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ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:
Ann Marshall Young, Chair
Dr. Richard F. Cole
Dr. Fred W. Oliver

In the Matter of	Docket No. 40-8943
CROW BUTTE RESOURCES, INC. (License Amendment for the North Trend Expansion Project)	ASLBP No. 07-859-03-MLA-BD01 April 29, 2008

MEMORANDUM and ORDER
(Ruling on Standing and Contentions of Petitioners Owe Aku, Bring Back the Way; Western Nebraska Resources Council; Slim Buttes Agricultural Development Corporation; Debra L. White Plume; and Thomas Kanatakeniate Cook)

I. Introduction

This proceeding involves an application by Crow Butte Resources, Inc. (CBR, Crow Butte, or Applicant), which is currently licensed to operate an in-situ leach (ISL) uranium recovery facility in Crawford, Dawes County, Nebraska,[1] to amend this license to permit development of additional ISL uranium mining resources in a nearby location. ISL mining involves injecting a leach solution into wells drilled into an ore body, allowing the solution to flow through the ore body and extract uranium, and then removing the uranium from the solution by ion exchange and ultimately precipitation, drying, and packaging into solid yellowcake uranium.[2] In response to a September 13, 2007, notice of opportunity for hearing that was published on the Nuclear Regulatory Commission (NRC) website, Petitioners Owe Aku/Bring Back the Way (Owe Aku), Western Nebraska Resources Council (WNRC), Slim Buttes Agricultural Development Corporation (Slim Buttes), Debra L. White Plume, and Thomas Kanatakeniate Cook on November 12, 2007, timely filed requests for hearing and petitions to intervene in accordance with 10 C.F.R. § 2.309.[3]

In this Memorandum and Order, in addition to ruling on three pending matters on which the participants are in dispute, we find that Petitioners WNRC, Owe Aku, and Debra L. White Plume have shown standing to participate in the proceeding, and admit three

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[1] Source Materials License, SUA-1534.

[2] Application for Amendment of USNRC Source Materials License SUA-1534 North Trend Expansion Area - Environmental Report [ER] at 1-18, 1-38 (May 30, 2007) (ADAMS Accession No. ML071870300). The ER is continued in ADAMS Accession No. ML071870302.

[3] Request for Hearing and/or Petition to Intervene for Owe Aku , Bring Back the Way (Nov. 12, 2007); Request for Hearing and/or Petition to Intervene for Western Nebraska Resources Council (Nov. 12, 2007) [hereinafter WNRC Petition]; Request for Hearing and/or Petition to Intervene for Slim Buttes Agricultural Development Corp. (Nov. 12, 2007); Request for Hearing and/or Petition to Intervene for Debra L. White Plume (Nov. 12, 2007); Request for Hearing and/or Petition to Intervene for Thomas Kanatakeniate Cook (Nov. 12, 2007). Petitions from two other organizations, Chadron Native American Center and High Plains Community Development Corporation, were received but subsequently withdrawn from this proceeding.

of their joint contentions, in modified form. The first two of these concern alleged contamination of water resources and potential resulting environmental and health issues; the third concerns the extent of consultation that is required with tribal leaders regarding a prehistoric Indian camp located in the region of the proposed expansion site, under the National Historic Preservation Act.

Based on these rulings, we grant the hearing requests of WNRC, Owe Aku, and Debra L. White Plume, and admit them as parties in this proceeding. In addition, we will hold a prehearing conference in the near future, at which we will hear additional oral argument on Contention E, regarding the issue of foreign ownership of Crow Butte Resources, Inc., and on Petitioners' Request for a 10 C.F.R. Part 2, Subpart G, hearing. At this conference we will also address the participation of the Oglala Sioux Tribe in the proceeding, as well as the schedule for the proceeding.

II. Background

CBR filed the license amendment application (Application) herein at issue on May 30, 2007.[4] If granted, the license amendment would allow the development of a satellite ISL uranium recovery facility, the "North Trend Expansion Area," approximately 4.5 miles northwest of CBR's existing ISL mining operation in Crawford, Nebraska.[5] The Application includes a Technical Report[6] (TR) and an Environmental Report[7] (ER). The NRC Staff formally accepted

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[4] Letter from Stephen P. Collings to Charles L. Miller dated May 30, 2007 (ADAMS Accession No. ML0715500570).

[5] ER at 3.1-2.

[6] Application for Amendment of USNRC Source Materials License SUA-1534 North Trend Expansion Area - Technical Report [TR] (May 30, 2007) (ADAMS Accession No's. ML071760344, ML071760347, ML071760349, ML071760350).

[7] *See supra* n.2.

the Application for review on August 28, 2007.[8] On December 4, 2007, the Secretary of the Commission referred Petitioners' November 12 hearing requests and intervention petitions to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel for appropriate action, in accordance with 10 C.F.R. § 2.346(i). On December 11 this Licensing Board was established to preside over the proceeding, and on December 12 the Board issued an order providing guidance for the proceeding.[9]

Applicant CBR and the NRC Staff filed responses to the Petitions on December 6 and 7, 2007, respectively.[10] On December 28, Petitioners through their newly-retained counsel timely filed a consolidated version of their original Petitions, titled the "Reference Petition," in compliance with the Board's prior request,[11] based on the substantial similarity of the contents of the original petitions (apart from certain issues related to the standing of the respective Petitioners).[12] Also on December 28, Petitioners filed replies to the Applicant's and NRC Staff's

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[8] Letter from Stephen J. Cohen to Stephen P. Collings (Aug. 28, 2007) (ADAMS Accession No. ML0723900040).

[9] Licensing Board Order (Regarding Schedule and Guidance for Proceedings) (Dec. 12, 2007) (unpublished).

[10] Response Of Applicant, Crowe Butte Resources To Petitions To Intervene Filed By Ms. Debra L. White Plume, Chadron Native American Center, Inc., High Plains Community Development Corporation, Thomas Kanatakeniate Cook, Slim Buttes Agricultural Development Corporation, Western Nebraska Resources Council (Dec. 6, 2007) [hereinafter CBR Response]; 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) [hereinafter NRC Response].

[11] *See* Licensing Board Order (Confirming Matters Addressed on December 18, 2007 Telephone Conference) (Dec. 20, 2007) at 3 (unpublished); Official Transcript of Proceedings [Tr.] at 33-35.

[12] Reference Petition (Dec. 28, 2007). On January 9, 2008, Petitioners filed a "Corrected Reference Petition," which we refer to as the "Reference Petition" throughout this Memorandum and Order, no party having indicated any dispute with this version at oral argument. Corrected Reference Petition (Jan. 9, 2008) [hereinafter "Reference Petition"]; *see* Tr. at 60. We also note

Responses.[13] With the permission of the Board, various affidavits relating to standing and curing defects relating thereto were submitted with the Replies or thereafter.[14] Both the Applicant and NRC Staff filed objections to Petitioners' supplemental affidavits in support of standing on January 4, 2007.[15]

The Board heard oral argument on Petitioners' standing and contentions on January 16, 2008. During argument, counsel for Petitioners proffered two documents, referred to as Exhibits A and B, in support of Petitioners' standing and as additional bases for Contentions A and B.[16]

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that the Reference Petition contains no significant changes from the multiple, largely identical Petitions that were previously filed by Petitioners acting *pro se*. *See supra* n.3.

[13] Reply To NRC Staff Response (Dec. 28, 2007) [hereinafter Cook Reply to NRC]; Reply to Applicant's Response [hereinafter Cook Reply to CBR]; Reply To NRC Staff Response To Petition Of Owe Aku And Debra White Plume (December 28, 2007) [hereinafter Owe Aku Reply to NRC]; Reply To CBR Response To Petitions Of Owe Aku And Debra White Plume (Dec. 28, 2007) [hereinafter Owe Aku Reply to CBR].

[14] Affidavit of Francis E. Anders (Dec. 28, 2007) [hereinafter Anders Aff.]; Affidavit of Janet Mize (Dec. 28, 2007); Affidavit of Bruce McIntosh (Dec. 28, 2007); Affidavit of Beth Ranger (Dec. 28, 2007); Affidavit of Joseph R. American Horse (Dec. 28, 2007) [hereinafter American Horse Aff.]; Affidavit of Thomas K. Cook (Dec. 28, 2007) [hereinafter Cook Aff.]; Affidavit of Debra White Plume [hereinafter White Plume Aff.] (Ms. White Plume's Affidavit is attached to the Owe Aku Reply to NRC). Based on the burning of Ms. White Plume's home, where documents relating to this proceeding were kept, Owe Aku requested two additional weeks to provide additional affidavits, Motion for Extension of Time, Owe Aku (Dec. 28, 2007); and the Board granted an extension until January 11, 2008, Licensing Board Order (Ruling of Petitioner Owe Aku's Motion for Extension of Time) (Jan. 4, 2008); over the objection of the Staff, NRC Staff's Answer in Opposition to Owe Aku's Motion for Extension of Time (Jan. 3, 2008). Affidavits for Owe Aku were then filed on January 10, 2008. Affidavit of David Alan House (Jan. 10, 2008) [hereinafter House Aff.]; Affidavit of Lester "Bo" Davis (submitted Jan. 10, 2008) [hereinafter Davis Aff.]; Affidavit of Sandy Sauser (submitted Jan. 10, 2008) [hereinafter Sauser Aff.].

[15] NRC Staff's Response to Petitioners' Supplemental Affidavits in Support of Standing (Jan. 4, 2008) [hereinafter NRC Response to Affidavits]; Applicant's, Crow Butte Resources, Inc., Response to Affidavits (Jan 4, 2008) [hereinafter CBR Response to Affidavits].

[16] Tr. at 65-66, 87-88; Email from buffalobruce@juno.com to dfrankel@igc.org (Jan. 14, 2008), forwarding Email from Hannan LaGarry to buffalobruce@juno.com *et al.* (Jan 14, 2008) (Subject: geology summary) [hereinafter Exhibit A]; Letter from Dr. Steven A. Fischbein, P.G., to Mr. Stephen P. Collings (Nov. 8, 2007), with attached NDEQ Detailed Technical Review Comments [hereinafter Exhibit B].

Thereafter, following up on matters that arose at oral argument and were further addressed in a subsequent telephone conference with all participants,[17] the Board in an Order issued January 24 set deadlines for Applicant and NRC Staff to file responses to the newly-filed exhibits.[18] Applicant and NRC Staff filed their responses on February 8,[19] and Petitioners jointly filed a combined reply to these on February 15, 2008.[20]

Based on matters raised by Petitioners both initially in their Petitions and Replies,[21] as well as in oral argument,[22] the Board in its January 24 Order also directed the parties to file briefs addressing the import of the Fort Laramie Treaties of 1851 and 1868, and the United Nations Declaration of Right of Indigenous Peoples, "insofar as [they] may be relevant to standing and any contentions concerning water rights and consultation with Native Americans on historical sites and artifacts."[23] These briefs were timely filed by all parties on February 21 and 22,[24] and responses thereto were filed by all parties on February 29.[25] In addition, on

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[17] Tr. at 375-414.

[18] Licensing Board Order (Confirming Matters Addressed at January 23, 2008, Telephone Conference) (Jan. 24, 2008) (unpublished) [hereinafter January 24 Board Order] at 2.

[19] Crow Butte Resources, Inc.'s Response to Newly-Filed Exhibits A and B (February 8, 2008) [hereinafter CBR Response to Exhibits]; NRC Staff's Response to Petitioners' Exhibits A and B (Feb. 8, 2008) [hereinafter NRC Response to Exhibits].

[20] Petitioners Combined Reply to NRC Staff's and Applicant's Responses to Exhibits A and B (Feb. 15, 2008) [hereinafter Petitioners Reply on Exhibits].

[21] *See* Reference Petition at 3-4; Cook Reply to NRC at 5; Owe Aku Reply to CBR at 10; Owe Aku Reply to NRC at 15.

[22] Tr. at 101, 178-186, 304.

[23] January 24 Board Order at 2.

[24] NRC Staff's Brief on Law Related to the Fort Laramie Treaties and the United Nations Declaration of Rights of Indigenous Peoples (Feb. 21, 2008) [hereinafter NRC Brief on Treaties]; Crow Butte Resources, Inc.'s Brief on Treaties and United Nations Declaration (Feb. 22, 2008) [hereinafter CBR Brief on Treaties]; Petitioners' Memorandum of Law Regarding Indigenous

February 22, the Board received two briefs *amicus curiae*, with motions for leave to file the same, one from the Oglala Sioux Tribe,[26] and one from the Center for Water Advocacy (CWA), Rock the Earth, and Mr. Robert Lippman.[27] Applicant and Staff filed responses to these motions on March 3;[28] movants CWA *et al*. filed a reply on March 10;[29] and Applicant filed a letter opposing the Reply on March 13, 2008.[30]

Rights, Treaties and Federal Indian Law (Feb. 22, 2008) [hereinafter Petitioners' Brief on Treaties].

[25] NRC Staff's Reply To Petitioners' Memorandum of Law Regarding Indigenous Rights, Treaties, and Federal Indian Law (Feb. 29, 2008) [hereinafter NRC Reply to Treaties]; Crow Butte Resources, Inc.'s Consolidated Response to Briefs on Treaties and United Nations Declaration (February 29, 2008) [hereinafter CBR Reply to Treaties]; Petitioners' Response to NRC Brief Regarding Treaties, Etc. (Feb. 29, 2008) [hereinafter Petitioners' Reply to NRC Treaties]; Petitioners' Response to Applicant's Brief Regarding Treaties, Etc. (Feb. 29, 2008) [hereinafter Petitioners' Reply on CBR Treaties].

[26] Motion for Leave to File a Brief *Amicus Curiae* and Brief of *Amicus Curiae* for Oglala Sioux Tribe (Feb. 22, 2008) [hereinafter Oglala Brief].

[27] Motion for Leave to File a Brief *Amicus Curiae* and *Amicus Curiae* Brief of Center for Water Advocacy, Rock The Earth and Robert Lippman In Support of 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, Slim Buttes Agricultural Development Corporation, and Western Nebraska Resources Council (Feb. 22, 2008) [hereinafter CWA Motion].

[28] Crow Butte Resources, Inc.'s Consolidated Answer to Motions for Leave to File Amicus Briefs (Mar. 3, 2008) [hereinafter CBR Answer to Amicus Motions]; NRC Staff's Answer to Motions of Oglala Sioux Tribe and Center for Water Advocacy Et Al. For Leave to File Briefs Amicus Curiae (Mar. 3, 2008) [hereinafter NRC Answer to Amicus Motions].

[29] Reply in Support of Motion of Center for Water Advocacy, Rock The Earth and Robert Lippman for Leave to File a Brief *Amicus Curiae* (Mar. 10, 2008) [CWA Reply].

[30] Letter from Tyson R. Smith, Counsel for Crow Butte Resources, Inc., to Administrative Judges, Atomic Safety and Licensing Board (Mar. 13, 2008) [hereinafter Smith Letter to Administrative Judges].

III. Board Rulings on Pending Matters

A. Documents Filed at January 16, 2008, Oral Argument

As indicated above, during oral argument on Petitioners' standing and contentions, Petitioners' counsel presented two documents only recently received by them, seeking to have them considered with regard to standing and certain contentions.[31] One of these, marked for identification as Exhibit A, consists of a January 14, 2008, email from Hannan E. LaGarry, with an attached curriculum vitae indicating he has a Ph.D. in geology from the University of Nebraska and currently teaches in the Department of Geosciences at Chadron State College in Chadron, Nebraska. In his email Dr. LaGarry refers to various published scientific literature relating to the geology of the area at issue in this proceeding.

The second document, marked as Exhibit B, consists of a copy of a November 8, 2007, letter from Dr. Steven A. Fischbein, Program Manager with the Nebraska Department of Environmental Quality (NDEQ), to Crow Butte President Stephen P. Collings, regarding Crow Butte's "Petition for Aquifer Exemption North Trend Expansion Area," and an 18-page, single-spaced attachment containing "NDEQ Detailed Technical Review Comments."[32] In addition to the license amendment application now at issue before the NRC, Crow Butte's petition to the NDEQ for an "aquifer exemption" must be approved in order for it to mine in the proposed North Trend Expansion area.[33]

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[31] *See* Tr. at 65-70; 87-96.

[32] We note that, according to the Staff, this document is found in NRC's ADAMS system with the number ML073300399. *See* NRC Response to Exhibits at 15.

[33] *See* ER at 1-58, 3.11-1, 4-12; *see also* Exhibit B. The NDEQ is the Nebraska State agency responsible for the enforcement of matters governed by the federal Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.*, including the Underground Injection Control (UIC) Program, 42 U.S.C. § 300h. *See also* ER at 4-12 to 4-13. UIC programs may be administered by the Federal Environmental Protection Agency, a State, or an Indian Tribe under the Safe Drinking Water Act, to ensure that subsurface waste injection does not endanger underground sources of drinking water. *See* Memorandum of Understanding Between the Nebraska Department of

1. Timeliness of Filings

Provided with opportunity to respond to these documents, including as to whether they should be considered under 10 C.F.R. § 2.309(c), § 2.309(f)(2), or any other relevant law or regulation, Applicant and Staff oppose any consideration of either document, arguing that they are both untimely to support either standing or admission of any contention.[34] Citing Petitioners' "ironclad obligation" to search the public record for information supporting their contentions,[35] Staff and Applicant point out that Exhibit A consists of references to material published prior to 1999,[36] Staff also noting that Petitioners "have not indicated when they first contacted Dr. LaGarry, nor have they provided a good reason why they could not have sought and obtained [his] input well before the original filing deadline."[37] Staff argues that Exhibit B, while it was not available prior to the deadline for filing the original petitions in this proceeding, was "publicly available in ADAMS since November 26, 2007."[38] Applicant argues that "the few references identified in Exhibit B are to materials published nearly a decade ago."[39]

Environmental Quality and the Nuclear Regulatory Commission for In Situ Uranium Mining, 47 Fed. Reg. 55,444 (Dec. 9, 1982).

[34] *See generally*, NRC Response to Exhibits; CBR Response to Exhibits.

[35] NRC Response to Exhibits at 14 (citing *Florida Power & Light Co*. (Turkey Point, Units 3 & 4), CLI-01-17, 54 NRC 3, 24-25 (2001); *Duke Energy Corp*. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 338 (1999)); CBR Response to Exhibits at 5 & n.3 (citing *Duke Power Co*. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 468 (1982); *Duke Energy Corp*. (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003)).

[36] NRC Response to Exhibits at 5; CBR Response to Exhibits at 4.

[37] NRC Response to Exhibits at 17.

[38] *Id.* at 15, referring to the NRC's document management system that may be found on the NRC website.

[39] CBR Response to Exhibits at 10.

Under 10 C.F.R. § 2.309(c), determinations on any "nontimely filing" of a petition must be based on a balancing of certain factors, the most important of which is "[g]ood cause, if any, for the failure to file on time."[40] As Staff has pointed out, this first factor is entitled to the most weight, and where no showing of good cause is made, "petitioner's demonstration on the other factors must be particularly strong."[41] Also, under 10 C.F.R. § 2.309(f)(2), other than contentions based on new "data or conclusions in an NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto," contentions "may be amended or new contentions filed after the initial filing only with leave of the presiding officer upon a showing that—

> (i) The information upon which the amended or new contention is based was not previously available;

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[40] 10 C.F.R. § 2.309(c) provides:

(c) Nontimely filings. (1) Nontimely requests and/or petitions and contentions will not be entertained absent a determination . . . that the request and/or petition should be granted and/or the contentions should be admitted based upon a balancing of the following factors to the extent that they apply to the particular nontimely filing:

(i) Good cause, if any, for the failure to file on time;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;

(iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;

(v) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

[41] NRC Response to Exhibits at 11-12 (citing *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 296 (1993); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 73 (1992) (quoting *Duke Power Co.* (Perkins Nuclear Station, Units 1, 2 & 3), ALAB-431, 6 NRC 460, 462 (1977)).

> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
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> (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.[42]

Although Exhibits A and B are not themselves either "petitions" or "contentions," we find it appropriate to consider the timeliness of their filing under 10 C.F.R. § 2.309(c) and (f)(2), given that the exhibits are offered in support of Petitioners' standing and certain of their contentions. Applying the standards found in these provisions, we agree with the NRC Staff and the Applicant that Petitioners have not shown that Exhibit A was timely filed. Although the email from Dr. LaGarry is dated January 14, 2008, Petitioners have not provided any indication of when they contacted him, and in his email he primarily references articles published years earlier. We do not find that any relevant factors under 10 C.F.R. § 2.309(c) or (f)(2) warrant its consideration.

As to consideration of the document as "legitimate amplification" of originally-filed contentions, as argued by Petitioners,[43] we note that the Commission in the *Louisiana Energy Services* proceeding ruled that, while this permits a petitioner in a reply to submit arguments that are "focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer,"[44] it does not permit the filing of "entirely new support for . . . contentions" in a reply.[45] We note further that Webster's Third New International Dictionary defines "amplify" as "to enlarge, expand, or extend (a statement or other expression of idea in words) by addition of

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[42] 10 C.F.R. § 2.309(f)(2).

[43] Petitioners Reply on Exhibits at 3 (citing *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 359 (2006)).

[44] *Louisiana Energy Services, L.P.* (National Enrichment Facility) [*LES*], CLI-04-35, 60 NRC 619, 624 (2004).

[45] *Id.* at 621.

detail or illustration or by logical development."[46] We find that Dr. LaGarry's email falls more under the category of "new [expert] support" for its Contentions A and B.[47] Thus it would be excluded under the Commission's *LES* decision.[48] While Dr. LaGarry may ultimately be an appropriate witness in a hearing in this proceeding, and the documents referenced by him in his email may be appropriate exhibits in any such hearing, we do not find good cause to consider Exhibit A at this point in this proceeding.[49]

With regard to Exhibit B, however, it is undisputed that Petitioners' counsel received the document only on the evening before the January 16, 2008, oral argument, from another organization.[50] Regarding Applicant's argument that Exhibit B contains references to previously-published materials,[51] we note that, in contrast to Exhibit A, Exhibit B consists primarily of fairly extensive original analysis. Regarding Staff's indication that the document was actually placed in "ADAMS" (the electronic document management system available through NRC's public website) on November 26, 2007, we note that this was two weeks after the deadline for, and Petitioners' filing of, their original requests for hearing and petitions,[52] and fifty-one (51) days prior to the date Petitioners actually presented it at the January 16 oral argument.

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[46] Webster's International Dictionary 74 (3d ed. 1976).

[47] *See* 10 C.F.R. § 2.309(f)(1)(v).

[48] *See supra* n.44.

[49] We do not find, as Petitioners argue, that Exhibit A is the sort of document or information of which we should take official notice under 10 C.F.R. § 2.337(f), nor do we find that it should have been disclosed as part of any discovery requirements, as we have not reached the discovery phase of this proceeding. *See* Petitioners Reply on Exhibits at 2, 4-5.

[50] Tr. at 89.

[51] CBR Response to Exhibits at 10.

[52] We do not have access to the original notice of opportunity for hearing that was at one point on NRC's public website, but presume that the deadline set for filing of petitions was 60 days after the September 13, 2007, date of the notice, or November 12, 2007.

Petitioners point out that, when they did a search in ADAMS using Applicant's license number as a search term, Exhibit B did not appear, although 115 other documents were found. We find this to be significant, given that, in NRC's public website, "License Number" is one of the specified search fields that one may use in searching for documents. It is thus quite reasonable that, with regard to a proceeding involving the amendment of a license, one would search for documents relating to that proposed license amendment by using the relevant license number as the search term; indeed, it is probably one of the most relevant search terms that persons such as Petitioners could use to find documents related to the Application at issue. However, possibly due to Staff's view that the document is *irrelevant* to the Application at issue, when it was entered into ADAMS it was not done so in a manner that would permit access to it using the license number relating to the amendment Application at issue. This approach obviously did not facilitate actual location of the document in the context of this proceeding.

Under these circumstances, we find, under 10 C.F.R. § 2.309(f)(2), that the document was not "previously available" to Petitioners in any reasonable sense prior to the date they received it from the other organization, that the information and analysis found in it is materially different than information previously available, and that it was submitted in a timely fashion based on when it did become available to Petitioners. Alternatively, we find, under 10 C.F.R. § 2.309(c), that Petitioners had good cause to file it when they did and that no other criteria under § 2.309(c) mitigate against our consideration of it. As noted by the Staff "the test [for 'Good Cause for Late Filing'] is when the information became available[,] . . . *when Petitioners reasonably should have become aware of that information*," and whether Petitioners "acted promptly *after learning of the new information*."[53] We find that Petitioners reasonably became

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[53] *Texas Utilities Electric Company, et al*. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 164 (1993) (emphasis added); *see also* NRC Response to Exhibits at 18.

aware of Exhibit B only when it was provided to them by the other organization, and that they had good cause to present it when they did, "promptly after learning of" the document.

Even assuming *arguendo* that the document was "reasonably available" on November 26, the time period from that date to the January 16 oral argument was less than the 60-day period specified at 10 C.F.R. § 2.309(b)(3) for the filing of requests for hearing and petitions to intervene. Although some licensing boards have set 30-day periods for the filing of new contentions based on new information, starting from the date the information becomes available, or reasonably available,[54] in such situations parties generally are directed to *provide* relevant materials containing such information to each other,[55] rather than require parties to search for it — in contrast to the situation before us, in which no such deadlines have been set and no requirements regarding disclosures have come into play. On this basis as well, therefore, we would find that Petitioners had good cause not to provide the NDEQ document identified as Exhibit B earlier, and timely filed it shortly after learning of it. In addition, a balancing of the other relevant factors under either 10 C.F.R. § 2.309(c) or (f)(2) supports Petitioners' position. We therefore deem it appropriate to consider Exhibit B as additional support for Petitioners' standing and Contentions A and B.

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[54] *See*, *e.g.*, *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), Licensing Board Order (Establishing Schedule for Proceeding and Addressing Related Matters) at 7 (Dec. 20, 2006) (unpublished) [hereinafter *Pilgrim* Dec. 20, 2006, Order]; *Entergy Nuclear Vermont Yankee, L.L.C., and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), Licensing Board Order (Initial Scheduling Order) at 7 (Nov. 17, 2006) (unpublished).

[55] *See*, *e.g.*, *id.* at 3-4; *Pilgrim* Dec. 20, 2006, Order at 3-4.

2. Relevance of Exhibit B in this Proceeding

Staff argues that Exhibit B is "completely unrelated to this NRC proceeding,"[56] and "outside the scope of th[e] proceeding and not material to a decision that the NRC must make" because it is "part of the NDEQ aquifer exemption process and reflects information submitted by the Applicant to NDEQ, not information submitted to NRC."[57] Crow Butte suggests that the information in Exhibit B is in the nature of NRC Staff requests for additional information, or "RAIs," noting case law that "petitioners must do more than 'rest on [the] mere existence' of RAIs as a basis for their contention."[58] Applicant argues further that "a contention cannot simply be based on a comment[ ] by a state agency regarding a permitting issue apart from the NRC's review, especially where the contention could have been drafted based on the original application and environmental report";[59] and that "[*n*]*othing in Exhibit B is based on information that is different from information available in applicant's application and ER.*"[60]

In ruling on the relevance of Exhibit B in this proceeding, we first observe that the final quoted argument of Crow Butte renders unpersuasive Staff's argument to the effect that the matters addressed in Exhibit B are different than and therefore irrelevant to those at issue herein. According to Crow Butte, the information on which Exhibit B is based is essentially the same as that to be found in the Application. Moreover, in contrast to Exhibit A, the document does not merely refer to other documents. Nor, contrary to Crow Butte's argument, does it merely request additional information from the Applicant. To provide just two examples, the

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[56] NRC Response to Exhibits at 9.

