UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Peter B. Lyons
Dale E. Klein
Kristine L. Svinicki

In the Matter of	)	
	)	Docket No. 40-8943-MLA
CROW BUTTE RESOURCES, INC.	)	
	)	
(North Trend Expansion Area)	)	
	)	

CLI-09-12

MEMORANDUM AND ORDER

Today we consider appeals by the NRC Staff and the applicant, Crow Butte Resources, Inc. (Crow Butte) of two Atomic Safety and Licensing Board decisions. The NRC Staff and Crow Butte appeal LBP-08-6, granting a hearing to several petitioners with respect to Crow Butte's license amendment application.[1] The Staff and Crow Butte further appeal LBP-09-1, which admitted a contention relating to Crow Butte's ownership by a foreign parent corporation, and which also added a new basis relating to the health effects of arsenic to a previously admitted contention.[2]

We affirm, in part, the Board's grant of a hearing on Contentions A and B, and reformulate the revised contention accordingly. We reverse the Board's decision to admit

[1] LBP-08-6, 67 NRC 241 (2008).

[2] LBP-09-1, 69 NRC __ (Jan. 27, 2009)(slip op.).

Contention C, relating to the consultations with Indian Tribes, and Contention E, relating to the applicant's foreign ownership. In addition, we reverse the Board's decision to admit a new basis, relating to the health effects of arsenic exposure, to previously admitted Contention B. Finally, we decline to direct the Board to apply the formal hearing procedures of 10 C.F.R. Part 2, Subpart G, to this matter.

I. BACKGROUND

Crow Butte operates an *in situ* leach (ISL) uranium recovery facility in Crawford, Nebraska, and has submitted an application to expand operations into an area known as the North Trend Expansion Area (NTEA). ISL uranium recovery involves injecting a leach solution into an underground ore body, letting the solution flow through the ore body to dissolve uranium, and pumping the solution back out of the ground in order to extract the uranium from the solution. In addition to the dissolved uranium, the solution can mobilize other elements, including arsenic, thorium, and radium. Uranium recovery operations in the NTEA are proposed to be in a geologic formation called the Basal Chadron Sandstone, which is below – and, according to Crow Butte, reliably separated from – the Brule Formation, the aquifer from which the local water supply is drawn.

Numerous petitioners filed substantially identical *pro se* intervention petitions in

November, 2007.[3] The various petitioners[4] subsequently retained counsel who filed a single "Reference Petition," consolidating their claims, in December, 2007.[5] A "Corrected Reference Petition" was filed on January 9, 2008, and is the document to which we will refer throughout this decision.[6]

On January 16, 2008, oral argument on standing and contention admissibility was held in Chadron, Nebraska. The Staff joined Crow Butte in arguing that none of the Petitioners had demonstrated standing or had submitted an admissible contention.[7]

At the January 16 oral argument, Petitioners offered two previously unreferenced

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[3] *See Request for Hearing and/or Petition to Intervene, Western Nebraska Resources Council* (Nov. 12, 2007); *Request for Hearing and/or Petition to Intervene, Chadron Native American Center, Inc.* (Nov. 12, 2007); *Request for Hearing and/or Petition to Intervene, Owe Aku/Bring Back the Way* (Nov. 12, 2007); *Request for Hearing and/or Petition to Intervene, Debra White Plume* (Nov. 12, 2007); *Request for Hearing and/or Petition to Intervene, High Plains Community Development Corp.* (Nov. 12, 2007) (subsequently withdrawn); *Request for Hearing and/or Petition to Intervene, Slim Buttes Agricultural Development Corp*. (Nov. 12, 2007); *Request for Hearing and/or Petition to Intervene, Thomas Kanatakeniate Cook* (Nov. 12, 2007).

[4] The Board eventually found standing for three petitioners: Owe Aku/Bring Back the Way (Owe Aku), Debra White Plume, and Western Nebraska Resources Council (WNRC) (collectively, Petitioners).

[5] *See* Thomas K. Cook, Debra White Plume, Owe Aku, Slim Buttes Agricultural Development Corp., and Western Nebraska Resources Council, *Reference Petition* (Dec. 28, 2007).

[6] Thomas K. Cook, Debra White Plume, Owe Aku, Slim Buttes Agricultural Development Corp., and Western Nebraska Resources Council, *Corrected Reference Petition* (Jan. 9. 2008).

[7] The Staff initially challenged the standing of all petitioners on the basis of the arguments and supporting documents submitted on their behalf as of December 7, 2007. *See NRC Staff Combined Response in Opposition to Petitioners' Requests for Discretionary Intervention and Petitions for Hearing and/or to Intervene of Debra White Plume, Thomas Cook, Owe Aku/Bring Back the Way, Chadron Native American Center, High Plains Development Corporation, Slim Buttes Agricultural Development Corporation, and Western Nebraska Resources Council* (Dec. 7, 2007).

documents which they claimed supported the argument that there could be mixing between the groundwater in the Basal Chadron and the Brule aquifers. One of these documents, referred to as "Exhibit B," is a letter from the Nebraska Department of Environmental Quality (NDEQ) to Crow Butte concerning Crow Butte's application for an aquifer exemption relating to the NTEA project.[8] Exhibit B included a 19-page preliminary analysis concluding that Crow Butte had not adequately supported its request for an aquifer exemption for NTEA operations. Among other things, the NDEQ stated in Exhibit B that Crow Butte had not shown that the impermeable layers that confine the mined aquifer and prevent mixing with the Brule are continuous throughout the NTEA.[9]

In LBP-08-6, the Board accepted Exhibit B as additional support for both standing and admissibility of two of Petitioners' reformulated contentions. It rejected as untimely the other document Petitioners submitted at the January 16 oral argument ("Exhibit A").[10]

The Petitioners whom the Board admitted as parties – Owe Aku, Debra White Plume, and WNRC – contend that contamination in the Basal Chadron stemming from Crow Butte's proposed expanded operation could reach them through various pathways. The Board found

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[8] Letter, Steven A Fischbein, NDEQ, to Stephen P. Collings, President, Crow Butte Resources, Inc., Re: Technical Review of Aquifer Exemption Petition for North Trend Expansion (Nov. 8, 2007), ADAMS Accession Number ML073300399 (Exhibit B).

[9] *See, e.g.*, *id*. at 11.

[10] LBP-08-6, 67 NRC at 255-60. Exhibit A consisted of a January 14, 2008 email from Hannan E. LaGarry, a geologist with the University of Nebraska, to Buffalo Bruce, Board Chairman of WNRC, relating to the geology of the surrounding area. A copy is attached to *Petitioners Combined Reply to NRC Staff's and Applicant's Responses to Exhibits A and B* (Feb. 15, 2008). Applying the standards for late-filed contentions under 10 C.F.R. §§ 2.309(c) and (f), the Board concluded that the email contained no new information, as it only cited sources that had been published, in some cases, "years earlier." *Id*. at 258. Petitioners have not challenged Exhibit A's exclusion; that ruling is not at issue here.

WNRC demonstrated representational standing through a member of the organization, Dr. Francis E. Anders, whose well draws directly from the Basal Chadron about a mile and a half outside the NTEA boundary.[11] The Board found two other petitioners to have standing based on a theory that contamination in the Basal Chadron could mix with the Brule aquifer through faults in the geological "confining layers," either within or outside the NTEA.[12] Applying this theory, the Board ruled Owe Aku had standing as representative of its member, David Alan House, who uses a well that draws from the Brule aquifer approximately 8 miles south-southwest of the NTEA. The Board found that a third petitioner, Debra White Plume, who lives 60 miles from the NTEA, had standing based on the "mixing theory" and on her use of the White River in the Pine Ridge Indian Reservation for fishing. The Board observed that the White River drains from the NTEA, and also may be in communication with the Brule and Basal Chadron aquifers.[13]

The Board rejected the standing claims of two other petitioners on the grounds that neither showed enough detail about how or when they might come in contact with water potentially contaminated by Crow Butte's operations.[14]

In LBP-08-6, the Board admitted three contentions, which were derived from what it determined were the admissible portions of the contentions as pled in Petitioners' Corrected Reference Petition. First, for "analytical clarity," the Board reshuffled the groundwater-quality

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[11] *See* LBP-08-6, 67 NRC at 281 n.191.

[12] *See* discussion *infra*, section II.C.2.b.ii.

[13] LBP-08-6, 67 NRC at 289.

[14] *Id.* at 284-88 (finding that Slim Buttes Agricultural Development Corp. and Thomas Kanatakeniate Cook had failed to establish standing). Neither petitioner has appealed the Board's finding.

claims found in proposed Contentions A and B into one "environmental" and one "safety" contention and reformulated them as follows:

> Contention A: [Crow Butte's] License Amendment 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.
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> Contention B: [Crow Butte's] proposed expansion of 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.

The Board also redrafted proposed Contention C to focus on a consultation requirement that it found under the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA):

> Contention C: Reasonable consultation with Tribal Leaders regarding the prehistoric Indian camp located in the area surrounding [Crow Butte's] proposed North Trend Expansion Project has not occurred as required under NEPA and the National Historic Preservation Act.[15]

The Board rejected outright two proposed contentions, proposed Contention D (risks associated with terrorist-induced transportation accidents)[16] and proposed Contention F (economic benefits are not shared with local communities).[17]

In LBP-08-6, the Board also reserved ruling on two matters pending further briefing: proposed Contention E, concerning whether Crow Butte's foreign ownership precludes it from holding the subject license, and whether the hearing should be held under the formal

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[15] *Id*. at 344.

[16] *Id.* at 333-34.

[17] *Id.* at 341-42.

procedures found in subpart G of our rules of procedure.[18] The parties briefed these issues extensively[19] before the Board resolved both issues in LBP-09-1.

In LBP-09-1, the Board admitted Contention E, regarding the issue of the impacts of Crow Butte's ownership by a Canadian parent corporation. In addition, the Board found that it did not have the authority to order the proceeding to be held under subpart G (our formal hearing procedures), as the Intervenors requested.[20] It recommended, however, that the Commission direct the proceeding to use subpart G procedures because discovery, live

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[18] Both the Staff and Crow Butte filed appeals of LBP-08-6 before the Board ruled on the admissibility of Contention E. *NRC Staff's Notice of Appeal of LBP-08-06, Licensing Board's Order of April 29, 2008, and Accompanying Brief* (May 9, 2008) (Staff Appeal of LBP-08-6), *Crow Butte Resources' Brief in Support of Appeal from LBP-08-06* (May 9, 2008) (Crow Butte Appeal of LBP-08-6). The Staff's appeal sought, among other things, a declaratory Commission ruling on the admissibility of proposed Contention E. Ordinarily, such a premature request would be improper. However, the Board has now ruled on all issues raised in the intervention petitions, and all issues have been fully briefed. In the interest of efficiency, we exercise our discretion to rule on the questions of standing and contention admissibility based on the briefs before us.

