February 25, 2013

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 40-8943-MLA-2
CROW BUTTE RESOURCES, INC.	)	
	)	ASLBP No. 13-926-01-MLA-BD01
(Marsland Expansion Project)	)	

NRC STAFF RESPONSE TO THE REQUEST FOR HEARING AND
PETITION TO INTERVENE BY CONSOLIDATED PETITIONERS

INTRODUCTION

The Nuclear Regulatory Commission (NRC or Commission) Staff responds to the hearing request filed on January 29, 2013 by various individual and organizational clients (collectively, Consolidated Petitioners).[1] Petitioners request a hearing on Crow Butte Resources, Inc.'s application for a license amendment to be used in connection with an *in-situ* leach uranium recovery facility near Crawford, Nebraska. As discussed below, Petitioners' request for hearing and petition to intervene should be denied because Petitioners have not demonstrated standing in this proceeding and none of their proffered contentions meet the requirements for admissibility under the NRC's Rules of Practice.

BACKGROUND

Crow Butte Resources, Inc. (CBR) possesses NRC source material license SUA-1534 to operate an in-situ leach (ISL) uranium recovery facility in Crawford, Dawes County, Nebraska.[2]

[1] "Consolidated Request for Hearing and Petition for Leave to Intervene" (Jan. 29, 2013) (Petition). Consolidated Petitioners are the following persons and organizations: Antonia Loretta Afraid of Bear Cook, Bruce McIntosh, Debra White Plume, Western Nebraska Resources Council, and Aligning for Responsible Mining. Petition at 1.

[2] On November 27, 2007, CBR filed a timely request for renewal of its license. Letter from Stephen P. Collings, CBR, to Charles L. Miller, NRC, "Request for License Renewal" (Nov. 27, 2007) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML073470645). Although the

On May 16, 2012, CBR submitted to the NRC a request to amend its license to allow CBR to construct and operate an ISL uranium recovery satellite facility at the Marsland Expansion Area (MEA) in Dawes County, Nebraska.[3] The MEA is located approximately 11 miles south-southeast of the CBR main facility and approximately 4.5 miles northeast of Marsland, Nebraska. CBR Technical Report (TR) Section 1.3. After conducting an acceptance review, the Staff formally accepted CBR's license amendment application for review on October 5, 2012.[4] On November 30, 2012, the Staff published a notice in the Federal Register offering the opportunity to request a hearing in the MEA license amendment proceeding.[5]

I. The Proposed Action

The in situ leach recovery process proposed for the MEA involves injecting lixiviant into an underground geological formation containing uranium deposits (*i.e.*, the "ore zone"). Lixiviant is a mixture of groundwater charged with oxygen and bicarbonate. As lixiviant is pumped through the ore zone, the uranium dissolves into the lixiviant. The uranium-bearing lixiviant is then pumped back to the surface, where the uranium is separated from the lixiviant, processed into yellowcake, and shipped to other facilities to be enriched for use as reactor fuel. After the uranium is removed, the lixiviant is re-charged with oxygen and bicarbonate and reinjected into the ore zone to repeat the cycle.

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license renewal proceeding is ongoing, CBR continues to operate its existing uranium recovery operation pursuant to 10 C.F.R. § 40.42(a).

[3] "License No. SUA-1534, Docket Number 40-8943, Marsland Expansion Area License Amendment Application" (May 16, 2012) (ADAMS Accession No. ML12160A512). The Technical Report (TR), Environmental Report (ER), and cultural resources reports are available on the NRC's public website at http://www.nrc.gov/materials/uranium-recovery/license-apps/marsland/marsland-app-docs.html.

[4] E-mail from Tom Lancaster, NRC, to Cameco Resources, "Acceptance Review, Marsland Expansion Area License Amendment Application, Crow Butte Resources, Inc., Crawford, Nebraska, License SUA-1534 (TAC J00674)" (Oct. 5, 2012) (ADAMS Accession No. ML12285A142).

[5] "Crow Butte Resources, Inc. License SUA-1534, License Amendment To Construct and Operate Marsland Expansion Area," 77 Fed. Reg. 71,454 (Nov. 30, 2012).

As a satellite facility, the operations at the MEA will be limited to injection of lixiviant into the ore zone, pumping of uranium-bearing lixiviant to the surface, and separation of uranium from the lixiviant via ion exchange. *See* TR at 3-15 to 3-17. The loaded ion exchange resins from the MEA will be transported to the main Crow Butte facility in Crawford, Nebraska, for subsequent processing into yellowcake. TR at 1-3 to 1-4.

II. Licensing and Regulation of Uranium Recovery Facilities

As with other uranium recovery applications, the NRC Staff will conduct a detailed technical review of CBR's application. The Staff's review will include both a safety review and an environmental review. The Staff's safety review will focus on the Technical Report (TR) that CBR submitted with its application, while the environmental review will focus on CBR's Environmental Report (ER). The Staff will conduct its safety review to determine whether CBR's application meets all applicable requirements in 10 C.F.R. Part 20 and 10 C.F.R. Part 40. In particular, the Staff will assess whether the application meets the applicable requirements in Appendix A of Part 40, "Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content." The Staff will conduct its environmental review in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321 *et seq.*, the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, and the NRC's NEPA-implementing regulations at 10 C.F.R. Part 51.

III. Staff Review Schedule

In its Initial Prehearing Order,[6] the Board asked the Staff to provide its current schedule for issuance of draft and final environmental and safety documents.[7] The Staff currently plans to complete its draft environmental review document in January 2014, and to issue the final

[6] Memorandum and Order (Initial Prehearing Order) (Feb. 8, 2013).

[7] *Id*. at 3.

version of that document in March 2014. The Staff plans to issue its safety evaluation report (SER) in February 2015.

IV. Section 106 Consultation

Section 106 of the NHPA requires that, prior to issuing a license for an undertaking, a federal agency must take into account the effect of the undertaking on "any district, site, building, structure, or object that is included in or eligible for inclusion" in the National Register of Historic Places (NRHP).[8] The regulations implementing Section 106 require federal agencies to "involve . . . consulting parties . . . in findings and determinations made during the section 106 process."[9] In particular, with respect to Indian tribes, the agency must "make a reasonable and good faith effort" to identify tribes that should be consulted, and provide those tribes

> a reasonable opportunity to identify [their] concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate [their] views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.[10]

In this proceeding, the Staff initiated the consultation process within a month of beginning its acceptance review of the MEA application.[11] On September 5, 2012, the Staff sent letters to the leaders of 21 tribes, including the Oglala Sioux Tribe, inviting the tribes to participate as Section 106 consulting parties in the MEA proceeding.[12] Subsequently, on October 31, 2012, the NRC sent letters to the Tribal Historic Preservation Officers (THPOs) of

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[8] 16 U.S.C. § 470f.

[9] 36 C.F.R. § 800.2(a)(4).

[10] *Id*. § 800.2(c)(2)(ii)(A).

[11] The Staff's acceptance review began on August 6, 2012. *See* http://www.nrc.gov/materials/uranium-recovery/license-apps/marsland/marsland-schedule.html (last visited Feb. 19, 2013).

[12] *See, e.g.*, Letter from Kevin Hsueh to President John Yellow Bird Steele, Oglala Sioux Tribe, "Invitation for Formal Section 106 Consultation Pursuant to the National Historic Preservation Act Regarding the Crow Butte Resources, Inc. License Amendment Application for the Proposed Marsland Expansion Area In-Situ Uranium Recovery Satellite Facility, in Dawes County and Sioux County, Nebraska" (Sept. 5, 2012) (ADAMS Accession No. ML12248A299). A copy of this letter was also sent to Mr. Wilmer Mesteth, the OST Tribal Historic Preservation Officer (THPO). *Id*.

the 21 tribes, including Mr. Wilmer Mesteth, the Oglala Sioux Tribe's THPO, inviting the tribes to send representative to all four of the CBR sites to conduct field surveys to identify cultural resources of interest to the tribes.[13] Finally, on January 13, 2013, the NRC sent letters to the THPOs, including Mr. Mesteth of the Oglala Sioux Tribe, providing an update on Section 106 activities.[14] As noted in this letter, two tribes accepted the offer to conduct field surveys and completed those surveys in November-December 2012.[15] The NRC is awaiting reports from those tribes on the results of their surveys.[16]

DISCUSSION

In order for a hearing request to be granted, a petitioner must demonstrate that it has standing to intervene in the proceeding and must submit at least one admissible contention.[17]

I. Standing

A. Legal Standards Governing Standing to Intervene

Under the NRC's Rules of Practice:

> [a]ny person whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing or petition for leave to intervene and a specification of the contentions which the person seeks to have litigated in the hearing.[18]

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[13] Letter from Kevin Hsueh to THPOs, "Continuation of Section 106 Consultation for the Proposed Crow Butte In-Situ Uranium Recovery (ISR) License Renewal, North Trend, Marsland, and Three Crow Projects" (Oct. 31, 2012) (ADAMS Accession No. ML12311A501). This letter was initially sent by e-mail on October 31, 2012. To follow up, a hard copy was mailed to tribal leaders, including President Yellow Bird Steele of the Oglala Sioux Tribe, on November 21, 2012. *See* Letter from Kevin Hsueh to President John Yellow Bird Steele, Oglala Sioux Tribe, "Transmittal of a Letter Sent to the Tribal Historic Preservation Officers Regarding the Proposed Crow Butte License Renewal, North Trend, Marsland and Three Crow Projects" (Nov. 21, 2012) (ADAMS Accession No. ML12320A480). The Tribe did not respond to this letter.

[14] Letter from Kevin Hsueh to THPOs, "Update of Section 106 Consultation for the Proposed Crow Butte In-Situ Uranium Recovery (ISR) License Renewal, North Trend, Marsland, and Three Crow Projects" (Jan. 3, 2013) (ADAMS Accession No. ML13303A280). This letter was sent by e-mail to the THPOs.

[15] *Id*. at 2.

[16] *Id*.

[17] 10 C.F.R. § 2.309(a).

[18] *Id.*

NRC regulations further provide that the designated Board "will grant the request [for a hearing] if it determines that the requestor has standing under the provisions of [10 C.F.R. § 2.309(d)] and has proposed at least one admissible contention that meets the requirements of [10 C.F.R. § 2.309(f)]."[19] Under the general standing requirements in 10 C.F.R. § 2.309(d)(1), a request for hearing must state:

> (i) The name, address and telephone number of the requestor or petitioner;
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> (ii) The nature of the requestor's/petitioner's right under the [Atomic Energy Act (AEA) of 1954, 42 U.S.C. § 2011 *et seq.*] to be made a party to the proceeding;
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> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding; and
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> (iv) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest.

"At the heart of the standing inquiry is whether the petitioner has 'alleged such a personal stake in the outcome of the controversy' as to demonstrate that a concrete adverseness exists which will sharpen the presentation of issues."[20] The Commission has long applied contemporaneous judicial concepts of standing to determine whether a party has a sufficient personal interest to intervene as a matter of right.[21] To establish standing, a petitioner must allege:

> (1) an "injury in fact" that is
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> (2) "fairly traceable to the challenged action"; and
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> (3) is "likely" to be "redressed by a favorable decision."[22]

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[19] *Id.*

[20] *Sequoyah Fuels Corp. and Gen. Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71 (1994) (citing *Duke Power Co. v. Carolina Envtl. Study Group, Inc.*, 438 U.S. 59, 72 (1978), and quoting *Baker v. Carr*, 369 U.S. 186, 204 (1962)).

[21] *Calvert Cliffs 3 Nuclear Project, LLC & Unistar Nuclear Operating Servs., LLC* (Combined License Application for Calvert Cliffs, Unit 3), CLI-09-20, 70 NRC 911, 913 (2009).

[22] *Id.* at 915 (citing *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)).

The injury must be "concrete and particularized," not "conjectural" or "hypothetical."[23] Standing will be denied when the threat of injury is too speculative.[24] Additionally, a petitioner's claimed injury must arguably be within the zone of interests protected by the governing statute in the proceeding.[25] In order to determine whether an interest is within the "zone of interests" of a statute, the Board must determine both what interests are "arguably . . . to be protected" by the statute and whether the petitioner's interests affected by the proceeding are among them.[26] In this case, the AEA, NEPA, and the NHPA are the statutes governing the proceeding before the Board.

To establish that an injury is "fairly traceable," a petitioner must establish a causal nexus between the alleged injury and the challenged action.[27] A determination that the injury is fairly traceable to the challenged action, however, does not depend "on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible."[28] "[W]hether a petitioner could be affected by the licensing action must be determined on a case-by-case basis, taking into account the petitioner's distance from the source, the nature of the licensed activity, and the significance of the radioactive source."[29]

The Commission has historically presumed standing in power reactor construction permit and operating license proceedings based on a petitioner's 50-mile proximity to the

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

[24] *Id*.

[25] *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195-96 (1998).

[26] *U.S. Enrichment Corp.* (Paducah, Kentucky), CLI-01-23, 54 NRC 267, 272-73 (2001) (citing *Nat'l Credit Union Admin. v. First Nat'l Bank*, 522 U.S. 479, 492 (1998)).

[27] *Commonwealth Edison Co*. (Zion Nuclear Power Station, Units 1 & 2), LBP-98-27, 48 NRC 271, 276 (1998), *aff'd*, CLI-99-4, 49 NRC 185 (1999).