[57] *Id.* at 21; *see also id.* at 20-22.

[58] CBR Response to Exhibits at 10 (citing *Baltimore Gas and Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349-50 (1998).

[59] *Id.* at 9.

[60] *Id.* at 10 (emphasis added).

document contains significant analysis and criticism of the information submitted to NDEQ by Applicant as being "unsupported and misleading,"[61] and at one point contains the suggestion that Applicant consider measures relating to the domestic water supply, to protect the health and safety of the public.[62]

The essential thrust of Petitioners' water-related arguments is that Petitioners may be injured by contamination of ground and surface water resulting from Applicant's proposed expansion of its mining operations, through the mixing of waters directly affected by such operations with waters used by Petitioners. Petitioners contend that various portions of the Application, stating in effect that the proposed expansion project involves no possible mixing of aquifers and will have no negative environmental or safety impacts, are contradicted by other portions of the Application, in which a *lack* of relevant knowledge about faults and fractures that might allow for mixing of the water in different aquifers is essentially acknowledged. It follows, to paraphrase Petitioners, that there is a possibility that any water within a mined aquifer that is in any way contaminated might mix with water in aquifers from which Petitioners draw and use water, and that this, as well as spills and leaks into surface water, endanger their safety and health and pose the possibility of negative impacts on the environment.[63]

Of course, when Petitioners filed their original Petitions, they were acting *pro se*, and as a result some of their arguments come across as less than optimally organized or articulated.[64] The cogency of their fundamental points, however, is bolstered by Exhibit B, which speaks to

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[61] Exhibit B, Detailed Review at 11, *see also id*. at 1, 4, 5, 8.

[62] *Id.* at 17.

[63] *See infra* sections IV.B, VI.A.1, VI.B.1, VI.B.4.

[64] We note that counsel subsequently became involved, but that under current NRC procedural rules would not be permitted to file amended petitions. *See infra* n.254; *see also infra* nn.167, 433.

some of the same concerns that Petitioners put forward, including, *e.g.*, hydraulic conductivity[65] and communication among aquifers and the White River.[66] These concerns, as well as the NDEQ's challenging of the sufficiency of the information provided by Applicant, would clearly be relevant and material additional support for Petitioners' standing arguments and for their Contentions A and B, and the information provided in it would be within the scope of the proceeding.

More specifically, first, in the introductory letter portion of Exhibit B, it is stated among other things that Applicant's Petition for an Aquifer Exemption for its North Trend Expansion Area "lacks site specific data, inclusion of recent research, and the presentation of well supported scientific interpretations to be considered acceptable."[67] The letter and the "NDEQ Detailed Technical Review Comments" that make up the remainder of Exhibit B go on to raise concerns relating to domestic water use and to the geology of the area, and to point out significant weaknesses in CBR's application for an aquifer exemption. Although questions are posed in them, the letter and Detailed Review go well beyond mere requests for additional information.

Among the numerous instances of allegedly inadequate analysis and presentation of information on the part of Applicant that are criticized in the Review is a reference to CBR's claims that the proposed expansion area "is comparable to the original [area]," with the Reviewer(s) noting that, to the contrary, "[o]ther than on a gross formational level scale, there is no evidence collected at North Trend to support this claim," and that "[t]his is a recurring theme

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[65] Exhibit B, Detailed Review at 6.

[66] *Id.* at 14, 15.

[67] Exhibit B, Letter at 1.

throughout the [Application to NDEQ]."[68] Specific questions in this regard are raised regarding CBR's failure to discuss

> differences between the two areas which are significant in that the Basal Chadron at North Trend was deposited into a basin that may have been actively subsiding at the time of deposition; that North Trend is dominated by an artesian groundwater system, significantly different from the existing mine site; and that overlying aquitards or aquicludes may be significantly different texturally due to basin subsidence.[69]

In addition, the Review states that "no supporting evidence is provided [by CBR] to establish the permeability of the Middle Chadron within North Trend, or where this unit thickens and thins," and that

> [o]ne thing that is conspicuously missing from this document are ANY lithologic logs. Further, the hydraulic conductivity of the "Middle Chadron" at North Trend is inferred from vertical hydraulic conductivity data collected from the original Crow Butte Study Area (CSA). Again, as previous, why is this data not site specific? Additionally, how is it possible that the mineralogical, petrologic, and petrophysical character of the Middle Chadron at North Trend is the same as the CSA when it is clear (from the data presented in this document) that the "Middle Chadron" at North Trend has been deposited into an actively subsiding basin. This depositional environment is completely different than that to the south of the Crawford/White River Structure, which is where the original CSA is located.[70]

Moreover, it is emphasized in the NDEQ Review that, because CBR's Petition "forms the foundation for any future discussion for an aquifer exemption,"

> [e]ach claim made within the document must be substantiated and appropriately referenced and based on sound science. If the claim is made out of original research, from original unpublished data collected, then the data set must be shown, along with the associated interpretation. Anyone reading this document, who decides to research the referenced claims, must be able to reach the same conclusions. If it is new data presented, then the interpretation of this data must be supported by the data. At this point in the document, there is a lack of ANY

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[68] Exhibit B, Detailed Review at 1.

[69] *Id.*

[70] *Id.* at 4.

> supporting evidence that has been collected and analyzed directly from the North Trend prospect.[71]

Regarding permeability, the Review states that it is

> inappropriate to lump the Brule and Chadron together as a single confining interval for the purpose of this discussion. Additionally, siltstones and claystones of the Lower Brule may be fractured due to the structural modification on the Crawford/White River Structure, and thus may be more permeable than other locales. This coupled with the widely dispersed or intermittent channel sandstones of the lower Brule may create permeability pathways that are heretofore uncharacterized.[72]

"Additionally," the Review asks, "why is there no reference to more recent data, such as Figure 4 from LaGarry (1998) or Figure 3 from Terry and LaGarry (1998) which shows details of faulting in the Toadstool Park area."[73] It is noted that, as Terry and LaGarry "demonstrated,"

> faults clearly offset the Peanut Peak and Big Cottonwood Creek Members of the Chadron Formation in Toadstool Park. . . . How is the offset of these units at Toadstool related to the structure at Crawford? Is it related at all? If there have been a series of deformational events, how does this [a]ffect the hydrogeology of the area.[74]

The Review quotes several provisions found in CBR's application to NDEQ, including the statement that "[t]he 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," and indicates that "[a]s stated previously, these types of statements are unsupported and misleading."[75] Also, it is noted in the Review that "CBR states that groundwater gradient in the Basal Chadron within the NTEA is to the east," but further, that

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[71] *Id.* at 5.

[72] *Id.* at 6.

[73] *Id.* at 8.

[74] *Id.* at 10.

[75] *Id.* at 11.

> [t]his by itself seems in question, as this gradient is directed, at least in part, towards the uplift on the Crawford/White River Structure. Although this data is placed within the caveat that it is only four data points, it is clear this gradient would be contrary to what would be expected. Again, this analysis suffers from lack of information . . . .[76]

The Review also raises questions about the relationship between groundwater and surface water. Specifically, it is noted that

> CBR states that the water bearing zone within the Brule is likely dissected, and is in communication with the White River. Given that [sic] this one possible, but important interpretation, wouldn't it be appropriate to provide monitoring data from the White River and from wells set into the Brule aquifer adjacent to sampling locations in the White River? This could be especially important information with regards to future potential failure of injection or production wells through the Brule that may result in communication with surface water. The exact nature of the relationship between groundwater and surface water within the proposed exemption area should be established as part of the exemption process.[77]

Further, the Review observes that:

> CBR states that no hydraulic communication has been identified between the Basal Chadron Sandstone and the White River. Has CBR conducted any surface water monitoring during any aquifer testing programs to verify this statement? What has CBR done to "identify" this possible connection?
>
> The statement that groundwater flow does not appear to be defined by the Crawford/White River Structure is not supported.[78]

With regard to possible domestic use of the Basal Chadron Aquifer, the Review notes that, contrary to CBR's claim that there is no such use, "in close proximity outside the exemption boundary at least one well is used for domestic purposes, and a number of wells are used for agricultural purposes."[79] Continuing, it is stated that "[t]his then seems to establish that the groundwater in the vicinity of the NTEA has some beneficial use, and is (or can be) used for

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[76] Exhibit B, Detailed Review at 12.

[77] *Id.* at 14.

[78] *Id.* at 15.

[79] *Id.* at 16.

domestic purposes."[80] The question is posed, "Is there possibly an overarching solution that can be presented by CBR with regards to domestic water supplies to protect the health and safety of persons in the vicinity of Crawford?"[81]

In light of the preceding and other similar comments, and given, as noted above, that Exhibit B is based on essentially the same information as that in the Application before us,[82] we are not inclined to grant much credence either to Staff's arguments to the contrary, or to Applicant's arguments that there is "nothing" in Exhibit B "that calls into question the license application's conclusion that the Basal Chadron is hydraulically separated from the Brule aquifer,"[83] or shows "any 'distinct new harm or threat apart from the activities already license[d].'"[84] Finally, with regard to Staff's assertion that Petitioners should have provided more explanation of the significance of Exhibit B,[85] we note the irony of the fact that Petitioners presented the document the very morning after they received it, and that same day made arguments based on it that addressed its significance.[86]

In conclusion, although all the concerns raised in Exhibit B may ultimately be satisfactorily addressed by Crow Butte with both the NDEQ and NRC Staff, we find it appropriate to consider the NDEQ letter and Review in ruling on Petitioners' standing and

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[80] *Id.*

[81] *Id.* at 17.

[82] *See supra* text accompanying n.60.

[83] CBR Response to Exhibits at 13.

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

[85] NRC Response to Exhibits at 12-13.

[86] *See*, *e.g.*, Tr. at 89, 92-95, 203, 207-10.

Contentions A and B, based on the evident significance of the document and the information that has been presented to us at this point.

B. Motions to File Briefs *Amicus Curiae*

On February 22, 2008, the deadline previously set for the Petitioners, Applicant and Staff to file briefs on any law relating to the 1851 and 1868 Fort Laramie Treaties and the United Nations Declaration of Indigenous Rights,[87] two briefs *amicus curiae* were filed, with accompanying motions for leave to file the same. One was filed on behalf of the Oglala Sioux Tribe;[88] the other was filed by Center for Water Advocacy (CWA), Rock the Earth, and Mr. Robert Lippman (hereinafter collectively CWA or CWA *et al*.).[89] The respective motions indicate they were filed pursuant to 10 C.F.R. § 2.315(d).

NRC Staff does not oppose the Tribe's motion, because it is entitled to a "reasonable opportunity to participate" in this proceeding under 10 C.F.R. § 2.315(c),[90] but requests denial of the motion of CWA *et al*.[91] Staff first points out that 10 C.F.R. § 2.315(d) applies to briefs filed before the Commission, not to briefs filed before Atomic Safety and Licensing Boards, but notes as well NRC case law for the proposition that, although NRC rules "do not explicitly authorize amicus briefs at the licensing board level, such briefs might still be granted in appropriate circumstances."[92] Staff argues, however, that movants have not complied with the requirements of 10 C.F.R. § 2.323(a) and (b), that any motion must be filed within 10 days of the "occurrence

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[87] January 24 Order at 2.

[88] Oglala Brief.

[89] CWA Motion.

[90] NRC Answer to Amicus Motions at 3

[91] *Id.* at 4.

[92] *Id.* at 2 (citing *Public Service Co. Of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-862, 25 NRC 144, 150 (1987)).

or circumstance from which the motion arises," and that any movant must contact other parties prior to filing the motions.[93]

According to Staff, although an amicus brief that supplied a "perspective that would materially aid the Licensing Board's deliberations" would be permissible, the CWA brief does not do this, but rather impermissibly "inject[s] new issues into [the] proceeding [and] alter[s] the content of the record developed by the parties."[94] At the same time, Staff maintains that, "[w]hen the information that is redundant [to information provided by Petitioners], irrelevant, and outside the scope of a proper amicus brief is stripped from [it], there is no significant new information to warrant" its consideration.[95]

Crow Butte argues that both CWA and the Oglala Sioux Tribe attempt to raise new matters and fail to comply with 10 C.F.R. § 2.323(b), and therefore both their motions should be denied.[96]

In reply, CWA *et al.* argue that there are no NRC regulations that actually prohibit the filing of the amicus briefs at issue, and notes that 10 C.F.R. § 2.315(d) explicitly provides that an amicus brief must be filed "within the time allowed to the party whose position the brief will support."[97] In addition, CWA argues among other things that amicus briefs are "normally allowed when the *amicus* has unique information or perspective that can help the court beyond

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[93] *Id.*

[94] *Id.* at 3 (citing *LES* (Claiborne Enrichment Center), CLI-97-4, 45 NRC 95, 96 (1997)).

[95] *Id.* at 4.

[96] CBR Answer to Amicus Motions at 3-4; Crow Butte also argues that in NRC proceedings such motions may be filed only with respect to issues on appeal, absent special circumstances that do not exist in this proceeding. *Id.* at 2-3.

[97] CWA Reply at 3, 4.

the help that the lawyers for the parties are able to provide,"[98] and that all the issues CWA raises in its brief are related to the 1851 and 1868 treaties, out of which arises a trust duty in the NRC as a federal permitting agency.[99] Crow Butte argues that under 10 C.F.R. § 2.323(c), CWA has no right to file a reply.[100]

Based on the same reasoning put forth by the Staff, we grant the Oglala Sioux Tribe's Motion for Leave to File a Brief *Amicus Curiae* of Oglala Sioux Tribe. Further, pursuant to the Tribe's right to participate in this proceeding under 10 C.F.R. § 2.315(c), we will add the Tribe's counsel to our service list, and ask the Office of the Commission Secretary and all parties to add the Tribe's counsel to their electronic and paper service lists. Although we do not in fact rest any of our rulings herein on the Tribe's current brief, we expect that its participation in future stages of this proceeding may be helpful, and will take up specific aspects of the Tribe's participation under § 2.315(c) in a prehearing conference to be held in this proceeding, as addressed *infra* in section VIII of this Memorandum and Order.

With regard to the CWA brief, although there is no rule or law of which we are aware that would definitively prohibit our consideration of it, we find it unnecessary to rest any of our rulings on it in any event. Therefore it is not necessary to make any ruling on it. It may be that, as the case progresses, CWA may wish to follow the proceeding through consultation with Petitioners

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[98] *Id.* at 6-7 (citing *Community Ass'n for Restoration of Environment (CARE) v. DeRuyter Bros. Dairy*, 54 F.Supp.2d 974 (E.D. Wash. 1999)).

[99] *Id.* at 7-8 (citing *Northwest Sea Farms Inc. v. United States Army Corps of Eng'rs*, 931 F.Supp. 1515, 1520 (W.D. Wash. 1996); *Muskleshoot Indian Tribe v. Hall*, 698 F. Supp. 1504, 1514 (W.D. Wash. 1988); *Jicarilla Apache Tribe v. Supron Energy Corp.*, 782 F.2d 855, 857 (10th Cir. 1986) (en banc), *modified on other grounds*, 793 F.2d 1171 (10th Cir.); *Assiniboine & Sioux Tirbe of the Fort Peck Indian Reservation v. Bd. Of Oil & Gas Conservation*, 792 F.2d 782, 794-96 (9th Cir. 1986); *Enos v. United State*s, 672 F. Supp. 1391, 1993-94 (D. Wyo. 1987)).

[100] Smith Letter to Administrative Judges.

and their counsel, and/or reference to the NRC's electronic hearing docket,[101] and at future appropriate times submit additional briefing on matters of concern. Given our appreciation for any insights that any entity or person may provide that would appropriately assist us in fulfilling our lawful functions, and the right of any entity at least to file such a motion and brief, we therefore do not rule out the possibility that we might consider and grant a future CWA motion to file a brief *amicus curiae*, to an extent found to be appropriate at the time. Also, CWA *et al.* are of course free, as is any member of the public, to attend any and all proceedings in the case.

C. Relevance of Treaties and Related Law

As pointed out by Petitioners, in order to address issues associated with the Gold Rush and significant warfare between the United States and Native American tribes in the 19th century, the United States and a number of tribes including those of the Sioux Nation entered into two significant peace treaties — the Fort Laramie Treaties of 1851 and 1868 — that are asserted to be relevant to various issues in this proceeding. According to the Oglala Sioux Tribe, the Pine Ridge Reservation "was established in part to encourage an agrarian lifestyle for the Oglala. The Oglala were encouraged to farm and raise livestock, as well as abandon a nomadic lifestyle and remain within the Reservation."[102] Prior to these treaties, the Sioux had occupied and controlled a large area of land, including that where the proposed North Trend Expansion site is now located.[103] Two descendants of Chiefs who signed these treaties, Chief Joseph American Horse and Chief Oliver Red Cloud, spoke at the oral argument held January 16 on Petitioners' standing and contentions. As stated by Chief American Horse, the Sioux

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[101] *See* http://ehd.nrc.gov/EHD_Proceeding/home.asp.

[102] Oglala Brief at 9-10 (citing Treaty With The Sioux, Apr. 29, 1868, art. 3, 15 stat. 635 [hereinafter 1868 Fort Laramie Treaty]).

[103] Petitioners' Brief on Treaties at 2.

Nation was a large nation with 10,000 campfires located in what are now several states including Nebraska and the Dakotas, the names of which come from the Lakota language.[104]

Petitioners argue among other things that the current mine sites are within the Treaty boundaries, that they possess water and mineral rights under the Treaties, that infringement of the treaties would constitute injury in fact for purposes of standing, and that the Treaties provide bases supportive of Contentions A and C, relating respectively to impacts on water from the proposed project at issue, and consultation responsibilities *vis-à-vis* tribal leaders on the part of Applicant and/or the NRC Staff.[105] They also cite Article 32 of the United Nations Declaration of the Rights of Indigenous Peoples (UN Declaration) in support of their Petition.[106]

In this proceeding, we are not being asked to rule on the treaty or water rights of the Oglala Tribe *per se*. The only relevance of either general treaty rights issues or more specific water rights issues is insofar as either or both may pertain to our rulings on standing and Contentions A and C. Although in an appropriate situation such considerations might be more critical to these or other rulings,[107] we do not, as illustrated in our analyses below, find it

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[104] Tr. at 179. *See also United States v. Sioux Nation of Indians*, 448 U.S. 371, 374 n.1 (1980), which is cited in the NRC Brief on Treaties at 5.

[105] Cook Reply to NRC at 5, 16-17, 19; Owe Aku Reply to NRC at 15-16; Tr. at 86, 100, 186-88, 304, 307. *See* NRC Brief on Treaties at 2-3.

[106] Reference Petition at 3-4; Cook Reply to NRC at 16-17; Owe Aku Reply to NRC at 15.

[107] We note, regarding the case law cited by Staff and Applicant (NRC Brief on Treaties at 11; CBR Brief on Treaties at 5) for the proposition that a licensing board would have no jurisdiction to consider any treaty-related or water-rights questions in an NRC adjudicatory proceeding, that although there is some dicta to this effect, the cases actually relate to disputes, including jurisdictional disputes, that at the times in question were actually or potentially before other tribunals. *See Arizona Public Service Co. et al*. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-82-117A, 16 NRC 1964, 1990-91 (1982); *Hydro Resources Inc.* (P.O. Box 777, Crownpoint, NM 87313) [*HRI*], CLI-06-29, 64 NRC 417, 420 (2006).

In contrast, there might arise NRC adjudicatory proceedings in which, for example, a licensing board, in fulfilling its responsibility to rule on issues before it and to consider any and all law that might pertain to such issues, may find some treaty-related law to be pertinent to its

necessary to rely on any of these matters in this proceeding in order to rule on either standing or the contentions in question. We do note certain treaty-related matters in passing, but these are not determinative on any of these issues.

IV. Standing of Petitioners to Participate in Proceeding

A. Legal Requirements for Standing in NRC Proceedings

Any person requesting a hearing and seeking to intervene in an NRC proceeding must demonstrate that he or she has "standing" to participate in the proceeding. Standing is a concept that concerns whether a party has "sufficient stake"[108] in a matter, as defined by relevant legal principles. The question of standing "focuses on the question of whether the litigant is the proper party to fight the lawsuit" — as contrasted with the separate question of whether there is a "justiciable," or "real and substantial controversy . . . appropriate for judicial determination," and not merely a hypothetical dispute.[109] The petitioner bears the burden of

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ruling and therefore very appropriately consider it. For example, there might be water-related issues that are integrally related to questions requiring a licensing board's determination, which are not, and are not expected to be, in dispute in any other forum, or, on the other hand, which may indeed have been resolved in another forum, producing case law now relevant to the issues before the licensing board. In such circumstances, a licensing board would have a duty to apply any existing law of which it is aware and that is on point to the facts at issue in the matter legitimately before the board, and if such law included any treaty-related law, the board could appropriately consider and apply it along with other pertinent law. This situation would clearly be distinguishable from resolving disputes over the existence or extent, for example, of specific treaty-related water rights. In this case, as we do not find any treaty-related law to be necessary to our rulings herein, we do not rely on it in making these rulings.

[108] Black's Law Dictionary 1405, 6th ed. 1990 (definition for "Standing to sue doctrine"). The Supreme Court has described the concept as addressing the following question:

> Have [petitioners] alleged such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which [a tribunal] so largely depends for illumination of difficult . . . questions?

Baker v. Carr, 369 U.S. 186, 204 (1962) (substituting terms relevant in NRC proceedings).

[109] Black's Law Dictionary at 1405; *id.* at 865 (definition for "Justiciable controversy").

demonstrating standing, but in ruling on standing a licensing board is to "construe the petition in favor of the petitioner."[110]

The Atomic Energy Act (AEA) is the starting point in determining the standing of a petitioner in an NRC proceeding. Section 189a of the Act requires the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."[111] Thus, in determining whether any petitioner has standing, we must ascertain what that petitioner's "interest" is and whether it "may be affected by the proceeding."

More specifically, the Commission has implemented the requirements of section 189a in its regulations at 10 C.F.R. § 2.309(d)(1), which provides in relevant part that a licensing board shall consider three factors when deciding whether to grant standing to a petitioner: the nature of the petitioner's right under the AEA to be made a party to the proceeding; the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and the possible effect of any order that may be entered in the proceeding on the petitioner's interest.[112] In addition, Commission precedent directs licensing boards, in deciding whether a petitioner in an NRC proceeding has established the necessary "interest" to show standing under Commission rules, to follow the guidance found in judicial concepts of standing, as stated in federal court case law.[113] Under these concepts, we are to consider whether a petitioner has "allege[d] [1] a concrete and particularized injury that is (2) fairly traceable to the challenged action and (3)

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[110] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

[111] 42 U.S.C. § 2239(a)(1)(A) (2000).

[112] 10 C.F.R. § 2.309(d)(1)(ii)-(iv). The provisions of 10 C.F.R. § 2.309 were formerly found at 10 C.F.R. § 2.714, prior to a major revision of the Commission's procedural rules for adjudications in 2004; thus, case law interpreting the prior section remains relevant. *See* Final Rule: Changes to Adjudicatory Process, 69 Fed. Reg. 2182 (Jan. 14, 2004).

[113] *See, e.g., Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998); *Georgia Tech*, CLI-95-12, 42 NRC at 115.

likely to be redressed by a favorable decision."[114] The requisite injury may be either actual or threatened,[115] but must arguably lie within the "zone of interests" protected by the statutes governing the proceeding — here, either the AEA or the National Environmental Policy Act (NEPA).[116] And, as indicated above, the injury must be "concrete and particularized," and not "conjectural" or "hypothetical."[117]

For an organizational petitioner to establish standing, it must show "either immediate or threatened injury to its organizational interests or to the interests of identified members."[118] An organization seeking to intervene in its own right — *i.e.*, to establish "organizational" standing — "must demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the AEA or NEPA.[119] An organization asserting standing on behalf of one or more of its members — *i.e.*, "representational" standing — must (1) demonstrate that the interests of at least one of its members will be so harmed, (2) identify that member by name and address, and (3) show that the organization is authorized to request a hearing on behalf of that member.[120] The organization must show that the member has individual standing in order to

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[114] *Yankee*, CLI-98-21, 48 NRC at 195 (citing *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 102-04 (1998); *Kelley v. Selin*, 42 F.3d 1501, 1508 (6th Cir. 1995)).

[115] *See Yankee*, CLI-98-21, 48 NRC at 195 (citing *Wilderness Soc'y v. Griles*, 824 F.2d 4, 11 (D.C. Cir. 1987)).

[116] *Id.* at 195-96 (citing *Ambrosia Lake Facility*, CLI-98-11, 48 NRC at 6).

[117] *See Sequoyah Fuels Corp. & General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994).

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

[119] *HRI* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 271 (1998).

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

assert representational standing on his behalf, and "the interests that the representative organization seeks to protect must be germane to its own purpose."[121]

Under Commission case law, some circumstances exist in which petitioners may be *presumed* to have standing based on their geographical proximity to a facility or source of radioactivity, without the need to show injury in fact, causation, or redressability.[122] In nuclear power reactor construction permit and operating license proceedings, showing proximity within 50 miles of a plant is often enough on its own to demonstrate standing.[123] In proceedings not involving power reactors, however, the Commission has held that proximity *alone* is not sufficient to establish standing.[124] Rather, a *presumption* of standing based on geographical proximity may be applied in nuclear materials licensing cases only when the activity at issue involves a "significant source of radioactivity producing an obvious potential for off-site consequences."[125] Thus petitioners who wish to base their standing on such a presumption must demonstrate that the radiological material at issue presents such an "obvious potential for offsite consequences." How close to the source a petitioner must live or work to invoke this "proximity plus" presumption "depends on the danger posed by the source at issue."[126] Thus, whether and at what distance a proposed action carries with it an "obvious potential for offsite

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

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

[123] *See*, *e.g.*, *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n.22; *Florida Power and Light Company* (Turkey Point, Units 3 and 4), LBP-01-06, 53 NRC 138, 148-49 (2001).

[124] *See Consumers Energy Co.* (Big Rock Point ISFSI), CLI-07-19, 65 NRC 423, 426 (2007); *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 117 n.1 (1998).

[125] *CFC Logistics, Inc.*, LBP-03-20, 58 NRC 311, 319 (2003); *see also Big Rock Point*, CLI-07-19, 65 NRC at 426*; Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n.22.

