

**NUCLEAR REGULATORY COMMISSION
ISSUANCES**

**OPINIONS AND DECISIONS OF THE
NUCLEAR REGULATORY COMMISSION
WITH SELECTED ORDERS**

July 1, 2018 – December 31, 2018

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PREFACE

This is the eighty-eighth volume of issuances (1–181) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2018, to December 31, 2018.

Atomic Safety and Licensing Boards are authorized by Section 191 of the Atomic Energy Act of 1954. These Boards, comprised of three members, conduct adjudicatory hearings on applications to construct and operate nuclear power plants and related facilities and issue initial decisions which, subject to internal review and appellate procedures, become the final Commission action with respect to those applications. Boards are drawn from the Atomic Safety and Licensing Board Panel, comprised of lawyers, nuclear physicists and engineers, environmentalists, chemists, and economists. The Atomic Energy Commission (AEC) first established Licensing Boards in 1962 and the Panel in 1967.

Between 1969 and 1990, the AEC authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission in facility licensing proceedings. In 1972, that Commission created an Appeal Panel, from which were drawn the Appeal Boards assigned to each licensing proceeding. The functions performed by both Appeal Boards and Licensing Boards were transferred from the AEC to the Nuclear Regulatory Commission by the Energy Reorganization Act of 1974. Appeal Boards represented the final level in the administrative adjudicatory process to which parties could appeal. Parties, however, were permitted to seek discretionary Commission review of certain board rulings. The Commission also could decide to review, on its own motion, various decisions or actions of Appeal Boards.

On June 29, 1990, however, the Commission voted to abolish the Atomic Safety and Licensing Appeal Panel, and the Panel ceased to exist as of June 30, 1991. Since then, the Commission itself reviews Licensing Board and other adjudicatory decisions, as a matter of discretion. *See* 56 FR 29403 (1991).

The Commission also may appoint Administrative Law Judges pursuant to the Administrative Procedure Act, who preside over proceedings as directed by the Commission.

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Issuances are referred to as follows: Commission (CLI), Atomic Safety and Licensing Boards (LBP), Administrative Law Judges (ALJ), Directors' Decisions (DD), and Decisions on Petitions for Rulemaking (DPRM).

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

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Jeff Baran
Stephen G. Burns
Annie Caputo
David A. Wright

In the Matter of

Docket No. 40-9075-MLA

POWERTECH (USA) INC.
(Dewey-Burdock *In Situ* Uranium
Recovery Facility)

July 24, 2018

SUMMARY DISPOSITION

APPEALS, INTERLOCUTORY

A board's denial of a motion for summary disposition is an interlocutory decision. *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-11-10, 74 NRC 251 (2011); *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203 (2011); *see also Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 810-11 (2011); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 34 (2008) (grant of summary disposition motion, where other contentions are pending in the proceeding, is interlocutory).

APPEALS, INTERLOCUTORY

The Commission has uniformly rejected the argument that expenses associated with additional litigation constitute "irreparable injury" warranting interlocutory review. *See Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 135 (2009) ("Indeed, we have found *no in-*

stance in this agency’s jurisprudence where either we or our boards have ruled that expenses of any kind constituted ‘irreparable injury.’ . . . [I]n situations where, as here, a movant for a stay or interlocutory review claims ‘irreparable injury’ based on excessive or unnecessary litigation expenses[, w]e have uniformly rejected such arguments.”); *see also* *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-10-30, 72 NRC 564, 569 (2010) (increased litigation and delay do not justify interlocutory review); *Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-01-25, 54 NRC 368, 373-74 (2001) (increased litigation resulting from the admission of a contention does not constitute serious or irreparable harm); *Sequoyah Fuels Corp. and General Atomic* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 61-62 (1994) (denial of motion for summary disposition or dismissal).

SUMMARY DISPOSITION

The question whether an Indian Tribe unreasonably failed to cooperate with the Staff in its efforts to identify cultural resources went to the merits of a contention arguing that an environmental assessment failed to adequately identify cultural resources potentially impacted by the proposed license. Therefore the Board acted within its discretion when it declined to rule on that question on summary disposition.

MEMORANDUM AND ORDER

Powertech (USA) Inc. (Powertech) petitions for review of the Atomic Safety and Licensing Board’s decision denying in part and granting in part the Staff’s motion for summary disposition of Contentions 1A and 1B challenging the issuance of an *in situ* uranium recovery license to Powertech.¹ Powertech requests that we reverse the Board’s partial denial of summary disposition and direct the Staff to supplement the Final Supplemental Environmental Impact Statement (FSEIS), thereby ending this proceeding.² For the reasons described below, we deny Powertech’s petition for review.

¹Brief of Licensee Powertech (USA), Inc. Petition for Review of LBP-17-09 (Nov. 13, 2017) (Petition); *see also* LBP-17-9, 86 NRC 167 (2017).

²Petition at 1-2, 16, 20.

I. BACKGROUND

This proceeding has been pending since 2009, when Powertech first applied for a license for the Dewey-Burdock *In Situ* Uranium Recovery Facility. The Oglala Sioux Tribe (“Tribe”) and Consolidated Intervenors (together, “Intervenors”) were admitted as intervenors in 2010.³ The Staff issued the FSEIS in January 2014 and issued the license to Powertech in April 2014, while Intervenors’ admitted contentions were still pending before the Board.⁴ The Board held an evidentiary hearing on the Intervenors’ contentions in August 2014.

In April 2015, the Board issued a partial initial decision finding in favor of the Staff and Powertech on all contentions except Contentions 1A and 1B, both of which concerned the Staff’s consideration of the potential impacts of the proposed project on Native American cultural resources at the project site.⁵ Specifically, the Board found “that the FSEIS [had] not adequately addressed the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources” (Contention 1A) and “that the consultation process between the NRC Staff and the Oglala Sioux Tribe was inadequate” (Contention 1B).⁶ Despite these findings, the Board did not determine that suspension of the license was warranted.⁷ Instead, it found that the Staff should work to remedy the two identified deficiencies, report to the Board on its progress, and eventually resolve the contention with a settlement agreement, or if not able to reach a settlement, with a motion for summary disposition.⁸

All parties appealed the Board’s various rulings in LBP-15-16 (as well as various interlocutory rulings), but we affirmed the Board in all respects relevant to this appeal.⁹ We specifically rejected Powertech’s argument that the Staff had already considered all information pertaining to cultural resources that was rea-

³ LBP-10-16, 72 NRC 361, 376 (2010).

⁴ See Exs. NRC-008-A-1 to NRC-008-B-2, “Environmental Impact Statement for the Dewey-Burdock Project in Custer and Fall River Counties, South Dakota, Supplement to the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities” (Final Report), NUREG-1910, Supplement 4, vols. 1-2 (Jan. 2014) (ADAMS Accession Nos. ML14246A350, ML14246A329, ML14246A330, ML14246A331) (FSEIS); Ex. NRC-012, License Number SUA-1600, Materials License for Powertech (USA) Inc. (Apr. 8, 2014) (ML14246A408) (License).