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

[29] *U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 72 NRC 185, 188 (Aug. 12, 2010) (quoting *USEC, Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311-12 (2005)).

facility.[30] In nuclear materials cases, however, "proximity alone does not suffice for standing, absent an 'obvious' potential for offsite harm."[31] For instance, "a presumption based on geographical proximity (albeit at distances much closer than 50 miles) may be applied where there is a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences."[32] In licensing decisions involving ISR projects, petitioners have demonstrated standing by showing that they use a substantial quantity of water from a source that is "reasonably contiguous" to the ISR injection or processing sites.[33]

"Where there is no 'obvious' potential for radiological harm at a particular distance frequented by a petitioner, it becomes the petitioner's 'burden to show a specific and plausible means' of how the challenged action may harm him or her."[34] "Conclusory allegations about potential radiological harm," however, are not sufficient to establish standing.[35] In order to show standing based on alleged contamination of water, the Commission has found that a petitioner must outline a pathway or mechanism through which such contamination would reach the water he uses or drinks.[36]

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[30] *Florida Power & Light, Co.* (St. Lucie, Units 1 & 2), CLI-89-21, 30 NRC 325, 329 (1989); *Calvert Cliffs 3*, CLI-09-20, 70 NRC at 915.

[31] *Nuclear Fuel Servs., Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004).

[32] *Georgia Inst. of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 116 (1995) (citing *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n.22).

[33] *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 275 (1998), *rev'd on other grounds*, CLI-98-16, 48 NRC 119 (1998).

[34] *USEC, Inc.*, CLI-05-11, 61 NRC at 311-12 (quoting *Nuclear Fuel Servs., Inc.*, CLI-04-13, 59 NRC at 248)).

[35] *Nuclear Fuel Servs., Inc.*, CLI-04-13, 59 NRC at 248.

[36] *See International Uranium (USA) Corp*. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252-53 (2001).

B. Representational and Associational/Organizational Standing

An organization does not have independent standing to intervene in a licensing proceeding merely because it asserts an interest in the litigation.[37] An organization may demonstrate standing by showing "either immediate or threatened injury to its organizational interests or to the interests of identified members."[38] For an organization to assert standing on its own behalf, it must satisfy the same standing requirements as an individual by showing a discrete institutional injury to the organization itself.[39] An organization seeking to intervene in its own right must demonstrate a palpable injury-in-fact to its organizational interests that is within the zone of interests of the AEA, NEPA or NHPA.[40] An organization cannot assert injury-in-fact to itself based upon nothing more than a broad, unparticularized interest—shared with many others—in the preservation of the environment, no matter how longstanding the interest or how qualified the organization may be in evaluating the problem.[41]

Whereas organizational standing involves an alleged harm to the organization itself, representational standing is based on an alleged harm to one or more members of an organization.[42] For an organization to assert "representational standing" on behalf of one or more of its members, the organization "[m]ust demonstrate how at least one member may be

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[37] *Puget Sound Power and Light Co.* (Skagit/Hanford Nuclear Power Project, Units 1 & 2), LBP-82-74, 16 NRC 981, 983 (1982) (citing *Allied General Nuclear Services* (Barnwell Fuel Receiving and Storage Station), ALAB-328, 3 NRC 420, 422 (1976)).

[38] *Georgia Tech*, CLI-95-12, 42 NRC at 115.

[39] *White Mesa*, CLI-01-21, 54 NRC at 252.

[40] *See Sierra Club v. Morton*, 405 U.S. 727, 739 (1972); *Georgia Tech*, CLI-95-12, 42 NRC at 115; *Yankee Atomic*, CLI-98-21, 48 NRC at 194-95; *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 530 (1991).

[41] *Sierra Club v. Morton*, 405 U.S. at 734-35, 739.

[42] *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 383 (2010).

affected by the licensing action, must identify that member by name/address, and must show that the organization is authorized to request a hearing on that member's behalf."[43]

C. Consolidated Petitioners' Standing Claims

1. Individual Petitioners

The Consolidated Petitioners include three individual Petitioners: Antonia Loretta Afraid of Bear Cook, Bruce McIntosh, and Debra White Plume. As described more fully below, none of the individual Petitioners has provided information sufficient to demonstrate standing.

Before addressing the Petitioners individually, the Staff addresses three general issues regarding plausible pathways between the MEA site and the Petitioners' water supplies. First, none of the Petitioners claim to draw water from the basal sandstone of the Chadron formation in which CBR plans to conduct ISL operations. Because the Petitioners do not claim to be using water from the same aquifer in which the proposed uranium ore source is situated, a plausible pathway between the proposed site and Petitioners' water sources cannot be presumed.[44] Second, all of the individual Petitioners who provided information on the location of their property interests reside generally northeast of the proposed MEA site at a distance of at least 25 miles from the MEA site.[45] This is significant because the groundwater of the aquifers overlying the mined aquifer flows *away* from the petitioners' residences. As stated in the application, "within the MEA, groundwater generally flows to the southeast across the entire MEA toward the Niobrara River . . . ." TR at 2-329. Third, the MEA site is located in the Niobrara River drainage basin, not the White River basin. TR at 2-329. Because none of the

[43] *N. States Power Co*. (Monticello; Prairie Island, Units 1 & 2; Prairie Island ISFSI), CLI-00-14, 52 NRC 37, 47 (2000). The purpose of the third requirement is to ensure that an organization is truly representing the interests of the member and not "simply seeking the 'vindication of its own value preferences.'" *White Mesa*, CLI-01-21, 54 NRC at 250-51.

[44] *See Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-12-3, __ NRC __, __ (Feb. 10, 2012) (slip op. at 13 n.11).

[45] *See id.* (slip op. at 13).

Petitioners appear to use water that is downgradient from CBR's proposed ISL operations, and because no Petitioner explains how contaminated material from the MEA site might plausibly enter the water upon which he or she relies, the Petitioners fail to demonstrate standing in this proceeding.[46]

Antonia Loretta Afraid of Bear Cook

Ms. Afraid of Bear Cook lives in Chadron, Nebraska, where she owns a house and five acres of land. Afraid of Bear Cook Declaration at ¶ 1. Ms. Afraid of Bear Cook also owns a home and vegetable farming operation on the Pine Ridge Indian Reservation, which she states is located alongside the White River, three miles north of the Nebraska state line near Bureau of Indian Affairs (BIA) Road No. 41. *Id.* Ms. Afraid of Bear Cook states that the water at her Chadron property comes from a 90-ft well which draws water "from the secondary porosity of the Brule Formation." *Id.* at ¶ 3. The water for her Reservation property comes from a tribal pipeline drawing water from the Arikaree aquifer "some miles north of Pine Ridge Village." *Id.* Ms. Afraid of Bear Cook attests that she has used water from the White River for her vegetable farming operation for 28 years, and that she and members of her family make their living from the operation. *Id.* at ¶ 4. She also states that as an enrolled member of the Oglala Sioux Tribe, she has a vested interest in traditional cultural properties that may exist within the Marsland expansion area. *Id.* at ¶ 5.

[46] In addition, the Staff notes that none of the Petitioners have referenced the LaGarry Opinion as support for their requests for standing. In the *Crow Butte* license renewal proceeding, the Commission held that "it was not unreasonable for the Board to look more closely at the LaGarry Opinion in deciding whether there was a plausible pathway to injury," despite the fact that the Consolidated Petitioners did not did not explain how the LaGarry Opinion supports the Petitioners' claims of potential harm. *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 345 (2009) (Crow Butte LR). Even if the Board in this proceeding were to look to the LaGarry Opinion for support for Petitioners' standing claims, however, the Opinion filed with this Petition provides only an overview of geology that covers the entire western region of Nebraska, and does not provide more than general, speculative suggestions of potential pathways for contamination. *See generally* LaGarry Opinion. Consequently, the LaGarry Opinion filed in the present proceeding does not provide a specific and plausible means by which potential contamination from the MEA site could reach any of the Petitioners in this case. *See USEC, Inc*., CLI-05-11, 61 NRC at 310-11 (Where there is no "obvious potential" for offsite harm, the petitioner must show a "specific and plausible means of how the challenged action may harm him or her").

In the current proceeding, Ms. Afraid of Bear Cook does not allege any injury that might be caused by CBR's proposed operations at the MEA. Specifically, Ms. Afraid of Bear Cook does not explain how the water she uses from the Brule Formation, the Arikaree aquifer, or the White River might be harmed by these operations. In addition, Ms. Afraid of Bear Cook does not describe a plausible pathway by which potential contamination from CBR's operations might reach her supply of water from any of these sources. The Applicant plans to recover uranium from the basal sandstone of the Chadron formation, which occurs at depths ranging from approximately 817 to 1,130 feet below ground surface. ER at 1-7, 3-13. Ms. Afraid of Bear Cook's residence in Chadron is located approximately 26 miles north-northeast of the MEA site[47] and draws from the Brule Formation at a substantially shallower depth of 90 feet below ground surface. Afraid of Bear Cook Declaration at ¶ 3.

Likewise, she has not suggested how cross contamination between the proposed site and the water source at her Pine Ridge Indian Reservation property, the Arikaree aquifer, could occur. Ms. Afraid of Bear Cook states that her water at the Reservation comes from the Arikaree aquifer "some miles north" of Pine Ridge village, and the distance between the MEA site and Pine Ridge, South Dakota, is approximately 50 miles.[48] While the LaGarry Opinion postulates possible interconnections between aquifers, he provides no explanation of how potential transposed contaminants would reach her water source nearly 50 miles from the site.[49]

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[47] The Staff used the distance calculator at http://www.infoplease.com/atlas/calculate-distance.html to estimate distances from the MEA site. The Staff used Marsland, Nebraska as the reference point for the MEA site. Because the town of Marsland is 4.5 miles southwest of the MEA site (TR at 1-2), the Staff subtracted 5 miles from the calculated distances.

[48] The Staff estimated the distance to Ms. Cook's Reservation property by using Google Maps to locate a point three miles north of the Nebraska state line on BIA Road No. 41. The Staff then visually compared (1) the distance between the BIA Road No. 41 point to the MEA site to (2) the distance between Pine Ridge, South Dakota, and the MEA site, calculated using the distance calculator at http://www.infoplease.com/atlas/calculate-distance.html. The distances appear to be approximately the same.

[49] *See Strata*, LBP-12-3, __ NRC at __ (slip op. at 14 n.14) (stating that, as a petitioner's distance increases from an ISR facility, "the petitioner with an upgradient water source must expect that it will be

Finally, Ms. Afraid of Bear Cook does not suggest a pathway by which contaminated water from the MEA site could reach the White River near her Pine Ridge Indian Reservation property. The White River is located in a different drainage basin than the MEA site, which is located in the Niobrara River Basin. TR at 2-329. The Niobrara River flows east from the MEA site. ER at 3-38. The groundwater on the site generally flows to the southeast toward the Niobrara River. TR at 2-329. Moreover, groundwater at the MEA is isolated from the White River Basin by the Pine Ridge Escarpment, which rises approximately 300 to 900 feet above the basal plain. TR at 2-215. Consequently, Ms. Afraid of Bear Cook has not fulfilled her burden to show a "specific and plausible means" by which potential contaminants from CBR's proposed Marsland expansion will reach the aquifers and surface waters from which she draws water.[50]

Finally, Ms. Afraid of Bear Cook's assertion of a "vested interest" in traditional cultural properties that may exist within the Marsland expansion area is not sufficient to establish her standing to intervene in this proceeding.[51] Ms. Ms. Afraid of Bear Cook must allege an "actual or threatened, concrete and particularized injury" to her interest that is "fairly traceable" to the proposed action,[52] and the injury must be "actual or imminent," not "conjectural" or "hypothetical."[53] Ms. Afraid of Bear Cook's Declaration does not allege such an injury. She has not indicated how she believes cultural artifacts may be impacted by the proposed Marsland operations. She lives more than 25 miles from the site, and she has not provided any information to suggest that she has ever visited the MEA site or is presently aware of any cultural properties of interest to her or the Tribe located within the MEA site. Therefore, Ms.

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called upon to . . . provide the board with some analysis . . . as to how any contamination will come to affect any wells alleged to be impacted by the facility, given the distance involved.")

[50] *Powertech*, LBP-10-16, 72 NRC at 382 (citing *USEC, Inc.*, CLI-05-11, 61 NRC at 311-12).

[51] *See Crow Creek Tribe v. Brownlee*, 331 F.3d 912, 916 (D.C. Cir. 2003) (stating that an Indian tribe does not have standing merely because it has statutory rights in cultural artifacts on certain lands).

[52] *Sequoyah Fuels*, CLI-01-2, 53 NRC at 13.

[53] *Calvert Cliffs 3*, CLI-09-20, 70 NRC at 916 n.22.

Afraid of Bear Cook has not met her burden to provide facts sufficient to show that her individual interest in cultural properties is threatened.

Bruce McIntosh

Mr. McIntosh resides in Chadron, Nebraska, and states that he has worked and played in Dawes County for 67 years. McIntosh Declaration at ¶ 1, 4. Mr. McIntosh attests that he uses water for personal, household, and domestic purposes, including gardening, bathing, and drinking. *Id.* at ¶ 3. Mr. McIntosh states that he is concerned about the potential for natural inter-mixing of aquifers from the mining areas due to fracturing in the rock. *Id.* He claims that the "harm to [his] wellbeing, health and to the communities surrounding the MEA would be catastrophic if the water supplies are contaminated or diminished, which would include harms to tourism, ranching businesses and livelihood." *Id.* at ¶ 5. Mr. McIntosh also expresses concern about recent local fires caused by man induced drought. *Id.* at ¶ 6.