[126] *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n. 22.

consequences" such that a petitioner can be "presumed to be affected" must be determined "on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source."[127]

B. Petitioners' Standing in this Proceeding

Five petitioners assert standing to participate in this proceeding: three organizations — WNRC, Owe Aku, and Slim Buttes; and two individuals — Thomas Kanatakeniate Cook and Debra White Plume. Although Petitioners do not assert standing based on any proximity presumption,[128] the geographic area that could potentially be affected by CBR's ISL mining at the proposed North Trend Expansion site is nonetheless at the heart of the standing arguments in this case, as Staff and Applicant challenge whether there could be any injury in fact that could be caused by the proposed project at issue at any distances greater than very minimal ones.

We note that ISL mining cases present unique issues because the geographical areas that may be affected by mining operations are largely dependant on the characteristics — *e.g.*, size, make-up, configuration, interconnections, and interconductivity — of underground aquifers that contain groundwater that may potentially be affected by ISL mining practices. Standing in this particular context has been addressed by the Commission in only one proceeding: *Hydro Resources, Inc.* (*HRI*). The licensing board in *HRI* granted standing to "anyone who use[d] a substantial quantity of water personally or for livestock from a source that is reasonably contiguous to either the injection or processing sites"; such a showing was found to be sufficient

[127] *Georgia Tech*, CLI-95-12, 42 NRC at 116.

[128] Some of the Petitioners do indicate, regarding standing, that their "property values" or "health values" are "adversely impacted by . . . proximity to the ISL Uranium mine," Reference Petition at 6-7, but we do not interpret such language as a claim based on proximity alone or on any proximity presumption.

to demonstrate an "injury in fact."[129] The "reasonably contiguous" standard was not, however, specifically defined in *HRI*.

NRC Staff notes that the material at issue in this proceeding is unenriched natural uranium (yellowcake), and claims that yellowcake is "not a significant source of radioactivity," comparing it to a highly-enriched uranium source that was at issue in the *Nuclear Fuel Services* (*NFS*) proceeding.[130] We make two observations regarding this comparison. First, in *NFS*, the Commission was applying the "proximity plus" presumption we discuss above, and under this analysis found "no obvious potential for harm at petitioner's property 20 miles" from the facility location.[131] Thus, the Commission stated, it became that petitioner's "burden to show a specific and plausible means how . . . activities at the NFS site will affect her," a burden she was found not to meet.[132] As indicated above, Petitioners do not assert standing based on any proximity presumption. Thus we must look to whether they show "specific and plausible means" by which CBR's proposed expansion of mining activities will affect them.

Second, with regard to distances more generally, the sources at issue in this proceeding are distinguishable from those at issue in *NFS* and similar cases because, unlike sources primarily involving potential airborne transmission of contaminants, or contamination of surface water, soil, or plants, ISL mining may also involve potential contamination of groundwater resources that are relatively more confined in underground aquifers, which may in fact be quite large. And, as touched on above, the potential for injury arising through the water in such aquifers depend on many complex factors, including not only the size of the aquifers but also

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[129] *HRI*, LBP-98-9, 47 NRC at 275.

[130] NRC Response at 8, 10.

[131] *Nuclear Fuel Services, Inc.* (Irwin, Tennessee) [NFS], CLI-04-13, 59 NRC 244, 248 (2004).

[132] *Id.*

the hydrogeological conditions that determine how easily and how fast water moves within and among aquifers and also how it interacts with surface water. These are all factual questions that, at this stage of a proceeding with regard to standing, are appropriately determined by considering whether an asserted potential injury is "plausible," as the Commission indicated in *NFS* and as we discuss further below.

Petitioners in this proceeding assert that relevant members and other persons drink and otherwise use water from aquifers that may mix with the aquifer in which CBR mines uranium.[133] They argue that the AEA "requires that they be admitted as intervenors in the proceeding despite any nonmaterial failures to comply with highly specific and technical regulations that may or may not be in 'harmony' with the origin and purpose of the statute."[134] Petitioners also allege that "leaks of radioactive [and] arsenic laden fluid into the Brule aquifer . . . from prior 'Excursions' from CBR's operations" have caused problems including a "slow-moving radioactive plume of contaminated water" that is mixing with the High Plains and/or Arikaree aquifers due to connectivity between these aquifers.[135] Petitioners indicate that the High Plains and Arikaree aquifers run beneath the Pine Ridge Indian Reservation.[136] We note that the High Plains also underlies parts of several states including Nebraska, South Dakota, Colorado, Kansas, New Mexico, Oklahoma, Texas and Wyoming, according to the U. S. Geological Survey [USGS] Ground Water Atlas of the United States, cited by Petitioners in support of their Contention A.[137]

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[133] Reference Petition at 6-8.

[134] Cook Reply to CBR at 2.

[135] Reference Petition at 3.

[136] *Id.*

[137] U.S. Geological Survey "Ground Water Atlas of the United States; Kansas, Missouri and Nebraska; HA 730-D (http://capp.water.usgs.gov/gwa/ch_d/D-text2.html) (1/3/2008); *see* Reference Petition at 9.

Applicant CBR disagrees with Petitioners' argument, claiming that the "Brule Aquifer in this area is not hydrologically connected to Arikaree Aquifer."[138] Moreover, the Applicant argues, the "Arikaree is not present in the area at issue in this application."[139] Applicant submits that it is required by its NRC license to install wells designed to "monitor the horizontal or vertical movement of mining solutions in the Chadron and Brule formation,"[140] and asserts that, in order for a radioactive plume of contaminated water to be present in these aquifers as Petitioners claim, "such a phenomenon would have to have gone undetected" by its monitoring wells.[141] Finally, Applicant claims that "without any evidence, anecdotal or otherwise, to suggest a connection between the Brule and the Basal Chadron that might cause some mixing [of those aquifers]," there is no basis to support a showing of injury necessary to meet the requirements for standing.[142]

NRC Staff agrees with the Applicant, claiming that the Application's Technical Report (TR) indicates that the "Chadron Formation is a different aquifer than the High Plains Aquifer and that no reasonable mechanism for mixing has been identified due to the very low hydraulic conductivity of the confining layers between the Brule and Chadron Formations."[143] Moreover, Staff posits, "in order to make a fairly traceable argument not only do they have to show that water can move from the site to their location, but they also have to provide some sense that

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[138] CBR Response at 2.

[139] *Id.*

[140] *Id.* at 3.

[141] *Id.* at 3-4. According to CBR, it has approximately 319 wells associated with its current ISL operations south of Crawford that were installed to monitor the horizontal and vertical movement of mining solutions in the Chadron and Brule formations. *Id.*

[142] Tr. at 141-42.

[143] NRC Response at 7 (citing TR at 2.7-9).

there will in fact be an offsite consequence from it."[144] Staff also argues that Petitioners fail to provide any evidence that "CBR's excursion history has resulted in release of radioactive constituents to underground sources of drinking water."[145]

Petitioners counter these arguments by citing parts of the Application's Environmental Report (ER), in which, among other things, it is noted that the "exact definition of the 'overlying aquifer' at North Trend is somewhat difficult to determine."[146] They note that the ER states that "[r]egional data regarding flow in the Basal Chadron [is] limited," and that additional future testing should be completed prior to mining in the North Trend area.[147] Petitioners also point to instances in which they contend the ER provides "some causes of possible excursions of uranium and other heavy metals in the re-injection of mine wastewater"; Petitioners suggest that potential water contamination may be caused by "unknown (but known to exist) fracturing between the Brule aquifer and the upper aquifer used by private wells in the North Trend area."[148]

Petitioners argue among other things that they meet their burden of showing a chain of causation that is plausible, through the Nebraska Department of Environmental Quality (NDEQ) document (Exhibit B) addressed in Section III above, which they contend indicates that Applicant's data and analysis relating to the proposed North Trend Expansion is "not accurate," "insufficient," and "old."[149] Further, Petitioners point out, according to the NDEQ document, "the subsurface structural anomaly . . . that is present in the southern portion of the [North Trend

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[144] Tr. at 112.

[145] NRC Response at 7-8.

[146] Cook Reply to CBR at 9 (citing ER at 3.4-78).

[147] *Id.*

[148] *Id.*

[149] Tr. at 89.

Expansion Area] . . . is inadequately defined [by Applicant CBR] and must be accurately delineated for consideration."[150] Petitioners also refer to NDEQ's statement that "[because of lack of studies and what is known,] there may be significant textural changes in the Basal Chadron," and that such textural changes "will likely impact potential vertical and horizontal hydraulic conductivities."[151] Petitioners aver that this demonstrates the plausibility of an interconnection between the aquifers, which may support mixing of potentially contaminated water, resulting in threatened harm to Petitioners who use water from those aquifers.[152]

Petitioners also raise issues of contamination of surface water and the White River, which lies approximately one half mile from the proposed expansion site, and of long term effects of any contamination arising from CBR's proposed expansion project.[153] Petitioners indicate that they recognize that underground contamination "might take years . . . to impact the Pine Ridge Reservation," but that they "believe that . . . you have to look at what will be the impact in generations in the future."[154] We address additional arguments relating to each Petitioner separately in our ruling, which follows.

C. Licensing Board's Rulings on Standing of Petitioners

We begin our analysis of Petitioners' standing in this proceeding by addressing two sets of issues that are of general applicability to some or all of the Petitioners — first, timeliness issues concerning whether various information presented to us after the initial filing of the Petitions may properly be considered in making our rulings on standing; and second, issues raised by Petitioners regarding aquifer conductivity and mixing of water between and among the

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[150] *Id.* at 166; *see* Exhibit B, Letter at 1.

[151] *Id.* at 167 (quoting Exhibit B, Detailed Review at 3-4).

[152] *Id.* at 167-69.

[153] *Id.* at 98-99.

[154] *Id.* at 99.

aquifers in the area surrounding the proposed project. We then address the separate claims of standing.

1. Timeliness Issues Related to Petitioners' Standing

With regard to issues of timeliness, upon objection by NRC Staff and the Applicant that defects existed in the original affidavits submitted by Petitioners in support of representational standing, the Board granted Petitioners an opportunity to cure those defects through submittal of supplemental affidavits. Applicant and Staff object to allowing any statements in these affidavits that were absent from the original petitions to "serve as further bases for . . . standing"[155] to the extent they go "beyond identifying information"[156] and "raise issues different than those raised in the original petition."[157]

Although the pleading requirements of 10 C.F.R. § 2.309 are "strict by design,"[158] a licensing board may permit potential intervenors to cure defects in petitions in order to obviate dismissal of an intervention petition because of inarticulate draftsmanship or procedural or pleading defects.[159] Indeed, licensing board determinations on standing involve a reasonable degree of discretion.[160] In *Virginia Electric and Power Company*, the Appeal Board found that a petition, which "was not submitted under oath *and did not state expressly the manner in which*

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[155] NRC Response to Affidavits at 3; CBR Response to Affidavits at 3.

[156] CBR Response to Affidavits at 3.

[157] NRC Response to Affidavits at 3.

[158] *Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

[159] *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-8, 39 NRC 116, 118 (1994) (pleading "niceties" should not be used to exclude parties who have a clear, albeit imperfectly stated, interest).

[160] *See International Uranium* (USA) *Corp.* (White Mesa Uranium Mill), CLI-01-08, 54 NRC 27, 31 (2001) (citing *International Uranium* (USA) *Corp.* (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 118 (1998); *Georgia Tech*, CLI-95-12, 42 NRC at 116).

the petitioner's interest would be affected by the proceeding," involved "defects [that were] readily curable."[161] The Appeal Board noted that "the participation of intervenors in licensing proceedings can furnish valuable assistance to the adjudicatory process,"[162] and observed that, while there must be "strict observance of the requirements governing intervention, in order that the adjudicatory process is invoked only by those persons who have real interests at stake and who seek resolution of concrete issues[,] . . . . it is not necessary to the attainment of that goal that interested persons be rebuffed by the inflexible application of procedural requirements."[163] Similarly, the federal courts have rejected the "approach that pleading is a game of skill in which one misstep by counsel may be decisive to the outcome, and accept the principle that the purpose of pleading is to facilitate a proper decision on the merits."[164]

Staff and Applicant, however, would have us apply such a strict standard that Staff indeed even objected to Owe Aku's request for a two-week extension to file its affidavits,[165] based on the destruction by fire of Ms. White Plume's home, where critical documents relating to this case (many of which still apparently have to be reconstructed or duplicated) were kept.[166] We find a more balanced approach, which takes into account appropriate considerations of prejudice and fairness, to be in order.

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[161] *Virginia Elec. & Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631, 633 (1973) (emphasis added). We note that even under the new 10 C.F.R. Part 2 rules, parties and licensing boards typically still refer to pre-2004 case law for guidance in making rulings on standing and contentions, and we see no reason not to do the same with this Appeal Board decision, which we find provides thoughtful and pertinent guidance with regard to the circumstances before us in this proceeding.

[162] *Id.*

[163] *Id.* at 633-34.

[164] *Wilson v. Westinghouse Elec. Corp*., 838 F.2d 286, 289-90 (8th Cir. 1988).

[165] NRC Staff's Answer in Opposition to Owe Aku's Motion for Extension of Time at 1-2.

[166] Tr. at 286.

We find that Petitioners' supplemental affidavits, including any additional expressions of "the manner in which [their interests] would be affected by [this] proceeding" that are found therein, create no undue prejudice or delay in this proceeding; Applicant and Staff have had ample opportunity to respond to them. We note as well that, when Petitioners first filed their petitions, they were acting *pro se.* As recently noted by another licensing board, "longstanding agency precedent instructs us that, as a rule, *pro se* petitioners are not held to the same standard of pleading as those represented by counsel."[167] In light of the preceding considerations and principles, we find that fundamental fairness mandates that we consider the interests so asserted by Petitioners. In addition, as stated above, in ruling on the standing of Petitioners we also find it appropriate to consider the NDEQ document submitted as Exhibit B by Petitioners at oral argument.[168]

2. Aquifer Conductivity and Related Issues

On issues relating to aquifer conductivity and mixing of water, we note that some of the arguments raised by the Applicant and Staff, to the effect that Petitioners' allegations regarding mixing of the aquifers are incorrect, may ultimately prevail in this proceeding. We also note that some of Applicant's arguments, for example, that the Chadron and Brule aquifers "are not hydrologically connected,"[169] are brought into question by Exhibit B. Applicant insists that any uncertainty "is not great enough to call into question the overall conclusions" of no connection.[170] However, factual arguments over such matters as the geological makeup of the area, the direction of flow, and the time it takes for water to flow a certain distance, go to the

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[167] *Shaw Areva MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 188 (2007) (citing *Public Service Electric and Gas Co*. (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487 (1973)).

[168] *See supra* § III.A of this Memorandum.

[169] Tr. at 140-41.

[170] Tr. at 146.

merits of the case and, as Petitioners point out, we must avoid "the familiar trap of confusing the standing determination with the assessment of petitioner's case on the merits."[171] Moreover, as Petitioners also point out, the Application itself "acknowledges that the geology and hydrology of the area connecting the Brule, Chadron and High Plains Aquifers is not completely understood."[172] We note, as just one example, the Application's recommendation that "additional future testing" be done prior to ISL mining operations in the proposed expansion area.[173] Thus, even without reference to Exhibit B, and as in *HRI*, "because knowledge of the relevant rock formations is still rudimentary . . . , there are enough reasonable doubts to establish 'injury in fact'."[174]

Exhibit B emphasizes this conclusion and lends credibility to the doubts and uncertainty regarding various hydrogeological issues. As noted therein, in addition to substantive doubts, at least some of the uncertainty lies in the nomenclature regarding geologic information — the NDEQ reviewer states that the "nomenclature utilized by CBR is outdated and does not conform to widely accepted and published geologic literature from the area."[175] We note further indication of a lack of complete clarity with regard to nomenclature and identification of various aquifers and formations in the USGS Ground Water Atlas's description of the Brule Formation being one of the units "included in the [High Plains] aquifer," at least "[w]here it contains fracture or solution permeability"; the Brule is also described as being the "upper unit of the White River

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[171] *Sequoyah Fuels Corp. & General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-04-5, 39 NRC 54, 68 (1994); *see* Cook Reply to CBR at 2.

[172] Owe Aku Reply to CBR at 5; *see also* Cook Reply to CBR at 9.

[173] Cook Reply to CBR at 9 (citing ER at 3.4-79).

[174] *HRI*, LBP-98-9, 47 NRC at 275.

[175] Exhibit B, Detailed Summary at 1.

Group."[176] The Atlas further suggests that the "Arikaree Group" is also part of the High Plains aquifer; and that the "Chadron Formation that is part of the White River Group of Tertiary age . . . directly underlies the High Plains aquifer in most of western Nebraska."[177] Of course, these are the sorts of issues that are appropriate for later determination on the merits of the issues in the proceeding.

At this point, however, we find that neither the Applicant nor the NRC Staff advances arguments refuting the plausibility, at least, that potential groundwater contamination from ISL mining at the North Trend Expansion might mix with surrounding aquifers and affect private wells at some distances from the ISL mining location. And a determination that the "injury is fairly traceable to the challenged action . . . is not dependent on whether the cause of the injury flows directly from the challenged action, but *whether the chain of causation is plausible*."[178]

As Petitioners emphasize, it is at least plausible to conclude, in light of past undisputed excursions and spills from Applicant's mining operations over the years, taken together with the lack of complete knowledge about the hydrogeology of the area in question, that there is the possibility of contamination of water that might mix with water ultimately used by at least some of the Petitioners.[179] In this regard we note that asserted harm "need not be great" to establish an injury in fact for standing,[180] and that the standing requirement for showing injury in fact "has

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[176] *See supra* n.137.

[177] *Id.*

[178] *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 (emphasis added).

[179] Owe Aku Reply to CBR at 6. We note that the town of Crawford takes its drinking water from the White River. Tr. at 126; ER 3.4-38. Although Crawford would appear to be upstream from Applicant's new proposed expansion site, Tr. at 125-26, we note that there may be members of Petitioners who live downstream from the project, and that "[t]he river flows northeast into South Dakota, passing through boundaries of the Pine Ridge . . .Reservation."). ER at 3.5-16.

[180] *HRI* (Crownpoint, New Mexico), LBP-03-27, 58 NRC 408, 414 (2003).

always been significantly less than for demonstrating an acceptable contention."[181] In the case of exposure to radiation similar to that claimed by Petitioners here, "a small or minor unwanted exposure, even one well within regulatory limits, is sufficient to establish an injury in fact."[182]

As in effect suggested by Staff and Applicant, "upon further analysis it may turn out that there is no way"[183] for the radioactive materials and byproducts from the ISL mining operation at the North Trend Expansion site to cause harm to persons living nearby. But we similarly "[n]onetheless . . . can[not] decide, at this early stage of the proceeding, that there is no reasonable possibility that such harm could occur."[184] Petitioners have demonstrated that some level of interconnection and conductivity between aquifers is plausible. It is in this context that we turn to the separate grounds for standing asserted by each of the Petitioners.

3. Standing of Petitioner WNRC

Petitioner WNRC asserts that its petition shows "palpable injury in fact to its organizational interests," which are "to protect the natural resources of Western [Nebraska]"[185] with a focus on "potential water quality/quantity degradation practices."[186] Petitioner WNRC also claims representational standing on behalf of four individuals.[187]

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[181] *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 249 (1993), *review declined* CLI-94-2, 39 NRC 91 (1994).

[182] *HRI*, LBP-03-27, 58 NRC at 414.

[183] *Armed Forces Radiobiology Research Institute* (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 155 (1982).

[184] *Id.*

[185] Reference Petition at 7.

[186] WNRC Petition at A-1.

[187] Cook Reply to NRC at 6.

One of these individuals, Dr. Francis E. Anders, lives in Crawford, Nebraska, about one mile from the current CBR mining operations.[188] Dr. Anders and his family use a well on his property for drinking, bathing, irrigation, and stock water. In his Affidavit he makes the following observations about his well and the water from it:

> I have observed a bad odor emanating from my well water which was not present before [CBR] began drilling about one (1) mile from my well in Fall 2007.
>
> I have observed that since CBR started drilling near my well in Fall 2007, there is a weekly cycle during which the CBR crew starts on Monday and by Wednesday, my well water becomes discolored, and the CBR crew quits on Friday and by Monday morning, my well water is clear again. This cycle repeats weekly.
>
> Since CBR's operations started, I have noticed an increase in the amount of sand in my water filter and in my toilet which I believe is due to the lowering of the water table.[189]

We note that CBR's ER indicates that a well referred to as the "Anders" well is located approximately 1.5 miles southeast of the proposed expansion site boundary.[190] It further appears that Dr. Anders' well draws from the Basal Chadron aquifer,[191] which is the same aquifer that CBR plans to mine in its proposed expansion operations.[192] Thus, it is not necessary to rely on mixing of water in different aquifers in the case of Dr. Anders.

At oral argument, both the Applicant and NRC Staff argued that Dr. Anders' affidavit fails to state an injury related to the license amendment, but instead claims injury "related to the existing operation."[193] Staff posits that such an injury is "really not within the scope of this

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[188] *See* Anders Aff. ¶ 3.

[189] *Id.* at ¶¶ 6-8.

[190] *See* ER at 4-10, 3.4-94. It does not appear to be disputed that the Anders well is that of Dr. Anders.

[191] *See* ER at 4-10; Tr. at 127-28; *see also id.* at 142.

[192] *See* ER at 4.3-78 ("The Production Zone in the North Trend is the Basal Chadron Sandstone.").

[193] Tr. at 126; *see also id.* at 155.

proceeding."[194] Applicant adds that "there is nothing here to suggest that there is a connection between the North Trend operations and what would be in [Dr. Anders'] well as it exists currently."[195]

We are not persuaded by the arguments of Staff and Applicant that the occurrences at Dr. Anders' well that are allegedly associated with CBR's current mining operations cannot be used to suggest potential injury from the proposed North Trend Expansion. First, this position is inconsistent with arguments made by the Staff and the analysis used throughout CBR's Application that the current operation is relevant to the extent that it provides historical information on the adequacy of CBR's radiation protection and monitoring programs, site characterization, operating procedures, and training programs.[196] These matters are obviously relevant to how the new proposed site might be operated if the license amendment request at issue is ultimately granted. Moreover, the close proximity of the Anders well to the boundary of the proposed expansion site — only 1.5 miles as compared to the one-mile distance from CBR's current mining operations[197] — seriously undercuts Staff's and Applicant's arguments. And when the occurrences Dr. Anders describes with his well water are taken into the mix,[198] along with the fact that his well draws from the same aquifer in which CBR proposes to mine in the

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[194] *Id.* at 126.

[195] *Id.* at 155-56.

[196] *See*, *e.g.*, NRC Response at 22 n.18; Tr. at 127. CBR takes the approach throughout its Application of using previous and existing reports and studies of the current ISL mining operation for analysis of the proposed North Trend location. *See*, *e.g.*, ER at 3.4-50 to 3.4-51 ("the hydrogeology of North Trend area is expected to be similar in many respects to that encountered in the [current mining location]").

[197] ER at 4-10; *see also* Anders Aff. ¶ 6.

[198] We note the NDEQ's observation that the well in question, "while outside the proposed exemption boundary, will end up being located between two active uranium mining areas." Exhibit B at 16. We also note the NDEQ's recognition that "future potential failure of injection or production wells *through* the Brule . . . may result in communication with surface water." *Id.* at 14 (emphasis added).

North Trend site, it is impossible not to find a plausible injury in fact, traceable to the action at issue, which would be redressed by a decision favorable to Petitioner WNRC. We thus find that WNRC has standing to participate in this proceeding through its representation of the interests of Dr. Anders

4. Standing of Petitioner Owe Aku

Petitioner Owe Aku, which was formed in 1998 to preserve and revitalize the Lakota way of life, invokes representational standing through submission of four affidavits of persons authorizing Owe Aku to represent their interests. Affiant David Alan House indicates he resides outside Crawford, "approximately 8 miles south south-west of the [CBR] mining operation and proposed expansion."[199] He states that he consumes water from a well on his property that he understands draws from the Brule Aquifer, and that he is also concerned with surface water contamination given CBR's history of leaks.[200]

At oral argument Staff noted with regard to any surface water contamination (of the White River into which the North Trend Expansion Area would drain[201]) that Mr. House lives upstream of the proposed project, arguing that any possible injury in fact could thus not be traceable to the proposed operation.[202] Applicant argued that the impacts on a petitioner from groundwater must be much greater than with surface water, "given the flow rate which in the Chadron . . . is on the order of 10 feet per year," and that CBR's monitoring wells 300 feet

[199] House Aff. at 1. Two other individuals (in addition to Debra L. White Plume, whose standing is discussed below) who submitted affidavits authorizing Owe Aku to represent their interests indicate respectively that they live 4 miles north of the Nebraska/South Dakota state line, and 100 yards from the White River in South Dakota, *see* Sauser and Davis Aff.'s, which places Mr. House closest to the proposed North Trend Expansion Area.

[200] House Aff. at 1-2

[201] Tr. at 119.

[202] *Id.* at 119-20.

outside the production and injection wells of the project are "designed to capture any potential excursions."[203]

Given our determination above that some level of mixing of the water between aquifers is at least plausible, particularly between the Brule and Chadron aquifers,[204] we further find that the potential for contamination of the water Mr. House uses at his property 8 miles from the proposed North Trend area and "in the vicinity of Crawford"[205] — the area the NDEQ suggests Applicant address with regard to "domestic water supplies" and "protect[ing] the health and safety of persons" in such vicinity[206] — establishes a sufficiently plausible and specific threatened injury that is "fairly traceable to the challenged action."[207] We thus find that Owe Aku's allegations regarding its increased risk, supported by at least one member who has demonstrated a threatened injury that is reasonably plausible, traceable to the proposed project, and redressable by an ultimate ruling in Owe Aku's favor, are sufficiently specific, concrete and particular to pass muster for representational standing.[208]

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[203] *Id.* at 136-38.

[204] *See supra* § III.A.2.

[205] Regarding the rates at which water in relevant aquifers flows, we note, as Petitioners point out in support of Contention A, Reference Petition at 11, that water in the Brule aquifer, from which Mr. House draws his water, moves at a rate of "less than 25 feet/day" according to the Application at 3.4-51, so that water from the Chadron that mixed with water in the Brule aquifer would, once it entered the Brule, move faster than Applicant asserts water moves in the Chadron aquifer, which could be significant given Petitioners' claims of long term effects. Reference Petition at 15, 18; *see also* Tr. at 258-61, 271-73, 282.

[206] *See* Exhibit B at 17, as noted *supra* at text accompanying nn.79-81.

[207] *Yankee*, CLI-98-21, 48 NRC at 195.

[208] *See supra* nn. 117, 131-32.

5. Standing of Petitioner Slim Buttes Agricultural Development Corporation

Petitioner Slim Buttes asserts "a palpable injury in fact to its organizational interests,"[209] which are "to foster rural self-sufficiency and agricultural development" and to develop "small family and community gardens and farm projects" in the Pine Ridge Indian Reservation.[210] Slim Buttes is a nonprofit association, chartered by the Oglala Sioux Tribe, that has been in continuous operation for over 20 years, engaged in the development of these gardening and agricultural projects, 356 of which are currently tractor-tilled and supported "across the 4,500 square-mile reservation."[211] The organization asserts among other things that its employees and clients "drink water from an aquifer that may mix with the Chadron aquifer and/or the Brule aquifer in which CBR mines uranium,"[212] and "eat from the community gardens."[213] It is argued that approval of the Application "would put Petitioner's employees and clients, including the families who eat from the community gardens plowed by Petitioner, at . . . risk of personal health problems associated with contamination of the air, surface water and groundwater by CBR's operations."[214] Petitioner also claims to have representational standing through two individuals, Thomas K. Cook and Chief Joe American Horse,[215] each of whom has provided an affidavit stating that he authorizes Slim Buttes to represent his interests in this proceeding.