⁵ LBP-15-16, 81 NRC 618 (2015).

⁶ *Id.* at 655, 657.

⁷ See *id.* at 657-58.

⁸ *Id.* at 710.

⁹ See CLI-16-20, 84 NRC 219, 262 (2016). We affirmed the Board’s decisions on the merits but we disagreed with the characterization that its ruling with respect to Contentions 1A and 1B rendered the decision non-final. We explained that the Board’s decision was final and appealable, although we ultimately approved the Board’s approach in retaining jurisdiction over the matter until the deficiencies identified in the FSEIS were resolved. See *id.* at 242-43, 250-51.

sonably available and had therefore satisfied the National Environmental Policy Act (NEPA) as a matter of law.¹⁰ Instead, we found that “Powertech’s dispute with the Board’s decision [was] factual, not legal” and, in the absence of clear error, deferred to the Board’s factual determinations concerning the adequacy of the FSEIS.¹¹

Over the course of the following two years, the Staff made several attempts to adequately consult with the Tribe, including correspondence and email, one face-to-face meeting, and a January 31, 2017, teleconference.¹² However, during this period, the Tribe and the Staff could not agree upon a method to survey cultural, historic, and religious resources at the site or assess the possible impact of the project on such resources.¹³ During the January 2017 teleconference, the Staff proposed an “open-site” survey method that would involve representatives of the Tribe walking over the site for a period of time in exchange for mileage reimbursement, a per diem, and an honorarium of \$10,000.¹⁴ The open site survey proposal would have been similar to a survey performed in 2013 in which the Tribe declined to participate.¹⁵ According to the Staff’s summary of the teleconference, the Tribe did not accept this proposal and instead “expressed its preference to develop a survey methodology similar in nature to the Makoche Wowapi survey proposal that was submitted to the NRC in 2012.”¹⁶ As a result of the parties’ failure to reach an agreement on the survey methodology, no

¹⁰ See Brief of Licensee Powertech (USA), Inc. Petition for Review of LBP-15-16, at 20-22 (May 26, 2015).

¹¹ CLI-16-20, 84 NRC at 247. The Tribe has filed a petition for review of CLI-16-20 in the United States Court of Appeals for the District of Columbia. *Oglala Sioux Tribe v. NRC* (D.C. Cir. No. 17-1059). On July 20, 2018, the court issued a decision remanding the case for further proceedings concerning the status of the license in light of the NEPA deficiency that has been identified.

¹² See NRC Staff’s Motion for Summary Disposition of Contentions 1A and 1B (Aug. 3, 2017) (Staff Motion), attach. 1, NRC Staff’s Statement of Material Facts to Support Motion for Summary Disposition of Contentions 1A and 1B (Aug. 3, 2017); *id.*, attach. 2, Affidavit of Kellee L. Jamerson Concerning the NRC Staff’s Motion for Summary Disposition of Contentions 1A and 1B (Aug. 3, 2017); *see also* LBP-17-9, 86 NRC at 173.

¹³ See NRC Staff Final Status Report (Aug. 3, 2017) (Final Status Report).

¹⁴ See Summary of Teleconference with the Oglala Sioux Tribe Regarding the Dewey-Burdock In situ Uranium Recovery Project (Jan. 31, 2017) (ML17060A260) (Teleconference Summary).

¹⁵ See Ex. NRC-008-A, FSEIS § 1.7.3.5, at 1-24 to 1-26.

¹⁶ Teleconference Summary at 1. The Makoche Wowapi proposal included a professional survey with established protocols for identification of historical sites with Makoche Wowapi/Mentz-Wilson Consultants, LLP, acting as contractor to conduct the survey. This approach was estimated to cost \$818,000. See Ex. NRC-008-A, FSEIS § 1.7.3.5, at 1-23; LBP-17-9, 86 NRC at 181 n.66; *see also* Letter from Trina Lone Hill, Oglala Lakota Cultural Affairs & Historic Preservation, to Cinthya I. Román, NRC, at 8 (May 31, 2017) (ML17152A109); Staff Motion at 28-29.

additional information about cultural resources at the site was able to be gathered from the Tribe.¹⁷

On August 3, 2017, the Staff moved for summary disposition of Contentions 1A and 1B, arguing that further attempts at consultation with the Tribe would be unlikely to result in an acceptable settlement.¹⁸ With respect to its obligations under NEPA, the Staff argued that its efforts satisfied the statute because “[u]nder NEPA’s ‘hard look’ standard, the proper inquiry is not whether the Staff obtained complete information on the sites of cultural, historical, and religious [significance] to the Oglala Sioux Tribe, but whether the Staff made reasonable efforts to do so.”¹⁹

Powertech filed a brief in support of the Staff’s motion, and the Intervenor’s opposed it.²⁰ With respect to the adequacy of the survey that had been proposed, the Tribe asserted that the proposed open site survey was not scientific or methodical, and that the survey should be conducted by professionals, in consultation with the Oglala and other Sioux Tribes. The Tribe argued that an open site survey conducted solely by Tribal representatives would essentially place the onus on the Tribe to survey the site and catalogue cultural resources there.²¹

The Board found that there was no remaining material issue of fact regarding the Staff’s consultation with the Tribe. It found that the Staff’s attempts at consultation had satisfied the requirements of the National Historic Preservation Act and, therefore, granted summary disposition of Contention 1B.²² But with respect to Contention 1A, the Board noted that no additional survey had been performed (such that the deficiencies in the FSEIS remained) and found that there was still a disputed fact issue as to whether the Staff’s effort to characterize cultural resources at the site was reasonable.²³ More specifically, the Board found that the

Tribe’s challenge to (1) the scientific integrity and lack of a trained surveyor or

¹⁷ Final Status Report at 2.

¹⁸ See Staff Motion; Final Status Report.

¹⁹ Staff Motion at 34 (citing *Ground Zero Ctr. for Non-Violent Action v. U.S. Dept. of the Navy*, 383 F.3d 1082, 1089-90 (9th Cir. 2004); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1026-27 (9th Cir. 1980)).

²⁰ Brief of Powertech (USA) Inc. in Support of the United States Nuclear Regulatory Commission Staff’s Motion for Summary Disposition of Contentions 1A and 1B (Sept. 1, 2017); Oglala Sioux Tribe Response in Opposition to NRC Staff’s Motion for Summary Disposition of Contentions 1A and 1B (Sept. 1, 2017) (Tribe Response in Opposition); Consolidated Intervenor’s Opposition to Motion for Summary Disposition of Contentions 1A and 1B (Sept. 1, 2017).

²¹ See LBP-17-9, 86 NRC at 193 (citing Tribe Response in Opposition at 33).

²² *Id.* at 188-90.