[19] *See Petitioners' Brief Concerning Contention E and Subpart G* (May 23, 2008); *NRC Staff Response to Board's Order of April 29, 2008* (May 23, 2008); *Applicant's Brief Regarding Foreign Ownership Issues* (May 23, 2008); *NRC Staff Response to Petitioners' Brief on Foreign Ownership and Subpart G* (June 9, 2008); *Applicant's Consolidated Response Regarding Foreign Ownership and Hearing Procedures* (June 9, 2008); *Petitioners' Consolidated Response to the NRC Staff's and Applicant's Replies Regarding Foreign Ownership and Subpart G* (June 16, 2008). The Board heard oral argument on these issues on July 23, 2008. *See also Petitioners' Post-Argument Submission Re: NDEQ Consent Decree* (Aug. 15, 2008); *NRC Staff's Response to Board's Order of August 5, 2008* (Aug. 15, 2008); *Applicant's Response to Board Order Regarding Standing* (Aug. 15, 2008); *Petitioners' Reply to Applicant's and NRC Staff's Responses to Post-Argument Submission Re: NDEQ Consent Decree* (Aug. 29, 2008); *Applicant's Response to NRC Staff's Response to Board's Order of August 5, 2008* (Aug. 29, 2008); *Petitioners' Response to NRC Staff and Applicant's Responses Dated August 29, 2008 to August 19th Order* (Sept. 8, 2008); *Applicant's Reply to Petitioners' Brief on Export Licensing* (Sept. 8, 2008). Our rules of practice provide the immediate right to appeal a Board ruling selecting a hearing procedure. *See* 10 C.F.R. § 2.311(d).

[20] LBP-09-1, 69 NRC __, slip op. at 44.

testimony, and cross-examination would give the process more transparency and could be beneficial to resolving certain issues.[21]

The Board also ruled that Petitioners may litigate, as part of already-admitted Contention B, their claim that arsenic released offsite as a result of Crow Butte's licensed operations will lead to increases in diabetes and pancreatic cancer in exposed individuals.[22]

II. DISCUSSION

As discussed further below, we do not disturb the Board's rulings on standing. We find, however, that the Board abused its discretion in its treatment of Contentions A and B – by not confining those contentions to defined and material bases – and erred as a matter of law in admitting Contention C at all. We further find that Contention E is outside the scope of this proceeding and that the Board erred in admitting it for hearing. In addition, insofar as the Board's new "basis" for Contention B seeks to litigate asserted links between arsenic, diabetes, and pancreatic cancer, it is outside the scope of the proceeding.

A. Standard of Review

We give the Board's judgment on determinations of standing "substantial deference" absent a "clear misapplication of facts or law."[23] Similarly, we defer to the Board's

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[21] *See id*., slip op. at 45-50. Although it made a recommendation, the Board expressly did not refer this ruling to the Commission. *See generally* 10 C.F.R. § 2.323(f)(1).

[22] *Id*. at 42-43. Petitioners attempted to introduce this claim as a new contention based on a recent study showing that exposure to low levels of arsenic is associated with an increase of diabetes. *Petition for Leave to File New Contention Re: Arsenic* (Sept. 22, 2008)(Arsenic Petition), citing Ana Navas-Acien, *et al*., *Arsenic Exposure and Prevalence of Type 2 Diabetes in US Adults*, 300 J. AM. MED. ASS'N 814 (2008)(Arsenic Study).

[23] *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 14 (2001); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999).

determinations on the admissibility of contentions unless we find an error of law or abuse of discretion.[24]

B. Standing

Crow Butte contests the standing of each petitioner. The NRC Staff does not dispute the standing of WNRC, but argues that the other two Petitioners – Debra White Plume and Owe Aku – have not shown standing.

1. Standing of Western Nebraska Resources Council (WNRC)

WNRC claims representational standing based on the affidavit of one of its members, Dr. Francis E. Anders, who lives about a mile from the current Crow Butte recovery operation and 1.5 miles from the proposed expansion area.[25] Dr. Anders' well – which he and his family use for drinking, bathing, irrigation, and stock water – draws from the Basal Chadron. Dr. Anders' affidavit states that since Crow Butte began drilling about one mile from his house in Fall 2007, he has noticed a bad odor and discoloration in his well water.[26] According to Dr. Anders, Crow Butte workers begin drilling each Monday, and by Wednesday his well water becomes discolored. He states that the workers stop drilling for the weekend and his well

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[24] *PPL Susquehanna L.L.C.* (Susquehanna Steam Electric Station, Units 1 and 2), CLI-07-25, 66 NRC 101, 104 (2007); *see also AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006); *International Uranium Corp.* (White Mesa Mill), CLI-98-6, 47 NRC 116, 118 (1998).

[25] Affidavits of Dr. Anders, Bruce McIntosh, Janet Minz, and Beth Ranger, of the Western Nebraska Resources Council; and of Joseph R. American Horse and Thomas K. Cook, of Slim Buttes Agricultural Development Corp.; were filed together with the December 28, 2007 Reference Petition.

[26] *See* Affidavit of Francis E. Anders (Dec. 28, 2007).

water is clear again by Monday, when the cycle begins anew.[27]

The Board found that the apparent injury caused by the existing operation, approximately one mile from Dr. Anders' house, suggested that identical operations occurring 1.5 miles from his house could cause a similar injury.[28] Taken with the fact that the uranium recovery operations will occur in the same aquifer from which Dr. Anders' well draws water, the Board found the potential for injury "plausible."[29]

Crow Butte offers both a legal argument and a fact-based argument why Dr. Anders has not shown standing. Crow Butte first argues that, as a matter of law, Dr. Anders cannot base standing on mere proximity to the site, but must show a "plausible chain of causation" between the licensed activity and potential harm to himself.[30] In addition, Crow Butte cites our holding in *White Mesa,*[31] an earlier *in situ* leach uranium recovery case, for the proposition that Dr. Anders must show that the license amendment will cause a "distinct new harm or threat" apart from the activities already licensed.[32] Therefore, the argument goes, Dr. Anders cannot use his claim that the existing operations affect his water quality to show that expanded operations would also have the potential to harm him.

The Board did not base standing on the existing "harm," *per se*, but on the argument

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[27] *Id*. at 1.

[28] LBP-08-6, 67 NRC at 282.

[29] *Id*.

[30] Crow Butte Appeal of LBP-08-6 at 12-13.

[31] *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 251 (2001).

[32] *See* Crow Butte Appeal of LBP-08-6 at 11-12.

that if the existing operation disrupts Dr. Anders' well, then it tends to prove that the new operation has the potential to further affect water quality in the well. For that reason, we do not find the holding in *White Mesa* particularly instructive.[33] In *White Mesa*, we found that in the case of an ongoing operation, a petitioner would have to show that the license amendment sought would cause a "distinct new" harm to himself to gain standing. But *White Mesa* involved a mill that was merely seeking an amendment to use a different feedstock at its ongoing operation. Crow Butte's current application seeks more than simply to continue its ongoing operation – it seeks to commence operations on a separate site five to eight miles away.[34] By comparison, if the applicant were a separate legal entity asking for a license to commence ISL uranium recovery operations on the NTEA site, it could not successfully argue that Dr. Anders had no standing to raise concerns about potential impacts to his well water simply because an existing ISL operation on the other side of his property was already causing similar harm.

Crow Butte argues it is impossible as a factual matter that either the existing or proposed Crow Butte operations would have any effect on Dr. Anders' well. Crow Butte acknowledges that Dr. Anders' well is in the same aquifer that it intends to mine.[35] But it claims, for example, that the water from the Basal Chadron is naturally odorous (sulfurous),[36] and that a "comparison of baseline water quality data taken 25 years ago from the Anders well

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[33] In *White Mesa*, the Presiding Officer found no standing, and the Commission deferred to that finding. *White Mesa,* CLI-01-21, 54 NRC at 252.

[34] Tr. 156.

[35] *See* Crow Butte Appeal of LBP-08-6 at 13 n.6.

[36] *See id.* at 14.

to water quality data taken last year shows no difference in water quality."[37] Similarly (while criticizing Dr. Anders' failure to provide expert evidence to show how contamination from the NTEA operations could get to his well), Crow Butte cites its own attorney's statements at oral argument for the proposition that the groundwater in the Basal Chadron only flows at 10 feet per year.[38] Crow Butte argues that "there are no expert affidavits supporting the standing declaration," but it cites no authority in our regulations or case law that such expert testimony is required. *White Mesa* does not hold that a petitioner must provide expert testimony in support of his "plausible scenario" for injury, and we find no basis for any such proposition.[39]

Crow Butte also argues that the Board "ignored" the fact that the weekly cycle that Dr. Anders describes could not be attributable to its operations, because its operations are conducted "24/7" rather than on a weekly basis.[40] But this argument appears to be entirely new on appeal. Crow Butte does not cite to a pleading or transcript where it presented this factual argument to the Board.[41] We do not entertain on appeal arguments not raised before

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[37] *See id*.

[38] *Id.* at 14, citing Tr. 156-57.

[39] *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 210 n.13 (1998), citing *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71-77 (1994) (*Sequoyah Fuels* rejected licensee's argument that petitioner must provide technical studies showing he could use the groundwater on his property in order to demonstrate standing to complain of possible groundwater contamination from licensee's operation).

[40] Crow Butte Appeal of LBP-08-6 at 13.

[41] A search of the transcript did not show any instance where Crow Butte raised this at oral argument. Crow Butte's response to Dr. Anders' affidavit did not raise this point. *See Applicant's, Crow Butte Resources, Inc., Response to Affidavits* (Jan. 4, 2008), at 2-3. Nor did its appellate brief cite any support for this factual assertion.

the Board.[42] We decline to find that the Board "clearly erred" in ignoring a matter that was not brought to its attention and to which Petitioners had no opportunity to respond.

The right of WNRC to represent the interest of its member, Dr. Anders, is also not in dispute. We see no clear error in the Board's finding of standing with respect to WNRC.