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[209] Cook Reply to CBR at 5.

[210] Reference Petition at 7; *see also* Tr. at 78-79. We note the similarity of these interests to one of the purposes of the establishment of the Pine Ridge Reservation, *i.e.*, to encourage the Oglala Sioux Tribe "to farm and raise livestock, as well as abandon a nomadic lifestyle and remain within the Reservation." *See* 1868 Fort Laramie Treaty at art. 3; *see also supra* n.102.

[211] Reference Petition at 7.

[212] *Id.*

[213] *Id.* at 8.

[214] *Id.*

[215] Cook Reply to NRC at 6.

Affiant Cook indicates that he lives with his family in Chadron, Nebraska, which is 20 miles east of CBR's mining operation and 150 feet below the operation's elevation.[216] Also provided by Cook is a statement that Slim Buttes "has invested substantial resources in developing small family and community gardens which are irrigated with water from local wells," stating further that "[t]his work has been made more difficult by extreme drought conditions and the drying up of the White River that begins from headwaters near Crawford."[217] Affiant American Horse indicates that he lives in Pine Ridge, South Dakota, and also makes the same declaration of Slim Buttes' efforts in the community.[218] Both affiants for Slim Buttes also address the Oglala Sioux religious/cultural practice of "inipi" (a Lakota term referring to the practice called the "sweat lodge" ceremony[219]) in which they participate and in which water is a central part of the practice.[220]

The Applicant and NRC Staff object to these affidavits and to Slim Buttes' claim for representational standing. They question the religious and cultural practices in which these two affiants state they engage,[221] arguing that no relationship is demonstrated in their affidavits between Slim Buttes and these religious practices, and that any alleged injuries that would occur in this regard are not within Slim Buttes' purpose and mission.[222] Staff also avers that the statements related to the work of Slim Buttes do not pertain to the individual standing of these

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[216] Cook Aff. ¶ 3.

[217] *Id.* ¶ 4.

[218] American Horse Aff. ¶¶ 3, 4.

[219] Petitioners' Brief on Treaties at 19.

[220] Cook Aff. ¶¶ 5, 6; American Horse Aff. ¶¶ 5, 6.

[221] CBR Response to Affidavits at 2, 3; NRC Response to Affidavits at 11.

[222] *Id.*

affiants and are "thus inappropriate for the purpose of supporting representational standing of [Slim Buttes]."[223]

The standing of Slim Buttes presents a close question. On the one hand, the purpose of the organization, in supporting gardening and agriculture on the Pine Ridge Indian Reservation, is integrally tied to the need for water. In addition, the organization is concerned with long term effects, for generations into the future,[224] and there is no reason to believe that the Pine Ridge Indian Reservation will not remain where it is for generations into the future.

On the other hand, under controlling Commission case law, even taking into account long term effects, it is appropriate to expect a fairly specific explanation of any injury asserted to be caused by the proposed project, given (1) the relatively low significance, as radioactive sources, of the uranium solution and yellowcake that would be involved in the proposed project, in comparison to other possible radioactive sources involving greater potential doses to the public; and (2) the relatively greater distances involved in the case of Slim Buttes, in comparison to other Petitioners in this case, and in the *HRI* case, for example.[225] This is not to say that any given distance would automatically confer, or result in a denial of, standing in a case involving ISL mining; many different variables, including the characteristics of the hydrogeology of a particular region and of aquifers in it,[226] could inform any standing decision. In the circumstances of this proceeding, we find the distances in question to be too great to support any presumption of standing based on proximity alone. No such presumption is argued, however, and we must therefore look to whether any circumstances presented to us by this

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[223] NRC Response to Affidavits at 11.

[224] *See* Tr. at 99.

[225] *See HRI*, LBP-98-9, 47 NRC at 277-78.

[226] *See supra* § IV.B.

Petitioner support a finding based on "specific and plausible means" through which injury could occur

In this regard, we note first that surface water plays more of a role with respect to Slim Buttes than it does with the other Petitioners. As recounted above, it is asserted that both ground and surface water may be contaminated as a result of the proposed expansion, and Affiant Cook also makes reference to the "drying up of the White River."[227] Moreover, the NDEQ in Exhibit B, offered in support of standing, raises questions about communication between the Brule and Basal Chadron aquifers and the White River.[228] We also note that Petitioners in their support of Contention B refer to the fact that the proposed expansion site drains into the White River, which runs toward the Pine Ridge Reservation.[229] Indeed, we observe that, according to the Application's ER at section 3.5.7, cited to us by Petitioners,[230] the "White River . . . flows northeast into South Dakota, passing through boundaries of the Pine Ridge . . . Indian reservation[ ]."[231] And we recall that at oral argument Petitioners amplified on an earlier reference in their Petition to a 300,000 gallon leak, to the effect that this spilled onto the frozen surface of the White River.[232]

We note further, regarding rivers generally and the question of how far contamination of various sorts may be carried in them, that although distances involved in case law on the subject are generally much shorter than those at issue here, there are cases involving significant distances in which plaintiffs have been found to have a right to apply for preventive

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[227] *See supra* text accompanying n.217.

[228] Exhibit B at 14, 15; *see* Tr. at 87; *see also supra* nn.77, 78.

[229] Reference Petition at 17 (citing to TR at 2.2-21).

[230] *Id.* at 17.

[231] ER at 3.5-16.

[232] *See* Tr. at 289; Reference Petition at 2, 15.

relief (where copper mining tailings were carried 25 miles to plaintiff's farm),[233] or to prevail against a motion for summary judgment (where chloride spillage was allegedly carried 100 miles to plaintiff's farm).[234] We note with regard to the latter that the standard for deciding a motion for summary judgment is, of course, significantly stricter not only than that regarding contention admissibility, but even more so than that for determining standing.

In light of all these factors, we might be inclined to view favorably Slim Buttes' arguments in support of standing, but for certain circumstances that we find we cannot, in light of the Commission precedent discussed above, ignore in making our ruling. First, although Petitioner indicates that its employees and clients "drink water from an aquifer that may mix with the Chadron aquifer and/or the Brule aquifer in which CBR mines uranium," there is a lack of specificity as to how this might occur, in comparison, for example, with the arguments for standing and affidavits of WNRC and Owe Aku. Also, although there are references to surface water and to the White River, nowhere do we find any references to how water from the river or any other surface water might be used by any of Petitioners' members, clients or employees, such as by using it to water gardens, for fishing and recreational purposes, or for any other purposes. Nor do we find any references to how close any member's residence, or any community gardens, might be to the river, such that there might be contamination by river water into which a leak from Applicant's mining operations might have spilled.[235] In addition, although Petitioner presents compelling statements of the spiritual significance of water to the Oglala Sioux Tribe, no connection between such significance and the purposes of Slim Buttes itself is shown.

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[233] *See Arizona Copper Co. v. Gillespie*, 230 U.S. 46, 52 (1913).

[234] *See Hale v. Colorado River Municipal Water District*, 818 S.W.2d 537, 538-39 (Tex. 1991).

[235] On a map of the area, the river appears to run about 15 miles from the town of Pine Ridge, South Dakota. The Times Atlas of the World 108 (Times Books ed., 8th ed. 1990).

In sum, Petitioner alludes to a number of promising avenues for demonstrating standing, but fails to follow any to a concrete, particular, and specific conclusion that would plausibly establish its standing.[236] We must therefore find that Petitioner Slim Buttes has not shown standing to participate in this proceeding as a party. We note in making this ruling, however, that its contentions are the same as those submitted by the Petitioners for whom we do find standing, and that the same counsel who represents Slim Buttes also represents WNRC; therefore it is to be expected that as a practical matter the interests of Slim Buttes will be protected in this proceeding. Moreover, members of Petitioner may attend, and may possibly be able to offer relevant testimony in this proceeding regarding, for example, agricultural issues that may be of concern to Slim Buttes.

6. Standing of Thomas Kanatakeniate Cook

Like Slim Buttes, Petitioner Cook presents a close case. He states that he lives approximately twenty miles east of the proposed North Trend Expansion site, downwind and downgrade from it, and drinks water from a well that draws from an aquifer that "may mix with the Basal Chadron . . . or Brule aquifer.[237] Mr. Cook is also a Commissioner on the Nebraska Commission on Indian Affairs and thus has a special interest in this proceeding. We are not, however, aware of any law that would make this admirable involvement in community affairs on his part relevant to his standing in this proceeding. And, given the relatively greater distance of his home from the site in comparison to those of others, and the somewhat speculative nature of his assertion regarding his well, we are constrained to find that he has not plausibly shown, with sufficient specificity, concreteness, or particularity, how he might be injured as a result of CBR's proposed expansion of mining operations, so as to establish standing. Again, in making this ruling we are not suggesting that any particular distance would or would not confer standing

[236] *See supra* nn. 117, 131-32.

[237] Reference Petition at 6.

in any case, as all such rulings are dependent on a variety of factors, as discussed above with regard to the standing of Slim Buttes. But in this case we find the combination of factors presented is not sufficient for us to conclude that Petitioner Cook has demonstrated standing to participate in this proceeding. We note, however, that given his clear interest in, and devotion of time and energy to, the issues put forward by all the Petitioners, he may wish to follow the proceeding as it progresses, and may indeed be able to provide testimony on such issues as drought, based on the information in his Affidavit.

7. Standing of Debra L. White Plume

Petitioner Debra L. White Plume, like Petitioner Cook, states that she lives downwind of the proposed expansion site, and that she drinks water from a well that "draws water from an aquifer that may mix with the Chadron . . . or Brule aquifer in which CBR mines."[238] She lives 60 miles from the site.[239] In her December 28, 2008, Affidavit, however, she also provides various additional information, including that she and her family fish in the White River, "which drains from the project area and then flows through the Pine Ridge Reservation," and that "[i]f this River is contaminated, we will lose valuable fishing rights."[240] She also states that the proposed expansion area is where her family gathers eagle feathers for ceremonial uses, and that she is concerned that "the expansion will scare the eagles away and interfere with our religious practices."[241]

Staff opposes Ms. White Plume's standing on several grounds, including that she "does not specify at what location on the river she fishes and the frequency with which this activity occurs," and that she "does not state how often she participates in [gathering eagle feathers, or]

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[238] *Id.* at 6-7.

[239] White Plume Aff. at 1.

[240] *Id.* at 2.

[241] *Id.*

explain why the proposed expansion would scare eagles away."[242] Applicant argues that her Affidavit is "speculative and conjectural as well as irrelevant."[243]

In our discussion of the standing of Petitioner Slim Buttes we addressed particular considerations relating to rivers and how far contamination might be carried in them, noting one case in which a plaintiff prevailed against a motion for summary judgment where chloride spillage was allegedly carried 100 miles to his farm.[244] Ms. White Plume states that she lives 60 miles from the proposed expansion site, and thus it may reasonably be presumed that she fishes at a location approximately the same distance from the site, in any event within 100 miles of it. She makes specific reference to CBR's operations draining into the White River. In contrast to our ruling on the standing of Slim Buttes, therefore, we find that Ms. White Plume has sufficiently provided specific, concrete, and particular information plausibly demonstrating how she might be injured as a result of CBR's proposed expansion of mining operations. Taking her statement of fishing in the White River together with the information about the past spill onto the frozen White River,[245] along with the information from Exhibit B raising questions about communication between the Brule and Chadron aquifers and the White River,[246] we find that Petitioner Debra L. White Plume has established standing to participate as a party in this proceeding.[247]

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[242] NRC Response to Affidavits at 5.

[243] CBR Response to Affidavits at 4.

[244] *See supra* n.234.

[245] *See supra text accompanying* n.232; *infra* text accompanying n.350.

[246] *See supra* text accompanying nn.77, 78.

[247] The standing of Ms. White Plume also provides an alternative ground for finding standing on the part of Owe Aku.

V. Standards for Admissibility of Contentions

As has previously been noted in a number of NRC adjudications,[248] to intervene in such a proceeding a petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1).[249] Failure of a contention to meet any of the requirements of § 2.309(f)(1) is grounds for its dismissal.[250] Heightened standards for the admissibility of contentions originally came into being in 1989, when the

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[248] *See*, *e.g.*, *Pilgrim*, LBP-06-23, 64 NRC at 272-74; *PPL Susquehanna, LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 302-12 (2007). An Appendix to the *Pilgrim* decision provides a more detailed summary of relevant case law on contention admissibility than that found in this Memorandum and Order. *See also Pilgrim*, LBP-06-23, 64 NRC at 351-59.

[249] *See* 10 C.F.R. § 2.309(a). 10 C.F.R. § 2.309(f)(1) states that:

> (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;
>
> (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;
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> (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 requestor/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 law, the identification of each failure and the supporting reasons for the petitioner's belief.

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

Commission amended its rules to "raise the threshold for the admission of contentions."[251] The Commission has stated that the "contention rule is strict by design," having been "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[252] More recent amendments to the NRC procedural rules, which went into effect in 2004,[253] put into place various additional restrictions[254] and changes to provisions relating to the hearing process.[255] The rules do, however, contain essentially the same substantive admissibility standards for contentions.

The Commission has explained that the "strict contention rule serves multiple interests."[256] These include the following (quoted in list form):

> First, it focuses the hearing process on real disputes susceptible of resolution in an adjudication. For example, a petitioner may not demand an adjudicatory

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[251] Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,168 (Aug. 11, 1989); *see also Oconee*, CLI-99-11, 49 NRC at 334.

[252] *Millstone*, CLI-01-24, 54 NRC at 358 (quoting *Oconee*, CLI-99-11, 49 NRC at 334).

[253] *See* 69 Fed. Reg. at 2182.

[254] For example, the current version of the rules no longer incorporates provisions formerly found at 10 C.F.R. §§ 2.714(a)(3), (b)(1), which permitted the supplementation of petitions and the filing of contentions after the original filing of petitions. Under the current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register*, unless a longer period is therein specified; an extension is granted, *see LES* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224 (2004), *reconsid. denied*, CLI-04-35, 60 NRC 619, 625 (2004); 69 Fed. Reg. at 2200; or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time, *see* 10 C.F.R. §§ 2.309(b)(3)(iii), (c), (f)(2).

[255] In this connection we note that a challenge to the new rules by several public interest groups was rejected in the case of *Citizens Awareness Network, Inc. v. NRC [CAN v. NRC]*, 391 F.3d 338 (1st Cir. 2004), on the basis that the new procedures "comply with the relevant provisions of the [Federal Administrative Procedure Act (APA)] and that the Commission has furnished an adequate explanation for the changes." *Id.* at 343; *see id*. at 351, 355.

[256] *Oconee*, CLI-99-11, 49 NRC at 334.

> hearing to attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies.
>
> Second, the rule's requirement of detailed pleadings puts other parties in the proceeding on notice of the Petitioners' specific grievances and thus gives them a good idea of the claims they will be either supporting or opposing.
>
> Finally, the rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.[257]

In its Statement of Consideration adopting the most recent revision of the rules, the Commission reiterated the same principles that were previously applicable; namely, that "[t]he threshold standard is necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues."[258]

It has also, however, been recognized that "technical perfection is not an essential element of contention pleading,"[259] and that the "[s]ounder practice is to decide issues on their merits, not to avoid them on technicalities."[260] Nonetheless, the rules are still held to "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'"[261]

A petitioner must "read the pertinent portions of the license application, including the Safety Analysis Report and the Environmental Report, state the applicant's position and the

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[257] *Id.* (citations omitted).

[258] 69 Fed. Reg. at 2,189-90.

[259] *PFS* (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 99 (2001) (citing *Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979), in which it is stated that "[i]t is neither Congressional nor Commission policy to exclude parties because the niceties of pleading were imperfectly observed").

[260] *Houston Lighting*, ALAB-549, 9 NRC at 649.

[261] *McGuire*, CLI-03-17, 58 NRC at 424 (citing *Oconee*, CLI-99-11, 49 NRC at 337-39).

petitioner's opposing view," and explain why it disagrees with the applicant.[262] A contention must directly controvert a position taken by the applicant in the application,[263] and "explain why the application is deficient."[264] And a petitioner must support its contentions with "[d]ocuments, expert opinion, or at least a fact-based argument."[265]

A petitioner is not, however, "require[d] . . . to prove its case at the contention stage,"[266] and "need not proffer facts in 'formal affidavit or evidentiary form,' sufficient 'to withstand a summary disposition motion."[267] But "a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that . . . a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate."[268] In other words, "a petitioner 'must present sufficient information to show a genuine dispute' and reasonably 'indicating that a

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[262] 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

[263] *See Oconee*, CLI-99-11, 49 NRC at 342.

[264] 54 Fed. Reg. at 33,170; *Palo Verde*, CLI-91-12, 34 NRC at 156.

[265] *Oconee*, CLI-99-11, 49 NRC at 342.

[266] *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996) (citing 54 Fed. Reg. at 33,171).

[267] *Id.* (citing *Georgia Tech*, CLI-95-12, 42 NRC at 118).

[268] *Conn. Bankers Ass'n v. Bd. of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980); *see* 54 Fed. Reg. at 33,171.

further inquiry is appropriate.'"[269] "[S]ome sort of minimal basis indicating the potential validity of the contention" is required.[270]

A petitioner is not required "to provide an exhaustive list of possible bases, but simply to provide sufficient alleged factual or legal bases to support the contention."[271] Finally, the "brief explanation of the basis" that is required by § 2.309(f)(1)(ii) helps define the scope of a contention — "[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases."[272] But it is the contention, not "bases," whose admissibility must be determined.[273]

VI. Board Analysis and Rulings on Petitioners' Contentions

Petitioners raise six contentions,[274] identified as Contentions A through F, the first two of which concern alleged contamination of water resources, with resulting alleged impacts on the environment and public health and safety. Our discussion of these first two contentions begins with discussions of each contention and all responses and arguments relating to each as presented to us, and concludes with our rulings on all of the issues presented in both contentions. We ultimately decide to admit the contentions in somewhat limited form, and

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[269] *Yankee*, CLI-96-7, 42 NRC at 249 (citing 54 Fed. Reg. at 33,171; *Costle v. Pacific Legal Foundation*, 445 U.S. 198, 204 (1980)); *Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519, 554 (1978)). *See also Gulf States Utilities Co*. (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994). It has also been observed that a contention must demonstrate "that there has been sufficient foundation assigned for it to warrant further exploration." *See Pub. Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 428 (1990) (footnote omitted).

[270] 54 Fed. Reg. at 33,170.

[271] *LES*, CLI-04-35, 60 NRC at 623.

[272] *Public Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991).

[273] *See* 10 C.F.R. § 2.309(a).

[274] Reference Petition at 1-2.

reframe them in a manner that more clearly sets forth those issues that we find Petitioners have adequately presented and supported so as to be litigable in this proceeding. We consolidate the proposed environmental issues that we find admissible and that would logically fall under the National Environmental Policy Act (NEPA) into one admitted contention, and the public health and safety issues that we find admissible and that would fall under the Atomic Energy Act (AEA) into a second admitted contention. We recognize that this results in a somewhat artificial separation of issues, given the interrelatedness of the two sets of issues, both of which are centered primarily in the underground geology of the area surrounding the proposed expansion area and the ways, and extent to which, groundwater may move among underground aquifers and interact with surface water, and thereby potentially affect both the environment and public health and safety through the same underlying mechanisms. However, the NRC's authority and responsibility to regulate the matters in dispute in this proceeding arise out of two sets of standards, found in NEPA and the AEA, and thus, for the sake of analytical clarity under these dual sets of standards — particularly given the absence of any rules specifically setting standards in ISL cases — we find that proceeding in the manner described makes for the most effective organization of issues under the circumstances.

With the exception of Contention E, on which we defer our ruling until further briefing and argument on related legal issues, our discussion and analysis of Petitioners' remaining contentions proceeds in the traditional manner, addressing and ruling on the issues and arguments relating to each contention separately and individually. We note further that, in an introductory section of their Petition, Petitioners list several "Relevant Facts," which they then incorporate by reference into the basis discussion for each separate contention.[275] In our consideration of each contention we have taken these alleged facts also into account.

[275] *See id.* at 2-5, 9, 15, 21, 23, 25, 26.

A. Contention A: Alleged Contamination of Water Resources

Petitioners in Contention A state:

> CBR's Mining Operations Use And Contaminate Substantial Water Resources and Radioactive Wastewater Mixes With Brule and High Plains Aquifers and Moves in a Slow-Moving Plume.[276]

1. Petitioners' Support for Contention A

In this contention Petitioners challenge parts of the Application having to do with water usage and with the hydrology and geology of the area surrounding the proposed expansion site, charging essentially that water used in CBR's mining process is not returned to the ground in the same condition in which it was removed, and that due to movement of allegedly contaminated water through fractures that allow for transport and mixing of the groundwater in various aquifers, the public health and safety is endangered. Petitioners assert that CBR currently "[u]ses 9,000 gallons per minute [gpm] of pristine water and returns that amount of radioactive, geochemically changed water to the Chadron aquifer."[277] Petitioners state that "[t]he basis for the contentions is that [in] several places in the Application and in . . . public testimony . . . CBR gives a misimpression that its water usage is relatively nominal," but that "a 'net consumption' number suggested by CBR of about 113 gpm" is incorrect "because the water returned to the aquifer is very different [in that] it contains low-level radioactivity."[278] Petitioners assert that "[t]he issue is in the scope of the proceeding because CBR seeks to use . . . 4,500 gpm [in addition to the 9,000 gpm used under its current license], for a total of [ ]13,500 gpm, at

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[276] *Id.* at 1, 9.

[277] *Id.* at 9; *see also id*. at 2.

[278] *Id.* at 9. The public testimony to which Petitioners refer occurred in an August 21, 2007, Legislative Hearing on Uranium Mining in Northwest Nebraska held before the Nebraska Natural Resources Committee.

a time when the aquifer is not recharging as fast as it is being used and at a time of widespread drought."[279]

Petitioners argue that the issue put forth in Contention A "is material to the findings of the NRC" because the NRC "is required to determine whether CBR's current operation and proposed operation is in the best interests of the general public [and] water usage is key to that determination."[280] Petitioners "believe[ ] there is a slow-moving plume of radioactive water in the High Plains aquifer caused by CBR's current operation[,] . . . 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."[281] They contend that "[t]he Arikaree aquifer that runs under the Eastern portion of Pine Ridge Indian Reservation mixes with the Brule aquifer in which CBR has documented radioactive leaks[,] and mixes further with the other elements of the High Plains aquifer."[282]

Petitioners cite the USGS Ground Water Atlas, contending that it "indicates 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."[283] Moreover, they claim, CBR states in its Application that it returns the water to the aquifer in a changed state and "that there is slow

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[279] Reference Petition at 9. Petitioners cite ER Section 1.1.3, "Operating Plans, Design Throughput, and Production," which indicates that CBR's current plant "is licensed for a flow rate of 5,000 gallons per minute, excluding restoration flow, under SUA-1534," and that the proposed North Trend satellite plant "will operate at a flow rate of 4,500 gpm with an expected annual production rate of 500,000 to 600,000 pounds U_3O_8," in support of their argument that "restoration flow should always be excluded when discussing water usage because radioactive water is not equal to pristine water." *Id.* at 14.

[280] *Id.* at 9.

[281] *Id.*

[282] *Id.*

[283] *Id.*; *see supra* n.137.

movement between fractures in Brule aquifer and the High Plains aquifer."[284] Petitioners assert that "[l]ittle is known about the White River Fault [a structural feature of the local geology] and how it may contribute to fractures that allow for movement of radioactive water when Excursions occur."[285]

In support of their arguments Petitioners quote from several parts of the Application's Technical and Environmental Reports. First they contrast ER 2.2 with ER 5.4.1.3.2. The first of these addresses groundwater "restoration" and states among other things that the "goal of the groundwater restoration is to return the water quality of the affected zone to a chemical quality consistent with baseline conditions or, as a secondary goal, to the quality level specified by the [NDEQ]."[286] ER 5.4.1.3.2 concerns the "Establishment of Restoration Goals" and states that, although

> the primary goal of restoration is to return the mine unit to preoperational water quality condition on a mine unit average[, s]ince ISL operations alter the groundwater geochemistry, it is unlikely that restoration efforts will return the groundwater to the precise water quality that existed before operations. Restoration goals are established by NDEQ to ensure that, if baseline water quality is not achievable after diligent application of best practicable technology (BPT), the groundwater is suitable for any use for which it was suitable before mining. NRC considers these NDEQ restoration goals as the secondary goals.[287]

Petitioners suggest that this shows that water used in CBR's proposed expansion of mining operations will not "really [be] restored" to its prior condition, and that "CBR knows [this]."[288]

Petitioners cite TR 2.2.3 for the statement "that Basal Chadron is not used for domestic supply in the North Trend area," with Petitioners urging that the section "omits to state that water that mixes with Basal Chadron and Brule aquifers is used by people and animals in the areas

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[284] Reference Petition at 9.

[285] *Id.*

[286] *Id.* at 10 (quoting from ER at 2-5).

[287] *Id.* (quoting from ER at 5-24).

[288] *Id.* at 10.

surrounding the North Trend area."[289] Petitioners also quote the following two sections on water use:

> ER 3.4.5 WATER USE INFORMATION
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> As discussed . . . in Section 3.4.1, local water use is very limited. Isolated household wells are completed in the Brule Formation, and the city of Crawford uses two wells completed in the Brule outside the North Trend Expansion Area (see Figure 3.4-2). One well completed in the Basal Chadron is used for household purposes (Well No. 61; approximately 1.5 miles southeast of the Expansion Area boundary).[290]
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> ER 4.4.3.1 Groundwater Consumption
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> . . . . [A related] application states that water levels in the City of Crawford (approximately three miles northwest of the mining area) could potentially be impacted by approximately 20 feet by consumptive withdrawal of water from the Basal Chadron Sandstone during mining and restoration operations (based on a 20-year operational period).
>
> A similar order of magnitude impact (drawdown) likely exists for the North Trend operations. No impact to other users of groundwater is expected because: (1) there is no documented existing use of the Basal Chadron in the proposed North Trend expansion area; and, (2) the potentiometric head of the Basal Chadron Sandstone in the North Trend expansion area ranges from approximately 10 to more than 50 feet above ground surface.[291]

Petitioners assert that these sections omit relevant information concerning local use in towns and farms beyond the two-mile radius.[292]

Petitioners cite the following sections of the Application as showing that there are fractures that would allow mixing of water from different aquifers:

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[289] *Id.* at 10 (emphasis omitted).

[290] *Id.* at 14 (quoting ER at 3.4-94). As noted in our discussion of standing above, *see supra* text accompanying .nn.190-92, section 4.4.3.1 of the ER, at 4-10, also indicates that Well No. 61 is the Anders well.