²³ *Id.* at 194.

ethnographer coordinating the survey; (2) the number of tribal members invited to participate in the survey; (3) the length of time provided for the survey; and (4) the tribes invited to participate in the survey — establish a significant material factual dispute as to the reasonableness of the NRC Staff’s proposed terms for an open-site survey to assess the identified deficiencies in this FSEIS.²⁴

Powertech appealed the denial of the Staff’s motion with respect to Contention 1A. Powertech requests that we “direct NRC Staff to supplement the [FSEIS] with all data and information for activities conducted to date by NRC Staff on historic and cultural resources and order the closure of Contention 1A upon completion of such supplement.”²⁵ Powertech also asks for “expedited review” because, it claims, the State of South Dakota and the U.S. Environmental Protection Agency and Bureau of Land Management are waiting for the NRC to approve the FSEIS supplement and end this proceeding before they grant approvals necessary for Powertech to begin operations.²⁶ Powertech also contended, in support of this request, that the Commission’s expedited consideration of its petition could have rendered moot certain issues in the Tribe’s petition for review before the D.C. Circuit.²⁷

II. DISCUSSION

A. Powertech’s Petition Does Not Meet the Standard for Interlocutory Review

A board’s denial of a motion for summary disposition is an interlocutory decision.²⁸ We generally disfavor interlocutory review; our rules of procedure provide for such review only where the petitioner can show that it is threatened

²⁴ *Id.* at 198.

²⁵ Petition at 1-2. The Staff continues to work to resolve the outstanding issues identified in LBP-15-16 and LBP-17-9. *See* Letter from Cinthya I. Román, NRC, to John M. Mays, Chief Operating Officer, Azarga Uranium Corp. (Dec. 6, 2017) (ML17340B374) (Proposal) (describing proposal to identify historic, cultural, and religious sites at the Dewey-Burdock site). Powertech is a wholly-owned subsidiary of Azarga.

²⁶ Petition at 20; *see also* Reply to Oglala Sioux Tribe’s and Consolidated Interveners’ Opposition to the Petition for Review of LBP-17-09, at 5 (Dec. 18, 2017).

²⁷ Petition at 20-21.

²⁸ *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-11-10, 74 NRC 251 (2011); *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203 (2011); *see also Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 810-11 (2011), *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 34 (2008) (grant of summary disposition motion, where other contentions are pending in the proceeding, is interlocutory).

with “immediate and serious irreparable impact” or the board’s decision “affects the basic structure of the proceeding in a pervasive and unusual manner.”²⁹

Powertech does not address the standard for interlocutory review in its petition. Nonetheless, we find, based on the record, that the standard, as stated in 10 C.F.R. § 2.341(f)(2), has not been met.³⁰ First, we find that Powertech will face no immediate and serious irreparable harm as a result of the Board’s ruling. Powertech’s request for “expedited review” claims that it will be harmed by delay and expense.³¹ But we have “uniformly rejected” arguments that “expenses of any kind” constitute irreparable injury.³² And, although Powertech suggests that other state and federal approvals depend on the outcome of this litigation, we do not view that assertion, even if we deemed it accurate, to warrant deviation from our standard process here. In addition, it is not apparent that the Board’s ruling has any effect on the “structure of the proceeding,” let alone a “pervasive and unusual” one.³³ This proceeding will continue as it has since 2015, when the Board ruled in favor of the Tribe on Contention 1A.³⁴

Although Powertech’s failure to meet the standard for interlocutory review

²⁹ See 10 C.F.R. § 2.341(f)(2)(i)-(ii). Absent a finding that these circumstances are present, Intervenor would have to wait until the disposition of Contention 1A before they could seek review of the Board’s summary disposition of Contention 1B.

³⁰ Powertech addresses the standard provided in 10 C.F.R. § 2.341(b), which governs petitions for review of final Board decisions, but, as noted above, LBP-17-9 is not a final decision.

³¹ Petition at 20.

³² *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 135 (2009) (“Indeed, we have found *no instance* in this agency’s jurisprudence where either we or our boards have ruled that expenses of any kind constituted ‘irreparable injury.’ . . . [I]n situations where, as here, a movant for a stay or interlocutory review claims ‘irreparable injury’ based on excessive or unnecessary litigation expenses[, w]e have uniformly rejected such arguments.”); see also *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-10-30, 72 NRC 564, 569 (2010) (increased litigation and delay do not justify interlocutory review); *Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-01-25, 54 NRC 368, 373-74 (2001) (increased litigation resulting from the admission of a contention does not constitute serious or irreparable harm); *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 61-62 (1994) (denial of motion for summary disposition or dismissal).

³³ The expansion of issues for resolution and the continuation of litigation that results from admitting a contention (see *Haddam Neck*, CLI-01-25, 54 NRC at 374) or denying summary disposition (see *Sequoyah Fuels*, CLI-94-11, 40 NRC at 62-63) does not necessarily have a “pervasive and unusual” effect on the litigation. It is simply part of the ebb and flow that characterizes complex adjudication.

³⁴ Powertech’s petition does not elaborate on how a favorable Commission ruling would have “moot[ed]” the Tribe’s petition for review of CLI-16-20 before the D.C. Circuit, see Petition at 2, 5, 20-21, and it is not apparent to us that interlocutory review would necessarily have had that result. Because this argument is not fully developed, we do not rule on whether potentially mooted a petition for review would present appropriate grounds for interlocutory review.

is a sufficient reason to deny its petition, we also find, as described below, that it has failed to show that the Board erred in denying its motion.

B. Powertech Has Not Shown that the Board Erred in Denying Summary Disposition

Summary disposition is appropriate where there is no remaining material issue of fact. The standards governing summary disposition are set forth at 10 C.F.R. § 2.710(a) and “are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure.”³⁵ Under those standards, the moving party has the initial burden of showing that no genuine issue of material fact remains in the proceeding.³⁶ If the nonmoving party opposes the motion, it cannot rest on the allegations or denials of a pleading; instead, it must “go beyond the pleadings and . . . designate specific facts showing that there is a genuine issue for trial.”³⁷

Powertech’s Petition does not address the standard for granting summary disposition, that is, the standard under which the Board ruled on Contention 1A. But Powertech does argue that there is a logical contradiction in the Board simultaneously finding that the Staff had complied with its consultation obligations under the NHPA while at the same time falling short in its duties under NEPA.³⁸ To this end, Powertech asserts that the Board’s logic in LBP-17-9 clashes with its interpretation of the same statutes in LBP-15-16.³⁹ In LBP-15-16, the Board found with respect to Contention 1A that

the FSEIS has not adequately addressed the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources. Without additional analysis as to how the Powertech project may affect the Sioux Tribes’ cultural, historical, and religious connections with the area, NEPA’s hard look requirement has not been satisfied[.]⁴⁰

Powertech points out that (in a separate section of LBP-15-16), the Board stated that “[t]his additional consultation is required in order (1) to satisfy the hard look at impacts required by NEPA and to supplement the FSEIS, if necessary; and (2)

³⁵ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010); *see also Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

³⁶ *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

³⁷ *Id.* at 324 (internal quotation marks omitted).