Mr. McIntosh requested standing to participate in the *Crow Butte* license renewal proceeding, but his request was denied by the licensing board for failure to "claim any actual or threatened cognizable injury attributable to Crow Butte's licensed ISL uranium mining operations."[54] As in the license renewal proceeding, Mr. McIntosh does not allege a concrete and particularized injury that is fairly traceable to the Applicant's proposed action.[55] Although he states that he has "worked and played" in Dawes County for many years, he does not explain how the proposed Marsland project would cause an injury in fact to his interests in that regard. McIntosh Declaration at ¶ 1. He also has not provided information regarding the source of the water that he uses for his personal, domestic, and household purposes, which is essential to determining whether a "plausible pathway" exists by which contaminated water from the mined

[54] *Crow Butte Resources, Inc.* (License Renewal for the In Situ Leach Facility), LBP-08-24, 68 NRC 691, 710 (2008) (Crow Butte LR).

[55] *See, e.g.*, *Yankee Atomic*, CLI-98-21, 48 NRC at 195; *Georgia Tech*, CLI-95-12, 42 NRC at 115; *Perry*, CLI-93-21, 38 NRC at 92 (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992)).

aquifer at the MEA site could intermingle with the water he uses. Without such information, he has not demonstrated an injury in fact that is fairly traceable to the proposed action. Further, Mr. McIntosh has not explained how the proposed Marsland project is connected to man induced drought. A petitioner's claimed injury must arguably be within the zone of interests protected by the governing statute in a proceeding, in this case, the AEA and NEPA.[56] Absent some alleged connection between the proposed Marsland project and man induced drought, Mr. McIntosh's generalized concern about drought and fires in his local area does not fall within the zone of interests protected by the AEA or NEPA. Consequently, Mr. McIntosh has not provided information sufficient to demonstrate personal standing in this proceeding.

Debra White Plume

Ms. White Plume lives in Manderson, South Dakota, and is an enrolled member of the Oglala Sioux Tribe. White Plume Declaration at ¶ 1. Ms. White Plume states that she uses water for personal, household, and domestic purposes, including gardening, irrigation, bathing, and drinking. *Id.* at ¶ 3. She further states that she uses water for ranching purposes and that she maintains livestock, including horses and buffalo. *Id.* at ¶ 4. Ms. White Plume claims that, to her knowledge, her water comes from the Arikaree aquifer, and that she has a well in that aquifer. *Id.* at ¶ 3. Ms. White Plume also claims that the water must be protected for the elk, deer, antelope, and birds and other life forms, and that it is her duty to protect the water for the coming Lakota and Northern Cheyenne generations. *Id.* at ¶ 4-5.

As with the other individual petitioners in this proceeding, Ms. White Plume has not provided sufficient information to establish a connection between the proposed project and an injury to her property, financial, or other interests. First, Ms. White Plume has not alleged any injury that is fairly traceable to the proposed Marsland operations. Although Ms. White Plume states that she draws water from the Arikaree aquifer, she does not explain how the water in the

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

Arikaree aquifer might be harmed by these operations. She also does not describe any plausible pathway by which contamination from CBR's operations at the MEA site might reach her water supply in Manderson, South Dakota, which is approximately 64 miles to the northeast of the MEA site. Finally, Ms. White Plume's expression of the need to "protect" water for the animals and for coming generations does not provide a clear indication of the harm to water that she anticipates to occur as a result of the proposed project. Therefore, Ms. White Plume has not met her burden to provide facts sufficient to support standing in the current proceeding.

Ms. White Plume was granted standing in the *Crow Butte* license renewal and *North Trend* proceedings. However, the information Ms. White Plume provided in support of standing in those proceeding was different from the information provided in this proceeding. In *North Trend*, Ms. White Plume stated that she uses the White River for fishing, that she "draws water from an aquifer that may mix with the Chadron . . . or Brule aquifer in which CBR mines," and that she and her family collect eagle feathers for ceremonial purposes at the North Trend site and she was afraid that noise from operations would scare eagles away.[57] In contrast, in her affidavit for this proceeding, she does not identify specific activities that would be affected, nor does she allege a connection between her well and the mined aquifer 64 miles away.

On appeal from the board's decision in *North Trend*, the Staff argued that Ms. White Plume had failed to show a plausible chain of causation for how contamination from the proposed North Trend project could reach her well.[58] While declining to overturn the board's decision, the Commission noted that the Staff's arguments were "not without force," and that Ms. White Plume's articulated bases for standing were "significantly more attenuated" than

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[57] *Crow Butte Resources, Inc*. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 548 n.53 (2009) (Crow Butte North Trend), citing Affidavit of Debra White Plume (Dec. 20, 2007) (Appended to Reply to NRC Staff Response to Petition of Owe Aku and Debra White Plume (Dec. 28, 2007)).

[58] *Id.* at 547. Ms. White Plume's property is approximately 64 miles from the MEA site.

those of another admitted petitioner.[59] In the present proceeding, Ms. White Plume's articulated bases for standing are even more attenuated than they were in *North Trend*. Therefore, Ms. White Plume has not demonstrated standing to intervene in this proceeding.

2. Organizational Standing

WNRC and ARM both request organizational standing. Petition at 6-7. WNRC is "a Nebraska nonprofit which was formed in 1983 to protect the natural resources of Western Nebraska with a focus on groundwater contamination from uranium mining." *Id.* ARM is "an NGO [Non-Governmental Organization] based at Pine Ridge Indian Reservation founded to prevent abusive mining which is mining that does not comply with the International Precautionary Principle." *Id.* at 6.

Neither ARM nor WNRC meets the requirement that it identify a discrete institutional injury it might suffer if the NRC grant's the Applicant's request.[60] Neither ARM nor WNRC states that it holds property in the vicinity of the Marsland expansion site or elsewhere that might be adversely affected by CBR's proposed project. Rather, WNRC expresses only a generalized interest in protecting the natural resources of Western Nebraska, with an emphasis on groundwater contamination from uranium mining, and ARM expresses a generalized interest in preventing abusive mining practices. Petition at 6-7. These general policy concerns are "of the sort [that] repeatedly have [been] found insufficient for organizational standing."[61] In addition, although ARM states that it maintains a "concrete interest" in protecting the "lands, natural resources, economic prosperity, and the health, safety, and welfare of the Oglala," these concerns amount to only a broad, unparticularized interest that is shared with many others – it

[59] *Id.* at 547-48.

[60] *Georgia Tech*, CLI-95-12, 42 NRC at 115; *Turkey Point*, ALAB-952, 33 NRC at 528-30.

[61] *Strata*, LBP-12-3, __ NRC at __ (slip op. at 8) (quoting *White Mesa*, CLI-01-21, 54 NRC at 252). *See also Sierra Club v. Morton*, 405 U.S. at 734-35 (holding that a petitioner cannot assert injury-in-fact to itself as an organization based upon nothing more than a broad interest – shared by many others – in the preservation of the environment).

can be assumed, with the Oglala Sioux themselves – rather than a palpable injury-in-fact to ARM's own organizational interests. Therefore, because it cannot be established that either organization is suffering or will suffer from a concrete, specific harm arising from the proposed Marsland project, ARM and WNRC's requests for organizational standing should be denied.

3. Representational Standing

ARM and WNRC each rely upon an individual Petitioner, as members of their respective organizations, to establish representational standing. ARM identifies Antonia Loretta Afraid of Bear Cook as a member of its organization, and WNRC names Bruce McIntosh as a member. Petition at 6-7. Petitioners have submitted documentation in which Ms. Cook and Mr. McIntosh authorize both ARM and WNRC to represent them in this proceeding. Cook Declaration at ¶ 2; McIntosh Declaration at ¶ 2. As described above, Petitioners have also explained that the interests or missions of their organizations include "prevent[ing] abusive mining . . . that does not comply with the International Precautionary Principle," Petition at 6, and "protect[ing] the natural resources of Western Nebraska with a focus on groundwater contamination from uranium mining," Petition at 6-7. The contentions presented by Petitioners, with the exception of the contentions pertaining to cultural resources, are germane to the organizations' interests. Nevertheless, as discussed in Section I.C.1, *supra*, neither Ms. Cook nor Mr. McIntosh have demonstrated individual standing to intervene in this proceeding. Because an organization seeking to establish representational standing must show that at least one of its members may be affected by the proceeding, neither ARM nor WNRC have made the necessary showing to establish representational standing.

II. Contentions

A. Legal Requirements for Contentions

The legal standards governing admissibility of contentions are set forth in the NRC's Rules of Practice at 10 C.F.R. § 2.309(f)(1). In order to be admissible, a contention must:

> (i) Provide a specific statement of the legal or factual issue sought to be raised or controverted;
>
> (ii) Provide a brief explanation of the basis for the contention;
>
> (iii) Demonstrate that the issue raised is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at the hearing, together with references to the specific sources and documents, which the petitioner intends to rely to support its position on the issue; and
>
> (vi) Provide sufficient information to show that a genuine dispute with the applicant/licensee exists on a material issue of law or fact. This information must include references to 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.[62]

The purpose of the Commission's contention pleading requirements is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[63] The Commission "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[64] The "contention admissibility 'requirements are deliberately strict, and [the Commission] will reject

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[62] 10 C.F.R. § 2.309(f)(1).

[63] *Changes to Adjudicatory Process (Part II)*, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

[64] *Id.*

any contention that does not satisfy the requirements.'"[65] Mere "notice pleading" does not suffice.[66] Further, the petitioner bears the burden of meeting the pleading standards. The Board may not supply missing information or draw inferences on the petitioners' behalf.[67]

A contention must be rejected where, rather than raising an issue that is concrete or litigable, it reflects nothing more than a generalization regarding the petitioner's view of what the applicable policies ought to be.[68] "Requiring the substance and presentation of contentions to be concrete and specific to the license application helps ensure that individual license applicants are not put into the position of defending the policies and decisions of the Commission itself."[69] Therefore, a contention must demonstrate a genuine dispute with the applicant, because "[i]t is the license application, not the NRC Staff review, that is at issue in [NRC] adjudications."[70] Petitioners are likewise required to raise environmental contentions on the Applicant's ER.[71] When a contention challenging the ER is admitted, the Staff can then request additional information from the Applicant in order to resolve any deficiencies as the Staff

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[65] *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 & 3), CLI-10-9, 71 NRC 245, 253 (2010) (quoting *USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006)).

[66] *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 120 (2009) (citing *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 414 (2007)).

[67] *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001) (*citing Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 22 (1998)) ("[a] contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions in 10 C.F.R. § 2.714(b)(2)).

[68] *Private Fuel Storage, L.L.C.*, (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 129 (2004) (citing *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20-21 (1974)); *see also* 10 C.F.R. § 2.335.

[69] *Private Fuel Storage, L.L.C.*, CLI-04-22, 60 NRC at 130.

[70] *Florida Power & Light Co.* (Turkey Point Nuclear Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 25 (2001) (citing *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998), *aff'd sub nom Nat'l Whistleblower Ctr v. NRC*, 208 F.3d 256 (D.C. Cir. 2000), *cert. denied*, 121 S. Ct. 758 (2001)).

[71] *Private Fuel Storage, L.L.C.*, CLI-04-22, 60 NRC at 130.

develops its environmental review documents.[72] "If the [environmental review document] addresses the concerns alleged in the contention, the original contention becomes moot and the intervenor must raise a new contention if it claims the [environmental review document's] discussion is still inaccurate or incomplete."[73]

B. Consolidated Petitioners' Contentions

The Petitioners have proposed 15 contentions.[74] As discussed more fully below, none of the proposed contentions are admissible.

At the outset, the Staff notes that the Petitioners have organized their discussion in a way that makes it extremely difficult to determine the bases and support for each subpart of Contentions A and B.[75] The Commission has recently stated that "[i]t 'should not be necessary to speculate about what a pleading is supposed to mean,' and petitioners bear the responsibility for setting forth their grievances clearly."[76] Furthermore, "a contention must make clear why cited references provide a basis," and "it is not up to the boards to search through pleadings or other materials to uncover arguments and support never advanced by a Petitioner; boards may not simply 'infer' unarticulated bases for contentions."[77] The Staff submits that neither the Board nor other participants should be required to "sort out some admissible claims" when a

[72] *Id.*

[73] *Id.*

[74] Petitioners have grouped their contentions under five headings labeled Contentions A-E. Under each heading (except for Contention E), there are several subparts (e.g., A(1), A(2), etc.). In its response, the Staff addresses each subpart as a separate contention.

[75] For example, does the "Basis and Discussion" starting on page 50 of the Petition apply to all of the preceding subparts (i.e., B(1) through B(4)), or does it apply only to subparts B(3) and B(4), which immediately precede it?

[76] *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc*. (Pilgrim Nuclear Power Station), CLI-10-15, 71 NRC 479, 482 (2010).

[77] *USEC, Inc*. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006).

petitioner presents a disorganized petition, particularly when the petitioners are represented by counsel.[78]

1. Contention A

Contention A consists of four subparts, labeled A(1) through A(4). Because these subparts address distinct issues, the Staff treats each of these subparts as a separate contention, and addresses each in turn in the ensuing discussion. For the reasons discussed below, Contentions A(1) through A(4) are inadmissible because they lack adequate support and/or fail to raise a genuine dispute with the applicant, as required by 10 C.F.R. 2.309(f)(1)(v) and (vi).

Contention A(1)

Petitioners state in Contention A(1):

> (A)(1) The Application violates 10 C.F.R. § 51.45, 51.60, and the National Environmental Policy Act, requiring a description of the affected environment, in that it fails to accurately quantify and describe the pre-operational baseline water quality within the MEA, in violation of Section 51.45(c) and 10 CFR Part 40 Appendix A, Criterion 5(B)(3)(a)(iii).