2. Standing of Debra White Plume and Owe Aku

The standing of the two remaining petitioners, Debra White Plume and Owe Aku, presents a more complicated inquiry. Ms. White Plume lives approximately 60 miles away from the NTEA, and fishes in the White River. She offered various bases for standing, but the Board focused on her concern that operations in the expansion area could contaminate the White River. The Board noted two court cases where plaintiffs living 25 and 100 miles downstream of a point source of contamination had successfully sued for damages,[43] indicating to the Board that 60 miles was not so great a distance as to make harm to Ms. White Plume from Crow Butte's operations "implausible."[44]

Owe Aku is an organization formed to "preserve and revitalize the Lakota way of life,"[45] which claimed representational standing through four members. The Board focused its

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[42] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139-40 (2004). *See also USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 458 (2006); *Hydro Resources Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-00-8, 51 NRC 227, 243 (2000).

[43] LBP-08-6, 67 NRC at 286-87, citing *Arizona Copper Co. v. Gillespie*, 230 U.S. 46, 52 (1913) (farmer 25 miles downstream could sue to enjoin mining company from depositing "slimes, slickens and tailings" into stream used for irrigation); *Hale v. Colorado River Municipal Water District*, 818 S.W.2d 537, 538-39 (Tex. 1991) (release of chlorides into river 100 miles upstream destroyed farmer's peanut crop).

[44] LBP-08-6, 67 NRC at 289.

[45] *Id.* at 282-83.

analysis of Owe Aku's standing on one member, David Alan House, who lives approximately 8 miles from the site and who draws water from a well in the Brule aquifer for domestic use.[46] The Board found that Petitioners had shown through Exhibit B that mixing between the Basal Chadron and the Brule aquifers within the NTEA was possible, so that it was at least plausible that Mr. House could be adversely affected by pollution of his well.[47]

The NRC Staff joined Crow Butte in challenging the standing of these two petitioners. The Staff argues that the Board used an overbroad construction of the "plausible chain of causation" standard. This standard requires not that the potential harm to petitioner flow directly from the proposed action, but that the petitioner show the chain of causation is plausible.[48] But the Staff argues that Ms. White Plume and Owe Aku failed to make an affirmative showing of how contamination from the proposed operation could reach them. For example, the Staff argues that Mr. House did not present evidence that the hydraulic gradient from the proposed operation flows toward his property.[49] Instead, Petitioners relied on showing that the Applicant failed to prove that its operation could not harm them.[50] The Staff concludes that the Board effectively found standing where there is only a "possible," rather

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[46] The Board noted that Debra White Plume also submitted an affidavit authorizing Owe Aku to represent her interest, as did two other individuals. *Id.* at 283 n.199. We, like the Board, focus our inquiry on the standing of Mr. House, who proffers the strongest claim of the four.

[47] *Id.* at 283.

[48] *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75.

[49] Staff Appeal of LBP-08-6 at 8-9. "Exhibit B," discussed *infra*, section C.1, contains the only evidence Petitioners presented on hydraulic gradient. It states that Crow Butte did not adequately support statements that suggest the hydraulic gradient was "generally" to the North and to the East within the NTEA. *See* Exhibit B at 12.

[50] Staff Appeal of LBP-08-6 at 10.

than a "plausible," chain of causation.[51]

The Staff's arguments are not without force; the articulated bases for standing of these two petitioners are significantly more attenuated than that of Dr. Anders. We are "not inclined to disturb the Licensing Board's judgment on standing," however, "[a]bsent a gross misapplication of the facts or applicable law."[52] Here, there is support in the record, albeit not overwhelming support, for standing.[53] Thus, we find no "gross misapplication of the facts or applicable law," and we defer to the Board's ruling as to the standing of Ms. White Plume and Owe Aku (the latter as supported by the affidavit of Mr. House).

C. Contentions

We agree with the Staff and Crow Butte that the admitted contentions are not adequately defined by the Board's ruling, and appear to include matters that are either irrelevant to the requested license amendment or unsupported in the pleadings. But this is not to say that there is no substance, at the core of Petitioners' complaints, that presents admissible issues. On the contrary, we agree with the Board that with the support of Exhibit B Petitioners have raised an issue as to whether the aquifer proposed to be subject to ISL

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[51] *Id*.

[52] *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72.

[53] According to Ms. White Plume's affidavit, in addition to fishing in the White River, she lives 60 miles from the site and drinks from a well that draws from an aquifer that "may" mix with the Basal Chadron. She also asserts that she and her family collect eagle feathers for ceremonial purposes on the NTEA, and she is concerned that the noise from the proposed operations would frighten the eagles away. *See* Affidavit of Debra White Plume (Dec. 20, 2007) (Appended to *Reply to NRC Staff Response to Petition of Owe Aku and Debra White Plume* (Dec. 28, 2007). In considering Ms. White Plume's standing, we focus on her stated uses of the White River and the NTEA, and do not consider her residence. *See White Mesa*, CLI-98-6, 47 NRC at 117 n.1 (finding that proximity alone does not suffice for standing in materials licensing cases).

operations is adequately confined. We therefore reformulate the vague and open-ended Contentions A and B to draw a more precise roadmap for the litigation.

We do not find, however, any record support for either Contention C or Contention E. For the reasons described below, we reverse the Board's decision to admit these two contentions.

1. Exhibit B

The Staff and Crow Butte object to the way in which the Board reframed the proffered contentions and to the Board's reliance on so-called "Exhibit B "[54] to bolster Petitioners' claims. Because the Board relied heavily on Exhibit B in determining whether Petitioners' claims regarding mixing of the aquifers had support, we first examine whether the Board abused its discretion in considering Exhibit B.

The Staff and Crow Butte argue that the Board improperly relied on Exhibit B to supplement Petitioners' proposed contentions.[55] The Board found that Exhibit B corroborated Petitioners' arguments that there could be mixing between the Basal Chadron and Brule aquifers, which relate to both Contentions A and B (as admitted). The Board found that the "significance [of Exhibit B] is essentially self-evident, and … needs little if any explanation to point out its relevance," and that it provided "information in the nature of expert support for Petitioners' arguments."[56]

a. Timeliness of Exhibit B

The Staff and Crow Butte opposed the Board's considering Exhibit B for any purpose,

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[54] Exhibit B, *supra* n.8.

[55] Crow Butte Appeal of LBP-08-6 at 23; Staff Appeal of LBP-08-6 at 14-21.

[56] LBP-08-6, 67 NRC at 320.

arguing that it was brought into the proceeding impermissibly late, and claiming that Petitioners failed to explain its relevance to their proposed contentions. While noting that Exhibit B was neither a contention nor a petition, the Board considered the timeliness of the exhibit using the late-filing factors of 10 C.F.R. §§ 2.309(c) and 2.309(f)(2).[57] We agree that a late-filed document that allegedly supports or provides a basis for a proposed contention should be considered under these rules.

As described above, Petitioners introduced Exhibit B on the day of the prehearing conference on standing and contention admissibility. Petitioners' counsel represented that he became aware of Exhibit B the day before oral argument when it was sent to him by an unnamed "research organization."[58] Apparently unbeknownst to Petitioners, the document had been publicly available on NRC's public document management system, ADAMS, since November 26, 2007.[59] According to the Board, however, the document was not indexed by license number, making it unlikely to be found by persons interested in the proposed North Trend expansion.[60] On this basis, the Board found that Petitioners had demonstrated good cause for the late filing.[61] We do not find that the Board erred in determining that the late-

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[57] *Id.* at 258.

[58] *See* Tr. 89.

[59] *See* ML073300399 (Exhibit B) (document profile indicating public release date of November 26, 2007).

[60] *See* LBP-08-6, 67 NRC at 259.

[61] "Good cause" is the most significant of the late-filing factors set out at 10 C.F.R. § 2.309(c). Neither the Staff nor Crow Butte addresses on appeal the remaining section 2.309(c) and (f)(2) factors.

filing factors, on balance, weigh in Petitioners' favor.[62]

We observe, further, that neither Crow Butte nor the Staff can claim that they were unfairly surprised by the introduction of Exhibit B, as both were in possession of the document for approximately two months prior to the time Petitioners learned of its existence.[63] We find no reason to upset the Board's conclusion that Petitioners' introduction of Exhibit B was timely.

b. Relevance of Exhibit B

Crow Butte argues that the Board should have disregarded Exhibit B because it is analogous to a request for additional information (RAI). It also argues, "*[j]ust because certain information was not submitted to NDEQ as part of the aquifer exemption application does not mean that information needed to be submitted to the NRC or even that it was not included in Crow Butte's NRC license amendment application.*"[64]

Exhibit B is roughly analogous, in some respects, to an RAI, but this does not exclude it from the Board's consideration. On one hand we have held – repeatedly – that a petitioner may not simply wait for the Staff to identify missing information and then ground a new contention on that request.[65] But on the other, we have acknowledged that in some cases, a

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[62] *Id.* at 260. *See, e.g., Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 NRC 1, 5-8 (2008) (opponents' arguments concerning other factors of the late-filing test – here considered under the Commission's identical pre-2004 rule 10 C.F.R. § 2.714(a)(1) – did not outweigh petitioner's strong showing of good cause).

[63] Tr. 89.

[64] Crow Butte Appeal of LBP-08-6 at 24 (emphasis in original).

[65] *See, e.g*., *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349-50 (1998); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-37 (1999) (rejecting a contention that the mere (Continued …)

petitioner may base a new contention on an RAI if the RAI or its response raises new information.[66] In addition, Petitioners here did not simply use Exhibit B to identify new "omissions," but used it to bolster their original challenges to Crow Butte's application. And, significantly, the Board found that Exhibit B does not merely ask for additional information, but points out specific statements that the NDEQ staff reviewer found to be unsupported, misleading, or wrong.[67]

The Board found that Crow Butte had conceded that the information in the NDEQ application is the same information as found in the NRC license application,[68] although Crow Butte and the Staff now argue to the contrary.[69] Crow Butte's argument that Exhibit B pertains to different information is belied by direct quotes from the NDEQ application, which have word-for-word parallels in Crow Butte's license application. To give but one example, on page 11 of Exhibit B, the NDEQ staff reviewer quotes the following passage from the NDEQ application:

Based on core analysis from the CSA,[70] it is evident that the upper and lower

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existence of "numerous" RAIs constituted "*prima facie* evidence … that the application is incomplete").

[66] *Calvert Cliffs*, CLI-98-25, 48 NRC at 50 (in some cases, an RAI or its response may raise a new issue upon which a new contention could be grounded, subject to the rules for filing a late contention).

[67] LBP-08-6, 67 NRC at 260-62 (the letter and detailed review "go well beyond mere requests for additional information").

[68] *See id.* at 261, citing *Crow Butte Resources, Inc.'s Response to Newly-Filed Exhibits A and B* (Feb. 8, 2008), at 10.

[69] Crow Butte Appeal of LBP-08-6 at 25; Staff Appeal of LBP-08-6 at 15-16.