³⁸ Petition at 12-16.

³⁹ *Id.*

⁴⁰ LBP-15-16, 81 NRC at 655.

to satisfy the consultation requirements of the NHPA.”⁴¹ Powertech interprets these statements to mean that additional consultation alone is sufficient to satisfy both NHPA and NEPA.⁴² Therefore, it argues, it is “legally illogical that you can conduct adequate consultation with a Native American Tribe on one hand and then be deemed to have failed to “[satisfy]” another statute with similar requirements on the other hand.”⁴³

We disagree. We do not interpret the Board’s language in LBP-15-16 to indicate that the Staff would necessarily satisfy its NEPA obligations simply through consultation with the Tribe. Rather, the Board explained that consultation was necessary to achieve the *end* of meeting NEPA’s “hard look” requirement; it did not suggest that the mere act of consultation would in and of itself be sufficient. And, in any event, NHPA and NEPA are separate statutes imposing different obligations on the Staff. It is thus not “legally illogical” for the Board to grant summary disposition with respect to one contention while denying it with respect to the other.

Nor do we find that the Board erred in holding that there was an unresolved dispute of material facts. The Board held that “there remains a material factual dispute as to whether the NRC Staff’s chosen methodology for obtaining information on the tribal cultural resources was reasonable.”⁴⁴ As the Board noted and the Staff acknowledged, the parties continued to dispute what would constitute a reasonable method to assess cultural resources at the site. We find that the Board did not err in its application of the standards for summary disposition.

Finally, much of Powertech’s Petition and Reply is devoted to arguing that the Tribe has unreasonably refused to cooperate in the consultation process. For example, Powertech argues that the Staff has satisfied NEPA because it has made reasonable efforts to obtain the missing information and therefore, the information is not “reasonably available.”⁴⁵ To the extent Powertech argues that the FSEIS was already sufficient before the 2014 evidentiary hearing, it is a challenge to the Board’s findings in LBP-15-16 and essentially a late-filed motion for reconsideration of CLI-16-20. We previously found that these argu-

⁴¹ *Id.* at 657.

⁴² Petition at 12 n.17.

⁴³ *Id.* at 16.

⁴⁴ LBP-17-9, 86 NRC at 194.

⁴⁵ *See* Petition at 13 (arguing that the Board ignored Powertech’s expert witness statement and Powertech and Staff witness testimony at the 2014 evidentiary hearing), 15-16, 19 (arguing that site identification requirements were satisfied by the participation of other tribes and by the binding Programmatic Agreement), 17-18 (urging the Commission to adopt the arguments in then-Commissioner Svinicki’s partial dissent); *see also* Brief of Powertech (USA), Inc. in Support of United States Nuclear Regulatory Commission Staff’s Motion for Summary Disposition of Contentions 1A and 1B (Sept. 7, 2017), at 10-11.

ments did not establish “clear error” by the Board.⁴⁶ Powertech does not provide a compelling reason to revisit those issues at this time. To the extent Powertech argues that the Tribe unreasonably failed to cooperate following the Board’s ruling in LBP-15-16, we note that the reasonableness of the Tribe’s efforts to help identify cultural resources at the site goes to the merits of Contention 1A. We discern no error in the Board’s identification of a dispute with respect to this issue, and we leave it to the Board to resolve it in the first instance.

III. CONCLUSION

For the foregoing reasons, we deny review of the Board’s decision in LBP-17-9.⁴⁷

IT IS SO ORDERED.

For the Commission

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 24th day of July 2018.

⁴⁶ See CLI-16-20, 84 NRC at 246-47.

⁴⁷ Because we decline review, Powertech’s request for expedited review is moot.

Chairman Svinicki, Additional Views

I fully join with the majority's order today as it comports with well-established Commission precedent on the issues of interlocutory appeals and summary disposition. Given the posture of this proceeding, these strict standards are controlling. However, my position with respect to the underlying issues surrounding Contentions 1A and 1B in this proceeding has not changed. If anything, recent developments in this proceeding reinforce my conclusion that the Board's legal errors created an unworkable framework by requiring the parties to take measures beyond those reasonable efforts required by NEPA and the NHPA. As expressed in my earlier dissent with respect to Contention 1A, instead of considering the Staff's argument that it could not reasonably obtain the information it acknowledged was missing, the Board invalidated the FSEIS simply because the information was missing in the first place.¹ For Contention 1B, the Board sought to determine "which party or specific action led to the impasse preventing an adequate tribal cultural survey"² instead of determining whether the Staff had provided the Tribe a "reasonable opportunity" for consultation as required by statute.³ Because the Board applied the legal standards to Contentions 1A and 1B incorrectly, the Board's decision should have been overturned with respect to those two contentions and the proceeding terminated at that time. Now, almost two years later, this proceeding remains ongoing.

¹ LBP-15-16, 81 NRC 618, 655 (2015). Several authorities relied on by the Staff supported the position that agencies need only undertake reasonable efforts to acquire missing information. *See* 40 C.F.R. § 1502.22; *Town of Winthrop v. FAA*, 535 F.3d 1 (1st Cir. 2008); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station)*, CLI-10-22, 72 NRC 202, 208 (2010).

² LBP-15-16, 81 NRC at 656.

³ 36 C.F.R. § 800.2(e)(2)(ii)(A).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Richard E. Wardwell
Dr. Thomas J. Hirons

In the Matter of

Docket No. 40-8943-MLA-2
(ASLBP No. 13-926-01-MLA-BD01)

CROW BUTTE RESOURCES, INC.
(Marsland Expansion Area)

July 20, 2018

In this proceeding concerning the license amendment application of Crow Butte Resources, Inc. (CBR), seeking authorization to operate a satellite in situ uranium recovery (ISR) facility within the Marsland Expansion Area, in Dawes County, Nebraska, the Licensing Board denies the request of Intervenor Oglala Sioux Tribe (OST) to submit fourteen new or, as OST refers to them, “renewed” contentions, for lack of good cause under 10 C.F.R. § 2.309(c)(1) and/or failure to satisfy one or more of the contention admissibility standards of section 2.309(f)(1), but finds that OST Contention 2 raising hydrogeology concerns may migrate from being a challenge to the Nuclear Regulatory Commission (NRC) Staff’s draft environmental assessment (EA) to contesting the Staff’s final EA.

**RULES OF PRACTICE: CONTENTIONS (NEPA MIGRATION
TENET)**

Under Commission case law, an environmental challenge may migrate to subsequently-issued National Environmental Policy Act (NEPA)-related environmental review documents without the contention’s proponent resubmitting the contention. *See* LBP-18-2, 87 NRC 21, 37 (2018). A contention may mi-

grate “where the information in the Staff’s environmental review document is ‘sufficiently similar’ to the material” in the previously issued licensing document. *Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 570 n.17 (2016) (quoting *Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 133 (2013), *petition for review denied*, *Ross*, CLI-16-13, 83 NRC at 601, *petition for review denied sub nom. Nat. Res. Def. Council v. NRC*, 879 F.2d 1202, 1206-07 (D.C. Cir. 2018)).

