuant to 10 C.F.R. § 2.315(c) by filing a formal notice within 10 days of the date of this Order stating its intention to participate and identifying those contentions in which it chooses to participate.

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[395] 10 C.F.R. § 2.1204(b). See also 69 Fed. Reg. at 2213. Parties may file motions with the Board to request cross-examination under 10 C.F.R. § 2.1204(b) if they choose.

D. Consolidated Petitioners' Miscellaneous Contention G is admitted in part regarding whether Crow Butte must disclose its alleged foreign ownership in its License Renewal Application. This raises a substantive legal issue not heretofore briefed: "Whether the foreign ownership of an applicant must be disclosed in each and every source materials license renewal application." The Board is of the opinion that it is in the best interest in the management of this proceeding that this issue be segregated from the other contentions admitted here and briefed on the merits up front. Accordingly, Consolidated Petitioners, Crow Butte and the NRC Staff are to file, within thirty days of the date of this Order, briefing on the merits with respect to this legal issue. Responses to such briefing shall be due no later than twenty days following receipt of the initial briefing, with replies due no later than ten days after the responses are served.

E. Consolidated Petitioners' Miscellaneous Contention K is admitted in part and involves substantive issues, the resolution of which is potentially dispositive of the remaining issues in this proceeding. The Board is of the opinion that it is in the best interest in the management of this proceeding that this issue be segregated from the other contentions admitted here and briefed on the merits up front. Accordingly, Consolidated Petitioners, Crow Butte and the NRC Staff are to file, within thirty days of the date of this Order, briefing on the merits with respect to Consolidated Petitioners' Miscellaneous Contention K as so admitted. Any such briefing shall be accompanied by a supporting legal memorandum and such affidavits of fact and expert opinion as shall be necessary. Responses to such briefing shall be due no later than twenty days following receipt of the initial briefing, with replies due no later than ten days after the responses are served.

F. The Licensing Board will hold a telephone conference with the parties in which we will discuss a schedule of further proceedings in this matter.

G. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review meeting applicable requirements set forth in that section must be filed within ten (10) days of service of this Memorandum and Order.

THE ATOMIC SAFETY
AND LICENSING BOARD[396]

_____***/RA/***
Michael M. Gibson, Chairman
ADMINISTRATIVE JUDGE

_____***/RA/***___
Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

_____***/RA/***_____
Brian K. Hajek
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 21, 2008

[396] Copies of this memorandum and order were sent this date by the agency's E-Filing system to the counsel/representatives for (1) applicant Crow Butte Resources, Inc.; (2) Consolidated Petitioners; (3) NRC Staff; 4) Oglala Delegation of the Great Sioux Nation Treaty Council; and 5) Oglala Sioux Tribe.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
CROW BUTTE RESOURCES, INC.	)	Docket No. 40-8943-OLA
	)	
In-Situ Leach Uranium Recovery Facility, Crawford, Nebraska	)	ASLBP No. 08-867-02-OLA-BD01
	)	
(License Amendment)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULING ON HEARING REQUESTS) (LBP-08-24) have been served upon the following persons by Electronic Information Exchange.

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[Original signed by Nancy Greathead]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 21st day of November 2008