[70] CSA refers to the original "Crow Butte Study Area," or the site of the existing operation. Exhibit B at 1.

> confining beds (the Upper Chadron through Brule and Pierre Shale, respectively) contain significant percentages of montmorillonite clay and other clays and/or calcite. Those would indicate the presence of clay minerals with very fine grain sizes. Core and hydrologic data from the CSA indicate that the vertical hydraulic conductivity of the confining shales and clays overlying and underlying the Basal Chadron Sandstone are on the order of 10^{-10} cm/sec, or lower. The geologic information presented in this application clearly demonstrates the lateral continuity of the overlying and underlying confining zones on both regional and local scales, as well as the lateral occurrence and distribution of the Basal Chadron Sandstone.[71]

The NDEQ staff reviewer then states that "these types of statements are unsupported and misleading," because they are based largely from inferring that conditions in the NTEA are the same as those in the CSA (site of Crow Butte's current operations).[72] Crow Butte's application before the NRC contains virtually the same passage, with the addition of two sentences referring to an analysis of the grain size of the clay found at the CSA site.[73] The Corrected Reference Petition specifically pointed to this portion of the license amendment application in disputing Crow Butte's assertion that the Basal Chadron is continuously confined.[74] And the Board cited to portions of Exhibit B that tend to bolster Petitioners'

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[71] Exhibit B at 11.

[72] *Id*.

[73] Application for Amendment of USNRC Source Materials License SUA-1534, North Trend Expansion Area Technical Report (TR), at 2.6-17 to -18 (ML071760343). There are other examples where the NDEQ application language quoted in Exhibit B is identical to that found in the NRC license application: *Compare*, *e.g.*, TR at 2.6-11: "The ancient soil horizon known as the Interior Paleosol has been scoured away by the overlying Chadron Sandstone throughout most of the North Trend Expansion Area," *with* Exhibit B at 2 (which notes that "Interior Paleosol" is no longer a term "accepted in the literature," and that "sandstones don't erode things)." *Compare*, also, TR at 2.6-12: "A persistent clay horizon typically brick red in color, generally marks the upper limit of the Basal Chadron Sandstone" *with* Exhibit B at 3 (criticizing the NDEQ license application for claiming that "a persistent clay horizon, typically brick red in color, generally marks the upper limit of the Basal Chadron Sandstone)."

[74] Corrected Reference Petition at 19.

argument that reliable confinement between the layers has not been shown.[75]

We therefore find no error in the Board's consideration of Exhibit B to support Petitioners' claims concerning site geology and hydrology set forth in support of Contentions A and B, discussed further below.

2. Contentions A and B

Our contention pleading rules are designed to ensure both that only well-defined issues are admitted for hearing and that parties admitted to litigate sophisticated technical issues are qualified to do so.[76] For our licensing boards to entertain contentions grounded on little more than guesswork would waste the scarce adjudicatory resources of all involved.

The Board diplomatically described Petitioners' pleadings as "less than optimally organized or articulated."[77] The Corrected Reference Petition (as well as the individual petitions that preceded the Corrected Reference Petition) is a muddle, particularly with respect to Contentions A and B. Significantly, Petitioners failed to file new or amended contentions based on the newly submitted Exhibits A and B after Petitioners had retained counsel and the Board gave Petitioners the express opportunity to do so[78] – an extraordinary opportunity not provided for in our rules. Petitioners did not take advantage of this opportunity to show how their newly proffered evidence supported their claims, and to bring their Petition up to the pleading standards that we expect, particularly when petitioners are represented by

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[75] LBP-08-6, 67 NRC at 262-64.

[76] *Id. See also Oconee*, CLI-99-11, 49 NRC at 334.

[77] LBP-08-6, 67 NRC at 262.

[78] *See* Order (Confirming Matters Addressed at January 23, 2008, Telephone Conference), (Jan. 24, 2008).

counsel. The Board generously overlooked Petitioners' failure to amend their Petition, and attempted to sort out some admissible claim from the disorganized papers with which it was presented.

We find that, in LBP-08-6, the Board exceeded its authority in reformulating Contentions A and B.

a. Reformulation of Petitioners' Contentions

Our boards may reformulate contentions to "eliminate extraneous issues or to consolidate issues for a more efficient proceeding."[79] Our rules of procedure authorize boards to hold prehearing conferences for the purposes of simplifying or clarifying the issues for hearing, after which a board might admit a revised contention.[80] But a board should not add material not raised by a petitioner in order to render a contention admissible.[81] In this case, the Board's efforts at reformulation did not achieve the goal of "clarity, succinctness, and a more efficient proceeding."[82]

As a preliminary matter, we see no error in the Board's initial determination to redraft

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[79] *Shaw Areva MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008)(emphasis omitted). (*See id.* at 481-83 for a discussion of Board's legal authority to reformulate contentions). *See also AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-22, 64 NRC 229, 237, 240-44 (2006); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 341 (2006); *Exelon Generation Co., LLC* (Early Site Permit for the Clinton ESP Site), LBP-04-17, 60 NRC 229, 245, 252 (2004), *review denied*, CLI-04-31, 60 NRC 461 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 271, 276 (2004).

[80] 10 C.F.R. §§ 2.319(j) and 2.329(c)(1).

[81] *Andrew Siemaszko,* CLI-06-16, 63 NRC 708, 720-21 (2006). *See also Arizona Public Service Co*. (Palo Verde Nuclear Generating Station), CLI-91-12, 34 NRC 149, 155 (1991).

[82] *Siemaszko,* 63 NRC at 720, quoting *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), LBP-84-40A, 20 NRC 1195, 1199 (1984).

the contentions to allocate to Contention A those claims pertaining to NEPA and to Contention B those falling under the AEA, for this promotes clarity.[83] Nor did the Board err when it stated that nothing prohibited Petitioners' approach of substantiating their contentions by pointing out omissions or inconsistencies in the application.[84] We also agree with the Board's general observation that the Petitioners are not *required to* provide expert support at the contention admissibility stage, although expert support is certainly one means to supply the basis and specificity our rules do require.[85]

We find, however, that the Board's reformulation of Contentions A and B admitted certain bases that do not meet our contention admissibility standards and failed to clarify the scope of the matters to be litigated. The Board should have explicitly stated which bases were admitted, including the reasons for their admissibility, and to which contention each basis applied. Instead, the Board merely noted in a general way that not all bases apply to both reformulated contentions because one deals only with AEA issues and the other with NEPA issues.[86] The Board went on to find that all bases "except as otherwise stated above … remain open issues."[87]

Having reviewed the record in this proceeding, we find that the Board's reformulation of Contentions A and B fails to define adequately the scope of the admitted contentions. As

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[83] LBP-08-6, 67 NRC at 293.

[84] *Id.* at 318.

[85] *Id.*, citing *Oconee,* CLI-99-11, 49 NRC at 342.

[86] *Id*. at 321.

[87] *Id*. at 323.

we have held, the scope of an admitted contention is defined by its bases.[88] Because the Board failed to specify which bases were admissible and which were not, and which applied to each admitted contention, we find that the Board improperly recast the contentions in this matter. Further, we find that certain of Petitioners' proffered claims, admitted by the Board, do not meet our contention admissibility standards.

Therefore, to clarify the scope of this proceeding, we reconsider the admissibility of Contentions A and B ourselves, bearing in mind the requirements for admissible contentions:

> (1) A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:
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> (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
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> (ii) Provide a brief explanation of the basis for the contention;
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> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue; and
>
> (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to the specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or if the petitioner believes that the application fails to contain information on a relevant matter as required by

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[88] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

> law, the identification of each failure and the supporting reasons for the petitioner's belief. [89]

b. Admissibility of Contentions A and B

Contentions A and B pertain to the alleged contamination of water resources from the proposed ISL uranium recovery activities, and the associated public health and safety and environmental impacts from such contamination. The Corrected Reference Petition grouped these claims into two contentions. Contention A, as submitted by Petitioners, focused principally on the health risks associated with contamination of water resources, while Contention B focused upon the impacts of that contamination to the environment. As the Board recast the contentions, admitted Contention A encompassed the environmental aspects of Petitioners' admissible claims, and admitted Contention B the public health and safety issues. As acknowledged by the Board, the issues in proposed Contentions A and B are interrelated.[90] For the sake of clarity, we consider Petitioners' proposed contentions as they were designated in the Corrected Reference Petition.

As discussed below, we find one core litigable issue, pertaining to potential mixing between the Basal Chadron and Brule aquifers. We therefore admit a revised, single Contention A. Subpart A1 encompasses the technical claims identified in the contention, and Subpart A2 the environmental claims.

(i) Issues Relating to Water Consumption

A number of "contentions" relevant to potential water contamination from operations

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[89] 10 C.F.R. § 2.309(f)(1).

[90] LBP-08-6, 67 NRC at 293.

were included in the Corrected Reference Petition.[91] The Board observed that Petitioners substantiated their contentions by pointing out omissions or inconsistencies in the application, noting that "nothing … prohibits such an approach.[92] Although the Board found that Exhibit B "bolstered" and "corroborated" Petitioners' claims,[93] it focused on portions of the Corrected Reference Petition that claimed there was mixing between the aquifers, not on portions of Exhibit B that purportedly supported this theory. [94]

In its original form, Petitioners' Contention A argued that Crow Butte's operations contaminate a large quantity of water, and that, even post-treatment, water is returned to the aquifer in a changed condition. The principal argument of original Contention A is that the application thereby misstates the proposed operation's net consumption of water:

> **A. [Crow Butte's] Mining Operations Use and Contaminate Substantial Water Resources and Radioactive Wastewater Mixes with [the] Brule and High Plains Aquifers and Moves in a Slow-Moving Plume.**
>
> (i) [Crow Butte] [u]ses 9,000 gallons per minute of pristine water and returns that amount of radioactive, geochemically changed water to the Chadron aquifer. There is no basis to use the "net consumption" number suggested by [Crow Butte] of about 113 gpm because the water returned to the aquifer is very different, namely it contains low-level radioactivity, from the water removed

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[91] Petitioners' approach in the Corrected Reference Petition was first to describe general concerns in contentions designated "A" through "F," with subparts listed in an attachment. Petitioners then cited specific sections of the license amendment application and described issues with those sections in statements also designated "contentions." These "contentions" were not assigned alphabetical descriptors, but the Board considered these also to be "bases" for the broader contentions. *See* LBP-08-6, 67 NRC at 301 n.314. The Corrected Reference Petition also lists (at 2-5) "Relevant Facts" concerning Crow Butte's ownership, spills and excursions that have or may have occurred at its existing facility, and related matters, which Petitioners claim support their proposed contentions.