RULES OF PRACTICE: CONTENTIONS (MIGRATION TENET AS APPLICABLE TO SAFETY-RELATED CONTENTIONS)

It is not clear, however, that the migration tenet can be “applied” to already admitted safety contentions. *See Ross*, LBP-13-10, 78 NRC at 132 n.7; *see also* LBP-18-2, 87 NRC at 36 n.7. An intervenor may not litigate the adequacy of the Staff’s safety review, so any safety-related contention must be based on the content of the application. *See AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 476 (2008); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 97 (2001).

RULES OF PRACTICE: MIGRATION DECLARATION

The intervenor sponsoring a migration-eligible contention is neither required to submit a migration declaration nor to plead the migration standards unless the Staff or the applicant challenged the contention’s migration. *See Ross*, LBP-13-10, 78 NRC at 143 n.15.

RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED; GOOD CAUSE REQUIREMENT; ADMISSIBILITY)

When a party seeks to admit a new or amended contention after the initial hearing petition is due to be filed, the contention must satisfy standards for both timeliness and admissibility. Section 2.309(c)(1) of the agency’s Part 2 rules of practice sets forth the standards for timeliness by requiring that “good cause” be shown for submitting a new or amended contention, while the requirements governing contention admissibility are found in section 2.309(f)(1).

RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED; GOOD CAUSE REQUIREMENT)

Under section 2.309(c)(1), when a party submits a new or amended contention

after the initial date for filing a hearing request, “good cause” must be shown establishing why the contentions ought to be admitted as timely submitted. To make such a showing, an intervenor must demonstrate that:

- (i) The information upon which the filing is based was not previously available;
- (ii) The information upon which the filing is based is materially different from information previously available; and
- (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(c)(1)(i)-(iii).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT)**

The first two “good cause” factors relate to the nature of the information that is being used as the basis for a new or amended contention, while the third obliges the sponsoring party to submit a new or amended contention in a timely manner upon learning of new, materially different information that may form the basis of the contention. *See Ross*, LBP-13-10, 78 NRC at 130.

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT; TIMELY FILING BASED ON
SUBSEQUENT INFORMATION)**

Regarding the third factor, section 2.309(c)(1)(iii) does not define “timely,” providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely. *See id.* at 130-31. As such, a board may define timeliness by specifying a deadline for timely filing a new or amended contention following a “triggering event” that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention.

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT)**

Relative to the “good cause” factors, it is a fundamental principle of practice before the Commission that a new or amended contention must be raised at the earliest possible opportunity. *See DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-1, 81 NRC 1, 7 (2015). “Petitioners who choose to wait to raise contentions that could have been raised earlier do so at their peril.” *Id.*

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

As with contentions filed at the time of the initial hearing petition, new or amended contentions must meet the six admissibility factors set out in section 2.309(f)(1). *See* 10 C.F.R. § 2.309(c)(4). These factors require the proponent of a new or amended contention to:

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

Id. § 2.309(f)(1)(i)-(vi).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

Failure to comply with any one of the six admissibility requirements is grounds for dismissing the contention. *See* LBP-13-6, 77 NRC 253, 284 (2013) (citing *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012)).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT)**

In challenging the Staff's environmental review documents, an intervenor that delays filing new contentions until the Staff's final environmental document is issued "risk[s] the possibility that there will not be a material difference" between the draft and final environmental review documents, "thus rendering any newly proposed contentions on previously available information impermissibly late." *Fermi*, CLI-15-1, 81 NRC at 7. Just as "the Commission expects that the filing of an environmental concern based on the ER will not be deferred because the staff may provide a different analysis in the [draft environmental impact statement (DEIS)]," so too "the institutional unavailability of a licensing-

related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention.” *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048-49 (1983). Therefore, an intervenor must contest information contained in a draft environmental review document contemporaneously with its publication, and may not wait to see whether the challenge is resolved when the final environmental document is issued. *See Calvert Cliffs 3 Nuclear Project, LLC, and Unistar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 732 (2010).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT; TIMELINESS)**

Submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication. *See* LBP-18-2, 87 NRC at 31-32 n.5 (indicating that fate for new/amended contention submissions by a party relative to the Staff’s SER and final EA is independent of any deadlines set by the Staff for general comments on these reports by the public). Thus, filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it, in and of itself, make timely a contention submitted in the first instance as a challenge to the final environmental document. *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 144 (2009) (noting that because the proponent of a late-filed contention filed rulemaking comments that mirrored contention’s basis on the same day intervention petition was filed, the petitioner was aware of the facts and issues supporting the contention and could have included that contention with the original petition to intervene); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-27, 52 NRC 216, 221-24 (2000) (rejecting a late-filed contention challenging a June 2000 DEIS because the contention was not based on previously unavailable information notwithstanding party’s assertion that, upon learning of the relevant information, it “did not ‘idly’ wait until the DEIS was published to make its concerns known” but adhered to the NEPA process by filing EIS scoping comments in May 1999).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
GENUINE DISPUTE ON MATERIAL ISSUE OF LAW OR FACT)**

A petitioner seeking admission of a contention contesting a NEPA document

must not only point out what specific deficiencies exist, but also must demonstrate why the deficiencies raise a genuine material dispute relative to the NEPA document. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-37 (1999).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
GENUINE DISPUTE ON MATERIAL ISSUE OF LAW OR FACT)**

“A contention that simply alleges that some matter ought to be considered does not provide the basis for an admissible contention.” *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993), *petition for review denied*, CLI-94-2, 39 NRC 91, 91 (1994).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
SUPPORTING INFORMATION OR EXPERT OPINION)**

When the stated factual underpinning for the contention is no longer accurate, the contention lacks a sufficient basis and so must be dismissed. *See Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), ALAB-872, 26 NRC 127, 136 (1987) (finding contention was appropriately dismissed as lacking a proper basis when factual support for the contention had been repudiated by its original source and no other independent information supporting the allegation had been offered).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
SUPPORTING INFORMATION OR EXPERT OPINION)**

It is well established that a contention’s sponsor must provide “documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention.” *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (citation omitted).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
PLEADING REQUIREMENTS)**

Licensing boards admit contentions, not bases. 10 C.F.R. § 2.309(a); *see, e.g., Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 988 (2009) (citing *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147 (2006)); *Southern Nuclear Operating Co.* (Early

Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 255 (2007). On the other hand, as they are intended “to put the other parties on notice as to what issues they will have to defend against or oppose,” bases can frame the scope of the contention. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff’d sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir.), *cert denied*, 502 U.S. 895 (1991). Nonetheless, the agency’s rules of practice only require that the petitioner “[p]rovide a brief explanation of the basis for the contention,” 10 C.F.R. § 2.309(f)(1)(ii), a recognition that mandating an exhaustive summary of all aspects of a petitioner’s argument would be tantamount to asking the petitioner to prove its case at the contention admissibility stage, *see Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004). Brevity thus is permitted, although it also must be recognized that a petitioner takes a not insignificant risk in relying on just a few factual, technical, or legal points in framing a contention lest the presiding officer reject later attempts to “fill in the blanks” as being outside the scope of the contention.