[291] *Id.* (quoting ER at 4-10).

[292] *Id.*

> TR 2.6.2.5 Upper Chadron and Brule Formations, Upper Confinement
> Based on data from the CSA,[293] the vertical hydraulic conductivity of the upper confining intervals at Crow Butte is less than $1.0x10^{-10}$ cm/sec.
> ***
> Infrequent fine-to-medium-grained sandstone channels have been observed in the lower part of the Brule Formation. When observed, these sandstone channels have very limited lateral extent. The Brule-Chadron contact is sometimes difficult to ascertain, as the contact between the two formations is gradational and cannot be consistently picked in drill cuttings or electric logs. Therefore, the Upper Chadron/Lower Brule may be considered a single confining interval.
>
> ER 3.4.3.1 Regional Groundwater Hydrology
>
> Souder indicates that the Brule is a tight formation with a minimal hydraulic conductivity of less than 25 feet/day, although in a few areas there may be a significant saturated thickness, presumably where sandier intervals are present. The Chadron is described as consisting of claystones with extensive volcanic ash that is tight with low hydraulic conductivity comparable to the Brule, except where fractured, although the coarse Basal Chadron Sandstone is present at the bottom of the formation. The Pierre is described by Souders (2004) as a dark grey, bentonitic shale that is "very tight and is not considered to hold any extractable groundwater" except where fractured. Fractures may increase Brule and Chadron permeability in localized areas (Souders, 2004). It is noted that CBR operations in the CSA to date do not support evidence of fracturing in the Pierre to a degree such that it would impact the designation of the Pierre as a lower confining unit below the Basal Chadron Sandstone.[294]

Petitioners contend that the preceding selections demonstrate the possibility of more saturated areas, and state that CBR's indication that there is no fracturing in the Pierre "to the degree that it would no longer serve as a lower confining unit" is "in contention."[295] They also cite ER section 3.4.3.2 as demonstrating the possibility of "movement of radioactive water amongst the aquifers,"[296] and ER section 3.4.3.3 to support their challenge of CBR's statement that

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[293] We note that, according to the Application, "CSA" is an acronym for "Commercial Study Area." TR at 2.6-1, 2.6-9; *see also* ER at 3.4-50.

[294] Reference Petition at 11 (quoting from ER at 3.4-51, 4-52).

[295] *Id.*

[296] *Id.* at 12 (citing ER at 3.4-71).

"adequate confinement exists[,] in light of admitted conductivity between the Brule formation and High Plains aquifer."[297]

Petitioners cite ER 3.4.4 as showing that "CBR admits that failures with its Chadron well casing caused increased Uranium and Radium-226 in the Brule well," and that "[t]his shows contamination of the Brule which flows unconfined with the High Plains aquifer."[298] This section provides:

> ER 3.4.4 Surface Water and Groundwater Quality
>
> CBR believes that integrity problems with the Chadron well casing may have had an impact on the water quality in the Brule well. The Chadron well has since been plugged and abandoned. It is noted that gross alpha and beta analyses were not performed because uranium and radium were the anticipated compounds and were thus specifically included on the analyte list.[299]

Petitioners contend that the following sections "show[ ] that CBR really doesn't know whether the White River fault, tectonic movements and/or nearby drilling of other wells will cause increased movement of water between the aquifers":[300]

> TR 2.6.2.7 - North Trend Structure
> . . . .
> In summary, current data suggest that the White River Fault may be present at depth and movement along this feature impacted the deposition of the Middle/Upper Chadron. However, data do not clearly require that this fault transect the Middle/Upper Chadron or Brule, and mapped data suggest that movement along the structure occurred during deposition of the Chadron/Brule via uplift of a monocline or fold in this area. Crow Butte is committed to conduct additional exploratory drilling to better define the nature of the feature before commencing mining operations.

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[297] *Id.* at 12 (citing ER at 3.4-78 to 3.4-79).

[298] *Id.* at 13.

[299] *Id.* at 12-13 (quoting from ER at 3.4-83). Petitioners also allege that ER Table 3.4-15, which is a "Laboratory Analysis Report [for] Brule Well W-78," "shows arsenic in Brule rising from .005, to .006, to .007 [parts per million or ppm] in a few months in 1997," noting that "this is from the existing ISL mining operation which had a large spill in 1997." *Id.* at 13.

[300] *Id.* at 14.

> ER 4.3.1 Geologic Impacts
>
> If the White River structural feature is in fact a fault, changes in aquifer pressure potentially could impact activity related to the fault and the transmissive characteristics of the fault (e.g., resistance to flow). There are numerous documented cases where injection in the immediate vicinity of a fault has caused an increase in seismic activity. However, such response typically occurs when injection operations have increased the pressure in the aquifer by a significant amount (e.g., 40 to 200 percent pressure increase over initial conditions). The pressure in the Basal Chadron will be increased by localized scale by injection operations during mining and restoration operations, and will be more than offset by production within each wellfield pattern.
>
> ER 3.4.6 CONCEPTUAL MODELING OF SITE HYDROLOGY
>
> Regional data regarding flow in the Basal Chadron are limited. Based on those data, the structural feature does not appear to dramatically impact flow in the Basal Chadron Sandstone. Additional investigations to be conducted during development of North Trend are expected to provide detailed information regarding the impact of this feature on regional and local flow in the Basal Chadron.[301]

Petitioners state that "CBR is assuming things about the structural feature — the White River Fault — related to the flow in the Basal Chadron Sandstone," which they contend means that CBR "do[es]n't know about how contained the radioactive fluid will be."[302]

Petitioners also cite TR Section 2.2.2.2.1, which concerns agriculture in the vicinity of the expansion area, stating that it "omits to state that huge numbers of people rely on . . . irrigated water for farms, pasture, habitat and/or rangeland," and that CBR considers only a "2.25 mile radius for this purpose[,] when it should consider entire radius of at least 80 Km or the radius involving the 174,000 sq. miles of the High Plains aquifer."[303] In addition, according to Petitioners, the Application "fails to state that area is in the 8th year of a drought," or "what impact [an] earthquake would have besides causing leaks of radioactive material into the water

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[301] *Id.* at 13 (quoting from TR at 2.6-16, 2.6-17; ER at 3.4-97, 4-6).

[302] *Id.* at 14.

[303] *id.* at 10 (referring to TR at 2.2-10).

supplies," or "how [the] risk of earthquakes and tectonic shifts would be mitigated.'[304] Finally, Petitioners suggest that a statement in ER Section 4.3.1, that "water and wind erosion are concerns at the North Trend site," indicates the importance of evaluating climate change.[305]

2. Applicant's Response to Contention A

Applicant CBR argues that Contention A is not admissible because Petitioners in it "do nothing more than set forth Petitioners' attempt to characterize as a consumptive use the non-consumptive use of water CBR is permitted to withdraw and reinject."[306] According to CBR, "[n]inety-nine percent (99%) of the water CBR withdraws is in fact reinjected."[307] Further, Petitioners' belief that there is a slow-moving plume of radioactive water in the High Plains aquifer caused by CBR's current operations is "misplaced," first, because the Brule aquifer is "not hydrologically connected to the Arikaree Aquifer," and the Arikaree is "not present in the area in question."[308] Second, according to CBR, as required by the NRC it "collect[s] quarterly uranium and radium[226] samples from the streams, impoundments and private wells located within one kilometer of an active mining unit," and the radio-chemistry of these samples "does not indicate the presence of any radioactive contamination," with the private wells all having a "uranium concentration below the drinking water standard of 0.03 mg/l."[309] In addition, CBR has installed monitoring wells "to monitor the horizontal or vertical movement of mining solutions in the Chadron and Brule formation," and according to CBR, "[i]n order for there to be a slow-moving radioactive plume of contaminated water moving through the related aquifers, such

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[304] Reference Petition at 10.

[305] *Id.*

[306] CBR Response at 3.

[307] *Id.*

[308] *Id.*

[309] *Id.*

phenomenon would have to have gone undetected" by 177 shallow monitor wells and 142 deep monitor wells in the Chadron formation, which are sampled on a bi-weekly basis.[310] CBR asserts that all other allegations are "not factually based."[311]

3. NRC Staff's Response to Contention A

In response to Petitioners' Contention A, NRC Staff argues that the "numerous allegations" Petitioners raise related to groundwater use and contamination are "immaterial to these proceedings; not adequately supported with documentation or expert opinion; and[ ] not stated with sufficient specificity to support an admissible contention."[312] Moreover, Staff urges, to the extent any of these allegations relates to CBR's current mining operation, they are "not material to this license amendment, and should be rejected."[313] The Staff treats each of 14 subparts of the basis offered by Petitioners in support of Contention A separately, in effect arguing that none on its own is an admissible contention, and otherwise making largely the same arguments with regard to each.[314] In Staff's view, Petitioners fail to provide supporting documents or expert opinion to controvert the statements in the application.[315] Further, Staff

[310] *Id.* at 3-4.

[311] *Id.* at 4.

[312] NRC Response at 20. Staff also faults Petitioners for not having provided the testimony they cite from a Nebraska Natural Resources Committee hearing, and for providing an incorrect citation for it. *Id.* n.16. We note, however, that Petitioners did later, with their Replies, provide a copy of this testimony.

[313] *Id.*

[314] We note that Petitioners do use the word "contention" in several places within what we consider to be the basis for each contention, thus providing occasion for confusion. We note further, however, that on the first page of their Petition they indicate their intent to submit only six "contentions" in NRC parlance, listing six "Admissible Contentions" identified by the letters A through F — which they indicate are "described in detail" in another part of the Petition. We consider these "detailed descriptions" to be the bases for the six contentions, and take the more generic use of the word "contention" at multiple points in these bases to be intended merely to introduce various arguments in support of the six "Contentions" listed at the beginning of the Petition. *See also* Tr. at 240-44.

[315] NRC Response at 27, 28, 29, 30, 31, 32.

argues, Petitioners provide no "basis in fact or law controverting the application," and their claims are "not a challenge to the adequacy of the application" and are therefore "insufficient to establish an admissible contention."[316]

Staff responds to Petitioners' claims regarding water use by asserting that Petitioners "have not provided expert opinions or documentation indicating that the aquifer will not be restored according to NDEQ regulations," and that the "contention" that "'restoration efforts will not meet . . . proposed goals' has no basis and is inadmissible."[317] Stating that data in the Application "demonstrat[es] that groundwater in the Chadron Formation already contains radionuclides and other inorganic constituents that render the groundwater unsafe for human consumption and, thus [ ] not 'pristine,'"[318] Staff faults Petitioners for not providing "any analytical data to the contrary or show[ing] that the Applicant is required to restore the groundwater to a more pristine level."[319] Nor, according to Staff, "have they challenged [the] factual underpinnings of the application related to groundwater restoration."[320]

Staff also argues that Petitioners' allegations regarding NDEQ standards being used to "'restore' an aquifer that is not really restored," and challenging ER 2.2, constitute "impermissible challenge[s] to the existing license conditions."[321] Staff states that "NRC's

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[316] *Id.* at 31 (citing *Rancho Seco Nuclear Generating Station*, LBP-93-23, 38 NRC at 247-48); *see also id.* at 26, 28, 29, 32.

[317] *Id.* at 26.

[318] *Id.* at 21 (citing ER at 3.4-39, 3.4-40). We also note, regarding Petitioners' reference to Table 3.4-15 of the Application showing arsenic in Brule rising from .005 to .006, to .007 in a few months in 1997," that Staff disputes the significance of this, stating that the actual arsenic level readings were 0.005, 0.003, 0.006, and 0.007, and arguing that "therefore there was not a continuous rise in the values," which are in units of parts per million, so that "the variation may reflect inherent variation in the measurement technique or natural water quality rather than a true increase in arsenic levels." *Id.* at 31 n.25.

[319] *Id.* at 21.

[320] *Id*.

[321] *Id.* at 24; *see* Reference Petition at 10.

groundwater protection program is embodied in NUREG-1569,[322] which the Staff developed at the Commission's direction."[323] Claiming that Petitioners' challenge to the Applicant's use of the NDEQ groundwater restoration standards as secondary standards is impermissible because "CBR does not propose to modify that license condition in this amendment application,"[324] Staff further argues that Petitioners' challenges to the "adequacy of the NRC's groundwater restoration standards [are] impermissible under 10 C.F.R. § 2.335(a)."[325]

Regarding "Petitioners[‘] assertion that the Basal Chadron is used by animals and people," Staff argues that this is "not a challenge to the adequacy of the application because the application provides documentation that it is unsuitable for domestic or livestock purposes."[326] "In any event," Staff argues, "without sufficient documentation to support their belief, the contention should be rejected."[327]

In the Staff's view, Petitioners have also failed to present any supporting facts or documentation for the existence of a "slow moving plume," citing legal precedent for the principle that "speculation or bare assertions that a matter should be considered are not

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[322] NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications: Final Report* (June 2003).

[323] NRC Response at 25 n.21 (citing National Mining Association; Denial of Petition for Rulemaking, 67 Fed. Reg. 44,573, 44,577 (July 3, 2002)). Staff also quotes the following language from "License Condition 10.3C":

> The secondary goal of groundwater restoration shall be on a parameter-by-parameter basis to return the average well field unit concentration to the numerical class-of-use standards established by the [NDEQ] . . . ." *Id.* at 25.

[324] *Id.*

[325] *Id.* at 32. In oral argument, Staff argued alternatively that "that license condition is not within the scope of this proceeding." Tr. at 240.

[326] NRC Response at 28 (citing TR 2.2-4).

[327] *Id.*

sufficient to allow admission of a contention."[328] Petitioners have, according to Staff, "failed to present any support, expert or otherwise, for the assertion that 'radioactive wastewater' mixes with Brule and High Plains Aquifers, or that the plume, if it does exist, poses a health threat."[329] Staff asserts that the Applicant "provides data in its Technical Report [at 2.7-37] that demonstrates hydraulic separation between the Brule and Chadron Formations," and that Petitioners provide no information to counter this.[330]

On Petitioners' references to the USGS Atlas, Staff argues that "on its face [it] cannot be used to explain the conditions at the North Trend site or to challenge the adequacy of the application."[331] Statements from the Atlas regarding the current condition of the High Plains aquifer, Staff suggests, "reflect the aquifer's condition in a global sense and do not describe the specific conditions at the North Trend site or in its immediate vicinity."[332] Because the Atlas addresses the High Plains aquifer, which covers an area of 174,000 square miles, "from a large-scale perspective," Staff insists that it is "neither instructive nor applicable to the geological conditions existing at the North Trend site."[333]

In addition, Staff argues that Petitioners' allegations, including those on climate change, drought, and earthquakes, "are beyond the scope of the proceeding"[334] and "fail[ ] to state a genuine dispute with the applicant on a material issue of fact" or to "state a basis under [ ] 10

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[328] *Id.* at 22 (citing *Fansteel, Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003)).

[329] *Id.*

[330] *Id.* at 24.

[331] *Id.* at 23-24.

[332] *Id.* at 23.

[333] *Id.*

[334] NRC Response at 27.

C.F.R. § 51.45 for requiring such a review."[335] Nor, insists Staff, do Petitioners provide any expert or "authoritative references" on climate change,[336] or "provide a basis for their claim that operations would contribute to further widespread drought."[337]

With regard to Petitioners' statements to the effect that "[l]ittle is known about the White River fault and how it may contribute to fractures that allow for movement of radioactive water when excursions occur," Staff argues that these are mere assertions insufficient to support admission of such a "contention," and that Petitioners "provide no basis in fact [or] documentation to support this assertion or demonstrate how the proposed operation impacts the White River fault or vice versa."[338] According to Staff, Petitioners additionally "fail to provide sufficient information or expert opinion to support a review beyond 2.25 miles."[339] Relying on NUREG-1569, which "states that applicants should consider water usage onsite and within a 2 mile radius of the proposed facility," Staff points out that Applicant has stated "that it used a 2.25 mile radius to be consistent with previous historical studies that also used a 2.25 mile radius,"[340] and that the Application "provides an analysis of specific distances using the methodology contained in NUREG-1569 and NUREG-1748."[341]

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[335] *Id.*

[336] *Id.* at 32.

[337] *Id.* at 21.

[338] *Id*. at 24 (citing *Fansteel*, CLI-03-13, 58 NRC at 203); *see also id.* at 31-32; Reference Petition at 9, 14.

[339] NRC Response at 26-27 & n.23 (citing Reference Petition at 10; NUREG-1569); *see also id.* at 33.

[340] *Id.* at 27 n.23 (citing NUREG-1569 at 2-4; TR at 2.2-1.24).

[341] *Id.* at 27 n.24.

Finally, regarding Petitioners' reference to CBR purportedly "admit[ing] that failures with its Chadron well casing caused increased Uranium and Radium-226 in the Brule well,"[342] Staff asserts that Petitioners take Applicant's statements out of context.[343] What is actually referred to, according to Staff, is a statement from a section of the Application describing "[a] pre-application monitoring program that the applicant undertook 'to establish baseline groundwater quality conditions in the North Trend area,'" involving two monitoring wells, one in the Chadron aquifer and a well in the Brule aquifer.[344] Staff argues that, contrary to Petitioners' implication "that the Applicant's operations have contaminated or will contaminate the Brule aquifer," the "wells and readings that Petitioners refer to were for testing of *baseline* groundwater conditions and are not related to operations under the proposed license amendment."[345]

Staff states that, "[d]uring this baseline monitoring, which took place in 1996 and 1997, readings in the Brule well were higher than expected, leading the applicant to conclude that 'integrity problems with the Chadron well casing may have had an impact on the water quality in the Brule well,' but that "[i]n fact, the ER notes that the Chadron well in question has been 'plugged and abandoned.'"[346] Again, Staff argues, Petitioners provide "no basis for their allegation that disputes the Applicant's data indicating that the Brule and Chadron aquifers are hydraulically separated."[347]

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[342] *Id.* at 30 (citing ER at 3.4-83); *see* Reference Petition at 13.

[343] NRC Response at 30.

[344] *Id.*

[345] *Id.* (emphasis in original).

[346] *Id.*

[347] *Id.*

B. Contention B: Alleged Environmental and Health Impacts

Petitioners in Contention B state:

> ISL Mining is NOT Environmentally Friendly; ISL Mining May Have Caused Health Impacts at Pine Ridge Indian Reservation Closing 98 Wells.[348]

1. Petitioners' Support for Contention B

Stating that CBR "claims throughout the Application and in public testimony that its ISL mining process is proven and environmentally friendly," Petitioners state that the "basis for the contention[ ] is that CBR gives a mis-impression 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." They assert that the issue they raise is within the scope of this proceeding "because CBR seeks to expand its operations on the basis that it is a less harmful alternative to open pit uranium mining but CBR fails to take responsibility for environmental damage caused by its form of ISL mining." Materiality is asserted, based on the NRC being "required to determine whether CBR's current operation and proposed operation is in the best interests of the general public," with "environmental safety [being] key to that determination."[349]

Petitioners allege as fact that "CBR is responsible for several leaks including a 300,000 gallon leak of which only 200,000 gallons w[ere] cleaned up[;] a 25,000 [square foot] contamination[;] and a two year long . . . leak [from a broken coupling] of at least one (1) gallon per hour of radioactive waste."[350] Petitioners contend that "[t]hese leaks migrated and may have

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[348] Reference Petition at 1, 15.

[349] *Id.* at 15.

[350] *Id.*; *see also id.* at 3, wherein Petitioners cite a statement in the July 8, 1997, Chadron Record, to the effect that the two-year leak from the broken coupling resulted in an unknown amount of contamination of at least 8,760 gallons per year, which Petitioners state was incorrect and should have been '535,600 gallons per year.' *Id.* at 3 n.2. Regarding the alleged 25,000 square foot leak, this contaminated the Brule aquifer in 1996, according to Petitioners. *Id.* at 3. At oral argument Petitioners indicated that the 300,000 gallon leak spilled onto the frozen White

caused the contamination of 98 water wells on Pine Ridge Indian Reservation."[351] Noting CBR's claim in its Application "that it believes that its operations result[ ] in minimal short term impacts and no long term impacts," Petitioners state that they believe that CBR's "operations result in major short term and long term adverse impacts."[352] Petitioners challenge sections of the Application in which Applicant, referring to operations under its current license, claims (1) that "[p]roduction of uranium has been maintained at design quantities throughout that period with no adverse environmental impacts," (2) that "the current commercial project, including the successful restoration of groundwater . . . demonstrates that such a program can be implemented with minimal short-term environmental impacts and with no significant risk to the public health or safety," and (3) that it has "environmental monitoring programs . . . to ensure that any impact to the environment or public is minimal."[353]

In support of their arguments Petitioners again quote the statement from ER 5.4.1.3.2 that "[s]ince ISL operations alter the groundwater geochemistry, it is unlikely that restoration efforts will return the groundwater to the precise water quality that existed before operations."[354] Noting references in the Application to a number of "excursions," or movements of water used in the mining process out of the wellfield area, Petitioners argue that these call into question CBR's claims of minimal environmental impact.[355] Petitioners quote the following from the Application in support of this argument:

River, stating that "it would have been much worse and none of it probably would have been cleaned up if it were summertime." Tr. at 289.

[351] Reference Petition at 15.

[352] *Id.*

[353] *Id.* at 15-16 (quoting from TR at 1-2, 1-6; ER at 4-12, 5-24).

[354] *Id.* at 16 (emphasis omitted).

[355] *Id.*

> ER 4.4.3.2 Impacts on Groundwater Quality
>
> In addition to uranium, other metals will mobilize by the mining process. This process affects the mining zone, which must be exempted from Clean Water Act protections by the NDEQ and the EPA under the aquifer exemption provisions of the State and Federal UIC regulations.
>
> Excursions represent a potential effect on the adjacent groundwater as a result of operations. During production, injection of the lixiviant into the wellfield results in a temporary degradation of water quality in the exempted aquifer compared to pre-mining conditions. Movement of this water out of the wellfield results in an excursion.
>
> Excursions of contaminated groundwater in a wellfield can result from an improper balance between injection and recovery rates, undetected high permeability strata or geologic faults, improperly abandoned exploration drill holes, discontinuity and unsuitability of the confining units which allow movement of the lixiviant out of the ore zone, poor well integrity, and hydrofracturing of the ore zone or surrounding units.
>
> To date, there have been several confirmed horizontal excursions in the Chadron sandstone in the current license area. These excursions were quickly detected and recovered through overproduction in the immediate vicinity of the excursion. In all but one case, the reported vertical excursions were actually due to natural seasonal fluctuations in Brule groundwater quality and very stringent upper control limits (UCLs).
>
> In no case did the excursions threaten the water quality of an underground source of drinking water since the monitor wells are located well within the aquifer exemption area approved by the EPA and the NDEQ. Table 4.4-1 provides a summary of excursions reported for the current license area.[356]

Another argument raised by Petitioners is that, according to the Application, CBR "does not perform any ecological monitoring at the current licensed operation," and that it "does not propose to perform any ecological monitoring for the North Trend Expansion Area," based on its discussion of ecological impacts elsewhere in its Application.[357] They further note a reference in the Application to a recent amendment to its current license authorizing an increased flow rate, along with a reference to an estimated "corresponding [22%] increase in the emission of radon-222 from the current operation" that would "have a cumulative effect" with the license

[356] *id.* at 16 (quoting from ER at 4-12, 4-13).

[357] *Id.* at 17 (citing ER at 6-60).

amendment request at issue herein.[358] Petitioners contend that the Application "should state the currently effective increases in Radon-222."[359]

Petitioners cite an example of "heavy rains push[ing the] water table up to high levels and caus[ing] Excursions . . . in June and July [of] 2005," to support an argument that "CBR must do climate change analysis due to the impact of rains and flooding on the safety of its operations."[360] In this regard, Petitioners cite the Application for statements that the "North Trend area drains into the White River," which flows "Northeast towards the Pine Ridge Indian Reservation," and that the "White River is subject to fluctuating water levels and flooding," among other things.[361]

Petitioners also quote the following section, regarding community water supplies:

> ER 3.4.1 - In summary, there is no domestic groundwater use of the Basal Chadron Sandstone within the North Trend Expansion Area. Two residences are supplied by wells completed in the Brule Formation. Based on population projections (see Section 3.10), future water use within the North Trend Expansion Area and the 2.0-mile review area likely will be a continuation of present use. It is unlikely that any irrigation development will occur within the license area due to the limited water supplies, topography, and climate. Irrigation within the review area is anticipated to be consistent with the past (e.g., limited irrigation in the immediate vicinity of the White River). It is anticipated that the City of Crawford municipal water supply will continue to be provided by the groundwater and infiltration galleries related to the White River and associated tributaries.[362]

Petitioners contend that in the preceding "CBR fails to consider climate change, drought conditions[,] and that Crawford's water supply comes from the White River," and that "the North

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[358] *Id.*

[359] *Id.*

[360] *Id.* at 16-17.

[361] Reference Petition at 17 (quoting TR at 2.2-21, ER at 3.5-16).

[362] *Id.* (quoting from ER at 3.4-41).

Trend project drains into the White River[,] meaning that the community water supplies may be contaminated with radioactive waste from the CBR mine."[363]

Petitioners also challenge, among others, various parts of the following sections of the Application, all relating to potential impacts on the environment and public health and safety: ER 3.11.1.2 – Potential Declines in Groundwater Quality; ER Table 3.11-1 – Excursion Summary; ER 4.4.3.3 – Potential Groundwater Impacts from Accidents; TR 2.6.2.8 – Conclusions - Site Geology and Confining Strata; ER 1.3.2.5.2 – Liquid Waste Disposal; ER 3.11.2.1 – Exposures from water pathways; ER 3.11.2.2 – Exposures from Air Pathways; and ER Figure 4.12-1 – Human Exposure Pathways for Known and Potential Sources from North Trend.[364]

Regarding ER 3.11.1.2 – Potential Declines in Groundwater Quality, Petitioners quote language referring to "several confirmed horizontal excursions in the Chadron sandstone in the current license area" and stating among other things that these "were quickly detected and recovered," and that

> [t]he long term impacts on groundwater quality should also be minimal, as restoration activities have been shown to be successful in returning the groundwater quality to background or class of use standards. Additionally, there is no mechanism in EPA or NDEQ regulations to "unexempt" an aquifer. Therefore, the groundwater in the immediate mining area will never be used as a USDW. The primary purpose for restoration is to ensure that postmining conditions do not affect adjacent USDWs.[365]

Petitioners disagree with the conclusions of the Applicant in ER 3.11.1.2, contending that "[t]he long term impacts on groundwater quality are major," and that "restoration activities are not the

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[363] *Id.* at 18. Petitioners also make a reference to the Environmental Justice section of the Application (TR 2.3.3), and cite TR Section 2.4.1, which states that "Harvey Whitewoman of the Oglala Sioux called before the follow up calls were begun to ask what effect the proposed project might have on water quality," asserting that "[n]o one answered the questions of Harvey Whitewoman of the Oglala Sioux Tribe concerning the impact on the water quality." *Id. See also infra* § VI.C.

[364] *See* Reference Petition at 18-21.