[92] LBP-08-6, 67 NRC at 318.

[93] *Id.* at 319.

[94] *Id*. at 295-99.

by [Crow Butte] from the aquifer.

(ii) The basis for the contention is that several places in the Application and in other public testimony (see, e.g., [Crow Butte] Testimony at August 21, 2007 Nebraska Natural Resources Committee Hearing) [Crow Butte] gives a misimpression that its water usage is relatively nominal because it uses the fact that its "restoration" meets NDEQ regulations as grounds for not counting the full amount of [its] water usage.

(iii) The issue is in the scope of the proceeding because [Crow Butte] seeks to use an additional 4,500 gpm, for a total of $13,500 [*sic*] gpm, at a time when the aquifer is not recharging as fast as it is being used and at a time of widespread drought.

(iv) The issue is material to the findings of the NRC which is required to determine whether [Crow Butte's] current operation and proposed operation is in the best interests of the general public; water usage is key to that determination.

(v) Alleged Facts: The Relevant Facts are hereby incorporated by reference.[95] In addition [Crow Butte's] water usage is admitted by it to be 9,000 gpm at its current facility and 4,500 at North Trend. Petitioner believes there is a slow moving plume of radioactive water in the High Plains aquifer caused by [Crow Butte's] current operation and which poses a health risk to the people who use the High Plains aquifer in Colorado, Nebraska, New Mexico, Oklahoma, South Dakota, Texas and Wyoming. The Arikaree aquifer that runs under the Eastern portion of Pine Ridge Indian Reservation mixes with the Brule aquifer in which [Crow Butte] has documented radioactive leaks and mixes further with the other elements of the High Plains aquifer. Petitioner cites to USGS "GroundWater Atlas of the United States; Kansas, Missouri and Nebraska["] … which indicated that the Brule aquifer mixes with the unconfined water in the High Plains aquifer and that the High Plains aquifer is being depleted faster than it is being recharged.

(vi) [Crow Butte's] Application states that it returns the water to the aquifer in a changed state and omits to state that the returned water is radioactive. Application states that there is a slow movement between fractures in Brule aquifer and the High Plains aquifer. Little is known about the White River Fault and how it may contribute to fractures that may contribute to factures that allow for movement of radioactive water when Excursions occur. [96]

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[95] *See* Corrected Reference Petition at 2.

[96] *Id.* at 9.

In support of the claim that water restored to the mined aquifer is contaminated, Petitioners pointed to portions of Crow Butte's Environmental Report (ER) wherein, they claimed, Crow Butte "admits" that water it would use and return to the aquifer is "radioactive."[97] This is a mischaracterization; the cited portions of the ER state that operations will "alter the groundwater geochemistry" in the Basal Chadron so that returning groundwater precisely to its baseline composition will be "unlikely." The application provides data showing that the groundwater in the Basal Chadron aquifer already contains radionuclides and other inorganic constituents that render it unsafe to drink.[98] The application further states that Crow Butte will use NDEQ standards as a secondary goal to ensure that the water will be "suitable for any use for which it was suitable before mining."[99] Although Petitioners argue that, apparently, the Basal Chadron is used for drinking regardless of whether it meets current NDEQ standards, they have not demonstrated a genuine dispute over the accuracy of the application's discussion of current or anticipated water quality in the Basal Chadron.

In short, Petitioners' proposed challenge to the restoration value of the water returned to the Basal Chadron fails to controvert the application, and therefore is not admissible. In addition, insofar as this contention and its associated bases attack the standards for *current operations* at the Crow Butte site, which would not be affected by the requested amendment, it is outside the scope of this proceeding. However it is viewed, then, the entire claim that the application has misstated the consumptive use of water is inadmissible.

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[97] *Id*. at 10, citing "Application for Amendment of USNRC Source Materials License SUA-1534 North Trend Expansion Area Environmental Report (ER)," Sections 2.2 and 5.4.1.3.2.

[98] ER at 3.4-40; 3.4-83 to -90.

[99] ER at 5-24.

Petitioners' assertion that there is a drought in the region was apparently intended to stress the importance of the consumptive water use claim. The claim that the application must consider drought and climate change was one of the few bases that the Board specifically admitted, finding that the question related to the applicant's obligation under our NEPA-implementing regulations to describe the environment affected by the proposed action and the significance of the environmental impacts.[100] The Staff argued before the Board that Petitioners failed both to explain the significance of drought and to offer any evidence of the existence of drought.[101]

Petitioners offered a regional atlas as support for their statement that the aquifer is not recharging as fast as it is being used. Crow Butte apparently does not deny this assertion, but argues that an atlas is too general to constitute evidence supporting a contention. We agree that a general statement in an atlas is thin support for the proposition that a drought exists. The existence or nonexistence of an asserted drought condition is not relevant to the proceeding.

The only element left of proposed Contention A is the claim that there is inadequate confinement between the aquifers within the NTEA such that contamination of the Basal Chadron could seep into the Brule. We discuss this so-called "mixing argument" in greater detail below.

(ii) "Mixing Argument" or Lack of Adequate Confinement in NTEA

Although not specifically listed as "bases" for Contention A, the Corrected Reference Petition includes the following arguments, which the Board also treated as proposed bases

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[100] LBP-08-6, 67 NRC at 321-22, citing 10 C.F.R. § 51.45(b)(1), (4).

[101] *NRC Staff Combined Response in Opposition to Petitioners' Requests for Discretionary Intervention and Petitions for Hearing and/or to Intervene of Debra White Plume, Thomas Cook, Owe Aku/Bring Back The Way, Chadron Native American Center, High Plains Development Corporation, Slim Buttes Agricultural Development Corporation, and Western Nebraska Resources Council*, at 21-23, 26-27, 36-38 (Dec. 7, 2007).

for Contention A's claim that contamination from the proposed operation could spread from the aquifer within the NTEA site:

> Contention: TR 2.2.3 states that Basal Chadron is not used for domestic supply in the North Trend area but omits to state that water that mixes with Basal Chadron and Brule aquifers is used by people and animals surrounding the North Trend Area.[102]
> …
>
> **Contention: [Crow Butte] says that the Brule Formation does conduct water; 25 ft/day; and there may be more saturated areas; and that it can be fractured (e.g., by the observed tectonic movements or earth quakes, and that upon fracturing, they would no longer serve as a lower confining unit – [Crow Butte] has evidence of fracturing but has made a judgment that it would not impact the designation of the Pierre as a lower confining unit below the Basal Chadron Sandstone – this is in contention.[103]
> …
>
> **Contention: Petitioner does not believe that adequate confinement exist[s] in light of admitted conductivity between the Brule formation and High Plains aquifer.[104]
> …
>
> **Contention [Descriptions of the North Trend structure and hydrology in specific portions of the Technical Report and Environmental Report] … show[] that [Crow Butte] really doesn't know whether the White River fault, tectonic movements and/or nearby drilling of other wells will cause increase movement of water between the aquifers. [Crow Butte] is assuming things about the structural feature – the White River fault – related to the flow in the Basal Chadron Sandstone – which means that they don't know about how contained the radioactive fluid will be.[105]

The "mixing argument" is at the heart of both Contentions A and B, as reformulated and admitted by the Board in LBP-08-6. Whether the Basal Chadron aquifer is adequately

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[102] Corrected Reference Petition at 10 (emphasis in original).

[103] *Id.* at 11 (emphasis in original).

[104] *Id*. at 12.

[105] *Id.* at 14.

confined is relevant to both the description of the affected environment and to the health and safety of potentially exposed individuals as a result of the proposed expanded operation. We agree with the Board that the mixing argument is within the scope of the proceeding. We also find that Petitioners adequately supported this argument for the purposes of contention pleading by identifying portions of the application they disputed and by relying on Exhibit B, which appears to contradict statements in the application and demonstrates a genuine dispute as to whether the proposed operations at the NTEA will contaminate underground sources of drinking water.[106] The mixing argument is therefore admissible.

(iii) Claims that Spills from Existing Operation Contaminated Pine Ridge Wells

Petitioners' proposed Contention B claimed in a general way that ISL uranium recovery is harmful to the environment. It cited, among other things, leaks at the current operation and an incident when drinking wells on the Pine Ridge Indian Reservation were closed due to contamination, which Petitioners claim came from ISL uranium recovery activities:

> **B. ISL Mining is NOT Environmentally Friendly; ISL Mining May Have Caused Health Impacts at Pine Ridge Indian Reservation Closing 98 Wells.**
>
> (i) [Crow Butte] claims throughout the application and in public testimony that it's [*sic*] ISL mining process is proven and environmentally friendly.
>
> (ii) The basis for the contention is that [Crow Butte] gives a mis-impression [*sic*] that its operations are environmentally friendly when there are at least 23 reported incidences of spills at its current facility and reports of excursions of radioactive wastewater into the Brule aquifer which does mix with the High Plains aquifer.
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> (iii) The issue is in the scope of the proceeding because [Crow Butte] seeks to expand its operations on the basis that it is a less harmful alternative to open pit uranium mining but [Crow Butte] fails to take responsibility for environmental

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[106] *See* notes 71-73, *supra*, and accompanying text.

> damage caused by its form of ISL mining.
>
> (iv) The issue is material to the findings of the NRC which is required to determine whether [Crow Butte's] current operation and proposed operation is in the best interests of the general public; environmental safety is key to that determination.
>
> (v) Alleged Facts: The Relevant Facts are hereby incorporated by reference. In addition, [Crow Butte] is responsible for several leaks including a 300,000 gallon leak of which only 200,000 gallons was cleaned up, a 25,000 sq. ft. contamination and a two year long coupling leak of at least one gallon per hour of radioactive waste. The leaks migrated and may have caused the contamination of 98 water wells on Pine Ridge Indian Reservation.
>
> (vi) [Crow Butte's] Application states that it believes that its operations results [*sic*] in minimal short term impacts and no long term impacts and Petitioner believes that its operations result in major short term and long term adverse impacts.[107]

The Board order did not discuss these bases for proposed Contention B. We observe, however, that Petitioners' claim that prior ISL uranium recovery — implicitly, Crow Butte's existing operation — has led to past contamination is not within the scope of this license application for a new operation in a different area. License amendment proceedings are not a forum to address past violations or accidents that have no direct bearing on the proposed amendment.[108] In addition, Petitioners' general claims that the application "misrepresents" that the proposed operations are "environmentally friendly" do not show a genuine dispute of fact or law with the application.

It does not appear, in fact, that Petitioners' proposed Contention B or any of its bases

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[107] Corrected Reference Petition at 15.