**NEPA: DESCRIPTION OF AFFECTED ENVIRONMENT
(GROUNDWATER AND SURFACE WATER BASELINE
CHARACTERIZATION)**

The agency’s regulations implementing NEPA require an environmental review to contain a description of the affected environment, 10 C.F.R. §§ 51.45(b), 51.71(a), 51.90, including a baseline characterization of groundwater and surface water that may be impacted, *see id.* Part 40, app. A, criterion 7. The baseline characterization is intended to show what the potentially affected environment looked like before any action is taken as an aid in determining what impacts the project will have.

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
GOOD CAUSE REQUIREMENT)**

New or amended contentions “must be *based on new facts* not previously available,” even when the proponent is challenging a new licensing document. *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 493 n.70 (2012).

NEPA: ENVIRONMENTAL JUSTICE (CONTENTION PLEADING REQUIREMENTS)

RULES OF PRACTICE: CONTENTIONS (PLEADING REQUIREMENTS)

While disproportionate religious and cultural impacts can provide the basis for an environmental justice-based contention, *see* Division of Waste Management, NMSS, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, NUREG-1748, at 5-22, 6-25, C-6 (Aug. 2003) (ADAMS Accession No. ML032450279); *see also Northern States Power Co.* (Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation), LBP-12-24, 76 NRC 503, 522 (2012), the proponent must make more than “generalized statements of concern . . . regarding these religious and cultural impacts,” *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 734 (2008); *see also Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 367 (2006). The burden thus is on the intervenor to provide factual support for its claim that the final EA’s discussion is inadequate and the Staff needs to consider environmental justice impacts in greater detail by showing that the project would have disproportionately high impacts on its historic, cultural, and spiritual interests.

RULES OF PRACTICE: CONTENTIONS (SCOPE)

The Commission has acknowledged that, in the appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission. *See Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009); *see also Ross*, LBP-13-10, 78 NRC at 138.

MEMORANDUM AND ORDER

(Denying Admission of New and Renewed Contentions)

On May 30, 2018, intervenor Oglala Sioux Tribe (OST) submitted a migrated contention declaration regarding admitted Contention 2 along with fourteen contentions OST designates either as new or, as OST references them, “renewed” that challenge various aspects of the Nuclear Regulatory Commission (NRC) Staff’s final environmental assessment (EA) for applicant Crow Butte Resources, Inc.’s (CBR) license amendment request for authorization to conduct activities associated with in situ uranium recovery (ISR) mining in the

Marsland Expansion Area (MEA).¹ *See* [OST] Migrated, Renewed, and New Marsland Expansion Final [EA] Contentions (May 30, 2018) [hereinafter OST New Contentions]. While not contesting the migration of Contention 2 as challenging the NRC Staff's final rather than draft EA, both the NRC Staff and applicant CBR oppose the admissibility of all the new/renewed contentions as lacking good cause under the standards in 10 C.F.R. § 2.309(c)(1) and/or for failing to fulfill one or more of the contention pleading requirements in section 2.309(f)(1). *See* NRC Staff Response to the [OST] Migrated, Renewed, and New Marsland Expansion Final [EA] Contentions (June 13, 2018) at 1 [hereinafter Staff Response]; [CBR] Response to the [OST] Final [EA] Contentions (June 13, 2018) at 1, 3-4 [hereinafter CBR Response].

For the reasons set forth below, the Licensing Board finds that none of the proffered new or renewed contentions is admissible. Contention 2, however, remains an admissible contention, and now migrates as a challenge to the final EA.

I. BACKGROUND

On May 10, 2013, the Board granted OST's petition to intervene and request for a hearing. *See* LBP-13-6, 77 NRC 253, 266 (2013), *aff'd*, CLI-14-2, 79 NRC 11 (2014). OST was admitted as an intervenor, having proffered two admissible contentions challenging CBR's 2012 application to operate a satellite ISR facility within the MEA near Crawford, Nebraska.² *See id.* at 266. Contention 1 contested the discussion of affected historic and cultural resources in CBR's environmental report (ER).³ *See id.* at 286. Currently the only admitted contention, Contention 2 challenges the sufficiency of CBR's application regarding the project area's geological setting and the MEA's potential effects on adjacent surface and groundwater resources. *See id.* at 289. This contention is a hybrid

¹ Although dated May 30, 2018, which was the assigned due date under the Board's general schedule for this proceeding, *see* Licensing Board Memorandum and Order (Revised General Schedule) (Apr. 20, 2017) app. A, at 1 (unpublished) [hereinafter General Schedule Order], the agency's E-Filing system logged in the OST filing as being received at 12:01 a.m. on May 31, 2018. Neither the Staff nor the applicant has objected to the filing as late.

² In the same order, the Board determined that OST's other four contentions, Contentions 3-6, were inadmissible. *See* LBP-13-6, 77 NRC at 305. Contention 3 challenged the ER as containing an "Inadequate Analysis of Ground Water Quantity Impacts"; Contention 4 questioned the ER's efficacy because "Requiring the Tribe to Formulate Contentions Before an EIS is Released Violates NEPA"; Contention 5 contested the ER's "Failure to Consider Connected Actions"; and Contention 6 claimed "The [ER] does not Examine Impacts of a Direct Tornado Strike." *Id.* at 295-302.

³ [CBR], Application for Amendment of USNRC Source Materials License SUA-1534, [MEA], Crawford, Nebraska, [ER] (May 2012) [hereinafter ER] (ADAMS Accession No. ML12160A513).

safety and environmental contention, raising issues regarding the adequacy of the application's "hydrogeologic characterization of the MEA site." *Id.* at 294-95.

In June 2014, the cultural resources section of the draft EA was made available to the parties and the public.⁴ *See* Letter from Marcia J. Simon, NRC Staff Counsel, to Licensing Board at 1 (June 30, 2014). OST did not submit new or amended contentions regarding that draft EA section. The Staff then filed a motion for summary disposition asserting Contention 1 had been resolved based on the draft EA section, which the Board granted in October 2014. *See* Licensing Board Memorandum and Order (Ruling on Motion for Summary Disposition Regarding [OST] Contention 1) (Oct. 22, 2014) at 2 (unpublished).