In support of their contention, Petitioners point to requirements in NEPA, NRC regulations, and NRC guidance documents that the application has purportedly violated, including NEPA generally; 10 C.F.R. § 51.45; 10 C.F.R. Part 40, Appendix A, Criteria 5(B)(3)(a)(iii) and 7;[79] and NUREG-1569 sections 2.7.1.(4), 2.7.3(4), and 2.7.4. Petition at 13-14. Petitioners also state that this contention is supported by the LaGarry Opinion, although they allege that "as a contention of omission, it is not necessary to provide expert support." *Id.* at 13.

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[78] *See Crow Butte North Trend*, CLI-09-12, 69 NRC at 552.

[79] Criterion 5(B)(3)(a)(iii) pertains to excluding hazardous constituents, and is irrelevant to this contention. Petitioners later correctly identify Criterion 7 as the requirement for preoperational baseline water quality monitoring. *See* Petition at 14.

As an initial matter, Petitioners' characterization of Contention A(1) as a "contention of omission" belies the fact that the contention, at its heart, challenges the *accuracy* of the Applicant's description and quantification of pre-operational baseline water quality within the MEA. *See id.* A contention of omission is a contention that "merely allege[s] an 'omission' of information," as opposed to a contention that "challenge[s] substantively and specifically how particular information has been discussed in a license application."[80] Therefore, Contention A(1) is more properly considered as a substantive challenge to the Applicant's ER rather than as a contention of omission, notwithstanding Petitioners' claim to the contrary. Consequently, Contention A(1) does not present a genuine, material dispute with CBR's applicant, because it fails to identify or controvert the sections of the Applicant's ER in which a description of the MEA site's pre-operational baseline water quality is in fact provided.

In Section 6.1.2 of the ER, the Applicant describes its preoperational baseline groundwater monitoring program and the results of preoperational sampling and testing for private water supply wells and CBR monitoring wells installed within the MEA. *See* ER at 6-4 to 6-9. From the data derived from the monitoring program, the ER provides a summary description of the pre-operational baseline water quality results for the Arikaree Formation, Brule Formation, and basal sandstone of the Chadron Formation. ER at 6-4. The Applicant also provides the results of radiological and non-radiological analyses for the private water supply wells and CBR monitoring wells in Tables 6.1-4, 6.1-5, 6.1-6, 6.1-8, 6.1-9, 6.1-10, and 6.1-11 of the ER. Nowhere in the bases for Contention A(1) or in the LaGarry Opinion do Petitioners explain how the descriptions and data presented in ER Section 6.1.2 and the tables referenced therein inaccurately describe or inaccurately quantify the preoperational baseline water quality or in any respect violate the requirements of NEPA or NRC regulations. Pursuant to 10 C.F.R.

[80] *Duke Energy Corporation* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-83 (2002); *see also* 10 C.F.R. § 2.309(f)(1)(vi) (distinguishing between contentions that assert that the application "fails to contain information on a relevant matter" and those that raise a dispute with a specific portion of the application).

§ 2.309(f)(1)(vi), where a contention fails to controvert the applicant, as here, the contention must be dismissed.

Furthermore, Petitioners do not adequately support their assertion that the application fails to accurately quantify and describe the pre-operational baseline water quality within the MEA. Petitioners correctly note that 10 C.F.R. Part 40, Appendix A, Criterion 7 requires the Applicant to provide "complete baseline data on a milling site and its environs." Petition at 14. However, Petitioners do not explain in their Petition or in the LaGarry Opinion how the Applicant's description and quantification of pre-operational baseline water quality in its application fails to achieve that standard.

Petitioners also cite to NRC guidance in NUREG-1569, sections 2.7.1(4) and 2.7.3(4), which specifies that ISL applications provide "assessments of available ground-water resources and ground-water quality . . . including a quantitative description of chemical and radiological characteristics of the ground water and potential changes in water quality caused by operations," as well as "reasonably comprehensive chemical and radiochemical analysis of water samples . . . to determine pre-operational baseline conditions." *Id.* Petitioners also refer to NUREG-1569, section 2.7.4 for the proposition that the application must "show that water samples were collected by acceptable sample procedures," and that [t]he Applicant should identify the list of constituents to be sampled for baseline concentrations," namely those listed in Table 2.7.3-1. *Id.* NRC guidance, such as NUREG-1569, describes programs acceptable to NRC Staff for typical uranium extraction facilities, including programs for establishing baseline water quality. Such guidelines, however, are not binding legal requirements,[81] and the acceptability of programs proposed in applications is determined by NRC Staff on a case-by-

[81] *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 98 (1995).

case basis during the individual licensing review.[82] Furthermore, Section 2.9.3 of the TR discusses the Applicant's baseline water monitoring program. The Petitioners have not identified specific portions of that discussion that they believe are inadequate in light of the authorities they reference. Accordingly, the Petitioners have failed to show a genuine dispute with the Applicant, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Contention A(2)

Petitioners state in Contention A(2):

> (A)(2) It further violates such sections by failing to analyze or describe the cumulative impacts of Applicant's existing DDWs [deep disposal wells] in combination with the DDW planned for the MEA.

For Contention A(2), Petitioners rely on the same discussion and support that they provided for Contention A(1). *See* Petition at 13-14. The Staff does not dispute Petitioners' characterization of Contention A(2) as a "contention of omission." Nevertheless, as with contentions challenging the substance of information in an application, the burden rests on the Petitioners alleging "that the application fails to contain information on a relevant matter as required by law" to "provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," including "the identification of each failure and the supporting reasons for the petitioner's belief."[83]

In this case, Petitioners have not provided any support for their belief that a failure to analyze or describe the cumulative impacts of the Applicant's existing DDWs in combination with the Marsland project's planned DDWs constitutes a violation of NEPA, 10 C.F.R. § 51.45, 51.60, and 10 C.F.R. Part 40 Appendix A, Criterion 5(B)(3)(a)(iii) (the "sections" in Contention

[82] An applicant may put forth alternative programs for consideration by the NRC Staff. When such alternatives to the guidance are proposed by an applicant, the NRC Staff will review the justification provided for such deviation from the guidance, and the acceptability of the proposed alternative program will be determined on a case-by-case basis. *See Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 397 (1995).

[83] 10 C.F.R. § 2.309(f)(1)(vi).

A(1) that are referred to in Contention A(2)). Petitioners point to no further information supporting their claim that the application's treatment of DDWs fails to comply with applicable law or regulations. The additional references to NRC regulations and guidance documents appear to pertain to the issues raised in Contention A(1). The LaGarry Opinion is silent on the matter of DDWs, stating only that injection and extraction wells (which are entirely different than DDWs) are required to extract the uranium in the Applicant seeks, and implying that such wells could be a source of underground leaks and excursions. LaGarry Opinion at 4. "[N]either mere speculation nor bare or conclusory assertions . . . alleging that a matter should be considered will suffice to allow the admission of a proffered contention."[84] Therefore, Petitioners have not met their burden under 10 C.F.R. §§ 2.309(f)(1)(v) and (vi) to show that Contention A(2) is supported by an adequate factual or legal basis and amounts to a genuine dispute with the applicant on a material issue of law or fact.

Contention A(3)

Petitioners state in Contention A(3):

> (A)(3) The Application documents repeatedly attempt to convey the impression that the ground water quality is already degraded, rather than compile statistically-defensible data from both the ore zones and non-mineralized zones.
>
> Much of the Application discussion concerning ground water quality seems focused on showing that the site waters are already contaminated or of low quality. This would not be surprising given the presence of the uranium mineralization which would have caused increased concentrations of numerous chemical constituents above true, pre-mining baseline.

In support of this contention, Petitioners reproduce in their Petition sections of the ER that discuss degradation or contamination of water quality, and other sections that appear to pertain to the part of their contention concerning data from the ore zones and non-mineralized

[84] *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007).

zones. *See generally* Petition at 15-26. Neither the Petition nor the LaGarry Opinion provide further arguments or support concerning the assertions in this contention.

Petitioners have not shown that Contention A(3) actually controverts the application. To be admissible, "[a] contention must directly controvert a position taken by the applicant in the application, and 'explain why the application is deficient.'"[85] As previously noted, 10 C.F.R. § 2.309(f)(1)(vi) requires petitioners to "provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact." Further, if challenging the adequacy of an analysis in an ER or TR, Petitioners "must include references to specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute."[86] If petitioners believe that an ER or TR omits information that is required by law, the petitioners must "[identify] each failure and the supporting reasons for the petitioner's belief." *Id.* Although Petitioners have included specific sections of the Applicant's ER in the petition, they have not explained why those excerpts from the ER were provided. Petitioners have not identified specific portions of the sections provided that they claim are inadequate or lacking in any material respect. Rather, the Petitioners seem to support the ER's characterizations of groundwater quality, stating that the application's discussion of site waters as already contaminated or of low quality "would not be surprising given the presence of the uranium mineralization which would have caused increased concentrations of numerous chemical constituents above true, pre-mining baseline." Petition at 14. In short, Petitioners have not met their burden to demonstrate a genuine, material dispute with the applicant, as required by 10 C.F.R. § 2.309(f)(1)(vi).

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[85] *Crow Butte North Trend*, LBP-08-06, 67 NRC at 292 (quoting *Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process*, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 156 (1991)).

[86] 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners have also not met their burden to provide a "concise statement of the alleged facts or expert opinions" that support their position and on which they intend to rely at hearing, as well as "references to the specific sources and documents" on which they intend to rely for support.[87] Although Petitioners have reproduced specific sections of the ER that concern the general issue raised in Contention A(3) – that the application documents describe ground water quality as already degraded, already contaminated, or of low quality – they have not provided any facts that controvert the application's conclusions. *See generally* Petition at 14-26.

Finally, it is not clear from the way Contention A(3) is written whether Petitioners are claiming that the Applicant has failed to compile statistically defensible data from the ore zones and non-mineralized zones. *See* Petition at 14. As the Commission has noted, the "contention pleading rules are designed to ensure both that only well-defined issues are admitted for hearing . . . For our licensing boards to entertain contentions grounded on little more than guesswork would waste the scarce adjudicatory resources of all involved."[88] Assuming that the Petitioners do intend to make such a claim, they have not provided adequate support to show that a genuine, material dispute exists with the applicant. Petitioners do not explain what they mean by "statistically defensible," nor do they identify any requirement to provide statistically-defensible data. Furthermore, Petitioners do not provide any facts or expert opinion demonstrating that the information provided in the application is not statistically defensible. In short, this claim amounts to a bare assertion that is insufficient to raise a genuine dispute with the Applicant as required by 10 C.F.R. § 2.309(f)(1)(vi).

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[87] *Id.* § 2.309(f)(1)(v).

[88] *Crow Butte North Trend*, CLI-09-12, 69 NRC at 552 (internal reference omitted).

Contention A(4)

Petitioners state in Contention A(4):

> (A)(4) Some of the Application discussion is admitted by Applicant to be based on information previously filed with respect to Applicant's other projects – CPF [Central Processing Facility], NTEA [North Trend Expansion Area], TCEA [Three Crow Expansion Area]. However, it is inappropriate to make reference to other proceedings or attempt to incorporate materials from other proceedings. The TCEA is according to the Application not a focus of Applicant and on hold. The NTEA proceeding is pending. Nothing about those two proceedings should be a basis for materials in the Application. The Application needs to stand on its own. Therefore it violates Section 51.45, 51.60, NEPA, and 10 CFR Part 40 Appendix A, Criterion 5(B)(3)(a)(iii).

In support of this contention, Petitioners provide 20 pages of excerpts from the TR and ER covering various topics, interspersed with several assertions on various topics unrelated to the issue stated in the contention above.[89] *See generally* Petition at 26-47. Petitioners do not explain how any of these excerpts support Contention A(4). Petitioners "must make clear why cited references provide a basis," and "it is not up to the boards to search through pleadings or other materials to uncover arguments and support never advanced by a Petitioner."[90]

The first section of the application that Petitioners reproduce in their Petition is part of section 3.4.3 of the ER, which states that the discussion in that section of regional and local groundwater hydrology is "based on information from investigations performed within the MEA, data presented in previous applications/reports for the current CPF where ISR mining is being conducted [and] the proposed NTEA and TCEA." Petition at 26. Section 3.4.3 goes on to state that "the hydrogeology of the MEA is expected to be similar in many respects to that encountered in the CPF, NTEA, and TCEA." *Id.*

Petitioners provide no factual or legal support for their claim that "it is inappropriate to make reference to other proceedings or attempt to incorporate materials from other

[89] These assertions appear on pages 26, 27 and 37 of the Petition, and are addressed by Staff after the issue raised in Contention A(4) itself.

[90] *USEC, Inc.*, CLI-06-10, 63 NRC at 457.

proceedings," or that doing so violates "Section 51.45, 51.60, NEPA, and 10 CFR Part 40 Appendix A, Criterion 5(B)(3)(a)(iii)." Petition at 26. Nearly all environmental and technical documents created in the course of the NRC's licensing process, whether those documents were generated by an applicant, a licensee, or the NRC Staff itself, rely to some degree upon data gathered from secondary sources. Although Petitioners state that "[n]othing in the [outside] proceedings should be a basis for materials in the Application," Petition at 26, they do not explain why the TR's reliance on data gathered for two similar ISR projects in the vicinity of the MEA project renders the materials in the application legally inadequate or incorrect.