[365] *Id.* at 18 (quoting from ER at 3.11-3). USDW is an acronym for "underground source of drinking water." *See* ER at 3.11-1.

same as returning the water to non-radioactive condition because of movement of the radioactive material." They question Applicant's knowledge that the excursions have not affected any drinking water, as well as the effects of excursions on "water that feeds grass that is eaten by deer and other wildlife."[366] Petitioners note that six "excursions of mining solution into the water table, one surface leak and problems with a high water table due to heavy spring rains" are to be found in ER Table 3.11-1, arguing that such problems "would likely worsen due to climate change."[367]

Petitioners quote the following from ER 4.4.3.3, which concerns "Potential Groundwater Impacts from Accidents":

> Groundwater quality could potentially be impacted during operations due to an accident such as evaporation pond leakage or failure, or an uncontrolled release of process liquids due to a wellfield accident. If there should be an uncontrolled pond leak or wellfield accident, potential contamination of the shallow aquifer (Brule), as well as surrounding soil, could occur. This could occur as a result of a slow leak or a catastrophic failure, a shallow excursion, an overflow due to excess production or restoration flow, or due to the addition of excessive rainwater or runoff.
>
> Over the course of the current licensed operation, CBR has experienced several leaks associated with the inner pond liner on the commercial evaporation ponds. **These small leaks are virtually unavoidable since the liners are exposed to the elements.**[368]

Petitioners argue that "CBR's admission that leaks of radioactive material are unavoidable means they cannot be considered an environmentally friendly operation," and that TR Sections 2.5.1 and 2.5.3 also "fail to account for climate change and current drought conditions."[369]

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[366] Reference Petition at 18.

[367] *Id.*

[368] *Id.* at 19 (emphasis added by Petitioners).

[369] *Id.* at 19; TR Sections 2.5.1 and 2.5.3 concern meteorological conditions in the region surrounding the North Trend Expansion Area and precipitation in the region.

Citing provisions of TR 2.6.2.8 ("Conclusions - Site Geology and Confining Strata") relating to the "very fine grain sizes" of clay minerals and referring among other things to "the vertical hydraulic conductivity of the confining shales and clays overlying and underlying the Basal Chadron Sandstone [being] on the order of 10^{-10} cm/sec, or lower," Petitioners contend this "shows conductivity between aquifers which means there is slow movement between radioactive material deposited in the Brule aquifer and the Chadron aquifer which has been mined."[370]

Petitioners counter statements found at ER 1.3.2.5.2 ("Liquid Waste Disposal"), to the effect that "CBR has operated [a] deep disposal well at the current license area for over ten years with excellent results and no serious compliance issues," and that "CBR expects that the liquid waste stream at the North Trend Satellite Facility will be chemically and radiologically similar to the waste disposed of in the current deep disposal well," by reference to CBR's prior leaks and excursions.[371]

Finally, Petitioners challenge the Application's statements regarding radioactive doses to human beings, submitting that certain dosage amounts from radon — estimated at ER 3.11.2.2 to be 23.2 mrem/yr (0.232 mSv/yr) to the most effected resident, or 23.2% of 100 mrem/yr dose constraint[372] — "are now doubled by [an] existing increase in upflow to 9,000 gpm and should be recalculated since [the upflow] results in increased Radon-222 emissions."[373] Petitioners also cite the Application for their argument that "ingestion of meat, air, dust, water would cause

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[370] *Id.* at 19.

[371] *Id.* at 19-20. In the "Relevant Facts" section of their Reference Petition, Petitioners argue that this history of leaks and excursions "contradicts CBR's statements that they have operated without any environmental impacts and indicates that CBR should not be allowed to expand." *Id.* at 3 and n.1, 2.

[372] Reference Petition at 20 (quoting from ER at 3.11-4, 3.11-5).

[373] *Id.* at 21.

health impacts to the residents of the area with[in] an 80 Km radius from the site," and that "there is no such thing as a safe low dose of radiation and that cumulative effects of these contaminations causes adverse health impacts."[374]

2. Applicant's Response to Contention B

Applicant characterizes as erroneous all of Petitioners' allegations, and, regarding the alleged 1996 leak, states that Petitioners "mischaracterize" it. According to CBR, the facts about this leak are:

> During 1996 injection well I 196-5 failed the five year mechanical integrity test. Subsequent investigation determined that the leak had contaminated an area in the shallow aquifer around the well. Wells were drilled in the area to delineate the area of contamination. A remediation plan was prepared and submitted to NRC and the NDEQ on May 28, 1996. On August 19, 1999, the NDEQ, upon review of the restoration data, determined that the affected waters had been returned to or brought within acceptable levels of baseline conditions and declared that the restoration efforts had been successful. This excursion and all other excursions have been successfully remediated.[375]

3. NRC Staff's Response to Contention B

Staff argues that Contention B "should be rejected [as] outside the scope of this proceeding," and because it alternatively fails to show a genuine dispute on a material issue of fact or law, or fails to provide supporting expert opinions.[376] Asserting that issues relating to CBR's compliance history "are not at issue in this amendment proceeding," Staff argues that its review of CBR's license amendment request is "limited to a whether the amendment application satisfies the requirements under 10 C.F.R. § 40.31(h) and 10 C.F.R. § 51.45."[377] In Staff's view, Petitioners' arguments based on prior spills, excursions, and contamination are in effect an

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[374] *Id.* (citing ER Figure 4.12-1, regarding "Human Exposure Pathways for Known and Potential Sources from North Trend").

[375] CBR Response at 4.

[376] NRC Response at 33 (citing 10 C.F.R. § 2.309(f)(1)(iii), (v), (vi)).

[377] *Id.* at 34.

"attempt to transform these proceedings into an enforcement proceeding," but that "[a]ny request for enforcement action or desire to raise compliance issues should be submitted pursuant to 10 C.F.R. § 2.206."[378] Nor, argues Staff, do Petitioners' references to past activities "contain any specific claim of inadequacy with respect to the current amendment application's sufficiency in satisfying NRC requirements."[379] Moreover, Staff urges, any allegations challenging "the fitness of CBR as an ISL operator . . . are not applicable to the adequacy of the Application or a legal requirement in this amendment."[380]

According to Staff, none of Petitioners' claims address any requirements relevant to the amendment Application, "nor do they demonstrate how the applicant's evaluation of environmental impacts is in error," nor is the claim that ISL operations are not environmentally friendly "a challenge to the adequacy of the Application."[381] Further, Staff argues, Petitioners' beliefs regarding "major short term and long term adverse impacts" are "unsupported by any authoritative references or expert opinions contradicting the applicant's review of adverse impacts in the environmental report [at] 4.1-48, 8-3."[382]

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[378] *Id.* (citing Reference Petition at 4).

[379] *Id.* at 35.

[380] *Id.* at 34 (citing Reference Petition at 15, and Petitioners' references to CBR giving a "mis-impression 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"; to CBR being responsible for several leaks that "migrated and may have caused the contamination of 98 water wells on the Pine Ridge Indian Reservation"; to CBR "fail[ing] to take responsibility for environmental damage caused by its form of ISL mining"; to CBR's operations resulting in "major short term and long term adverse impacts"; and to CBR being "responsible for several leaks including a 300,000 gallon leak . . . [which] may have migrated and may have caused the contamination of 98 water wells on Pine Ridge Indian Reservation").

[381] NRC Response at 35.

[382] *Id.*

Staff makes the following additional arguments regarding Petitioners' references to various sections of the Application: On Petitioners' assertions that "CBR's excursions call into question its claim to have only a minimal impact on the environment," Staff argues this shows no genuine dispute with the applicant on a material issue of fact or law, and alleges no "deficiency in the Application that is supported by documentation or expert opinion."[383] According to the Staff, Petitioners misunderstand the term "excursion." It does not, Staff asserts, mean a release of radioactive material; "in reality [it] is an increase in concentration of non-radioactive ions in the monitoring well."[384] Staff also repeats its argument in response to Contention A that climate change and drought are outside the scope of this proceeding, citing 10 C.F.R. Part 51, and notes, regarding the November 2007 license amendment NRC granted to CBR, that the 22 percent increase in radon emissions has been addressed by CBR.[385]

Staff argues that Petitioners "fail to demonstrate the manner in which drought affects the adequacy of the application, since the City of Crawford obtains its water from the White River which, according to the application is hydraulically isolated from the Basal Chadron Formation at North Trend."[386] In addition, Staff avers, "Petitioners have provided no expert opinion or facts to support the claim that the North Trend operation will contaminate either the White River or Crawford's water supply" and "[t]hus, this basis for the contention is inadequate to support admission of the contention."[387]

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[383] *Id.*

[384] *Id.* Staff at oral argument revised this statement somewhat, stating that "an excursion does not *necessarily* mean a release of radioactive material offsite." Tr. at 246 (emphasis added).

[385] NRC Response at 36.

[386] *Id.* (citing TR at 2.7-9).

[387] *Id.*

Regarding long-term impacts on groundwater quality, Staff argues that Petitioners fail "to provide sufficient information or expert opinion" to support their contention. Noting that groundwater restoration is addressed in the application, Staff considers Petitioners' questions to be "mere conjecture" that is unsupported and fails to "present a genuine dispute with the Applicant on a material issue of fact."[388]

Staff describes "Petitioners' conclusion that 'CBR's admission that leaks of radioactive material are unavoidable means that they cannot be considered an environmentally friendly operation'" as not "relevant to the adequacy of the application," noting that "[t]he regulations require that the application include an evaluation of the environmental impacts of the amendment, and this contention by petitioners does not appear to challenge the content of that evaluation."[389] Pointing out that "the ponds in question have both an inner and outer liner which act[ ] as a barrier to leaks," and that "the application states that CBR monitors groundwater around their ponds to detect potential releases from the ponds," Staff asserts that "Petitioners do not dispute any of these statements in the application nor do they indicate a premise with supporting bases to challenge the conclusions of the application in this regard."[390] Thus, Staff asserts, the contention should be rejected, because it "does not raise a genuine dispute with the Applicant on a material issue of fact or law and is not a challenge to the adequacy of the application."[391]

On Petitioners' reference to "a one gallon per hour leak from a coupling for two years and . . . one or more excursions from its disposal well," Staff also claims that Petitioners "fail to specifically identify a genuine dispute with the Applicant on a material issue of law or fact

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[388] *Id.* at 36-37 (citing ER at 5-18 to 5-30, TR at 6-1 to 6-16).

[389] *Id.* at 37.

[390] *Id.* (citing ER at 4-15; 6-59 to 6-60; TR at 4-5 to 4-7).

[391] *Id.*

related to the amendment application, [fail] to explain how their allegation of excursions at the current facility is relevant to this amendment application," and fail to provide any reference to specific facts, portions of the Application, or actual supportive documents.[392]

With respect to Petitioners' arguments on dosage-related issues, Staff first argues that "claims concerning the effects of an increase in upflow to 9,000 gpm are outside the scope of this proceeding because the increase they refer to relates to a different amendment application," adding that Petitioners' allegations lack any support.[393] Staff asserts that other statements regarding dose are unsupported as well, and calls the allegation that there is "no such thing as a safe low dose of radiation" an "impermissible attack on NRC regulations that set maximum permissible doses."[394] Arguing that "Petitioners do not allege or provide documentation or expert opinion supporting a claim that the current amendment application will result in activities that fail to meet NRC dose limits," Staff says Petitioners "offer no supporting documentation or expert opinion that 'cumulative effects of these contaminations causes adverse health impacts' nor explain how their health would be adversely impacted by operations described in the application."[395]

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[392] *Id.* at 38.

[393] *Id.* at 39. Staff states that the March, 2007, amendment application:

> requested an increase in the processing plant throughput at the main facility. NRC's review of this throughput amendment involved an assessment and confirmation of the additional dose contributed by the new ion exchange columns. Because the new columns will be pressurized downflow columns instead of the original upflow columns, radon remains in solution and only gets vented when the resin is removed and through wellfield. Therefore, doses to workers and the public would not double, as alleged by the petitioner.

Id. at 39 n.27 (citing Letter from Stephen P. Collings to Gary Janosko (Oct. 17, 2006) at 5-6 (ADAMS ML063390348)).

[394] NRC Response at 39-40 (citing 10 C.F.R. § 20.1301).

[395] *Id.* at 40.

4. Petitioners' Replies Regarding Contentions A and B

In response to Applicant and Staff's factual arguments relating to the High Plains aquifer, Petitioners argue among other things that they do present genuine disputes on material issues, that both new geologic mapping and the Application's indication of the need for further testing and investigation support their own arguments regarding conductivity and mixing of aquifers, and that a "hearing and expert testimony is required to ascertain the amount of mixing and whether it poses a threat."[396] They emphasize that water asserted to be unusable is actually currently being used, cite an example of drought in recent dryness of Squaw Creek, and offer arguments including that they are not required at this point to support their contentions with documents or expert opinions.[397]

5. Additional Argument on Contentions A and B at January 16, 2008, Oral Argument

Among the arguments made by Petitioners at oral argument is the assertion that the water "consumption versus restoration" issue they raise is supported by the requirement at 10 C.F.R. § 51.45(b)(5) that an applicant's environmental report must discuss "[a]ny irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."[398] According to Petitioners, this supports their argument that the contention is within the scope of the proceeding, and suggests that the NRC cannot examine this issue if the impression Applicant gives is that there is no "substantial commitment of

[396] Cook Reply to CBR at 9; *see also id*. at 6-9; Cook Reply to NRC at 8, 11-13; Owe Aku Reply to CBR at 9; Owe Aku Reply to NRC at 11-14.

[397] Cook Reply to NRC at 9-10.

[398] 10 C.F.R. ¶ 51.45(b)(5); *see also* Tr. at 197.

resources."[399] Moreover, Petitioners argued, this also suggests the need for an environmental impact statement.[400]

In support of Contentions A and B and their arguments on mixing of water from different aquifers and related issues, Petitioners also presented the NDEQ letter and review (Exhibit B) on which we rule above and which we discuss further below. Petitioners cited NUREG CR-6870, "Consideration of Geochemical Issues in Groundwater Restoration at Uranium in Situ Leach Mining Facilities," in support of their argument that groundwater after Applicant's mining and restoration contains more radioactivity, also asserting that the water at issue is in fact used for drinking water.[401] Arguing that because NUREGs are "legal guidance," Petitioners contended they should be able to use them in their reply arguments to Applicant's and Staff's response arguments.[402]

As to long term effects, Petitioners reiterated that once an aquifer has been exempted it cannot be unexempted, and that "[t]herefore, the groundwater in the immediate mining area [would] never be used as U.S. drinking water."[403] Petitioners argued that this itself "conflicts

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[399] Tr. at 197-98.

[400] *Id.* at 198.

[401] *Id.* at 205-07.

[402] *Id.* at 274. Applicant through counsel argued that, although some NUREGs are guidance, others are contractor reports that deal more with facts. *Id*. at 275. In support of this argument, Staff at oral argument read language from NUREG CR-6870, including that the report "summarizes the application of a geochemical model to the restoration process to estimate the degree to which a licensee has decontaminated a site where the leach mining has been used," and that, "[t]oward that end, this report analyzes the respective amounts of water and chemical additives pumped into the mine regions to remove and neutralize the residual contamination using ten different restoration strategies," and "also summarizes the conditions under which various restoration strategies will prove successful." *Id*. at 277-78.

Petitioners also cited the NUREG for a reference to a "1979 Kaiser report," in which minerals that can be mobilized by the ISL process are identified as including arsenic, uranium, thorium, radium, radon and respective daughter products. *Id.* at 291-92.

[403] Tr. at 272.

with the primary goal of restoration . . . to return it to the baseline." In addition, according to Petitioners, "if we have intermixing with other aquifers that flow at different rates . . . that then goes to the long-term effects."[404] Indications of geological differences between CBR's current and proposed sites, evidence of fractures and faults, and lack of information and knowledge about the extent of these in the area of the proposed North Trend expansion site support their contention that mixing among aquifers likely occurs, Petitioners emphasized.[405] Stating that Bruce McIntosh, Chairman of WNRC and a scientist, believes the slow-moving plume asserted in their Petition in fact exists,[406] Petitioners also argued that the existence of conductivity between aquifers provides "common sense" support for this assertion.[407]

Regarding Staff's materiality arguments, Petitioners contended that the "[c]urrent operation is clearly material not because it's already licensed but because they are intending to replicate it in the North Trend expansion." Their major dispute is with Applicant's view that "its operations result in minimal short-term impacts and no long-term impacts," when they believe that short- and long-term impacts will be "major."[408] Because the proposed operation would be a "self-monitoring, self-regulating entity," there is no control or check on the operation's impacts, Petitioners argued.[409] In addition, Petitioners emphasized Applicant's "failure to consider climate change, drought conditions, . . . and that the North Trend project drains into the White River."[410] With regard to climate change, Petitioners argued that they are not challenging any

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[404] *Id.* at 273.

[405] *Id.* at 207-10.

[406] *Id.* at 210-11.

[407] *Id.* at 211.

[408] Tr. at 279.

[409] *Id.* at 280.

[410] *Id.* at 281.

regulation, because "[t]he regulations say the effect on the environment has to be considered [and] climate change is part of the environment," which is a matter of "common knowledge."[411]

On the contamination of wells on the Pine Ridge Reservation, Petitioners stated that it was the Tribal Water Program that closed the wells,[412] asserting also that Shannon County, where the Reservation is located, is the "second poorest county in the country."[413] Petitioners contended this contamination was a result of Applicant's operation, and stated that the information they had on this was in Ms. White Plume's home when it burned,[414] but that they would like the opportunity to duplicate this information for this proceeding.[415] On causation, Petitioners admitted that they could not at the time prove the source of the contamination, but stated through counsel that, "if these wells are on the part of the reservation closest to the site where the mining is occurring and it's where the fault runs, and . . . there may be a mixture of the aquifers," this suggests a relationship, particularly in light of spills from Applicant's current operation, regarding which Petitioners suggested Applicant should provide more information.[416]

In response to the Reservation well closings, Staff indicated that these occurred when EPA changed the maximum level of arsenic that is allowable in drinking water, suggesting that this indicates that the well closings "[do not] necessarily point to any contamination coming from elsewhere."[417] Staff also among other things reiterated its argument that Petitioners cannot challenge the standards for water restoration, relying on 10 C.F.R. § 2.335(a) and urging that

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[411] *Id.* at 301-02.

[412] *Id.* at 286.

[413] Tr. at 282.

[414] *See supra* n.14.

[415] Tr. at 285-286.

[416] *Id.* at 288.

[417] *Id.* at 295.

the license conditions are thus "not at issue in this license proceeding," and, like everything else relating to the current license, "not within the scope of this proceeding."[418] Following up its argument relating to the USGS, Staff suggested that, in indicating that effects on the High Plains aquifer "in this section of Nebraska have not been drastic as opposed to the effects in other areas," the USGS "rather than supporting their contention . . . actually goes against it."[419] On more specific points, Staff stated through counsel that conductivity of "1 times 10 to the minus 10 centimeters per second" is "incredibly low."[420]

Regarding the liner leaks, Staff conceded that surface water drainage into the White River "would be a concern," but faulted Petitioners for providing no support to challenge Applicant's monitoring program.[421] Petitioners pointed out, *vis-à-vis* the 34-mil evaporation pond liners, that "even Home Depot sells 50 mil."[422] Staff countered that there are two liners, the outer one of which actually prevented a leak on the occasion in question.[423]

Applicant at oral argument argued that Petitioners provide "no basis" for their disagreements.[424] In addition, Applicant made various statements of its views about the actual facts relating to its Application,[425] arguing that "there is no evidence that there has been any — that there would be any mixing or connection between the Brule Aquifer or any of the overlying

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[418] *Id.* at 238, 240, 244; *see id*. at 238-40, 244-45.

[419] *Id.* at 251.

[420] *Id.* Staff also stated, regarding conductivity in general, that flow velocity is "gradient times conductivity divided by porosity." *Id.* at 252.

[421] Tr. at 297-98.

[422] *Id.* at 284-85.

[423] *Id.* at 296.

[424] *Id.* at 255.

[425] *Id.* at 255-56.

aquifers in the Basal Chadron."[426] Applicant agreed that there could "potentially" be fractures between the Chadron, Brule and High Plains aquifers, but argued that "that could not occur in the area of the [proposed] site," at least in part because water there moves "on the order of 10 feet per year."[427] Applicant argued that anything related to the aquifer exemption process is out of the scope of this proceeding, even though it "is important as to whether or not the project goes forward."[428]

With regard to the 300,000 gallon spill, this was said to be "a spill into the shallow aquifer that came from an incomplete casing, a problem with the casing of the well," and that, because it was into a shallow aquifer, "that aquifer was actually pumped and treated and was fully restored to baseline water quality and not just secondary standards but all the way back to baseline water quality."[429] This, argued Applicant's counsel, "demonstrates just additionally that there are processes in place to control any excursion which in the history of the current facility have been few and far between."[430] Moreover, for "those that have been[, CBR has] been able to respond to quickly and reverse any problems before they migrated offsite or even out of the mining area."[431]

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[426] Tr. at 257.

[427] *Id.* at 265.

[428] *Id.* at 300.

[429] *Id.*

[430] *Id.*

[431] *Id.* at 301.

6. Licensing Board's Ruling on Contentions A and B

We begin by noting once more that in Exhibit B the Nebraska Department of Environmental Quality, apparently considering information that is essentially the same as that contained in the Application at issue,[432] raises, on a much more sophisticated level, many of the same concerns that Petitioners raise in their Reference Petition. We note further that the Corrected Reference Petition, to which we will refer herein as the Petition, is essentially identical to the Petitions originally filed by Petitioners, at that time acting *pro se.* Thus, even though they later retained counsel, it would not be appropriate to hold the Petition itself "to those standards of clarity and precision to which a lawyer might reasonably be expected to adhere,"[433] particularly as, under the new procedural rules in 10 C.F.R. Part 2, it is not permissible for counsel to file an amended petition in such circumstances.[434]

It is perhaps owing to this situation that, as with the other contentions, Contention A and B of the Petition consist largely of references to, quotations from, and comparisons between language from various sections of the Application, noting some inconsistencies and pointing out some statements they challenge by reference to other statements therein. There is nothing that prohibits such an approach, however. Expert support is not required for admission of a contention; a fact-based argument may be sufficient on its own.[435] We note, indeed, that even the Staff does not disagree that Petitioners may base contentions on internal inconsistencies in

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[432] *See supra* text accompanying n.60.

[433] *Salem*, ALAB-136, 6 AEC at 489. The Appeals Board in *Salem* opined that, "[w]hile a totally deficient [contention] may not be justified on th[e] basis [that it was prepared by a non-lawyer], at the same time . . . a *pro se* petitioner should [not] be held to those standards of clarity and precision to which a lawyer might reasonably be expected to adhere." *Id.*

[434] *See supra* n.254.

[435] *See Oconee*, CLI-99-11, 49 NRC at 342.

an Application, provided that they explain "why, if it's not obvious[,] why there is an inconsistency or why they disagree."[436]

Petitioners provide explanations for most such arguments in Contentions A and B. It is true that many of these are less than perfectly articulated, and some lack an ideal level of support. Some, however, albeit somewhat inartfully, do raise significant questions concerning the lack of information about fractures, faults, conductivity between aquifers, and related issues, as well as about the potential environmental, health, and safety impacts of these.

We note, for example, Petitioners' references to leaks, including the spill onto the frozen White River — which according to the Application flows toward and then into the Pine Ridge reservation, as discussed in the standing section above.[437] And Petitioners provide information about current usage of well water for drinking — including from the same Basal Chadron aquifer from which Applicant proposes to mine — which, notwithstanding Applicant's and Staff's arguments that this either does not (or *should not*) occur or is irrelevant, would appear to be significant with regard to the question of health and safety impacts of the proposed project at issue. To ignore this information is obviously not appropriate. And the information is corroborated by statements in Exhibit B,[438] as are assertions regarding possible conductivity between aquifers.[439] In addition, we note Petitioners' pointing out of places in the Application that indicate a lack of complete information, which is of course bolstered by Exhibit B.[440]

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[436] Tr. at 247-48; *see id*. at 249.

[437] *See supra* text accompanying nn. 230-33, 240.

[438] *See* Exhibit B, Detailed Review at 16-17. With regard to the Anders well, although it is outside the actual site boundary, it is, as noted by the NDEQ, between CBR's current and proposed sites and very close to both — one mile from one, a mile and a half from the other. *Id.* at 16. *See also supra* text accompanying nn.79-81, 190-92.

[439] *See supra* text accompanying nn.70-78.

[440] *See id.*

With regard to Applicant's argument that there is nothing in Exhibit B that "calls into question the license application's conclusion that the Basal Chadron is hydraulically separated from the Brule aquifer," or shows any new harm or threat distinct from CBR's current operation,[441] we do not agree that any threat of harm from the proposed expansion is "speculative" and "bordering on the physically impossible."[442] And as to Staff's faulting of Exhibit B for not specifically indicating which if any faults are located "anywhere near the proposed site," and arguing that the document is "completely unrelated to this NRC proceeding"[443] — again, these are belied by Applicant's indication that the information underlying it is essentially the same as that at issue herein. For the same reasons discussed above in section III.A.2, we find the information in Exhibit B to be persuasive and strong support for Petitioners' arguments regarding the inadequacy of the Application in addressing issues of conductivity, at least between the Chadron and Brule aquifers, and between groundwater and the White River. Taking this in conjunction with Petitioners' references to prior excursions and spills, including that onto the frozen White River, we find that Petitioners have sufficiently supported Contentions A and B.

The information regarding prior leaks and spills is relevant because the Application itself relies on CBR's prior mining operations as an indication of how it would conduct its proposed new operation. It would be manifestly unfair not to permit the Petitioners also to use such historical information. Regarding any new harm or threat from the proposed new operation,

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[441] CBR Response to Exhibits at 13. We note that these statements were made in opposition to standing but we consider them as well with regard to Contentions A and B, to give Applicant the benefit of the doubt on these issues.

[442] *Id.*

[443] NRC Response to Exhibits at 9. As with the Applicant's response, we give the Staff the benefit of the doubt and include its arguments not only on these contentions but also insofar as they oppose standing, which of course demands a lower standard than for contentions, so that any arguments against use of the document in support of standing would logically also apply against the contentions.

although any increased threat to others might not be so dramatic, Dr. Anders' well, located between CBR's existing and proposed mining sites, illustrates very distinctly the potential for any existing harm or threat to public health from current operations being in effect almost doubled by the proposed new project in his case.

Moreover, issues relating to threats to public health and safety and potential impacts on the environment arising out of water quality issues are clearly within the scope of this proceeding, and material to the decision whether to grant or deny the requested license amendment.[444] Petitioners provide a fact-based argument that, supported by Exhibit B, clearly satisfies the "brief explanation" and "specific" and "concise statement[s]" requirements of the rule.[445] They provide extensive specific references to the Application, basing, as required under 10 C.F.R. § 2.309(f)(2), their allegations on the "documents available at the time the petition [was required] to be filed," including the Application and its Technical and Environmental Reports. And particularly through Exhibit B, Petitioners provide more than sufficient information to show that the parties are in genuine dispute over the material issues that they raise.[446] Exhibit B, the significance of which is essentially self-evident and (notwithstanding our discussion in § II.A.2 above) needs little if any explanation to point out its relevance, provides information in the nature of expert support for Petitioners' arguments, raising significant questions about the issues of concern to Petitioners, including potential mixing of contaminated water between and among aquifers and with surface water, and potential resulting impacts on public health and safety and the environment.[447]

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[444] *See*, *e.g.*, 10 C.F.R. §§ 40.32(d), 51.45(b); 10 C.F.R. § 2.309(f)(1)(iii), (iv).