On December 11, 2017, the draft EA was made available to the parties and the public in its entirety.⁵ *See* Letter from Marcia J. Simon, NRC Staff Counsel, to Licensing Board at 1 (Dec. 11, 2017). When OST did not file new or amended contentions relating to the draft EA by the Board-assigned deadline, the Staff, supported by the applicant, challenged the migration of the environmental portions of Contention 2. *See* NRC Staff's Motion to Deny Migration of Environmental Portion of Contention 2 (Jan. 26, 2018) at 1; [CBR] Response to NRC Staff Motion to Deny Migration of Contention 2 (Feb. 2, 2018) at 1. The Board denied the motion in part and allowed the majority of Contention 2 to migrate from a challenge to the CBR ER to a dispute with the Staff's draft EA. *See* LBP-18-2, 87 NRC 21, 27-28 (2018). The Board, however, granted the motion as to the environmental aspects of the omission portion of the contention.⁶ *See id.* at 35-36.

The final EA was made available to the parties and the public on April 30, 2018.⁷ *See* Letter from Marcia J. Simon, NRC Staff Counsel, to Licensing Board at 1 (Apr. 30, 2018). Under the proceeding's general schedule, that publication

⁴ Division of Fuel Cycle Safety, Safeguards & Environmental Review (FCSE), Office of Nuclear Material Safety and Safeguards (NMSS), [CBR] Proposed [MEA], NRC Documentation of NHPA Section 106 Review (Draft Cultural Resources Sections of [EA]) (June 2014) [hereinafter Draft EA Cultural Resources Sections] (ADAMS Accession No. ML14176B129).

⁵ FCSE, NMSS, Draft [EA] for the [MEA] License Amendment Application (Dec. 2017) [hereinafter Draft EA] (ADAMS Accession No. ML17334A870). This included the previously published draft EA section on cultural resources. *Compare* Draft EA Cultural Resources Sections at 1-20, *with* Draft EA at 3-65 to -76, 4-36 to -38, 5-8 to -12.

⁶ At the initial contention admissibility stage, based on the information submitted by OST in support of Contention 1, the Board identified four specific alleged deficits in the application, the second of which involved an omission of various hydrogeologic parameters. *See* LBP-13-6, 77 NRC at 289. The challenge to the omission, as it relates to the safety aspects, remains. *See infra* section II.A.

⁷ FCSE, NMSS, [EA] for the [MEA] License Amendment Application (Apr. 2018) [hereinafter Final EA] (ADAMS Accession No. ML18103A145).

triggered the deadline for filing any new or amended contentions based on the final EA and the Staff's safety evaluation report (SER), which previously had been issued on January 31, 2018.⁸ See General Schedule Order at 2; see also Letter from Marcia J. Simon, NRC Staff Counsel, to Licensing Board at 1 (Jan. 31, 2018). Thereafter, on May 30, 2018, OST submitted its new and renewed contentions, along with its migration declaration, that now are before the Board for disposition. See OST New Contentions at 1-3, 10-84.

In June 13, 2018 responsive pleadings, while acknowledging that Contention 2 could migrate to challenge the final EA, the Staff and CBR opposed admission of OST's new and renewed contentions. See Staff Response at 1; CBR Response at 1 (omitting any discussion of Contention 2's migration). On June 20, 2018, OST filed a combined reply to both responses, reasserting that all of its new and renewed contentions were admissible.⁹ See [OST] Combined Reply to NRC Staff's and [CBR] Responses to Tribe's Migrated, Renewed and New Contentions Based on the Marsland Expansion Final [EA] (June 20, 2018) [hereinafter OST Reply].

The license application at issue here, which would permit CBR to undertake ISR activities in the MEA, is an amendment to CBR's existing 10 C.F.R. Part 40 source materials license. See LBP-13-6, 77 NRC at 265. CBR's existing license, which covers another ISR site near Crawford, Nebraska, that includes both a mining site and a processing facility, is the subject of a pending license renewal proceeding.¹⁰ See *id.* at 266.

⁸In April 2014, the Board determined that because these final Staff environmental and safety review documents were to be published in close temporal proximity, it would be simpler to provide for a unified date for submitting any new or amended contentions based on the later of the final EA or the SER. See General Schedule Order at 2 n.1.

⁹Because of the unavailability of OST's counsel of record, on July 20, 2018, this pleading was submitted by e-mail to the agency's hearing docket and served on the other parties to this proceeding and the Board on his behalf by counsel who has not yet been authorized by OST to enter an appearance in this case and so lacked access to the agency's E-Filing system so as to make submissions for this proceeding. See E-Mail from David Frankel, Esq., to Hearing Docket and Crow Butte Marsland Proceeding Service List (June 20, 2018, 10:50 p.m. EDT) (ADAMS Accession No. ML18192C150).

¹⁰To refer only to the mining area at the licensed Crawford site, we will use the term "Crow Butte mine," while for the Crawford site's central processing facility, we will use "CPF," and for the Crawford site as a whole, we will use the term "renewal site." The license renewal application, which was the subject of licensing board partial initial decisions in 2016, see *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-16-7, 83 NRC 340 (2016), *petition for Commission review pending*; *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-16-13, 84 NRC 271 (2016), *petition for Commission review pending*, remains before a licensing board in a proceeding that we will refer to as the "Renewal Site" proceeding.

II. ANALYSIS

A. Migration of OST Contention 2

As currently admitted, Contention 2 reads:

OST Contention 2: Failure to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration

The application and draft environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet the requirements of 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2); the National Environmental Policy Act; and NUREG-1569 section 2.6. The application and draft environmental assessment similarly fail to provide sufficient information to establish potential effects of the project on the adjacent surface and ground-water resources, as required by NUREG-1569 section 2.7, and the National Environmental Policy Act.

LBP-18-2, 87 NRC at 36-37. The Board, however, has sought to clarify the scope of this contention in various orders throughout this proceeding. *See, e.g.*, LBP-13-6, 77 NRC at 289; LBP-18-2, 87 NRC at 37. Thus, as noted previously, *see supra* note 6, within the scope of this contention are safety and environmental concerns that include:

(1) the adequacy of the descriptions of the affected environment for establishing the potential effects of the proposed MEA operation on the adjacent surface water and groundwater resources; (2) exclusively as a safety concern, the absence in the applicant's technical report, in accord with NUREG-1569 section 2.7, of a description of the effective porosity, hydraulic porosity, hydraulic conductivity, and hydraulic gradient of site hydrogeology, along with other information relative to the control and prevention of excursions; (3) the failure to develop, in accord with NUREG-1569 section 2.7, an acceptable conceptual model of site hydrology that is adequately supported by site characterization data so as to demonstrate with scientific confidence that the area hydrogeology, including horizontal and vertical hydraulic conductivity, will result in the confinement of extraction fluids and expected operational and restoration performance; and (4) whether the draft EA contains unsubstantiated assumptions as to the isolation of the aquifers in the ore-bearing zones.

LBP-18-2, 87 NRC at 37.

Under Commission case law, an environmental challenge may migrate to subsequently-issued National Environmental Policy Act (NEPA)-related environmental review documents without the contention's proponent resubmitting the contention. *See id.* at 30. A contention may migrate "where the information in the Staff's environmental review document is 'sufficiently similar' to the ma-

terial” in the previously issued licensing document. *Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 570 n.17 (quoting *Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 133 (2013), *petition for review denied, Ross*, CLI-16-13, 83 NRC at 601, *petition for review denied sub nom. Nat. Res. Def. Council v. NRC*, 879 F.2d 1202, 1206-07 (D.C. Cir. 2018)).