Furthermore, nothing in the laws or regulations cited by Petitioners proscribes incorporating material from another source by reference into an environmental or technical document. The Staff is not aware of any other statutory or regulatory requirement proscribing this practice. If the Petitioners believe that the Applicant has omitted necessary information, they can propose a contention to that effect. In this case, the Petitioners have not specified any information "incorporated by reference" that should have been, but was not, included in the MEA application. Therefore, Petitioners have failed to raise a genuine dispute with the applicant.[91]

On pages 26 and 27 of the Petition, Petitioners make several additional unsupported assertions. First, they claim that the application "states in a conclusory way" that groundwater is of poor quality and has not been used in the past, and that the application cites a study from 1978. Petition at 26. Petitioners state that "[t]his is a failure to include current events and current research." *Id.* Petitioners also assert that "[w]ater in 2013 is a scarce commodity which

[91] In fact, 10 C.F.R. § 51.60 expressly contemplates that an applicant's ER may incorporate information by reference in some situations. 10 C.F.R. § 51.60(a) states, "[i]f the application is for an amendment to . . . a license . . . for which the applicant has previously submitted an environmental report, the supplement to [sic] applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change […]." Although the MEA license is sought as an amendment to CBR's existing Crow Butte facility, under this standard the applicant will most likely have to provide a significant amount of site-specific information to supplement the information previously submitted in order to comply with its NEPA obligations. To the extent that it is able to rely on information previously submitted that is relevant to the proposed action, however, the applicant is permitted to do so.

is expected to become even more scarce" during the operational life of the MEA, and that "[s]ince 1978 the technology for water purification has improved and the cost of filtering water has reduced." *Id.* at 26-27. In support of these claims, Petitioners reproduce sections of the Applicant's TR or ER that discuss topics as varied as surface water hydrology; drainages; aquatic ecology; baseline groundwater monitoring; vegetation; oxidation; baseline water quality; groundwater; aquifer testing and hydraulic parameter identification; hydrologic conditions and models; and the description of the proposed mining operation's relationship to site geology and hydrology. *Id.* at 27-37. In only one of the sections does a reference to a 1978 study appear.

Petitioners challenge the application's "conclusory" reliance on a 1978 study in the section referenced, but they do not challenge the statement for which the study was cited that, in general, groundwater quality in the vicinity of the MEA is poor, nor do they explain why this statement is "conclusory." *See* Petition at 27, 28. Petitioners also do not explain why citing this study fails "to include current events and current research." The Petitioners' assertions that since 1978 water purification technology has improved and the cost of water filtration has dropped are unsupported and do not go so far as to allege an actual dispute with the application. In addition, while focusing on a single reference from the TR's introduction to a discussion of baseline groundwater monitoring, Petitioners disregard the very next paragraph of the same discussion, which provides information on groundwater drawn from the Applicant's own groundwater monitoring program conducted in 2011 and 2012, TR at 2-394, and from another source dated 2011. TR at 2-397.

Petitioners further assert that the application "fails to adequately describe the affected aquifers at the site and on adjacent lands and fails to provide the required quantitative descriptions of the chemical and radiological characteristics of these waters necessary to assess the impacts of the operation." Petition at 37. Petitioners also add that the "Application states repeatedly that it will rely on the DDW almost exclusively for disposal of wastes from the

MEA," and following that statement reproduce additional sections from the ER and TR that mention DDWs. Petition at 37-47.

Petitioners have failed to provide the requisite information to support either of these claims or to demonstrate the existence of a genuine, material dispute with the applicant. To meet the requirements of 10 C.F.R. § 2.309(f)(1)(v), Petitioners must provide a concise statement of the alleged facts or expert opinions that support their position. Here, Petitioners have provided no statements of facts or expert opinion to support their claims related to inadequate description of affected aquifers, failure to provide a quantitative description of aquifer water characteristics, or use of DDWs. To the extent that the Petitioners rely on the Applicant's own analyses as reproduced in excerpts in the Petition, Petitioners have not explained how such information actually supports their claims. As the licensing board in *Powertech* recognized, "it is not the Board's duty to forage through a petition in order to find statements or other support that may be located in various portions of the petition but not referenced in the contention."[92] The Commission "expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference to a specific point."[93] Furthermore, "general assertions, without some effort to show why the assertions undercut findings or analyses in the ER, fail to satisfy the requirements of Section 2.309(f)(1)(vi)."[94]

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[92] *Powertech*, LBP-10-16, 72 NRC at 398 (further stating that "[a] properly pled contention needs to lay out explicitly the required criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi) in order to be admissible; a licensing board cannot be expected to go on a veritable scavenger hunt to find the missing pieces needed for an admissible contention.").

[93] *Pub. Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-03, 29 NRC 234, 240-41 (1989) ("The Commission expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference to a specific point. The Commission cannot be faulted for not having searched for a needle that may be in a haystack."). *See also Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-21, 38 NRC 143, 146 (1993) ("[I]t is a settled rule of practice at this Commission that contentions ought to be interpreted in light of the required specificity, so that adjudicators and parties need not search out broader meanings than were clearly intended"); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 89 & n.26 (2004).

[94] *South Carolina Elec. & Gas Co. and South Carolina Pub. Service Authority (Also Referred to as Santee Cooper)* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 22 (2010).

Consequently, because Petitioners have not met the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi), this contention is inadmissible.

2. Contention B

Contention B consists of five subparts, labeled B(1) through B(5). Petition at 47, 49, 58. Because these subparts address distinct issues, the Staff treats each of these subparts as a separate contention, and addresses each in turn in the ensuing discussion. For the reasons discussed below, Contentions B(1) through B(5) are inadmissible because they lack adequate support and fail to raise a genuine dispute with the applicant, as required by 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

Contention B(1)

Petitioners state in Contention B(1):

> The lack of adequate confinement of the host aquifer makes the proposed operation inimical to public health and safety in violation of section 40.31(d). Further, Applicant's failure to describe faults and fractures between aquifers, through which the groundwater can spread uranium, thorium radium 226 and 228, arsenic, and other harmful substances, violates section 51.45(c) and (e).

In Contention B(1), Petitioners make two assertions. First, Petitioners assert that the "host aquifer" lacks adequate confinement, making the proposed operation of the MEA "inimical to public health and safety in violation of section 40.31(d)." Petition at 47. Second, the Petitioners claim that the application fails to describe faults and fractures between aquifers that could lead to the spread of contaminants in groundwater, and that this failure violates 10 C.F.R. §§ 51.45(c) and (e). *Id.*

The Petitioners' first assertion regarding confinement of the host aquifer lacks adequate support and fails to raise a genuine dispute with the applicant, as required by 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). Petitioners have not clearly identified supporting bases for this claim. For example, pages 55-58 of the Petition reproduce excerpts from ER sections 3.3.1.1 (Regional Setting) and 3.3.1.3 (Structural Geology), but it is not clear which contention(s) these sections relate to. In any event, merely repeating sections of an application in a petition does

not provide support for a contention, because the Petitioners do not identify any statements in those sections that they dispute.

If Petitioners are relying on the LaGarry Opinion,[95] they have not explained how the LaGarry Opinion supports the assertion that the mined aquifer lacks adequate confinement. Merely "attaching a document in support of a contention without any explanation of its significance does not provide an adequate basis for a contention."[96] The Application discusses aquifer confinement in sections 2.7.2.2 and 2.7.2.3 of the TR and section 3.4.3.3 of the ER. Neither the Petition nor the LaGarry Opinion identify these sections of the application or challenge the discussion of aquifer confinement in those sections. In fact, the LaGarry Opinion does not directly address isolation of the mined aquifer (i.e., confinement of the aquifer). Dr. LaGarry does assert that "the simplified 'layer-cake' concept applied by pre-1990's workers is incorrect, and overestimates the thickness and areal extent of many units by 40-60%." LaGarry Opinion at 4. However, he does not indicate where in the MEA application CBR relies on the "layer cake" concept, nor does he explain the significance of this statement (i.e., how it supports the contention).[97] Therefore, this statement does not raise a genuine dispute with the application.

The closest the LaGarry Opinion comes to the topic of confinement is its discussion of "lack of containment" due to faults. But Dr. LaGarry's statements that there are "potential" faults in the area that "may allow" transmission of mining fluids, or that there are "probably" many

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[95] Petitioners provide an excerpt from the LaGarry Opinion on pages 50-52 of the Petition, after stating contentions B(3) and B(4). As previously noted, the Petitioners have not clearly identified the bases that support each subpart of Contention B. Therefore, it is not clear whether Petitioners intended to rely on the LaGarry Opinion as support for Contention B(1).

[96] *Private Fuel Storage* (Independent Spent Fuel Storage Installation), LBP-98-10, 47 NRC 288, 298-99 (1998).

[97] For example, even if areal extent and thickness are overestimated, that does not necessarily mean that there is inadequate confinement.

unknown faults, are general, speculative statements. *See* LaGarry Opinion at 4-5. In Figure 2.6.12 of the TR, the Applicant provided a map showing faults and other structural features in the vicinity of the MEA. Dr. LaGarry does not take issue with this figure, nor does he identify any additional *known* faults in the vicinity of the MEA. Dr. LaGarry provides Figure 1, which purports to show the location of faults and "vulnerable" areas with respect to the MEA site. However, the scale of that figure is so large that it can only be viewed as a "schematic" or birds-eye view of the geology of the area.[98] More importantly, Figure 1 provides no indication of the location of the cross-section depicted in the figure with respect to the MEA site from an east-west perspective. Therefore, it is not possible to ascertain whether the cross section accurately reflects the stratigraphy at the site, and Figure 1 does not provide support for the claim of inadequate confinement of the host aquifer.[99]

In sum, the Petitioners do not, through the LaGarry Opinion or otherwise, provide support for the claims of lack of adequate confinement. Similarly, because the Petitioners do not identify specific deficiencies in the sections of the application that address aquifer confinement, they have failed to raise a genuine dispute with the Applicant on this issue. Therefore, because Petitioners have not met the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(1)(v) and (vi), this portion of Contention B(1) is inadmissible.

The Petitioners' second assertion, that the application fails to describe faults and fractures, fails to raise a genuine dispute with the application because the application does, in fact, address this topic. Section 2.6.1.3 of the TR and section 3.3.1.3 of the ER discuss structural geology, including faults. And, as noted above, Figure 2.6.12 of the TR provides a map of structural features, including faults, in the vicinity of the MEA. Therefore, Petitioners'

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[98] As indicated in Figure 1 of the LaGarry Opinion, the cross-section depicted runs the entire north-south length of the state of Nebraska – a distance of hundreds of miles. LaGarry Opinion at 3. Also, the vertical scale is exaggerated by a factor of 106. *Id.*

[99] *See Crow Butte North Trend*, CLI-09-12, 69 NRC at 558 (noting that a regional groundwater atlas is "thin support" for a contention).

assertion that the application "fails to describe faults" is incorrect. Moreover, the Petitioners have not challenged the information in the relevant sections of the TR and ER. Therefore, this portion of Contention B(1) is inadmissible.

Finally, the Staff notes that on page 49 of the Petition, the Petitioners assert that the Applicant fails to provide sufficient information regarding the geological setting of the area, and that this failure violates numerous NRC regulations and NEPA. It is not clear if these claims are intended to support Contention B(1), or if they are intended to be stand-alone contention(s). In either case, Petitioners provide no support for these claims, nor do they identify deficiencies with particular portions of the application that discuss geological setting. "Bare assertions are insufficient to demonstrate a genuine dispute . . . under our contention admissibility requirements in [10 C.F.R. §] 2.309(f)(1)(vi). . . ."[100] Therefore, Petitioners' claims regarding the description of geological setting on page 49 of the Petition are inadmissible.

Contention B(2)

Petitioners state in Contention B(2):

> Applicant's admission that there is a 'flare' of between 20%-80% in which lixiviant is expected to travel beyond the MEA means that naturally occurring uranium will likely be oxidized and mobilized by such lixiviant in unknown and unpredictable ways that may be in pathways to consumption by people, animals, birds, fish and plants. The failure to describe these impacts also violates NEPA and Sections 51.45 and 51.60. The failure to monitor for mobilized contaminants downstream, especially in the Niobrara River, is further inimical to public health and safety in violation of Section 40.31(d). Applicant is required to quantify the flare for purposes of calculating a surety. Based on Applicant's experiences in restoring mine units at the CPF, it should be able to quantify and describe the size of the flare experienced in mine units being restored. Applicant has estimated $1.6 million cost to restore each mine unit at the MEA so it should be able to describe how many volumes of water and restoration activity were required to deal with the impacts of the flare in mine units being restored. Failure to do so violates section 51.45, 51.60, 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2).

Contention B(2) raises four issues. Petitioners' first claim is that CBR "[admits] that there is a "flare" of 20%- 80% in which lixiviant is expected to travel beyond the MEA," and this

[100] *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc*. (Pilgrim Nuclear Power Station), CLI-12-03, __ NRC __, __ (Feb. 22, 2012) (slip op. at 23-24).

will lead to mobilization and oxidation of uranium in "unknown and unpredictable ways" that may reach people and wildlife through consumption pathways. This claim is unfounded because it is based on a misreading of Section 6.1.4.2 of the TR. The purported "admission" is, in fact, a quote from NUREG-1569 indicating that, in the past, the NRC has approved flare factors ranging from 20 to 80 percent. Flare is defined in NUREG-1569 as "a proportionality factor designed to estimate the amount of aquifer water outside of the pore volume that has been impacted by lixiviant flow during the extraction phase."[101] As discussed in section 6.1.4.2 of the TR and in NUREG-1569, the "flare factor" is used in conjunction with a calculation of affected pore volume for purposes of calculating the groundwater restoration component of the Applicant's surety estimate.[102] As such, flare has no bearing on potential health and safety impacts such as possible migration of contaminants beyond the site. Further, Petitioners provide no factual or expert support for their claim, and, although they reiterate portions of the application that discuss flare, they fail to challenge any of the information in those sections. Therefore, this portion of Contention B(2) is inadmissible.