[108] *Millstone,* CLI-01-24, 54 NRC at 366, citing *Georgia Power Co*. (Vogtle Electric Generating Plant, Units 1 and 2) CLI-93-16, 38 NRC 25, 36 (1993). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), CLI-08-17, 68 NRC 231, 243 (2008) (a license amendment adjudication is "not the forum" to address Petitioners' concern about past radiological releases).

are to be found in the Board's reformulated contentions. Rather, it appears that reformulated Contention A relates to the NEPA aspects, and Contention B relates to the AEA aspects, of the argument related to inadequate confinement of the mined aquifer found throughout the Corrected Reference Petition and specifically addressed in Petitioners' proposed Contention A.

We agree with Crow Butte and the NRC Staff that neither proposed Contention B nor any of its stated bases was, or should have been, admitted by the Board. The scope of the admitted contentions cannot include the claims relating to contamination of wells at Pine Ridge or the general environmental "friendliness" of Crow Butte's operation.

(iv) Health Effects of Exposure to Arsenic

In LBP-09-1, the Board declined to admit, as a stand-alone contention, a proposed new contention concerning the health effects of arsenic exposure. Instead, the Board found that the new material presented issues that may be litigated "as part of" the previously admitted Contention B.[109] Although it is unclear to what extent the Board's ruling would expand issues for hearing, Crow Butte has appealed that portion of LBP-09-1.[110] We find that the late-filed information (whether considered a proposed contention, or a supplemental basis) does not show a genuine dispute within the scope of this license amendment proceeding.

Petitioners based their contention on a recent study suggesting a link between low levels of arsenic in drinking water and diabetes.[111] Petitioners argued that arsenic released

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[109] LBP-09-1, 69 NRC __, slip op. at 42-43.

[110] *Crow Butte Resources' Notice of Appeal of LBP-09-1* (Feb. 6, 2009), at 17 (Crow Butte Appeal of LBP-09-1).

[111] *See generally* Arsenic Petition, citing Arsenic Study, *supra* n.22.

from the expansion area will contaminate the groundwater and cause diabetes.[112] Citing a different study, Petitioners further claimed that diabetes can lead to pancreatic cancer.[113] Finally, they submitted the affidavit of their own attorney, stating his belief that the towns of Chadron, Nebraska, and Pine Ridge, South Dakota, have disproportionately high rates of pancreatic cancer compared to the national average. Petitioners attributed these diseases to releases of arsenic from Crow Butte's existing ISL uranium recovery activities.[114]

There is no dispute that exposure to arsenic causes adverse health effects. Crow Butte concedes that "[c]hronic arsenic exposure has long been known to cause adverse health effects, including cancer and diabetes."[115] What Crow Butte disputes is Petitioners' claim that its proposed new operation will release arsenic to usable ground and surface waters.

On appeal, Crow Butte raises both substantive and procedural objections. It argues, with some basis, that the Board failed to consider the late-filing factors with respect to the "new" contention.[116] Crow Butte also argues that the proposed "new" contention was not new

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[112] Petitioners' contention is identical to one offered in the proceeding on Crow Butte's license renewal application. We rejected the arsenic contention as outside the scope of that proceeding, and similarly reject it here. *See Crow Butte Resources, Inc.* (License Renewal for *In Situ* Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC __, (May 18, 2009) (slip op. at 39-43).

[113] Arsenic Petition at 8, citing Suresh T. Chari, et al, *Probability of Pancreatic Cancer Following Diabetes: A Population-Based Study*, 129 J INST. AM GASTROENTEROLOGICAL ASSN 504 (Aug. 2005).

[114] Arsenic Petition at 3-4. Petitioners' claim that Chadron has an unusually high rate of pancreatic cancer was based on their attorney's conversation with a Chadron resident who told him of several known cases. *See* Affidavit of David Frankel (attached to Arsenic Petition).

[115] Crow Butte Appeal of LBP-09-1 at 18.

[116] *Id.* at 17.

at all. Petitioners' Corrected Reference Petition included assertions about how arsenic exposure from the existing ISL operations had already caused "cancer, kidney disease, birth defects, miscarriages and infant brain seizures."[117] Both the Staff and Crow Butte had argued before the Board that the single "new" study relating to the dangers of arsenic exposure did not offer any information that was substantively different from previously available information. But other than to note that the Staff and Crow Butte had objected under the late-filed contention rules, the Board did not address this argument.

In our view, the issue presented lacks adequate support and does not demonstrate a genuine dispute with respect to the application. Petitioners give no support, other than their own beliefs, for the claim that the existing ISL operation has released arsenic into the groundwater, which in turn has caused adverse health effects to the surrounding populations.

Even assuming that Petitioners had demonstrated a dispute as to whether arsenic has been released from the existing site of operations, there are gaps in Petitioners' reasoning. First, they claim that the Arsenic Study's findings explain the asserted prevalence of diabetes at Chadron, Nebraska and the Pine Ridge Indian Reservation, but provide no facts or expert opinion to buttress that argument. For example, they do not argue that persons in Chadron or on the reservation are exposed to inorganic arsenic in quantities comparable to those of the subjects of the Arsenic Study. And they do not exclude other factors that may cause diabetes. In addition, Petitioners offer the unsubstantiated arguments of counsel regarding the increased incidence of pancreatic cancer in Chadron.[118] Without more, therefore, Petitioners' arguments are speculative and do not form the basis for a litigable contention.

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[117] Corrected Reference Petition at 3.

[118] Arsenic Petition at 3-4.

Because this contention fails to satisfy the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1), we need not reach Crow Butte's procedural arguments on lateness. We note, however, that Crow Butte's timeliness arguments help illustrate why the contention is substantively inadmissible for failing to show a genuine dispute with the application. Crow Butte argues that the study discussing the link between low-level arsenic exposure and diabetes is not new information supporting a late-filed contention, because the various adverse health effects of arsenic exposure have long been known.[119] Crow Butte, in other words, does not dispute that the release of arsenic into public drinking water would be harmful. Rather, Crow Butte maintains that its operations have not and will not release contaminants such as arsenic – a broad issue encompassed by Contention A. But there is nothing in the Arsenic Study that tends to show that Crow Butte's proposed expansion operation is likely to release arsenic. The Arsenic Study, therefore, does not include any new information within the scope of this adjudication. We therefore conclude that the Board erred in admitting this issue as a new basis for admitted Contention B.

(v) Revised Admitted Contention A

To summarize our holding, we find that there is a single core issue — whether mixing between the aquifers could lead to potential contamination of offsite ground and surface waters — and that this single issue has both a technical and an environmental aspect. We restate the admitted contention as follows:

> Subpart A1 (technical): Crow Butte's proposed expansion of 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.

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[119] Crow Butte Appeal of LBP-09-1 at 18, 19.

> Basis: Crow Butte has not established the Brule formation as a confining layer in that Crow Butte acknowledges that the Brule conducts water at 25 ft/day; that there may be more saturated areas; and that fracturing may be present (e.g., by the observed tectonic movements or earthquakes).[120]
>
> Basis: Crow Butte has not established the continuity of the Pierre as a lower confining unit.[121]
>
> Basis: Crow Butte has not shown that the White River fault, tectonic movements and/or nearby drilling of other wells will not cause increased movement of water between the aquifers. Crow Butte has not shown that the White River fault will not cause communication between the mined aquifer and the overlying aquifer and the White River.[122]

Subpart A2 (environmental): Crow Butte's License Amendment 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.

> Basis: The application does not take into consideration current and future domestic use of water from the Basal Chadron in the area surrounding the NTEA.[123]

3. Contention C (Consultation with Tribes)

We find that the Board erred in admitting Contention C in LBP-08-6. As discussed below, Contention C fails because it does not identify – either in its original or reformulated form – a deficiency in the application.

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[120] Corrected Reference Petition at 11, citing TR 2.6.2.5; ER 3.4.3.1. *Compare* Exhibit B at 10-11 *with* TR at 2.7-17 to -18.

[121] Corrected Reference Petition at 11, citing ER 3.4.3.1. *See also* Exhibit B at 9.

[122] Corrected Reference Petition at 13-14, citing TR 2.6.2.7, ER 4.3.1. *See also* Exhibit B at 9, 15.

[123] Corrected Reference Petition at 10, citing ER 5.4.1.3.2; TR 2.2.3. *See also* Exhibit B at 1, 16-17.

Crow Butte's license amendment application states that there is a prehistoric Indian camp in the general vicinity of the NTEA, located to the southwest of the NTEA.[124] It goes on to say that within the NTEA, there are "three historic sites and three isolated prehistoric artifacts."[125] With its Environmental Report, Crow Butte included an archeologists' report that concluded the scattered prehistoric artifacts "are not likely to yield information important in prehistory or history."[126]

Petitioners' proposed Contention C appears to reflect Petitioners' belief that an "Indian camp" discussed in the application is actually within the NTEA boundary:

> C. Prehistoric Indian Camp Should Be Inspected by Tribal Elders and Leaders[127]
>
> …
>
> Petitioner submits that [Crow Butte] is not qualified to make any determinations concerning the significance of the prehistoric Indian camp found at the North Trend Site. Oglala Sioux elders and leaders should be consulted immediately before any further action is taken that might interfere with the archeological value of the prehistoric Indian camp.[128]

We find that neither the proposed Contention C, nor Contention C as reformulated and admitted by the Board, states an admissible contention.

In response to the Petition, Crow Butte pointed out that there was *no* Indian camp –

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[124] *See* ER at 3.8-1.

[125] *Id*.

[126] *See* ARCADIS U.S., Inc., "Crow Butte Resources North Trend Expansion Area Class III Cultural Resource Inventory, Dawes County, Nebraska," (Feb. 2007) (ML071870307), at i (Cultural Resource Inventory).

[127] Corrected Reference Petition at 2.

[128] *Id*. at 23.

only three isolated prehistoric artifacts — found within the NTEA.[129] It argued before the Board that Petitioners gave no reason to believe the proposed expansion would have an impact on any Indian archeological site.[130]

The Board dismissed Crow Butte's argument that the Indian camp is outside the NTEA boundary, stating simply that "Staff and Applicant raise questions about the location of the resources at issue and whether these are within the area that is relevant to the site."[131] We, on the other hand, see no support in the record for any plausible claim that an Indian camp is within the NTEA boundary. Petitioners offered no support for their claim that there is a prehistoric Indian campsite within the NTEA boundary. Petitioners' belief that such a campsite exists appears to be the result of their misunderstanding of the application. Petitioners' contention, as submitted, did not raise a genuine dispute with respect to the application.