[445] *See* 10 C.F.R. § 2.309(f)(1)(i), (ii), (v).

[446] *See* 10 C.F.R. § 2.309(f)(1)(vi).

[447] If, of course, it turns out that further provision of material to NDEQ results in its approval of Applicant's aquifer exemption request and effective retraction of the statements in Exhibit B, such facts could be submitted in this proceeding in support of the Applicant's and

It is true, as Applicant argues, that NEPA speaks to what is required of Federal agencies. An agency is to "include in every recommendation or report on . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on . . . the environmental impact to the proposed action."[448] Nevertheless, although the requirements of NEPA are directed to Federal agencies and thus the primary duties of NEPA fall on the NRC Staff in the NRC proceedings,[449] the initial requirement to analyze the environmental impacts of an action, including a materials licensing amendment, is directed to applicants under relevant NRC rules.[450] Accordingly, 10 C.F.R. § 51.60(a) requires a materials license amendment applicant to submit with its application an environmental report, which is required to contain the information specified in § 51.45.[451]

As indicated above,[452] for the sake of analytical clarity under the dual sets of standards under NEPA and the AEA, in admitting Contentions A and B we reframe them in a manner that more clearly sets forth those issues we find to be relevant and litigable in this proceeding, consolidating proposed environmental issues that we find admissible and that would logically fall under the NEPA into one admitted contention, and proposed public health and safety issues

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Staff's positions on the matters at issue herein, at appropriate points in this proceeding, with appropriate opportunity for Petitioners to respond. But this is not the situation before us at this point in this proceeding.

[448] 42 U.S.C. § 4332(2)(c) (2000); *see Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989).

[449] *See, e.g.,* 10 C.F.R. § 51.70(b), which states among other things that "[t]he NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement."

[450] *See id.* § 51.41.

[451] *See id.* § 51.60(a).

[452] *See supra* introductory part of section VI.

that we find admissible and that would fall under the Atomic Energy Act into a second admitted contention.

We note that not all issues would fall under the contentions as we have reframed them. For example, challenges to dose limits in NRC regulations are not appropriate for admission under 10 C.F.R. § 2.335(a).[453] In contrast, however, we find several of Staff's arguments, including some relating to the scope of this proceeding, to be unpersuasive. For example, with regard to issues such as drought and climate change, Staff insists that these are outside the scope of the proceeding because not within the purview of regulations including 10 C.F.R. § 51.45. We note, however, that this section includes the following language:

> (b) Environmental Considerations. The environmental report shall contain a description of the proposed action, a statement of its purposes, *a description of the environment affected*, and discuss the following considerations:
> (1) The impact of the proposed action on the environment. Impacts shall be discussed in proportion to their significance;
> . . . .
> (4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity . . . .[454]

Drought and climate change would clearly fall within any reasonable consideration of the concepts expressed in the quoted excerpts of the rule. First, anything relevant to these should be included in any "description of the environment affected." Second, Petitioners' arguments to the effect that impacts of the proposed expansion of mining operations will exacerbate drought, for example, would arguably necessitate discussion of the level of the significance of impacts in relation to this under § 51.45(b)(1). Third, the "maintenance and enhancement of long-term productivity" would reasonably warrant consideration of any aspects of climate change, for example, along with other long-term effects as alleged by Petitioners.

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[453] *See* 10 C.F.R. § 20.1301.

[454] *Id.* § 51.45 (emphasis added).

Moreover, Petitioners themselves, as well as others who live and farm in the area, would be capable of addressing drought conditions they have observed; and although there are some who dispute the reality of climate change, it is widely viewed as being a part of today's environment that warrants serious consideration at least, in any long-term view of the environment and productivity in it. Petitioners allege essentially that, by consuming and/or rendering unfit for human use or consumption groundwater resources that mix with water resources that they use, in an environmental setting that includes drought and climate change, CBR's proposed mining operations could have negative impacts. Whether or not this is the case is not to determine at this stage of the proceeding, and indeed it may be that climate change would have no significant impact in the matters at issue herein. Petitioners have, however, posed the issues and supported them sufficiently under the contention admissibility rules, with fact-based arguments as well as such things as the USGS Water Atlas and the NDEQ document quoted above.

We also find Staff's arguments, that conditions in CBR's current license as to restoration standards are not subject to attack under § 2.335(a), to be legally in error and unsupportable. The plain language of § 2.335(a) makes this clear — the exclusion applies only to a "rule or regulation of the Commission," not to license conditions. In any event, there is no requirement that the same conditions that exist in a current license would necessarily and always apply to a new project under a license amendment. And although there currently exist some relatively broadly-applicable law and regulations that govern this proceeding, along with various NRC guidance documents, we note the current absence of any rules specifically setting standards in ISL cases. And guidance documents such as NUREGs are just that — documents that provide guidance, with some persuasive authority, but not binding. This is true, whether in the context of water restoration standards or standards on such things as the size of the geographic area to be reviewed by Staff. The lack of specific rules on such matters makes these issues much less

definite than Staff or Applicant might wish to argue, but this is the situation that exists, and we may not give guidance documents any more, or less, significance than they warrant in any given circumstance.

In conclusion with regard to Contentions A and B, we find that Petitioners have raised some significant issues and demonstrated that further "inquiry in depth" is appropriate regarding these material legal and factual issues. Finally, we would reemphasize that, contrary to the approach of the Applicant in centering much of its argument on disputing the allegations of Petitioners, except as otherwise stated above all such matters remain open issues at this point in this proceeding. We note, based on the NDEQ document, that many factual assertions of the Applicant would themselves appear to be fraught with a number of questions regarding adequate support for them. But the contention admissibility stage of a proceeding is not the time to go to merits determinations on such matters, and we do not mean to suggest in any of our rulings any ultimate findings on these issues. We do, however, find that Contentions A and B have been posed and supported sufficiently, including through Exhibit B, to demonstrate genuine disputes on material issues that (1) are within the scope of this proceeding, (2) warrant further "inquiry in depth," and (3) are therefore appropriate for us to admit, in the form of the following reframed contentions:

Contention A. CBR'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.

Contention B. CBR'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,

C. Contention C: Alleged Need to Inspect Prehistoric Indian Camp

Petitioners in Contention C state that a:

Prehistoric Indian Camp Should Be Inspected by Tribal Elders and Leaders.[455]

1. Petitioners' Support for Contention C

Applicant's cultural resource analysis in its Application indicates that "a variety of prehistoric and historic resources of potential significance exist" in the general region surrounding Crawford and the North Trend Expansion area.[456] Specifically, two archeological sites, one historic and one prehistoric, were identified in the Applicant's archeological site search for the general vicinity.[457] The historic site is the ruins of a mill, and the prehistoric site is a "reported Indian camp"[458] — the one at issue in this contention. In addition, a cultural resource inventory and survey relating to the North Trend Expansion was conducted by the Applicant, which identified three additional historic sites and three isolated prehistoric artifacts.[459] The Applicant assessed these resources as "not likely to yield information important in prehistory or history," and thus, the Applicant concluded, the "proposed North Trend Expansion . . . will have no effect on historic properties, and no further cultural resource work is recommended."[460]

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[455] Reference Petition at 1, 21.

[456] ER at 3.8-1; cultural resources in the area include "the Hudson-Meng prehistoric bison kill to the north of the area, several prehistoric camps and artifact scatters in the general areas, fur-trade period sites associated with the early history of Chadron, Fort Robinson to the west of Crawford, the Sidney-Deadwood Trail, the two historic railroads that cross where the town of Crawford emerged, and the town of Crawford itself." *Id.*

[457] *Id.* (both of these sites are reported as being outside the assessment area).

[458] *Id.*

[459] *Id.* at 3.8-2 (the historic sites are the ruins of an abandoned farm complex, an occupied farm complex, and a "refuse disposal area"; and the prehistoric artifacts include "an early historic metal trade point, a chert core, and a Plains Archaic chert point fragment").

[460] *Id.* at 4-27.

Petitioners submit that "[CBR] is not qualified to make any determinations concerning the significance of the prehistoric Indian camp found at the North Trend site," and that "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."[461] Petitioners challenge the Applicant's belief that the site "is not significant," contending that the Applicant not only has no basis to reach that conclusion; it is "not authorized" to make such a "decision" in any event.[462] Petitioners argue that the issue is in the scope of the proceeding "because CBR seeks to expand its operations on the basis [of] the planned ground disturbances," and that it is "material to the findings . . . the NRC . . . is required to [make in determining] whether CBR's . . . proposed operation is in the best interests of the general public," because "respect for Indian artifacts is key to that determination."[463] At oral argument, Petitioners emphasized that consultation should have occurred with "the traditional indigenous leaders within this area" to determine the importance of the sites discovered during the Applicant's cultural resource analysis.[464] Petitioners added, "this is a major omission with regard to protecting religious and cultural rights of the Lakota people."[465]

2. Applicant's and NRC Staff's Responses to Contention C

In response to Petitioners' contention, the Applicant denies all allegations,[466] and the NRC Staff asserts that the bases offered in support of Contention C fail to present a genuine

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[461] Reference Petition at 23.

[462] *Id.*

[463] *Id.* at 21.

[464] Tr. at 304.

[465] *Id.*

[466] CBR Response at 5.

dispute with the Applicant on a material issue of fact or law.[467] Staff argues that Petitioners fail to provide any facts to support their dispute with the Applicant's conclusions relating to the prehistoric camp site, nor do they provide any authoritative reference documents indicating that consultation with Oglala Sioux Tribe elders and leaders "would affirmatively identify any dispute with the information in the application."[468] More specifically, Staff asserts that Petitioners did not dispute information in the Application that the site in question is "outside the assessment area"; thus, Staff argues, "the area of concern was considered in the application" and Petitioners have not disputed those conclusions.[469] Regarding the requirement for further consultation, Staff notes that staff-level review of the cultural resource analysis in the ER has not yet taken place, but that, in accordance with the National Historic Preservation Act (NHPA), the consultation process conducted by the Applicant will be reviewed.[470]

At oral argument, Applicant through counsel provided an overview of the consultation process it used in its cultural resource analysis, including the issuance of letters identifying the nature and location of the project to the Nebraska Commission on Indian Affairs; Applicant indicated that "about 50 letters were sent to other various tribal leaders soliciting input on the project or help identifying any proposed impacts."[471] According to Applicant, follow-up telephone calls were also made to verify that the letters were received and to identify any

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[467] NRC Response at 40.

[468] *Id.*

[469] *Id.* at 41.

[470] Tr. at 313. NRC Staff submits that, as part of the review process, Staff will potentially have to look at the possibility of consulting tribal historic preservation offices. *Id.*

[471] *Id.* at 317-18. The ER states that on April 30, 2004, the Applicant sent letters to the Nebraska Commission on Indian Affairs and thirteen Indian tribes, including the Oglala Sioux Nation, informing them of the "nature and location of the proposed project." ER at 3.8-1.

questions, and no concerns were identified.[472] Applicant asserted that the lack of response to the letters and telephone calls indicated that the tribes did not "avail themselves of the opportunity to make a determination."[473] When questioned by the Board, however, about one telephone call to Applicant from a Tribe member, Mr. Harvey Whitewoman, Applicant through counsel stated that his concerns were "apparently" addressed but was unable to indicate any particulars as to how this was done, leaving the impression that it may in fact not have been done.[474]

Applicant stated that it had conducted "the same process . . . that the NRC [must] comply with under the [NHPA],"[475] and argued that the information in the ER regarding cultural resources were acquired by a qualified archaeologist and submitted to and approved by the State Historic Preservation Officer (SHPO). Therefore, Applicant insisted, there is nothing to suggest that the statements made in the Application regarding the lack of importance of those artifacts are inaccurate.[476] Applicant further asserted that there is no evidence or indication of a dispute as to whether there will be any impacts on cultural resources at the North Trend Expansion area,[477] maintaining that what the Applicant "has done here is more than what's required by the law."[478] Finally, Applicant argued, "there is no legal requirement that the

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[472] Tr. at 318. The Applicant stated through counsel that follow-up telephone calls were made to the same groups to "verify that the information had reached the appropriate persons in each tribe and to ask whether the tribes had any concerns about the project or were aware of any traditional concerns in the immediate vicinity of the project." *Id.*

[473] *Id.* at 326.

[474] *Id.* at 318-21.

[475] *Id.* at 319.

[476] *Id.* at 321-22.

[477] *Id.* at 318.

[478] *Id.* at 330.

applicant consult with state or tribal authorities under the [NHPA]";[479] the requirement to consult applies only to federal agencies.[480]

3. Petitioners' Replies Regarding Contention C

In reply, Petitioners argue that NRC Staff merely supports the conclusions of the Applicant in its ER,[481] and assert that Staff ignores "the consultation requirements embodied in the UN Declaration on the Rights of the World's Indigenous Peoples, which requires consultation with traditional Chiefs prior to development of resources within indigenous land."[482] Without this, Petitioners argue, Applicant "fails to analyze the issue properly in its application and fails to obtain approval from Native American authorities."[483] Petitioners at oral argument also noted that consultation is required under both NHPA and NEPA.[484] They emphasize that they "dispute[ ] any authority Applicant may be using to make any conclusions about such Native American matters."[485] Petitioners do concede that the Applicant made calls in an effort to follow up with Native American tribes to verify receipt of letters regarding the proposed North Trend Expansion, but allege a lack of further action.[486] Petitioners urge recognition that "one of

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[479] CBR Response to Briefs on Treaties at 10 (citing 16 U.S.C. § 470) (emphasis in original).

[480] *Id.*

[481] Cook Reply to NRC at 16.

[482] Owe Aku Reply to NRC at 15.

[483] Cook Reply to NRC at 16.

[484] Tr. at 307.

[485] Cook Reply to NRC at 16.

[486] *Id.* The Board notes that, after oral argument, Petitioners submitted an affidavit of Mr. Harvey Whitewoman, stating among other things that his concerns regarding water quality impacts were not resolved. Affidavit of Harvey Whitewoman (Feb. 19, 2008).

the things that indigenous people have for decades now been claiming is that federal agencies have been ignoring them."[487]

4. Licensing Board's Ruling on Contention C

In light of the foregoing arguments, and after considering the consultation requirements of the National Historic Preservation Act (NHPA), we find that Contention C is admissible. Contrary to the NRC Staff's argument that Petitioners fail to present a genuine dispute with the Applicant on a material issue of fact or law, the contention demonstrates a dispute between Petitioners and the Applicant over the material factual/legal issue of whether the consultation process conducted by the Applicant in conjunction with its Application (a precursor to the consultation to be conducted by the NRC as the federal agency responsible for reviewing and approving or disapproving this Application) complies with relevant requirements of law.

In the NHPA,[488] Congress declared that this Nation's historical heritage "is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans."[489] Section 106 of the Act among other things requires a federal agency, prior to the issuance of any license, to "take into account" the effect of the federal action on any area eligible for inclusion in the National Register of Historic Places.[490]

Detailed regulations, developed to give substance to the consultation requirements of Section 106, provide a complex consultative process that must be followed to obtain compliance with the NHPA.[491] As part of this process, a tribe may become a consulting party when it

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[487] *Id*. at 307.

[488] 16 U.S.C. § 470 *et seq.*

[489] *Id.* § 470(b)(4).

[490] *Id.* § 470f; *see id.* § 470a(a) (National Register guidelines).

[491] 36 C.F.R. § 800; *see* Rules and Regulations Advisory Council on Historic Preservation, Final Rule: revision of current regulations, 65 Fed. Reg. 77,698 (Dec. 12, 2000).

considers property potentially affected by a federal undertaking to have religious or cultural significance.[492] A consulting tribe is entitled to a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties (including those of traditional religious and cultural importance), articulate its views on the undertaking's effects on such properties, and participate in resolution of adverse effects.[493] Moreover, the regulations under NHPA also state that the federal agency "should be sensitive to the special concerns of Indian tribes in historic preservation issues, which often extend beyond Indian lands to other historic properties," and should "invite the governing body of the responsible tribe to be a consulting party and to concur in any agreement."[494]

Petitioners' assertions in and in support of Contention C are based on information provided in the Applicant's environmental and technical reports, as required at 10 C.F.R. § 2.309(f)(2). And with regard to the requirements of 10 C.F.R. § 2.309(f)(1), in addition to providing a specific statement of their contention and briefly explaining the basis for it, Petitioners support it with references to the Application and a fact-based argument, stating why they disagree with the Applicant's actions and position.[495] The issues presented in the contention are clearly within the scope of this proceeding and material to the findings the NRC must make regarding the Application, and the parties are clearly in dispute over these issues.

Because an agency's compliance with the requirements of Section 106 of NHPA is nondiscretionary, the Staff's compliance with NHPA is obviously material to the findings the NRC must make in addressing the Applicant's license amendment Application. It is true that NHPA and NEPA — out of which the NHPA requirements at issue arise, relating as they do to

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

[493] *See id.* § 800.2(c)(2)(ii)(A).

[494] *See id.* § 800.2(c)(2)(iii).

[495] *See supra* nn.262-65.

the environmental aspects of the action at issue — speak to what is required of federal agencies. As we note in our ruling on Contentions A and B, however, even though the primary duties of NEPA fall on the NRC Staff in the NRC proceedings,[496] an applicant in a materials licensing proceeding is required under 10 C.F.R. § 51.60(a) to submit with its application an environmental report that contains information specified in 10 C.F.R. § 51.45.[497] And, specific to this contention, § 51.45(d) requires the applicant to provide a list of all approvals and describe the status of those approvals with the applicable environmental standards and requirements.[498] In addition, 10 C.F.R. § 2.309(f)(2) requires among other things that "[c]ontentions must be based on documents . . . available at the time the petition is to be filed, such as the . . . environmental report . . . filed by an applicant." And this is what Petitioners did.

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 proposed project. Applicant also argues that the law was followed, that tribal leaders were notified of the project, and that follow-up calls were made. What NHPA requires in terms of the amount of consultation, however, is a reasonableness inquiry, and "a mere request for information is not necessarily sufficient to constitute the 'reasonable effort' section 106 requires."[499] In addition to notification requirements, NHPA obligates federal agencies to consult with any Indian tribe that attaches religious or cultural significance to identified properties during the evaluation of any historic

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[496] *See, e.g.,* 10 C.F.R. § 51.70(b), which states among other things that "[t]he NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement."

[497] *See id.* § 51.60(a).

[498] *See id.* § 51.45(d).

[499] *Pueblo of Sandia v. United States*, 50 F.3d 856, 860 (10th Cir. 1995) (the Court held that because communications from the tribes indicated the existence of traditional cultural properties and because the Forest Service should have known that tribal customs might restrict the ready disclosure of specific information, the agency did not reasonably pursue the information necessary to evaluate the site).

significance.[500] And relevant regulations specifically state that the federal agency "shall acknowledge that Indian tribes . . . possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them."[501] Moreover, the regulations require the federal agency to notify all consulting parties, including Indian tribes, when a finding of no effect has been made, and to provide those consulting parties with an invitation to inspect the documentation prior to approving the undertaking.[502]

It may be that the Staff in its review process will address Petitioners' concerns.[503] At this point, however, the matters at issue in Contention C are clearly material, and there is clearly a dispute between Petitioners and Applicant, supported by the Staff, over whether reasonable measures under relevant rules have been taken and over how these matters should be resolved. We therefore find Contention C to be admissible in this proceeding, in the following reframed form:

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

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[500] *See* 36 C.F.R. § 800.4(b).

[501] *See id.* § 800.4(c)(1).

[502] *See id.* § 800.4(d)(1). The *HRI* case involved a similar issue, albeit under the pre-2004 adjudicatory procedures in 10 C.F.R. Part 2, Subpart L proceedings. *HRI* (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-05-26, 62 NRC 442 (2005). *HRI* involved an application to license a multi-phased project to do ISL mining on different parcels of land over the course of 20 years. Intervenors in that case challenged the adequacy of consultation with tribal groups, claiming that, other than a "form letter" sent by HRI to the tribes, tribal groups were not consulted or given an opportunity to participate in the NHPA review process. *Id*. at 465. Ultimately, the presiding officer held that adequate consultation with tribal groups had occurred because "the Staff (1) closely coordinated its NHPA review with the [SHPO]; (2) obtained relevant NHPA information from numerous tribal leaders and traditional practitioners, and (3) conscientiously provided tribal groups with updated information regarding the cultural resources review, as well as a meaningful opportunity to participate in the review process." *Id.* at 467-68.

[503] See *USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 445 n. 65 (2006).

D. Contention D: Alleged Terrorist Risk and Potential for Trucking Accident

Petitioners in Contention D state that:

> Proposed Trucking of Radioactive Resin Between CBR Facilities Creates Substantial Homeland Security Risk of Terrorist Attack and Presents the Risk of Contamination to the Public and the Environment in the Event of Accidents and Spills.[504]

1. Petitioners' Support for Contention D

Petitioners contend the Applicant's proposed plan to truck radioactive material back and forth between the current facility and the North Trend facility will expose the surrounding community to a "substantial risk of terrorist attack and/or criminal interference resulting in a release of a radioactive material — the equivalent of a 'dirty bomb.'"[505] Petitioners note plans in the Application to have one truckload per day carry radioactive resin from the North Trend site to the current facility, which would be "unguarded radioactive waste."[506] Petitioners further argue that by "dramatically increasing" the transport of radioactive material on public highways on a regular basis over a fixed route "makes the radioactive material a potential target for terrorist attack."[507] Petitioners claim this issue is within the scope of this proceeding because such actions increase the public exposure to radioactive materials, and argue it is material to the findings the NRC must make, to determine whether the proposed operation is in the best interest of the public.[508] Finally, Petitioners argue that the Applicant's failure to consider the security risks, and the potential threat to the environment and the public, associated with such

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[504] Reference Petition at 2, 23.

[505] *Id.* at 5.

[506] *Id.* at 23.

[507] *Id.*

[508] *Id.* at 23-24.

trucking activity demonstrates "the falsity of [the Applicant's] conclusion that it is 'relatively safe and simple' to transport the resin."[509]

2. Applicant's and NRC Staff's Responses to Contention D

NRC Staff challenges this contention on the basis of Commission case law holding that terrorism need not be considered under NEPA. According to NRC Staff, "[t]he Commission has consistently held that the NRC has no legal duty to consider the environmental impacts of terrorism at NRC licensed facilities."[510] That line of reasoning was most recently upheld, according to NRC Staff, in the *Oyster Creek* proceeding,[511] in which the Commission rejected a contention that the NRC was required under NEPA to conduct a review of the environmental impacts of terrorism in a license renewal proceeding, notwithstanding the Ninth Circuit Court of Appeals' ruling in *San Luis Obispo Mothers for Peace v. NRC* (*Mothers for Peace*).[512] Staff notes that, in *Oyster Creek*, the Commission reiterated its position that a reasonably close causal relationship must exist between a federal agency action and any environmental consequences of that action in order to trigger a NEPA review, and that such a relationship does not exist with terrorism.[513] Staff argues that Petitioners have not identified any information

[509] *Id.* at 24.

[510] NRC Response at 41 (citing *Nuclear Management Company, LLC* (Palisades Nuclear Plant), CLI-07-09, 65 NRC 139, 141 (2007)).

[511] *Amergen Energy Company, LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 129 (2007).

[512] 449 F. 3d 1016 (9th Cir. 2006); in *Mothers for Peace* the Ninth Circuit held that the NRC must consider the environmental impacts of a terrorist attack against an independent spent fuel storage installation at the Diablo Canyon Nuclear Power Plant.

[513] *See* NRC Response at 41 (citing *Oyster Creek*, CLI-07-08, 65 NRC at 129). NRC Staff states that, "following the same line of reasoning in *Oyster Creek*, the Commission also rejected terrorism-related NEPA contentions in two other decisions. Referencing their decision in *Oyster Creek* and their decision not to follow *Mothers for Peace* in each instance, the Commission found contentions requiring an evaluation of terrorist attacks under NEPA inadmissible in the license renewal of a nuclear power plant, *Palisades*, CLI-07-09, 65 NRC 139 (2007), and an early site permit in System Energy Resources, Inc. (Grand Gulf ESP site), CLI-07-10, 65 NRC 144, 147 (2007)." *Id.* at 41 n.30

distinguishing this proceeding from *Oyster Creek*, and that based on this Contention D should be denied, because it fails to demonstrate a genuine dispute on a material issue of law or fact and raises issues outside the scope of the proceeding.[514]

Applicant also argues that, contrary to Petitioners' contention, the Application contains information addressing the environmental impacts of transportation due to a potential traffic accident, including procedures proposed to minimize exposure and risk to the public and the environment from those accidents.[515] Applicant insists that nothing provided by Petitioners in Contention D calls into question any of the Applicant's conclusions or analyses of this issue.[516] Staff similarly avers that Petitioners' claim should be rejected for failing to dispute the information in the amendment application, including the approach proposed in the Application to reduce or avoid environmental impacts from transportation of these sources.[517] Staff notes examples of "[t]he planned transportation route [being] designed to avoid travel on U.S. [federal and state highways],"[518] and the Application providing emergency procedures for any spills.[519]

3. Petitioners' Reply Regarding Contention D

In their Reply, Petitioners address the NRC Staff's argument that there is no duty to address the environmental impacts from a terrorist attack by claiming that "the environmental impact is part of the homeland security evaluation that must be performed."[520] Attempting to distinguish this proceeding from cases like *Oyster Creek*, Petitioners argue that the Commission

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[514] *Id.* at 42.

[515] Tr. at 343.

[516] NRC Response at 42.

[517] *Id.*

[518] *Id.* (citing ER at 4-5).

[519] *Id.* (citing TR at 4-9, 5-28).

[520] Cook Reply to NRC at 14.

rejected the triggering of NEPA review for consequences of terrorism against licensed facilities when no new type of activity is being licensed, whereas the application at issue is for licensing of a newly-proposed activity.[521] Thus, Petitioners insist, Applicant should have addressed terrorism and security issues relating to Applicant's proposed trucking plan.[522] Moreover, Petitioners argue, Applicant provided no evidence demonstrating that the transport of radioactive resin is "relatively safe and simple," especially when such transport occurs on dirt and trail roads instead of well-maintained highways.[523]

4. Licensing Board's Ruling on Contention D

Beginning with its 2002 decision in *Private Fuel Storage L.L.C.*, the Commission has determined that, even post 9/11, the NRC has no legal duty to consider the environmental impacts of terrorism at NRC licensed facilities.[524] Recent Commission rulings are to the same effect, including the Commission's decision in *Oyster Creek* that "NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities."[525] Because the Supreme Court has neither endorsed nor rejected the reasoning of the Ninth Circuit in *Mothers for Peace*, and because the proposed North Trend Expansion is located outside the jurisdiction of the Ninth Circuit, we are bound by the Commission's decision in *Oyster Creek*, absent anything that would distinguish this case from that one.