Petitioners' second claim, related to the first, is that the failure to describe the impacts of the flare violates NEPA and 10 C.F.R. § 51.45. As discussed above, Petitioners have misconstrued the discussion of flare in the application. Petitioners have not identified any impacts of flare that must be described in the ER, nor have they provided any factual or expert support to back up this claim. Thus, this claim is also inadmissible.

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[101] NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications* (June 2003), at 6-7 n.2.

[102] NUREG-1569 states, "*For purposes of surety bonding*, restoration plans must include estimates of the level of effort (typically in terms of pore volume displacements) necessary to achieve the primary restoration target concentrations."). NUREG-1569 at 6-8 (emphasis added). "The pore volume and flare factors provide a means of comparing the level of effort required to restore ground water . . . ." *Id*. at 6-7. Table P.1-1 of Appendix P to the TR provides the primary assumptions used as the basis for surety cost estimates associated with mine unit restoration. This table shows a flare factor of 1.2, meaning that the calculated pore volumes are increased by a flare factor of 20 percent. The cost of groundwater restoration is one component of the surety cost estimate that the applicant must provide. *See* TR at Appendix P, Table P.1-2.

Third, Petitioners claim that "[t]he failure to monitor for mobilized contaminants downstream, especially in the Niobrara River," is inimical to public health and safety and violates 10 C.F.R. § 40.31(d). This claim fails to raise a genuine dispute with the Applicant because the application does, in fact, indicate that such monitoring will be provided. Section 6.1.3.4 of the ER states that CBR has established a water quality sampling points in the Niobrara River, including one downstream of the site, which can be used to assess impacts of any releases from MEA operations. ER at 6-12; *see also* ER Figure 3.4-4. The ER also indicates that CBR has collected samples from the river for baseline water quality analysis. *Id*. Petitioners have not challenged the specific portions of the application, cited above, that address this issue. Nor have Petitioners presented any facts or expert opinion indicating that CBR's sampling is inadequate. Consequently, this claim is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

Finally, Petitioners claim that the Applicant "should be able to quantify and describe the size of the flare experienced in mine units being restored" and "should be able to describe how many volumes of water and restoration activity were required to deal with the impacts of the flare in mine units being restored." Petition at 47. Petitioners claim that failure to do so violates 10 C.F.R. § 51.45 and 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2).[103] *Id.* As explained previously, the flare factor is the means by which CBR (or any ISL applicant) accounts for flare in terms of the projected amount of extracted aquifer water needed for the completion of groundwater restoration.[104] The ER states that "CBR bases their projected

[103] Criteria 4(e) and 5G(2) are not applicable to the Staff's review of the MEA application. Criterion 4(e) relates to impoundments (i.e., either tailings impoundments or ponds), which will not be present at the MEA. Criterion 4(e) also states that uranium processing facilities must be located away from faults that may cause impoundment failure. However, this criterion applies only to "capable faults" as defined in 10 C.F.R. Part 100, Appendix A, III(g). The application does not indicate that such faults exist near the MEA site, and Petitioners have provided no evidence to the contrary. Criterion 5G(2) requires an adequate description of characteristics of underlying soils and geologic formations for "tailing disposal system proposals." Because ISR facilities do not generate tailings (unlike conventional mines where ore is physically excavated), this criterion is not applicable to the MEA application.

[104] See NUREG-1569 at 6-7, n.2.

restoration volumes at the MEA project on historical experience and past successful restoration activities" and that "CBR's technical basis for the proposed flare factor is operational experience and hydrological modeling at the nearby commercial ISR operation." ER at 5-20, 5-21. Petitioners do not dispute these statements, nor do they explain why the Applicant is required to provide further details in order to satisfy the requirements of 10 C.F.R. § 51.45. Bare assertions such as those presented in Contention B(2) are insufficient to demonstrate a genuine dispute of fact or law under 10 C.F.R. § 2.309(f)(1)(vi).[105] Furthermore, the Petitioners do not provide any facts or expert opinion to support this claim. For these reasons, this last claim in Contention B(2) is inadmissible.

Contentions B(3) and B(4)

Petitioners state in Contentions B(3) and B(4):

> (B)(3) The 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 the surrounding aquifers and drainage of contaminated water into the White River and Niobrara River.
>
> (B)(4) Applicant's proposed mining operations will use and contaminate water resources, resulting in harm to public health and safety, through mixing of contaminated groundwater in the mined aquifer with water in surrounding aquifers and drainage of contaminated water into the White River and the Niobrara River.

Although the Petitioners identify these as two separate contentions, the Staff is responding to them together because they both involve the same issue: contamination that could result from mixing of water between the mined aquifer and other aquifers or by drainage of contaminated water into nearby rivers. These two contentions, respectively, are virtually

[105] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC __, __ (Jun. 7, 2012) (slip op. at 13).

identical to Subparts A2 and A1 of Contention A in the Crow Butte North Trend proceeding.[106] As stated in *Crow Butte North Trend*, CLI-09-12, the two subparts of Contention A in the North Trend proceeding address specific environmental (A2) and safety/technical (A1) aspects of the mixing issue, as set forth in the bases for the reformulated contention.[107]

In the *North Trend* proceeding, the Commission found that the petitioners had adequately supported their contention because they identified sections of the application which they disputed, and they provided adequate support for their contention.[108] In this proceeding, unlike *North Trend*, Petitioners have not identified sections of the MEA application that they dispute. Moreover, Petitioners have failed to provide adequate support for these contentions. Therefore, in this proceeding, these contentions are inadmissible.

Contention B(3) asserts that the application does not accurately describe the affected environment or the impacts of use and potential contamination of water resources. Contention B(4) alleges that the proposed operations at the MEA will "use and contaminate water resources, resulting in harm to public health and safety." Petition at 49. In both contentions, Petitioners assert that contamination will occur through two possible mechanisms: mixing of contaminated water from the mined aquifer (Basal Chadron sandstone) with surrounding aquifers and drainage of contaminated water into nearby rivers.

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[106] *See Crow Butte North Trend*, CLI-09-12, 69 NRC at 563. The only difference is that the MEA contentions add "and the Niobrara River" at the end. Several of the intervenors in the North Trend proceeding are also petitioners in the Marsland proceeding.

[107] *Id.* at 563-64. The single basis for Subpart A2 (contention B(3) in this proceeding) is that the North Trend application "does not take into consideration current and future domestic use of water from the Basal Chadron in the area surrounding the NTEA." *Id.* The three bases for Subpart A1 (contention B(4)) involved specific claims about the upper and lower confining units at the North Trend site and possible communication between the mined aquifer and overlying aquifers or the White River due to the White River Fault.

[108] *Id.* at 569. In the *North Trend* proceeding, the petitioners provided a letter from the Nebraska DEQ (referred to in the *North Trend* proceeding as "Exhibit B") that appeared to contradict those portions of the North Trend application. The Commission found that the *North Trend* board "relied heavily" on Exhibit B when considering the Petitioners' claims regarding mixing. *Id.* at 548.

Petitioners fail to raise a genuine dispute with the applicant in either contention B(3) or B(4). The ER contains an extensive description of both the affected environment (Chapter 3) and impacts on the environment (Chapter 4). These chapters include sections describing site and regional geology, including aquifers (ER Section 3.3.1), groundwater and surface water resources (ER Sections 3.4.2 and 3.4.3), the impacts on water resources (ER Section 4.4), and impacts on public health (ER Section 4.12). Sections 2.6 and 2.7 of the TR also contain descriptions of site geology, groundwater, and surface water resources. Several sections of the TR discuss how the Applicant would address spills or excursions to prevent releases from traveling offsite. *See, e.g.*, TR Sections 4.2.1.13, 5.7.1.3, 5.7.8. With respect to contention B(3), Petitioners have not (in the LaGarry opinion or otherwise) identified specific portions of the application that contain inaccurate descriptions of the affected environment or impacts. For both Contentions B(3) and B(4), Petitioners have not (in the LaGarry Opinion or otherwise) challenged portions of the application related to adequate confinement of aquifers or adequate measures to assure containment of spills or excursions.[109] Therefore, these contentions are inadmissible because Petitioners have failed to raise a genuine dispute with the Applicant, as required by 10 C.F.R. § 2.309(f)(1)(vi).

In addition, the Petitioners have not adequately supported these contentions. Petitioners reproduce portions of the LaGarry Opinion as support for these contentions, but they do not explain how the LaGarry Opinion provides support. As explained below, the LaGarry Opinion provides only general information on the stratigraphy of northwestern Nebraska and general, speculative statements about possible contaminant pathways. And, as noted above, it does not allege any deficiencies in the MEA application.

[109] Although the Petition contains excerpts from sections 3.3.1.1, 3.3.1.3, and 3.5.7.3 of the ER (Petition at 55-58), neither the Petition nor the LaGarry Opinion explains the relevance of these excerpts to this contention, or otherwise identifies specific deficiencies in these sections of the application.

Petitioners claim that contamination could occur in two ways: through mixing of waters between the mined aquifer and surrounding aquifers, and through "drainage of contaminated water into the White River and the Niobrara River." Petition at 49. With regard to mixing of water between aquifers, the key issue is confinement of the mined aquifer. CBR's application describes the extent, thickness, and composition of the upper and lower confining layers and provides site-specific cross-sectional data (e.g., TR Figs. 2.6-2, 2.6-3a through 2.6-3n, and 2.6-4) and the results of a pumping test (*see* TR Section 2.7.2) demonstrating aquifer confinement. The application also discusses faults and indicates that there are no known faults near the MEA.[110] TR Section 2.6.1.3; ER Section 3.3.1.3. In its response to contention B(1), *supra*, the Staff explained why Dr. LaGarry's opinion does not support the claim of inadequate confinement. For the same reasons, his statements do not support the claims here concerning potential mixing between aquifers.

With regard to possible drainage of contaminated water into the White and Niobrara Rivers, Dr. LaGarry also makes several broad assertions about contaminant pathways such as surface spills and excursions. LaGarry Opinion at 4. With regard to surface spills, he states that "[a]ny leaks or spills onto the landscape would be transmitted directly into the High Plains Aquifer within a few years." *Id.* He also states that an excursion into any of the aquifers overlying the mined aquifer "would be catastrophic, with contaminants quickly spreading throughout the entire section of the aquifer." *Id.* His only basis for these claims are general broad-ranging statements, such as "[t]he soils in western Nebraska are thin." *Id.* Dr. LaGarry refers to Figure 1 in his Opinion, but, for the reasons discussed in the Staff's response to contention B(1), Figure 1 does not provide adequate support for his claims.

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[110] An important factual difference between the North Trend site and the Marsland site is that the White River fault is adjacent to the North Trend site. *See*, *e.g.*, *Crow Butte LR*, LBP-08-24, 68 NRC at 727. The presence of the White River fault was an important factor in admitting this contention in the North Trend proceeding. See *Crow Butte North Trend*, CLI-09-12, 69 NRC at 563 (identifying possible effect of White River fault as a basis for the admitted contention). The MEA application indicates that this fault is not present at the MEA. TR at 2-228.

Dr. LaGarry also speaks generally about lateral migration in underground aquifers, and speculates that "if contaminants were to escape into the High Plains Aquifer," such contamination "could" reach wells or springs that feed the White River. LaGarry Opinion at 5. However, he offers no further support for these speculations, such as the locations of such wells or springs and pathways to them. In fact, Dr. LaGarry contradicts himself by stating that contaminants "would likely migrate eastwards (down gradient) and contaminate the White River," because the White River is located northwest of the MEA site.[111] *Id.* at 5. Moreover, unlike the North Trend site and the main CBR facility, the MEA is not in the White River watershed. ER at 3-38; ER Figs. 3.4-1 and 3.4-2. Therefore, it would be physically impossible for contaminants to "drain into" the White River as surface flow from the MEA site.

Finally, Dr. LaGarry makes similarly speculative assertions regarding lateral migration with respect to the Niobrara River, stating that contaminants "could quickly find [their] way into the Niobrara River" but providing no further details on how that might occur. LaGarry Opinion at 5. None of these statements amount to more than bare assertions and speculation which, even when provided by an expert, "are insufficient to trigger a full adjudicatory proceeding."[112]

In sum, for the reasons discussed above, the LaGarry Opinion does not adequately support these contentions. The remainder of Petitioners' discussion of these contentions consists of a recital of several regulatory requirements and citations to NUREG-1569, unsupported assertions, and four pages of excerpts from the application. As discussed below, none of the remaining discussion provides support for these contentions.

First, although Petitioners identify several regulatory requirements, such as 10 C.F.R. § 51.45 and Criteria 4(e) and 5G(2) from Appendix A of 10 C.F.R. Part 40, Petitioners do not

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[111] This is consistent with the application, which indicates that groundwater flow in the aquifer overlying the mined aquifer is to the southeast. TR at 2-329 & Fig. 2.9-4.