Apparently based on discussions during the prehearing conference,[132] the Board found that there was a question whether the consultation requirements of the National Historic Preservation Act (NHPA) had been met. It appears that the Board found that applicable provisions of the NHPA requiring "consultation" with tribal leaders give credence to Petitioners' view that only a tribal member can judge the significance of a site or artifact

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[129] The three "historic" sites evidently relate to 20th-century farm use. Cultural Resource Inventory, at 6-8.

[130] Tr. 318-22.

[131] *See* LBP-08-6, 67 NRC at 329.

[132] *See* Tr. 312-34.

from a particular tribe.[133] The Board reasoned that the NHPA requires the Staff to consult with Indian tribes concerning certain actions that potentially affect them.[134] Because our procedural rules require Petitioners to raise contentions based on the application (including the environmental report), the Board reasoned, Petitioners should be able to raise the non-consultation at this time.[135] The Board reformulated the proposed contention into a Contention C that claims:

> Reasonable consultation with Tribal Leaders regarding the prehistoric Indian camp located in the area surrounding [Crow Butte's] proposed North Trend Expansion Project has not occurred as required under NEPA and the National Historic Preservation Act.[136]

Not only was this argument the Board's own creation, it incorrectly suggests that the NHPA consultation requirement applies to the applicant, rather than the Staff. The Advisory Council on Historic Preservation (ACHP) regulations the Board cites explicitly apply to federal agencies, not to a private license applicant.

The NHPA requires a federal agency to take into account the effects that certain proposals may have on properties listed, or eligible for listing, under the National Register of Historic Places.[137] The agency must consult with Indian tribes in two situations. First, where

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[133] *See* LBP-08-6, 67 NRC at 328. *See also* Tr. 330-32 (Petitioners' argument that the applicant had a duty to inform Tribal leaders of the findings in the cultural assessment so leaders could judge artifacts' significance).

[134] *See* LBP-08-6, 67 NRC at 328, citing 36 C.F.R. §§ 800.4(b), 800.4(c)(1), 800.4(d)(1).

[135] *Id.* at 329.

[136] *Id.* at 344.

[137] ACHP's NHPA regulations apply to Federal "undertakings," defined as any "project, activity or program … funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those … requiring a Federal permit, license or approval." 36 C.F.R. § 800.16(y). The NRC implements its responsibilities under NHPA in conjunction with the (Continued …)

the action is going to take place on tribal lands, the agency must consult with the "Tribal Historic Preservation Officer" (if one has been designated to assume the duties normally performed by the State Historic Preservation Officer on tribal lands).[138] Second, *the agency* must make a "reasonable and good faith effort to identify any Indian tribes … that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties."[139]

While the applicant may consult with local tribes before submitting an application, as Crow Butte did here,[140] an applicant's consultation would not relieve the agency of its compliance responsibility. Regardless of the applicant's efforts, the burden rests on the NRC to fulfill the consultation requirements. By the Board's logic, a contention like Contention C would be admissible for any license application involving an opportunity for a hearing, without regard to the contents of the license application, simply because the agency has not yet had the opportunity to act.

In other words, the fact that staff consultations have not taken place is a result of the legal framework, not of any deficiency in the application. Absent a genuine dispute over the sufficiency of the application, Contention C is inadmissible.[141]

NEPA process. *See USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437-38 (2006).

[138] 36 C.F.R. § 800.3(c).

[139] 36 C.F.R. § 800.4(f)(2).

[140] According to its ER, Crow Butte sent letters to the Nebraska Commission on Indian Affairs and to thirteen potentially affected tribes notifying them of the proposed action. ER at 3.8-1.

[141] Our rules of procedure explicitly allow the filing of a new contention on the basis of the draft or final environmental impact statement where that document contains information that differs "significantly" from the information that was previously available. *See* 10 C.F.R. § 2.309(f)(2)
(Continued …)

4. Contention E (Foreign Ownership)

We find the Board erred in admitting Contention E, concerning the significance of the applicant's ownership by a Canadian parent, Cameco Corporation. On appeal, Crow Butte argues that proposed Contention E raises issues outside the scope of this license amendment proceeding, and that Petitioners have articulated no genuine dispute with the applicant.[142] The Staff makes similar arguments, and further complains that the Board accepted arguments not actually made by Petitioners in the Reference Petition, and that the Board engaged in an "unwarranted reconsideration of the NRC's past regulatory approval of Cameco's controlling interest in [Crow Butte]."[143] We agree with Crow Butte and the Staff. The Board admitted this contention based largely on arguments and evidence that were not in the Corrected Reference Petition and which were developed throughout several rounds of briefs, in contravention of our regulations regarding the scope of replies and the filing of late contentions. In addition, this contention encompasses matters that are outside the scope of the proceeding; principally, postulated exports of uranium to other countries. Finally, there is no support for the Board's conclusion that Petitioners had raised a question whether foreign ownership of the proposed expansion of the ISL operation would be inimical to the public

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(providing that, with respect to issues arising under NEPA, the petitioner may file new contentions "if there are data or conclusions in the NRC draft or final environmental impact statement . . . that differ significantly from the data or conclusions in the applicant's documents."). If, following publication of the Staff's environmental review document, Petitioners continue to believe that the consultations were not performed as required, they may proffer such a contention pursuant to Section 2.309(f)(2). *See* CLI-09-9, 69 NRC __, slip op. at 24-25.

[142] Crow Butte Appeal of LBP-09-1 at 13-17.

[143] *NRC Staff's Notice of Appeal of Licensing Board's Order of January 27, 2009 (LBP-09-01), and Accompanying Brief* (Feb. 6, 2009) at 8-9.

health and safety or the common defense and security.[144]

a. Background of Contention E

Petitioners' original proposed contention, as submitted, states:

> [Crow Butte] Fails to Mention it is Foreign Owned by Cameco, Inc. So all the Environmental Detriment and Adverse Health Impacts Are For Foreign Profit and There is No Assurance The [Crow Butte] Mined Uranium Will Stay in the US for Power Generation
> …
> (ii) The Basis for the contentions [*sic*] is that [Crow Butte] has omitted references to foreign ownership in order to give the mis-impression that [Crow Butte's] Uranium mining operations are somehow profitable to US interests when in fact they are profitable to Canadian and other foreign interest to the detriment to US persons' health and safety.
> …
> Contention: [Crow Butte] is [*sic*] owned by Cameco since 2000. Cameco also runs operations in Canada and Kazahstan [*sic*] and which sells [*sic*] Uranium products to other non-US buyers which may include China, India, Pakistan, North Korea and possibly Iran unless there are Canadian regulations which restrict such sales.[145]

The proposed contention made three basic arguments. First, Petitioners claimed that the profits and products of the uranium recovery operations will go to Canada, while the environmental consequences would be imposed on the local population. Second, they argued that as a Canadian company, Crow Butte's parent company, Cameco, will direct Crow Butte to export its product overseas to buyers to whom a U.S. corporation could not or would not sell. Third, they claimed that the application "concealed" Crow Butte's foreign ownership. None of these arguments forms the basis for an admissible contention.

In LBP-08-6, the Board indicated that it saw at least the potential for a contention over

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[144] This contention raises the same arguments that we rejected with respect to the Crow Butte license renewal proceeding. *See* CLI-09-9, 69 NRC __, slip op. at 38.

[145] Corrected Reference Petition at 24-25.

whether foreign ownership is "inimical to the common defense and security or to the health and safety of the public" and that it would ask for follow-up briefs and schedule additional oral argument on the issue.[146] Subsequently, the parties submitted five rounds of briefs, and the Board held additional oral argument on July 23, 2008.[147] Over time, the arguments shifted away from those originally presented by Petitioners, and some of those newer arguments formed the basis of the Board's ruling in LBP-09-1.

b. Board Ruling Disregarded Rules Regarding New Arguments

In addition to the arguments Petitioners raised in their Corrected Reference Petition, new claims were added as briefing on this issue continued. By allowing Petitioners to develop their arguments over the course of five rounds of briefs, the Board disregarded the rule that a reply cannot expand the scope of the arguments set forth in the original hearing request.[148] New bases may not be introduced in a reply brief unless they meet the late-filing criteria set forth in our regulations.[149] Although a Board has discretion in determining what is timely, we find in this case that the Board abused that discretion.

Petitioners' initial contention was that Crow Butte had concealed its foreign parent, that it is unfair for a Canadian corporation to receive economic benefits when U.S. citizens bear

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[146] LBP-08-6, 67 NRC at 339, citing 42 U.S.C. § 2012(d). The Board appeared to be confused by a misreading of § 103(d) of the AEA and of 10 C.F.R. § 40.38, which prohibit foreign ownership of production and utilization facilities, and the U.S. Enrichment Corporation or any of its successors, respectively. These provisions do not apply to ISL recovery licensees. The Board acknowledged that this reading was in error at subsequent oral argument. Tr. 439.

[147] *See supra* n.19, Tr. 415-624.

[148] *See Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006).

[149] *Id*.

the environmental risks associated with uranium recovery, and that the "Canadian owners may divert the uranium products to non-US customers such as China, India, Pakistan, North Korea or possibly Iran."[150] But the briefs, oral argument and the Board's discussion in LBP-09-1 went far beyond those claims.

As an initial matter, there is no basis for the claim that Crow Butte "concealed" its foreign ownership. Crow Butte notified the Commission of its change in ownership April, 2000, and the NRC reviewed the proposed transaction and concluded that a license amendment was not necessary.[151] The current license amendment application involves no change of ownership or control. Despite this, the Board suggested that the license application was deceptive in not disclosing Crow Butte's ultimate ownership by Cameco.[152]

Although the Board did not restate Contention E when admitting it, it is evident that the Board intends the admitted contention to include matters not raised in the Corrected Reference Petition. One such argument is Petitioners' claim that Cameco would direct Crow Butte to disregard U.S. regulations regarding health, safety, and environmental protection because its directors are beyond the reach of U.S. laws.[153] The Board accepted this

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[150] Corrected Reference Petition at 24-25.

[151] *See* letter from Stephen P. Collings, Senior Vice President – Operations, Crow Butte Resources Inc., to Thomas Essig, Chief, Uranium Recovery Branch, Office of Nuclear Material Safety and Safeguards, NRC, Re: Docket No. 40-8943, Source Materials License SUA-1534, Change of Ownership (Apr. 7, 2000) (ML080390182); letter from Thomas H. Essig to Stephen P. Collings, Subject: License Amendment is not needed for change in ownership, License No. SUA-1534 (May 31, 2000) (ML003711700).

[152] *See* LBP-09-1, 69 NRC __, slip op. at 23-25, 36, 45-46.