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[521] *Id.*

[522] Tr. at 337.

[523] *Id.* at 338.

[524] *PFS*, CLI-02-25, 56 NRC 340 (2002); *see U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357 (2004)*; Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335 (2002); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358 (2002).

[525] *Oyster Cree*k, CLI-07-8, 65 NRC at 129.

We do not find that Petitioners have distinguished this proceeding from the *Oyster Creek* proceeding in any way that is meaningful under the cited Commission authorities. Thus, to the extent Contention D raises concerns regarding potential terrorism, we must, and do, find it to be inadmissible, because it is beyond the scope of this proceeding, and not "material to the findings the NRC must make to support the action that is involved in the proceeding," as required under 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

To the extent that Petitioners raise environmental impact claims related to transportation, we also deny their request. 10 C.F.R. § 2.309(f)(1)(vi) requires that a petitioner provide sufficient information to demonstrate that a genuine dispute exists with the application on a material issue of law or fact. Petitioners claim merely that the Applicant fails to consider the threat to the environment imposed by the proposed trucking plan for the North Trend Expansion. As noted by both the Applicant and NRC Staff, issues relating to the environmental impacts of transportation due to potential traffic accidents are addressed in Applicant's environmental and technical reports. As indicated above, these include emergency spill response plans and analyses of available roadways in order to minimize potential effects.[526] Petitioners fail to dispute this information. Thus, we also find this portion of Contention D inadmissible for failure to comply with 10 C.F.R. § 2.309(f)(1)(vi) by providing sufficient information and support demonstrating a genuine dispute on a material issue of law or fact.

[526] *See supra* text accompanying nn.518, 519; Tr. at 341, 343.

E. Contention E: Alleged Foreign ownership and Impacts Thereof

Petitioners in Contention E state:

> CBR 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 CBR Mined Uranium Will Stay In US for Power Generation.[527]

1. Petitioners' Support for Contention E

In this contention Petitioners challenge Applicant's acquisition by a foreign-owned company, asserting that this issue is in the scope of the proceeding because the Applicant seeks to expand its operations on the basis that the uranium it produces is needed to fulfill U.S. demand while such demand may likely be diverted to other foreign interests.[528] Petitioners contend that understanding Applicant's foreign ownership is key to the determination of whether the Applicant's current and proposed operations are within "the best interests of the U.S. general public," and that this issue is thus material to the findings of the NRC.[529] Petitioners further argue that the Applicant deliberately omitted references to foreign ownership in its application "in order to give the mis-impression that CBR's [u]ranium mining operations are somehow profitable to U.S. interests" when, as a Canadian-owned company, its operations are "clearly for the profit of foreign interests."[530] Finally, Petitioners state that the Applicant also neglects to include information in its application regarding the "chain of possession of this nuclear source material or who the buyers are and where it may end up or how it may be ultimately used." [531] As a result, "all the environmental detriment and adverse health impacts"

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[527] Reference Petition at 2, 24.

[528] *Id.* at 24-25; Petitioners state that Cameco also runs operations in Canada and Kazakstan, and also allegedly sells uranium products to other non-U.S. buyers, potentially including China, India, Pakistan, North Korea and possibly Iran, unless the Canadian government legally restricts such sales. *Id.* at 25.

[529] *Id.*

[530] *Id.*

[531] *Id.* at 26.

are asserted to be "for foreign profit [with] no assurance [that] the CBR mined uranium will stay in [the] U.S. for power generation."[532]

2. Applicant's and NRC Staff's Responses to Contention E

In the Staff's view, the contention is outside the scope of the proceeding and raises concerns which are "irrelevant because whether a company is foreign-owned is not material to the safety and environmental requirements under 10 C.F.R. Part 40, Appendix A or Section 51.45."[533] Staff also argues that Petitioners' claim that there is no assurance the CBR-mined uranium will stay in the U.S. for power generation is not a matter "material to NRC requirements nor the adequacy of the amended application."[534] Staff avers Petitioners are wrong in their claim that CBR's ownership by a Canadian company that will make profits or lose on its investments is material; "[m]arket conditions and concerns are business matters of the Applicant" and the Petitioners fail to indicate how these concerns relate to any NRC requirement.[535] Finally, Staff argues that Petitioners do not provide supporting documentation or point to any law or regulation requiring the Applicant to consider "the chain of possession of this nuclear source material," and therefore this contention is inadmissible.[536]

Applicant agrees with Staff that Contention E does not raise any issues within the scope of this proceeding.[537] More directly, Applicant states that although Cameco is a Canadian-owned company, the chain of ownership of such nuclear materials will be monitored under the

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[532] *Id.* at 24.

[533] NRC Response at 43.

[534] *Id.*

[535] *Id.* at 44.

[536] *Id.*

[537] Tr. at 353.

Nuclear Non-Proliferation Treaty, of which Canada is a signatory.[538] In addition, according to Applicant, Canada has a safeguards agreement and protocol that provides the International Atomic Energy Agency (IAEA) with "the right and obligation to monitor Canada's nuclear related activities and verify nuclear material inventories and flows into Canada."[539]

3. Petitioners' Replies on Contention E

In addition to the general argument that their contentions are material and within the scope of this proceeding, Petitioners assert that "the NRC itself lacks authority under the [AEA] to grant a license where, as here, there is no benefit to the U.S. national interest, common defense or security and there are clear detriments to the health and safety of the public."[540] Petitioners add that "mere technical compliance with NRC disclosure regulations" is not enough to satisfy AEA purposes; thus, the NRC is "required to deny a license amendment that would not serve the U.S. national interest or common defense and security or would fail to protect public health and safety."[541]

Citing 42 U.S.C. § 2012(d), regarding the regulation of source material, Petitioners challenge Staff's and Applicant's silence on "how it would [be] in furtherance of the protection of the health and safety of the public to grant a foreign owned Applicant's amendment to expand to the North Trend area."[542] Petitioners also contend that Applicant provides no assurance that the ISL mining product, yellowcake uranium, "will not be used for nuclear weapons of a foreign country or terrorists or fall into the hands of such enemies of the [U.S.]," and the Applicant fails

[538] *Id.* at 354.

[539] Citations to International Agreements (Jan. 30, 2008) at 2. In 2000, as part of an effort to strengthen IAEA safeguards, Canada signed an additional protocol to its safeguards agreement giving the "IAEA enhanced rights of access to nuclear sites and other locations and provid[ing] it with access to information about nuclear-related activities in Canada." *Id.*

[540] Cook Reply to NRC at 1-2.

[541] *Id.* at 2.

[542] Owe Aku Reply to NRC at 15.

to provide any evidence that the uranium products "will not be sold to China, Pakistan, North Korea or elsewhere to the highest bidder."[543] Finally, Petitioners argue that "NRC lacks authority to grant such a licence amendment without evidence that this risk is mitigated."[544]

4. Licensing Board's Ruling on Contention E

We first note that Petitioners' allegation of foreign ownership of Crow Butte Resources, Inc., was not disputed by the Applicant at any time in this proceeding; thus, for purposes of this discussion, it is assumed the Applicant is foreign-owned.[545] Second, contrary to arguments presented by the Applicant and NRC Staff, we find that Contention E is not outside the scope of this proceeding. The concerns raised by Petitioners related to the Applicant's foreign ownership are potentially material to the safety and environmental requirements of 10 C.F.R. Part 40.

The Atomic Energy Act of 1954, as amended, provides that the processing of source material "must be regulated *in the national interest* and in order *to provide for the common defense and security* and to protect the health and safety of the public."[546] Moreover, section 103(d) of the AEA, which governs "Commercial Licenses," states that "no license may be issued to an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government."[547] If in the opinion of the Commission "the issuance of a license to such a person would be inimical to the common defense and security or the health and safety of the public,"

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[543] Cook Reply to NRC at 13.

[544] *Id.* at 14.

[545] We note that the Commission has determined that a facility is foreign-owned when a foreign interest has the "power," direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the Applicant. *General Electric, Co. and Southwest Atomic Energy Associates*, 3 AEC 99, 101 (1966). No argument has been made by Staff or Applicant that Cameco, a Canadian corporation, does not have control, or "power," to direct CBR's activities.

[546] 42 U.S.C. § 2012(d) (emphasis added).

[547] *Id.* § 2133(d). *See also supra* n.545.

such license should not be issued.[548] In addition, 10 C.F.R. § 40.38 provides that a source material license "may not be issued to the Corporation, if the Commission determines that: (A) The Corporation is owned, controlled or dominated by . . . a foreign corporation."[549] From this point forward, however, the matter becomes a bit cloudy.

The language in the Act and in 10 C.F.R. § 40.38 appears to be more or less straightforward. It would seem that the type of license Crow Butte has and wishes to amend is a "commercial license," which would seem to render its foreign ownership prohibitive of its being granted a license under the Act. We are not aware of a definition of the term, "Commercial License," but this would seem to be fairly straightforward. The situation is confused, however, by a definition for the term "Corporation" that is found at 10 C.F.R. § 40.4.

For the purposes of Part 40 of the Commission's regulations, which concern the domestic licensing of source material, the definition at § 40.4 for "Corporation" seems to indicate that this term embraces exclusively the United States Enrichment Corporation (USEC) or a successor thereto.[550] This suggests the rather unusual result that the only corporation subject

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[548] *Id.* § 2133(d).

[549] 10 C.F.R. § 40.38(a). We note that the Commission also incorporated the limitations stated in section 103(d) of the Act into 10 C.F.R. Part 50, concerning the "Domestic Licensing of Production and Utilization Facilities." *See* Final Standard Review Plan on Foreign Ownership, Control, or Domination, 64 Fed. Reg. 52,355 (Sept. 28, 1999). Specifically, § 50.38 provides that "[a]ny person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license."

[550] *See* 10 C.F.R. § 40.4. The definition in question states:

> *Corporation* means the United States Enrichment Corporation (USEC), or its successor, a corporation that is authorized by statute to lease the gaseous diffusion enrichment plants in Paducah, Kentucky, and Piketon, Ohio, from the Department of Energy, or any person authorized to operate one or both of the gaseous diffusion plants, or other facilities, pursuant to a plan for the privatization of USEC that is approved by the President.

We note that at one time the AEA also included references to USEC, which were to be, and apparently were, repealed when USEC was privatized. *See*, *e.g.*, 42 U.S.C. §§ 2061, 2297b. It is unclear whether there was ever any parallel intention to repeal the definition at 10 C.F.R. § 40.4 for "Corporation," but in any event, it appears this has not been done.

to the prohibitions of 10 C.F.R. § 40.38 is USEC — an interpretation that would seem to be in conflict with § 103(d) the Act. On the other hand, the definitions in § 40.4 for "Government agency" and "Persons" refer to the term "corporation" in a way suggesting that it is to be interpreted according to its ordinary meaning. Also potentially brought into play is § 40.3, which states that a "*person* subject to the regulations [of part 40] may not . . . possess . . . radioactive material . . . or any source material . . . unless authorized in a specific or general license issued by the Commission under the regulations of this part."[551] The upshot of all this is that the meaning of § 40.38 is at least ambiguous, and its applicability to this proceeding thus becomes one of statutory and regulatory interpretation.

Minimally, the regulations under 10 C.F.R. Part 40 for "Domestic Licensing of Source Material" clearly require, at § 40.32(d), that "the issuance of the license will not be inimical to the common defense and security or to the health and safety of the public."[552] As argued by Petitioners, whether a license would serve the U.S. national interest and the common defense and security is very material to the findings the NRC must make in determining whether to grant a license, or, as in this proceeding, a license amendment. In an early case analyzing Congressional intent for the phrase "common defense and security," the D.C. Circuit Court of Appeals suggested that there was "internal evidence [in] the Act" that

> Congress was thinking of such things as not allowing the new industrial needs for nuclear materials to preempt the requirements of the military; of keeping such materials in private hands secure against loss or diversion; and of denying such materials and classified information to persons whose loyalties were not to the United States.[553]

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[551] 10 C.F.R. § 40.3 (emphasis added). We note in addition § 40.6, stating that, "[e]xcept as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission." Of course, any rulings by this Board interpreting any regulations would be appealable to, subject to review by, and thus not binding on, the Commission.

[552] 10 C.F.R. § 40.32(d).

[553] *Siegel v. AEC*, 400 F.2d 778, 784 (D.C. Cir. 1968).

And the Commission has held that, among other things, the phrase refers to "the absence of foreign control over the applicant."[554]

The Applicant posits that the foreign ownership element is not of any concern because Cameco is a Canadian-owned corporation, which, along with the United States, is a signatory to the Non-Proliferation Treaty. However, "previous Commission decisions regarding foreign ownership or control did not appear to turn on which particular nation the applicant was associated with."[555] As such, we are not inclined to resolve the issue so hastily as Applicant might prefer.

The questions before us are two-fold: (1) whether the issuance of a license amendment to the Applicant would be in direct violation of 10 C.F.R. § 40.38; and (2) if not restricted under § 40.38, whether foreign ownership of the Applicant would, under Part 40, including § 40.32(d), have an impact on or endanger the common defense or security of the United States, so as to bring into question the propriety of granting the sought license amendment. As these are significant questions on which this Board believes the parties should be heard,[556] and on which we wish to make a fully informed ruling, we will therefore refrain from ruling on the admissibility of Contention E and these related issues at this time, and direct the parties to brief the issue, to be followed up by oral argument at a time to be determined.[557]

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[554] *Long Island Lighting Company* (Shoreham Nuclear Power Station, Unit 1), LBP-84-45, 20 NRC 1343, 1400 (1984).

[555] 64 Fed. Reg. at 52,357.

[556] We note our surprise that neither Staff's nor Applicant's counsel mentioned the statutory and regulatory provisions we reference, given their ethical duty as officers of the court to alert NRC adjudicatory bodies to information relevant to the matters being adjudicated. *See* Model Code of Prof'l Responsibility R. 3.3 (2004) (a lawyer shall not knowingly "fail to disclose to the tribunal legal authority in the controlling jurisdiction known to the lawyer to be directly adverse to the position of the client and not disclosed by opposing counsel"); *see also* D.C. Rules of Prof'l Conduct R. 3.3 (2007).

[557] We address the particulars of this below in our Conclusion and Order.

F. Contention F: Alleged Non-Sharing of Economic Benefits

Petitioners in Contention F state:

> The Economic Benefits Conferred by the Applicant on Crawford, Nebraska are not Shared by Other Communities that Bear Burdens Downwind and Downstream like Chadron, Slim Buttes, Pine Ridge Indian Reservation and Hot Springs, South Dakota.[558]

1. Petitioners' Support for Contention F

In support of this contention, Petitioners claim that Applicant "argues that its economic contributions should be balanced against the environmental costs but only provides a comparison that includes economic benefits conferred on a small percentage of the people affected by the environmental pollution."[559] As additional support, Petitioners contend that the Applicant's cost-benefit analysis should consider the "additional costs of nuclear power [including] . . . the proper disposal of fuel rod waste" and the effects of "the use of depleted uranium on innocent civilians and our troops when used in conflicts abroad."[560]

Petitioners argue that this issue is in the scope of the proceeding because "CBR seeks action on the basis that its economic contributions justify its environmental burdens."[561] Asserting that the NRC must determine whether the Applicant's current and proposed operations are in the best interests of the public, Petitioners further argue that "understanding the disproportionate allocation of [the Applicant's] benefits compared to the distribution of environmental burdens" would be key to that determination. As such, Petitioners claim this issue is material to the findings the NRC must make with regard to the Application at issue.[562]

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[558] Reference Petition at 2, 26.

[559] *Id.* at 26.

[560] *Id.* at 27.

[561] *Id.* at 26.

[562] *Id.*

Finally, contrary to claims made by the Applicant in its ER, Petitioners submit that the impacts of contamination are major and permanent in nature.[563]

2. Applicant's and NRC Staff's Responses to Contention F

At oral argument Applicant asserted through counsel, relying on a Commission decision in the *Private Fuel Storage* proceeding, "that a failure to receive a benefit from a project is not an environmental impact."[564] NRC Staff submits that this contention is inadmissible because "Petitioners do not provide any expert opinion or facts that support the Petitioners' statement that Chadron, Slim Buttes, and the Pine Ridge Reservation bear any burden from the North Trend site."[565] Citing to Section 4.10 of the Application, regarding "Socioeconomic Impacts," NRC Staff states "CBR employs people from Harrison and Chadron," and it purchases "millions of dollars of goods and services from within Dawes County," and pays "state taxes that benefit communities well beyond Crawford."[566]

Regarding Petitioners' arguments relating to fuel rod waste disposal, Staff notes that ISL uranium recovery "do[es] not involve disposal of fuel rod waste."[567] Furthermore, Staff claims, "Petitioners' misplaced references to the 'use of depleted uranium . . . on innocent civilians and our troops when used in conflicts abroad' does not explain how such a discussion is relevant to

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[563] *Id.*

[564] Tr. at 362-63 (*citing* PFS, CLI-02-20, 56 NRC 147, 153-54 (2002)). In *PFS*, the Commission stated that "[e]nvironmental harm is NEPA's 'core interest'[; that t]he essence of an environmental justice claim, in NRC practice, is disparate environmental harm," 56 NRC at 153; and that "nothing in . . . NEPA . . . suggest[s] that a failure to receive an economic benefit should be considered tantamount to a disproportionate environmental impact," *id.* at 154. The Commission denied a hearing on a contention alleging "a disparity in the financial benefits that the PFS project may bring to different members of the [Community]." *Id.* at 156.

[565] NRC Response at 45.

[566] *Id.* (citing ER at 4-30).

[567] *Id.*

the cost-benefit analysis performed by the applicant for this proposed amendment."[568] Thus, Staff argues, this contention "raises concerns that are outside the scope of these proceedings."[569] Moreover, according to the Staff, Petitioners do not identify a legal basis or expert opinion requiring that Applicant must conduct such a review.[570]

3. Licensing Board's Ruling on Contention F

We find that Petitioners do not provide a sufficiently specific explanation of particular ways in which the Applicant's analysis should have considered additional benefits relating to an enlarged area. Petitioners say essentially two things. First, they claim that the benefits that Applicant describes in its Application do not, but should, extend to communities outside the 80 km radius that Applicant purportedly used in its analysis, and that in view of asserted harm extending to a larger area, additional benefits should also have been considered for a larger area. However, the effect of considering additional benefits might be viewed as actually *supporting* the proposed project, by adding to the "positives" in the cost-benefit analysis — a process that is required to be undertaken in order to ensure that all environmental ramifications of a project are adequately taken into consideration before approving the project. In any event, Petitioners have not stated with any significant specificity how such considerations should come into play in this proceeding, or explained with sufficient specificity any genuine dispute on a material issue in this proceeding. Moreover, to the extent Contention F concerns environmental justice, it would seem to be inadmissible under the Commission's *PFS* decision.[571]

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[568] *Id.*

[569] *Id.*

[570] *Id.* at 46.

[571] *PFS*, CLI-02-20, 56 NRC at 156. *See* Policy Statement on the Treatment of Env. Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040 (Aug. 24, 2004); *see also supra* n.564.

Second, Petitioners argue that certain costs — proper disposal of fuel rod waste and the costs of cancer caused by depleted uranium used in ammunition on gunnery ranges and in conflicts abroad — should be included in the cost-benefit analysis. However, as Staff points out, ISL mining does not involve fuel rod waste; and to the extent such waste is indirectly relevant, the "Waste Confidence" rule would prohibit consideration of this in this proceeding.[572] And Petitioners' statements regarding the costs of cancer from depleted uranium provide no specific fact-based, logical argument, only the mere assertion, which is not enough to warrant admission of a contention.

In light of the preceding, we deny admission of Contention F.

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

Petitioners formally request that this Board apply "Subpart G Hearing Procedures to this proceeding, pursuant to 10 C.F.R. § 2.310(d)," because these contentions necessitate resolution of issues of material fact relating to the occurrence of past events, i.e., whether CBR disputes any of the Relevant Facts [incorporated into each contention by reference]."[573] Staff opposes the request, arguing that Petitioners' reliance on § 2.310(d) is misplaced as it does not apply to license amendments issued under Part 40, but instead "applies only to 'nuclear power reactors.'"[574] Staff argues that certain language of 10 C.F.R. § 2.310(a) — *i.e.*, that "licensee-initiated amendments . . . subject to part[ ] . . . 40 . . . *may* be conducted under the procedures of subpart L of [part 2]" — should, in conjunction with relevant language of 10 C.F.R. § 2.1200, be interpreted to mean that proceedings such as this one *must* be conducted under 10 C.F.R.

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[572] 10 C.F.R. § 51.23; *see Southern Nuclear Operating Company* (Early Site Permit for Vogtle ESP site), LBP-07-03, 65 NRC 237, 268 (2007); *Nevada v. NRC*, No. 05-1350, 2006 WL 2828864, at 1 (D.C. Cir., Sept. 22, 2006).

[573] Reference Petition at 5.

[574] NRC Response at 17.

Subpart L.[575] Staff supports its argument with a Commission statement, made when it adopted certain revisions to the NRC procedural rules at 10 C.F.R. Part 2, that "the listed proceedings [at § 2.310] *are to be conducted under Subpart L*," unless one of the exceptions of subsections (b) through (h) are applicable.[576] Staff concludes because this proceeding does not apply to any of the applications specified in paragraphs (b) through (h), "the appropriate hearing procedure is Subpart L."[577]

At oral argument, Petitioners argued that the licensing board in *Vermont Yankee*[578] specifically rejected the argument now put forth by Staff, by virtue of the use of the permissive term, "may," in 10 C.F.R. § 2.310(a), which indicates that licensing boards have some discretion in determining whether to hold hearings under Subpart L or Subpart G.[579] Petitioners urged that a Subpart G Hearing is appropriate "due to the nature of the issues in this case, the technical issues related to water movement, geological formations, intermixing of the aquifers, as well as the cultural and indigenous peoples issues, and [ ] in order to have a proper record."[580] Petitioners asserted that the Subpart L procedures, while found "to comply technically with the Administrative Procedure Act,"[581] would not provide the discovery and expert testimony

[575] *Id.* (citing 10 C.F.R. §§ 2.310(a), 2.1200) (emphasis added).

[576] *Id.* (citing Final Rule: Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, 2,206 (Jan. 14, 2004) (emphasis added)).

[577] *Id.* at 17-18; the Applicant did not specifically address Petitioners' request for Subpart G hearing in pleadings, but did argue in opposition to the request at oral argument.

[578] Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (*Vermont Yankee Nuclear Power Station*), LBP-06-20, 64 NRC 131, 201 (2006).

[579] Tr. at 365-66.

[580] *Id.* at 366.

[581] *See CAN v. NRC*, 391 F.3d at 351, wherein the First Circuit upheld the validity of the Subpart L regulations on the basis of NRC's representation that the opportunity for cross-examination under 10 C.F.R. § 2.1204(b)(3) of Subpart L is equivalent to the opportunity for cross-examination under the APA, 5 U.S.C. §556(d), *i.e.*, that cross-examination is available whenever it is "required for a full and fair adjudication of the facts."

procedures more appropriate for the issues before the Board in this proceeding.[582] Staff and Applicant contended that a Subpart G hearing is "just not permitted under the rules."[583]

We note that the January 16, 2008, oral argument on Subpart G was effectively cut short at the end of the day, and as a result, the Board deems it appropriate to conduct limited additional argument on this matter in conjunction with argument on Contention E, to be scheduled at a later date.

VIII. Conclusion and Order

Based, therefore, upon the preceding findings and rulings, it is, this 29th day of April, 2008, ORDERED as follows:

A. Petitioners Owe Aku/Bring Back the Way and Western Nebraska Resources Council are admitted as parties in this proceeding and their Requests for Hearing and Petitions to Intervene are granted in part and denied in part. A hearing is granted with respect to their joint Contentions A, B, and C, reframed and limited as follows:

Contention A. CBR'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.

Contention B. CBR'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,

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

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[582] Tr. at 366.

[583] *Id.* at 369; *see id.* at 367-69.

The Requests for Hearing and Petitions of Slim Buttes Agricultural Development Corporation, Thomas Kanatakeniate Cook and Debra L. White Plume are denied, as is admission of Contentions D and F. The Board will hear additional argument on Contention E, in accordance with relevant provisions of the preceding Memorandum.

B. The Board will conduct additional oral argument on Petitioners' request to hold the hearing in this proceeding under the procedures set forth at Subpart G of 10 C.F.R. Part 2, at a date to be specified in the near future.

C. The Oglala Sioux Tribe may participate in the hearing pursuant to 10 C.F.R. § 2.315(c). The particulars and extent of the Tribe's participation will be addressed in a prehearing conference to be held in the near future, in conjunction with oral argument on Contention E and Petitioners' request that the hearing be held under 10 C.F.R. Part 2, Subpart G, and other preliminary matters.

D. We request that any other interested State, local governmental body, and affected, Federally-recognized Indian Tribe that wishes to participate in the hearing pursuant to 10 C.F.R. § 2.315(c) file a Request and Notice of such intent within thirty (30) days, or by May 29, 2008. Any such notice shall, as required at § 2.315(c), contain a designation of a single representative for the hearing, and an identification of the contention or contentions on which it will participate.

E. After discussing with the parties relevant scheduling matters in the aforementioned prehearing conference, the Licensing Board will issue a schedule of further proceedings in this matter.

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

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

_____
Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

/RA/

_____
Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

/RA/

_____
Dr. Fred W. Oliver
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 29, 2008[584]

[584] Copies of this Memorandum and Order were sent this date by Internet email transmission to all participants or counsel for participants.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of		
CROW BUTTE RESOURCES, INC.	)	Docket No. 40-8943-MLA
In-situ Leach Uranium Recovery Facility, Crawford, Nebraska	)	
(License Amendment for the North Trend Expansion Area)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULING ON STANDING AND CONTENTIONS OF PETITIONERS OWE AKU, BRING BACK THE WAY; WESTERN NEBRASKA RESOURCES COUNCIL; SLIM BUTTES AGRICULTURAL DEVELOPMENT CORPORATION; DEBRA L. WHITE PLUME; AND THOMAS KANATAKENIATE COOK) (LBP-08-06) have been served upon the following persons by U.S. Mail, first class, or through NRC internal distribution.

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U. S. Nuclear Regulatory Commission
Washington, DC 20555-001

Administrative Judge
Ann Marshall Young, Chair
Atomic Safety and Licensing Board Panel
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Administrative Judge
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Administrative Judge
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Docket No. 40-8943-MLA
LB MEMORANDUM AND ORDER (RULING ON STANDING AND CONTENTIONS OF PETITIONERS OWE AKU, BRING BACK THE WAY; WESTERN NEBRASKA RESOURCES COUNCIL; SLIM BUTTES AGRICULTURAL DEVELOPMENT CORPORATION; DEBRA L. WHITE PLUME; AND THOMAS KANATAKENIATE COOK) (LBP-08-06)

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Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 29th day of April 2008