[112] *Pilgrim*, CLI-12-15, 75 NRC at __ (slip op. at 13).

explain how the Applicant has failed to meet these requirements.[113] Petition at 52. Furthermore, in the case of the Appendix A criteria, Petitioners do not explain why those criteria apply to this application. As noted in the Staff's response to Contention B(2), Criteria 4(e) and 5G(2) are not applicable to the MEA licensing.[114] Petitioners also provide excerpts from sections 2.7.1(3) and 2.7.2 of NUREG-1569, but again do not explain how they support this contention.[115] Petition at 52-53. Petitioners do not actually allege that the application fails to address the areas described in these sections of NUREG-1569, and in any event, NUREG-1569, like other NUREGs, does not impose binding legal requirements.[116] Therefore, allegations of failure to meet criteria in a NUREG are insufficient to support an admissible contention.

Second, Petitioners assert that the application does not "present sufficient information in a scientifically defensible manner to adequately characterize the site and off-site hydrogeology to ensure confinement of extraction fluids." Petition at 53. The Petitioners do not explain what they mean by "in a scientifically defensible manner," nor have they identified a statute or regulation containing this requirement. This unsupported claim is followed by various assertions related to isolation and confinement of aquifers and potential hydrogeologic pathways. Petition at 53-54. Although the Petitioners do not identify the source of these statements, the first

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[113] In fact, Petitioners misquote the relevant requirement in 10 C.F.R. § 51.45, which requires an applicant to provide "sufficient data to assist the Commission in developing its independent analysis." 10 C.F.R. § 51.45(c).

[114] *See supra* note 103.

[115] Section 2.7.1(3) of NUREG-1569 indicates that the Staff reviews site hydrogeology, including, among other things, aquifer properties such as "effective porosity, hydraulic conductivity, and hydraulic gradient" and "estimated thickness and lateral extent of aquitards, and other information relative to the control and prevention of excursions." NUREG-1569 at 2-20 to 2-21. Section 2.7.2, entitled "Review Procedures," provides guidance for the Staff's review of an applicant's site hydrology model. *Id.* at 2-21. Neither the petition nor the LaGarry Opinion identify or challenge specific portions of CBR's discussion of site hydrogeology, its conceptual model of site hydrology, or its supporting data.

[116] *Curators of the University of Missouri*, CLI-95-1, 41 at 98 (NUREGs and Regulatory Guides are advisory by nature and do not themselves impose legal requirements on either the Commission or its licensees).

statement (beginning with "These deficiencies include . . . .") is identical to a statement in the Oglala Sioux Tribe's petition in this proceeding,[117] and the remainder are excerpts from the Declaration of Dr. Robert Moran submitted in the *Powertech* proceeding.[118] Dr. Moran's statements were based on a review of the Powertech application, and Dr. Moran has not submitted an opinion in this proceeding. Therefore, these statements do not provide support for Contentions B(3) and B(4).

Finally, Petitioners provide excerpts from various sections of the ER without explaining how they support the contention and without challenging any of the information in those sections. Thus, these excerpts do not support the contentions.

Contention B(5)

Petitioners state in Contention B(5):

> (B)(5) what results from CBR's existing restoration on existing mine units -? Applicant should discuss the results of existing restoration in terms of volumes of water and actual versus projected time and money to complete and confirm that the projections for MEA have been updated to be based on the actual experiences of Applicant in restoring mines units to date. A failure to do so makes the Application in violation of Sections 40.9(a) and (b), Sections 51.45, 51.60, and NEPA.

Contention B(5) appears to assert that the application contains insufficient information regarding restoration experience at existing mine units. Specifically, Petitioners assert that the projected restoration requirements for the MEA in terms of water volume, time, and money, should be "based on the actual experiences of Applicant in restoring mine units to date." Petition at 58.

The ER provides an estimated restoration volume for the first MEA wellfield. ER at 5-20. The ER also states that "CBR bases their projected restoration volumes at the MEA project on

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[117] *See* Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe (Jan. 29, 2013) (ADAMS Accession No. ML13029A802) (OST Petition), at 18.

[118] *See* Declaration of Dr. Robert E. Moran (Apr. 4, 2010) (ADAMS Accession No. ML100960635) (Moran Declaration), at 19-22 (¶¶ 36, 38, 39, 40, 45, 46).

historical experience and past successful restoration activities." *Id*. Petitioners do not explain why the Applicant is required to provide further information, or why a failure to do so would violate the cited NRC regulations or NEPA. None of the authorities that Petitioners cite (10 C.F.R. §§ 40.9(a) and (b), 10 C.F.R. § 51.45, 10 C.F.R. § 51.60, and NEPA) contain such a requirement.[119] Furthermore, Petitioners do not identify specific portions of the application that they dispute. Instead, Petitioners provide excerpts from the application with no further explanation of the reason for including them. This practice is not sufficient to raise a general dispute with the Applicant, as required by 10 C.F.R. § 2.309(f)(1)(vi). Petitioners also fail to meet 10 C.F.R. § 2.309(f)(1)(v) because they provide no support whatsoever, either facts or expert opinion, to support this claim. Thus, for the reasons explained above, Contention B(5) is inadmissible.

3. Contention C

Contention C consists of three subparts, labeled C(1) through C(3). The Staff addresses each subpart as a separate contention. For the reasons explained below, none of these contentions are admissible.

Contention C(1)

Petitioners state in Contention C(1):

> (C)(1) The Application violates NEPA in its failure to provide an analysis of the ground water quantity impacts of the project. These failings violate 10 CFR 40.32(c), 40.32(d), and 51.45.[120]

As the basis for Contention C(1), the Petitioners first recite the requirements of 10 C.F.R. §§ 40.32(c) and 40.32(d), which require the Staff to find that the Applicant's equipment,

[119] For example, 10 C.F.R. § 40.9(a) requires that information provided to the Commission by an applicant or a licensee must be complete and accurate in all material respects, and 10 C.F.R. § 40.9(b) requires applicants to notify the Commission of information that the applicant identifies as having "a significant implication for public health and safety or common defense and security" for the regulated activity. Petitioners do not explain why these provisions are relevant to this proceeding, or how the Applicant has violated them.

[120] This contention is identical to the first part of Contention 3 in the Oglala Sioux Tribe's petition to intervene in this proceeding. *See* OST Petition at 18-19.

facilities, and procedures are adequate to protect health and minimize danger to life or property, and that issuance of the license will not be inimical to public health and safety or the common defense and security. The Petitioners then state that 10 C.F.R. § 51.45 and NEPA require the Applicant to "provide sufficient data for a scientifically defensible review of the environmental impacts of the operation and for the Commission to conduct an independent analysis." Petition at 60. However, Petitioners misstate the relevant provision of 10 C.F.R. § 51.45(c), which states only that the environmental report "should contain sufficient data to aid the Commission in its development of an independent analysis." Furthermore, there is no requirement for a "scientifically defensible review" in 10 C.F.R. § 51.45, nor do the Petitioners identify specific language in NEPA or case law interpreting NEPA containing such a requirement.

The Petitioners assert that the application "fails to meet these requirements in that it does not provide reliable and accurate information as to the project's ground water consumption." However, CBR provides information on expected groundwater consumptions in both the TR and ER. ER at Section 4.4.3.1; TR at Section 7.2.5.1. Because Petitioners have not challenged the adequacy of those sections of the application, they have failed to raise a genuine dispute with the Applicant, as required by 10 C.F.R. § 2.309(f)(vi).

Finally, Petitioners have failed to provide any factual basis or expert opinion to support their claim. In the *Powertech* proceeding, the Board admitted a contention identical to this one.[121] However, in *Powertec*h, the contention was supported by a 30-page expert opinion that specifically identified disputes with the discussion of water usage in the Powertech application.[122] In contrast, in this proceeding Petitioners have provided no factual support for their claims. Accordingly, unlike the similar contention in *Powertech*, this contention is inadmissible because it does not satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(v).

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[121] *Powertech*, LBP-10-16, 72 NRC at 426-28.

[122] *See id.* at 427-28 (citing the Moran Declaration).

Contention C(2)

Petitioners state in Contention C(2):

> (C)(2) The Application contains inadequate analysis of Ground Water Quantity Impacts. The Application violates 10 CFR 40.32(c), (d), and 51.45 by failing to analyze the impacts of groundwater consumption on public health and safety and property. Petitioners submit that the Application presents conflicting groundwater consumption information, making this information impossible to evaluate accurately.

None of the claims in Contention (C)(2) raise a genuine dispute with the application, and all are unsupported. Petitioners provide excerpts from sections 3.11.1.2 and 4.4.3.1 of the ER, which discuss potential declines in groundwater quality and groundwater consumption. Petition at 60-61. Petitioners do not, however, identify any portions of those sections with which they take issue. In particular, they do not explain why the information in Section 4.4.3.1 of the ER, which discusses groundwater consumption, is inadequate or "conflicting." In fact, Petitioners provide no further discussion (in the LaGarry Opinion or otherwise) to support the claims made in this contention. Because Petitioners have not identified specific deficiencies in the application, and have not provided any factual basis whatsoever to support their claims, Contention C(2) is inadmissible because it does not satisfy 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

Contention C(3)

Petitioners state in Contention C(3):

> (C)(3) Elsewhere (see TR 2.2.3) population usage was described in gals per day – here it is gals per min – but that minimizes the numbers unless the reader does a calculation – not clear or concise – not easy to understand – to calculate it – 2 % x 6,000 gpm x 60 min x 24 hrs = 172,800 gals per day –

In Contention C(3), the Petitioners appear to be asserting that the use of different units for water usage in different parts of the application is unacceptable. They assert that using gallons per minute "minimizes the numbers" and requires a calculation to convert back to gallons per day. Petition at 61. This statement is followed by several pages of excerpts from the TR, without any discussion of how those sections support or relate to this contention. *See id.* at 61-69.

This contention is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(1)(iv)-(vi). First, Petitioners have not identified a statutory or regulatory requirement pertaining to the units used to express water usage. The choice of units has no safety or environmental implications and thus is not material to a decision that the Staff must make, as required by 10 C.F.R. § 2.309(f)(1)(iv). Second, Petitioners provide no facts or expert opinion to support their claim, as required by 10 C.F.R. § 2.309(f)(1)(v). Instead, they merely repeat information from the application without any discussion of that information. Finally, because Petitioners do not identify any sections of the application that they dispute, they fail to raise a genuine dispute with the Applicant, as required by 10 C.F.R. § 2.309(f)(1)(vi).

4. Contention D

Contention D is divided into two subparts, D(1) and D(2). The Staff addresses them together because they both deal with similar issues. For the reasons discussed below, neither of these contentions is admissible.

Petitioners state in Contentions D(1) and D(2):

> (D)(1) The Application is not in conformance with 10 C.F.R. § 40.9 and 10 C.F.R. § 51.45 because the Application does not provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources . . . are identified and protected pursuant to Section 106 of the National Historic Preservation Act. As a result, the Application fails to comply with Section 51.60.
>
> (D)(2) The Application fails to meet the requirements of 10 C.F.R. §§ 51.60 and 51.45, and the National Environmental Policy Act because it lacks an adequate description of either the affected environment or the impacts of the project on archaeological, historical, and traditional cultural resources. The Application also fails to demonstrate compliance under the National Historic Preservation Act, and the relevant portions of NRC guidance included at NUREG-1569 section 2.4.

Contentions D(1) and D(2) each make two similar claims: first, that the analysis of cultural and historical resources in the application is inadequate, and second, that the

application does not demonstrate compliance with the NHPA.[123] For the reasons discussed below, these contentions are inadmissible.

With regard to the adequacy of the cultural resources analysis in the application, the Petitioners state that "the Environmental Report, at Appendix 4.10-A, demonstrates that a significant number of archaeological, historical, and traditional cultural resources on site have not been evaluated." Petition at 69. This statement is incorrect, because there is no such appendix in the Marsland ER. Section 3.8.1 of the ER, as well as the cultural resources investigation reports referenced in that section and submitted to the NRC as part of the application,[124] indicate that all cultural and historical resources identified on the site have been evaluated. ER at 3-77 to 3-78; TR Report at 147-48.

In support of this contention, Petitioners provide a letter from Dr. Louis Redmond.[125] For the reasons discussed below, this letter does not provide adequate support for these contentions and does not raise genuine disputes with the Applicant as required by 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

Based on his reading of the ER,[126] Dr. Redmond identifies "several problems" with CBR's failure to locate any Native American properties during the field survey. Redmond Letter at 1. First, Dr. Redmond states that in his experience, when surveying areas near water

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[123] Although Contention D(2) also mentions compliance with section 2.4 of NUREG-1569, there is no further mention of that section in Petitioners' discussion of Contention D. Petition at 69-77. Petitioners' Contention E discusses various provisions in section 2.4 of NUREG-1569. *See* Petition at 77-78. Therefore, the Staff addresses claims related to that section in its response to Contention E.

[124] "Cameco Resources Marsland Expansion Area Uranium Project, Class III Cultural Resources Investigation, Dawes County, Nebraska" (April 28, 2011) (ADAMS Accession Nos. ML12165A503, ML12165A504, and ML12165A505) (CR Report); "Cameco Resources Marsland Expansion Area Uranium Project Addition, Cultural Resources Inventory, Dawes County, Nebraska" (March 5, 2012) (ADAMS Accession No. ML12165A502) (CR Supplement).

[125] Letter from Dr. Louis Redmond to David Frankel (Jan. 28, 2013) (ADAMS Accession No. ML13029A820).