[153] *See* Tr. 462-63. *See also Response to Applicant's Submission re: Standing* (Aug. 22, 2008), at 4, wherein Petitioners argue that problems associated with foreign control of Crow Butte include "reckless disregard by foreign owners of the US public health and safety" and "skape-goating [*sic*] of US managers of the mine for acts by foreign decisionmakers."

argument, first introduced at oral argument, that it is not "realistic to expect that relevant regulatory requirements could be enforced with Crow Butte if the need ever arose."[154] Not only is this argument impermissibly late and unsupported, it ignores the principle that we do not presume that a licensee will violate our regulations.[155] This and other matters raised after the contention was originally proffered should have been considered under the late-filing rules. Because they were not (and it is not evident that those rules would be satisfied in any event), the Board erred in including them within the scope of the contention.

c. Contention E is Outside the Scope of the License Amendment Proceeding

Petitioners argued that a foreign-owned company would be more likely to export its product overseas than would a U.S.-owned company, including to countries that sponsor terrorism.[156] But before source material can be exported from the United States, the NRC must grant an export license under 10 C.F.R. Part 110.[157] Crow Butte is not seeking an export license in connection with the application at issue. As such, Petitioners' concern, for which it has provided no support beyond general speculation, falls outside the scope of this proceeding.

The Board also erred in finding the difficulty Petitioners might have in demonstrating standing in a future export proceeding to be a reason to allow Petitioners to litigate

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[154] LBP-09-1, 69 NRC__, slip op. at 27, citing Tr. 458.

[155] *See, e.g., Northeastern Nuclear Energy Co.* (Millstone Nuclear Power Station), CLI-01-10, 57 NRC 273, 287 (2001); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000).

[156] *See, e.g.*, Tr. 443-44.

[157] 10 C.F.R. § 110.9(b).

hypothetical exports in this proceeding.[158] The scope of any NRC licensing proceeding is defined by the scope of the approval at issue. Any future proposed export of source material by Crow Butte would be the subject of an opportunity for hearing pursuant to 10 C.F.R. Part 110.[159] Issues that may arise in a future proceeding based on an entirely separate application are not relevant to the proceeding at hand.[160]

d. No Support for Claim that Cameco's Ownership is Inimical to Common Defense or Public Safety

The Board erroneously found a "genuine dispute" whether ownership of Crow Butte by a foreign parent is "inimical" to the common defense and public safety based entirely on the bald assertions and speculation of Petitioners. Petitioners' unsupported claims that Cameco will divert uranium to enemies of the United States do not raise a "genuine dispute."

Our regulations do not prohibit issuance of a materials license to a licensee wholly owned by a foreign parent.[161] Rather, the Staff must find that issuance of the license, among other things, "will not be inimical to the common defense and security or to the health and

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[158] LBP-09-1, 69 NRC __, slip op. at 32-35.

[159] 10 C.F.R. § 110.82. Should the license amendment application ultimately be granted, to the extent that natural uranium recovered at that time may be subject to export under an existing export license, an opportunity to request a hearing was published with respect to that application, in accordance with the Part 110 rules. Should Petitioners or any other member of the public seek enforcement action with respect to ongoing licensed activities (including licensed exports), they may pursue such action under the provisions of 10 C.F.R. § 2.206.

[160] *See, e.g., Duke Energy Corp*. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 293-94 (2002) (contention related to facility's possible future use of mixed oxide (MOX) fuel was irrelevant to and outside the scope of a license renewal application that did not request approval for use of such fuel, despite evidence that applicant might request approval to use such fuel in a separate, future proceeding).

[161] *See* CLI-09-9, 69 NRC __, slip op. at 38.

safety of the public."[162] Because such a license is not prohibited in general, then the Petitioners at a minimum would have to offer some evidence that issuing the license amendment to Crow Butte *in particular* would present a danger to the common defense and security, or public health and safety.

Petitioners provide no support, other than the mere fact of Crow Butte's foreign ownership and Petitioners own hypothetical scenarios, to show that Crow Butte's Canadian ownership poses such a danger. The Board appears to conclude that Petitioners have raised more than the mere fact of foreign ownership, because "it came out in [the Board's] site visit that, whatever Crow Butte mine personnel may do with regard to NRC requirements, ultimate control of the License/Applicant appears to rest with Cameco personnel, who are based in Canada."[163] From this unrecorded conversation, the Board determined that an issue had arisen over whether the NRC could effectively enforce its regulations against the applicant.[164] For the reasons stated above, the Board erred in admitting this issue.

We find that neither foreign ownership itself, nor Petitioners' postulated concerns, is enough to demonstrate a genuine dispute as to whether the license amendment would be inimical to the common defense and security or to the health and safety of the public. We therefore conclude that the Board erred in admitting Contention E.[165]

D. Request for Subpart G Procedures

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[162] *See generally* 10 C.F.R. § 40.32(d); AEA Section 69, 42 U.S.C. § 2099.

[163] LBP-09-1, 69 NRC __, slip op. at 26.

[164] *Id.* slip op. at 27.

[165] In its appeal, Crow Butte advances the argument that Petitioners have not demonstrated standing to prosecute Contention E. Crow Butte Appeal of LBP-09-1 at 8-13. Because we find that Contention E is inadmissible, we need not reach Crow Butte's standing argument.

Early in the proceeding, Petitioners requested that the Board apply the more formal procedures set forth in 10 C.F.R. Part 2, subpart G.[166] The Board declined Petitioners' request to hold the hearing under subpart G. The Board correctly found that it had no authority on its own to grant Petitioners' request to use subpart G procedures, but recommended that the Commission order that the proceeding be conducted under those procedures.[167] The Board observed that our regulations state that a materials license amendment proceeding "may" be held under subpart L,[168] but that the provisions of subpart G, which expressly apply in certain identified circumstances not present here, may be used in "any other proceeding as ordered by the Commission."[169]

The Board gave several reasons why it considered the more formal procedures in subpart G to be appropriate in this case. One reason the Board gave for the request is that subpart G would allow cross examination, which, it reasoned, would be helpful in resolving complex technical issues involving geology and hydrology.[170] The Board also found that Crow Butte's alleged "failure to disclose" significant information concerning its foreign ownership, and intervenors' allegation that Crow Butte will "value 'foreign profits'" over U.S. laws, raised questions about Crow Butte's credibility, motive and intent, which can be better addressed using subpart G procedures.[171] The Board further indicated that formal discovery under

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[166] Corrected Reference Petition at 5. *See* 10 C.F.R. § 2.310(d).

[167] LBP-09-1, 69 NRC __, slip op. at 44-45.

[168] *Id.*, slip op. at 44, citing 10 C.F.R. § 2.310(a). *See generally* 10 C.F.R. § 2.1200.

[169] *Id.*, citing 10 C.F.R. § 2.700.

[170] *Id.*, slip op. at 46.

[171] *Id.*, slip op. at 46, 48.

subpart G would "better ensure disclosure of all pertinent information" than subpart L's "mandatory disclosures," particularly in light of the claim that Crow Butte deliberately omitted information relating to its foreign ownership.[172] For the reasons set forth below, we decline to order that this proceeding be conducted using subpart G procedures.

In our view, the Board overstated the supposed limitations of subpart L in conducting a hearing. Subpart L does, in fact, contemplate requests for cross-examination by the parties. Should a discrete issue be identified at or before the oral hearing that warrants cross-examination by the parties, subpart L allows any party to request it.[173] Indeed, the cross-examination rules in subpart L have been upheld, and found to meet the requirements of the Administrative Procedure Act.[174]

In the same vein, mandatory disclosures (in lieu of discovery), which apply to subpart L proceedings, are wide-reaching, requiring parties (other than the NRC Staff) to provide, among other things, a copy or description of "all documents and data compilations in the possession, custody and control of the party that are relevant to the contentions."[175] And the

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[172] *Id.*, slip op. at 48-49.

[173] *See* 10 C.F.R. § 2.1204(b)(permitting a party to file a motion with the presiding officer to permit cross-examination by the parties on particular admitted contentions or issues). The presiding officer shall allow cross-examination if such cross-examination "is necessary to ensure the development of an adequate record for decision." 10 C.F.R. § 2.1204(b)(3). In addition, the provisions of subpart L governing the oral hearing provide an opportunity for the parties to propose questions that the presiding officer may propound to persons sponsoring testimony. 10 C.F.R. § 2.1207(a)(3).

[174] *Citizens Awareness Network, Inc. v. NRC*, 391 F.3d 338, 351 (1st Cir. 2004).

[175] *See* 10 C.F.R. § 2.336(a)(2). For its part, the Staff must maintain a hearing file (*see* 10 C.F.R. § 2.1203), and also make disclosures pursuant to 10 C.F.R. § 2.336(b), which includes not only information relevant to the contentions, but all documents supporting the Staff's review of the application that is the subject of the proceeding.

Board may impose sanctions on parties who fail to comply, including dismissal of the relevant contention or of the application itself.[176] These provisions also have been examined by the First Circuit, which upheld the mandatory disclosure rules, finding that they "provide meaningful access to information from adverse parties in the form of a system of mandatory disclosure."[177]

Not only is it true that our procedures provide for a full and fair adjudication of the case, but at bottom, the contention admitted for litigation is one that is fairly typical for a uranium recovery case. We do not, therefore, find that this is a situation that warrants the extraordinary step of a subpart G proceeding. As discussed above, the claimed "non-disclosure" of foreign ownership does not raise an issue of the applicant's credibility, in light of the fact that the ownership change was known to and approved by the NRC Staff.[178] We also do not find that the Applicant's "motive" is at issue here. The bare assertions of Petitioners provide no support for the claim that the applicant has improper motives for seeking this license amendment. These assertions, as discussed earlier, are insufficient to support a contention and we do not find them sufficient to support a request for the extraordinary application of subpart G procedures.

III. CONCLUSION

We conclude that the Board did not err in finding that Petitioners have demonstrated standing. We find that the Board abused its discretion in recasting and admitting Contentions A and B, *reverse* the Board's ruling admitting those contentions, and *remand* with the direction

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[176] 10 C.F.R. § 2.336(e)(1).

[177] *Citizens' Awareness Network*, 391 F.3d at 350, citing 10 C.F.R. § 2.336.

[178] *See supra* n.151 and accompanying text.

to admit Contention A as set forth above. We *reverse* the Board's decision to admit Contention C and Contention E. Finally, we *decline* to order that the Board use subpart G procedures in this proceeding.

IT IS SO ORDERED.

For the Commission

(NRC SEAL)

/RA/

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland
this 25th day of June, 2009.