[126] Dr. Redmond states in his letter that he "has reviewed the CBR . . . environmental report for the Marsland Expansion Area dated May 2012." Based on this statement, it does not appear that Dr. Redmond has reviewed the CR Report or the CR Supplement.

resources, they would "almost invariably find prehistoric camp sites and related process sites." Redmond Letter at 1. He then notes that there are a number of permanent and intermittent water resources in the proposed MEA site. *Id*. However, although it may be true that prehistoric camps are often found near water resources, and that the MEA site contains water resources, it does not follow that there are *necessarily* such camps on the site. Neither Petitioners nor Dr. Redmond have provided evidence that there are in fact such camps, or other Native American sites or artifacts, at the MEA site. The fact that the Applicant did not find any prehistoric camp sites (or other Native American sites), while it may be unexpected, is not necessarily an inadequacy in the cultural resources analysis. Therefore, this statement by Dr. Redmond does not raise a genuine dispute with the Applicant.

Dr. Redmond also notes that CBR's field investigations were conducted during the winter months, when, in his experience, at least 85 percent of the ground would be snow-covered, making it "relatively impossible" to find prehistoric or Native American sites. Redmond Letter at 1. Dr. Redmond states that "greater than 60-75 [percent]" level of ground observation (i.e., less than 25 percent snow cover) would be necessary, and he concludes that "an investigation with little or no ground surface visibility would be insufficient to state that no Native American/prehistoric materials were present. *Id.* However, Dr. Redmond's statements fail to take into account the actual snow cover present during the field investigation. As stated in the CR Report,

> Weather was cold and windy for most of the survey with a brief stint of snowfall and snow cover. *Survey was not conducted when frost or snow cover exceeded 20 percent ground coverage.* Other than delaying the ability to complete inventory before the 2010 year end, the weather and ground conditions did not alter field methods.

CR Report at 21 (emphasis added). Photographs in the CR Report support this statement that there was very little snow cover during the field survey. *See* CR Report at 23, 27, 31-33, 37-38, 40-45, 47-48, 50. In addition, the reported snow cover (less than 20 percent)

meets Dr. Redmond's suggested requirement for level of ground observation. *See* Redmond Letter at 1. Dr. Redmond's opinion about typical winter conditions does not raise a genuine dispute with the actual reported field conditions and visual evidence from photographs. Therefore, Dr. Redmond's statements concerning winter conditions do not support these contentions.

The final issue Dr. Redmond discusses is that, based on his reading of the ER, "there is no evidence that any type of subsurface testing process for any level of cultural materials took place." Redmond Letter at 1. According to Dr. Redmond, because "this project will eventually cause significant ground disturbance," such testing should be performed "at least in the area where most of the surface impacts occur." *Id*. Dr. Redmond suggests that subsurface testing should be implemented "on at least the higher elevations near water resources where the alluvium layer would be shallower . . . ." *Id*.

Dr. Redmond's statements do not support the contention that the cultural resources analysis in the ER is inadequate. That analysis is supported by the CR Report and the CR Supplement, which are referenced on page 3-77 of the ER. With regard to the need for subsurface testing, the CR Report addressed this issue as follows:

> Limited evaluative testing (i.e., shovel testing, auger testing) was not conducted as part of this investigation. Historic features and artifacts were present on the surface at all of the sites recorded and shovel tests would not offer additional information to aid in a NRHP determination. *Locations along drainages and creeks where a higher, though still limited, probability of discovering buried prehistoric sites offered excellent bare ground visibility and bare cut-banks to observe subsurface strata.*

CR Report at 21 (emphasis added). The CR Report later states:

> The greatest potential for stable intact sediment deposits occurs in the southern portion of the project area . . . . Across this lowland agricultural area, ARCADIS observed no exposed sandstone bedrock, and the sporadic occurrence of weathered sandstone gravels intermixed with loam and sand. *ARCADIS examined cultivated fields (providing excellent visibility), drainage and road cuts, animal mounds (which were numerous), and disturbance from erosion, agriculture, livestock, and historic occupation, that did not reveal buried cultural*

> *materials. The project area included a major ridge system and the surrounding, foothills, uplands, lowlands, and drainages as well as transitions between these settings, providing many opportunities to observe sediments and rule out the occurrence of subsurface archaeological deposits.*

CR Report at 148 (emphasis added). Dr. Redmond's opinion that "there is no evidence of any type of subsurface testing process" is based solely on a review of the ER, and is contraverted by the statements from the CR Report, which discuss a process that was used to determine whether subsurface testing was needed. The CR Report is part of the application and has been publicly available in ADAMS since June 2012.[127] Petitioners have an "ironclad obligation" to diligently search publicly available NRC or Applicant documents for information relevant to their [c]ontention."[128] Because Dr. Redmond did not consider the information in the CR Report that discussed the need for subsurface testing, he could not raise a dispute with the Applicant's discussion of the need for subsurface testing in the cultural resources investigation.

In addition to the Redmond Opinion, Petitioners provide six pages of excerpts from the ER and TR. *See* Petition at 71-76. However, they fail to explain how those sections support these contentions, and they do not identify any statements in those sections that they dispute. Therefore, the excerpts do not provide support for the contentions.

The second issue raised in Contentions D(1) and D(2) is compliance with the NHPA. With respect to the NHPA, Contention D(1) asserts that the analyses in the application are not 'adequate, accurate, and complete . . . to *demonstrate that cultural and historic resources . . . are identified and protected pursuant to Section 106 of the [NHPA]* . . . ." Petition at 69 (emphasis added). Contention D(2) states that the application "fails to *demonstrate compliance*

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[127] *See supra* note 124 for ADAMS Accession numbers of the reports. Links to the reports are also available at the website for the Marsland proceeding: http://www.nrc.gov/materials/uranium-recovery/license-apps/marsland/marsland-app-docs.html.

[128] *Shaw Areva MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), CLI-09-2, 69 NRC 55, 65 n.47 (2009).

under the [NHPA]." *Id.* (emphasis added). As explained below, this portion of the contentions is inadmissible because the issue is not yet ripe for adjudication.

The regulations in 10 C.F.R. § 51.45 do not require that the application demonstrate compliance with Section 106 of the NHPA. Under Section 51.45, the Applicant must provide a description of the affected environment and potential impacts, and an analysis to aid the Commission in developing its independent assessment. The Applicant has provided such descriptions for cultural and historical resources in Section 3.8.1 of the ER and two cultural resource investigation reports submitted as part of the license amendment application, as required by 10 C.F.R. § 51.45. The burden of compliance with the NHPA, however, rests on the federal agency, not the Applicant.[129] Therefore, at this time, any claims relating to the Staff's NHPA obligations are not ripe for adjudication.

The Commission addressed similar claims in the *Crow Butte* license renewal proceeding,[130] as did the Board in the *Powertech* proceeding.[131] In *Crow Butte LR*, the Commission held that a contention alleging that the Staff had not yet engaged in the required Section 106 consultation was not ripe for adjudication.[132] The Commission explained that the federal agency, not the Applicant, is responsible for compliance with the NHPA, including the requirement for consultation with Indian tribes.[133] Therefore, such contentions are unripe until the Staff completes its NEPA review.[134] In *Crow Butte LR*, the Commission stated that if a

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[129] *Crow Butte LR*, CLI-09-9, 69 NRC at 350-51.

[130] *Id.* at 348-51.

[131] *See Powertech*, LBP-10-16, 72 NRC at 421-22.

[132] *Crow Butte LR*, CLI-09-9, 69 NRC at 350-51. The Commission reached a similar conclusion in the *Crow Butte North Trend* proceeding. *See Crow Butte North Trend*, CLI-09-12, 69 NRC at 564-66.

[133] *Crow Butte LR*, CLI-09-9, 69 NRC at 348-49; *see also Crow Butte North Trend*, CLI-09-12, 69 NRC at 566.

[134] The NRC implements its NHPA responsibilities in conjunction with its NEPA review. *Crow Butte LR*, CLI-09-9, 69 NRC at 348 n.89.

petitioner (in that case, the Oglala Sioux Tribe) believes that the Staff's NEPA document, when issued, reflects inadequacies in the NHPA consultation, the petitioner could submit late-filed contentions on this issue at that time.[135]

5. Contention E

Under the heading "Contention E," Petitioners raise only one issue, labeled E(1).

Petitioners state in Contention E(1):

> (E)(1) The Application fails to include a description of proper consultation with all affected Indian Tribes concerning cultural resources at the MEA in violation of NEPA, NHPA, Section 51.45, 51.60, and 10 CFR Part 40 Appendix A.

Petitioners first allege that "NUREG-1569 Section 2.4 imposes several requirements . . . that have not been met in this case." Petition at 77. Specifically, Petitioners suggest that acceptance criteria 2.4.3(1), 2.4.3(3), 2.4.3(4), and 2.4.3(5) have not been met. *Id.* This claim must be rejected because NUREGs are guidance and do not impose binding legal requirements.[136] NUREG-1569 specifically states that the acceptance criteria contained therein "are for the guidance of NRC staff responsible for the review of applications to operate in situ leach facilities."[137] Thus, because Petitioners have not identified requirements that the Applicant has not complied with, the Petitioners' claim that the Applicant did not meet certain acceptance criteria in section 2.4 of NUREG-1569 does not support an admissible contention.[138]

The Petitioners state that under the NHPA and related Executive Orders, "the NRC is

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[135] *Id.* at 351.

[136] *See Curators of the University of Missouri*, CLI-95-8, 41 NRC at 397.

[137] NUREG-1569 at xviii. Furthermore, "Review plans are not substitutes for the Commission's regulations, and compliance with a particular standard review plan is not required. . . . Methods and solutions different from those set out in the standard review plan will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a license by NRC." *Id*.

[138] In any event, the acceptance criteria in section 2.4.1(3), (4), and (5) include qualifiers. For instance, section 2.4.1(3) states, "*Where appropriate*, tribal authorities have been consulted . . . ." NUREG-1569 at 2-11 (emphasis added). Sections 2.4.1(4) and (5) both say "*If delegated by NRC*," the applicant will provide evidence of contact with tribal authorities (2.4.1(4)) or present a memorandum of agreement (2.4.1(5)). *Id*. (emphasis added).

required to fully involve Native American Tribes in all aspects of decision-making affecting tribal interests such as those directly impacted by the project." Petition at 78. The Petitioners specifically claim that the NRC is required to begin consultation "as early as possible in the decision-making process." *Id.* The Petitioners assert that the NRC has not "properly consulted" with a number of tribes which may have historical connections to the MEA, and that the Application fails to describe the required consultations. Petition at 81.

This claim of failure to consult is premature and not yet ripe for litigation. Because the obligation to conduct Section 106 consultations belongs to the Staff, not the Applicant, the Petitioners' dispute is with the NRC. Consequently, for the same reasons discussed in the Staff's response to the NHPA compliance issues raised in Contentions D(1) and D(2), Contention E(1) is not yet ripe.[139]

Finally, Petitioners' claim that the application "fails to describe the required consultations" is inadmissible. As discussed above, it is the NRC's duty to conduct consultations under Section 106 of the NHPA. The Applicant's responsibility under 10 C.F.R. § 51.45 is to provide a description of the affected environment and a discussion of impacts in proportion to their significance, and to provide "sufficient data to aid the Commission in its development of an independent analysis."[140] In the context of historic and cultural resources, the Applicant provided this information in Section 3.8.1 of the ER and in the reports on cultural resource investigations.[141] Dr. Redmond's opinion does not support the claim that the

[139] Notwithstanding the ripeness of Petitioners' claim, the Staff has in fact commenced consultation with Indian tribes deemed to be affected by the proposed MEA project, including the Oglala Sioux tribe. *See* pp. 4-5 *supra*.

[140] 10 C.F.R. § 51.45(c).

[141] The publicly available versions of the reports have been available in ADAMS since June 13, 2012. "Cameco Resources Marsland Expansion Area Uranium Project, Class III Cultural Resources Investigation, Dawes County, Nebraska" (April 28, 2011), ADAMS Accession Nos. ML12165A503, ML12165A504, and ML12165A505 (CR Report); Cameco Resources Marsland Expansion Area Uranium Project Addition, Cultural Resources Inventory, Dawes County, Nebraska" (Mar. 5, 2012), ADAMS Accession No. ML12165A502 (CR Supplement).

application must "include a description with all affected Indian Tribes . . . ." Petition at 77. Rather, his opinion merely identifies other tribes that may have an interest in the MEA. Redmond Letter at 1. Thus, Petitioners have not raised a genuine dispute with the Applicant, nor have they adequately supported their assertion that the application fails to meet the requirements of 10 C.F.R. §§ 51.45, 51.60, and 10 C.F.R. Part 40 Appendix A. For these reasons, Contention E(1) is inadmissible.

CONCLUSION

For the reasons discussed above, Petitioners have not demonstrated standing to intervene in this proceeding and have not submitted an admissible contention. Therefore, the Board should deny the Petitioners' hearing request under 10 C.F.R. § 2.309(a).

Respectfully submitted,

/Signed (electronically) by/
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Dated at Rockville, Maryland
this 25th day of February, 2013

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 40-8943-MLA-2
CROW BUTTE RESOURCES, INC.	)	
	)	ASLBP No. 13-926-01-MLA-BD01
(Marsland Expansion Project)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF RESPONSE TO THE REQUEST FOR HEARING AND PETITION TO INTERVENE BY CONSOLIDATED PETITIONERS" in the above-captioned proceeding have been served via the Electronic Information Exchange ("EIE"), the NRC's E-Filing System, this 25th day of February, 2013, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the above-captioned proceeding.

/Signed (electronically) by/
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