Here, OST has submitted a “migration declaration” for Contention 2, averring that the contention as set forth in LBP-18-2 questioning the Staff’s draft EA should now be considered a challenge to the final EA.¹¹ Neither the Staff nor the applicant objects to the migration of this admitted contention.¹² *See* Staff Response at 9; *see also* CBR Response (omitting any challenge to migration). Given that no party objects, and the Staff acknowledges that “with respect to the subject matter of the contention, the Final EA does not present substantially different information or analyses than was presented in the Draft EA,” Staff Response at 9, Contention 2 will migrate as a challenge to the final EA with regard to the environmental portion of the contention, and will continue to be admissible as a technical/safety contention challenging the CBR application. *See infra* section III.

B. Standards Governing the Admission of New/Amended Contentions

When a party seeks to admit a new or amended contention after the initial hearing petition is due to be filed, the contention must satisfy standards for both timeliness and admissibility. Section 2.309(c)(1) of the agency’s Part 2 rules of practice sets forth the standards for timeliness by requiring that “good cause” be shown for submitting a new or amended contention, while the requirements governing contention admissibility are found in section 2.309(f)(1). Both standards are discussed in more detail below.

¹¹ OST indicates that it is seeking the migration of both the environmental and scientific portions of the contention. *See* OST New Contentions at 1. It is not clear, however, that the migration tenet can be “applied” to already admitted safety contentions. *See Ross*, LBP-13-10, 78 NRC at 132 n.7; *see also* LBP-18-2, 87 NRC at 36 n.7. An intervenor may not litigate the adequacy of the Staff’s safety review, so any safety-related contention must be based on the content of the application. *See AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 476 (2008); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 97 (2001). Therefore, there arguably is no need for a contention to migrate from the CBR application to the Staff’s SER, so that the safety aspects of Contention 2 will be litigated at the evidentiary hearing stage as a challenge to the CBR application.

¹² Although OST was neither required to submit a migration declaration nor to plead the migration standards unless the Staff or CBR challenged this contention’s migration, *see Ross*, LBP-13-10, 78 NRC at 143 n.15, its submission of this declaration has been of material assistance in clarifying the status of this contention.

1. “Good Cause” for the Submission of New/Amended Contentions

Under section 2.309(c)(1), when a party submits a new or amended contention after the initial date for filing a hearing request, “good cause” must be shown establishing why the contentions ought to be admitted as timely submitted. To make such a showing, an intervenor must demonstrate that:

- (i) The information upon which the filing is based was not previously available;
- (ii) The information upon which the filing is based is materially different from information previously available; and
- (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(c)(1)(i)-(iii). The first two “good cause” factors relate to the nature of the information that is being used as the basis for a new or amended contention, while the third obliges the sponsoring party to submit a new or amended contention in a timely manner upon learning of new, materially different information that may form the basis of the contention. *See Ross*, LBP-13-10, 78 NRC at 130.

Regarding the third factor, section 2.309(c)(1)(iii) does not define “timely,” providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely. *See id.* at 130-31. As such, a board may, as we have in this proceeding, define timeliness by specifying a deadline for timely filing a new or amended contention following a “triggering event” that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention. *See* Licensing Board Memorandum and Order (License Amendment Effectiveness Stay Application, In Limine Motions, and Site Visit/Limited Appearance Session/Evidentiary Hearing Scheduling) (May 21, 2018) app. A, at 2 (unpublished) (indicating that new or amended contentions based on the final EA or SER would be deemed timely if filed by May 30, 2018); *see also* Licensing Board Memorandum and Order (Initial Prehearing Order) (Feb. 8, 2013) at 6 n.8 (unpublished) (noting that to be considered timely, any motion to admit a new or amended contention “should be filed within 30 days of the date upon which the information that is the basis of the motion becomes available to the petitioner/intervenor”).

Thus, relative to the “good cause” factors, it is a fundamental principle of practice before the Commission that a new or amended contention must be raised at the earliest possible opportunity. *See DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-1, 81 NRC 1, 7 (2015). “Petitioners who choose to wait to raise contentions that could have been raised earlier do so at their peril.” *Id.*

2. *Admissibility of New/Amended Contentions*

As with contentions filed at the time of the initial hearing petition, new or amended contentions must meet the six admissibility factors set out in section 2.309(f)(1). *See* 10 C.F.R. § 2.309(c)(4). These factors require the proponent of a new or amended contention to:

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

Id. § 2.309(f)(1)(i)-(vi); *see also* LBP-13-6, 77 NRC at 283-86. Failure to comply with any one of these requirements is grounds for dismissing the contention. *See* LBP-13-6, 77 NRC at 284 (citing *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012)).

C. **Timeliness of OST Contentions**

In its motion, OST neither cites nor discusses any of the three section 2.309(c)(1) “good cause” factors. In their responses, the Staff and CBR highlight the applicability of the section 2.309(c)(1) good cause standard to OST’s contentions and OST’s purported failure to establish the timeliness of its various contentions under those criteria. *See* Staff Response at 4-5; CBR Response at 3-4. In its reply, however, OST asserts as a general matter that the draft EA should not be considered a factor in assessing the timeliness of its new and renewed contentions under section 2.309(c)(1). *See* OST Reply at 2. This is so, OST declares, because the draft EA was subject to change after the public comment period, which effectively negates the need to file new contentions regarding that document based on ripeness considerations. *See id.* Further, OST maintains it has both provided lengthy public comments on the draft EA and submitted its new and renewed contentions at the first available opportunity following the issuance of the final EA. As a result, and in light of the Commission’s recognition that NEPA-based issues cannot be the subject of an evidentiary hearing until

the Staff's environmental review is completed with the final EA, OST declares that the Board should reject any assertion its fourteen contentions needed to be submitted prior to issuance of the final EA. *See id.*

In challenging the Staff's environmental review documents, an intervenor that delays filing new contentions until the Staff's final environmental document is issued "risk[s] the possibility that there will not be a material difference" between the draft and final environmental review documents, "thus rendering any newly proposed contentions on previously available information impermissibly late." *Fermi*, CLI-15-1, 81 NRC at 7. Just as "the Commission expects that the filing of an environmental concern based on the ER will not be deferred because the Staff may provide a different analysis in the [draft EIS]," so too "the institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention." *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048-49 (1983). Therefore, an intervenor must contest information contained in a draft environmental review document contemporaneously with its publication, and may not wait to see whether the challenge is resolved when the final environmental document is issued. *See Calvert Cliffs 3 Nuclear Project, LLC, and Unistar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 732 (2010).

Moreover, submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication. *See* LBP-18-2, 87 NRC at 31-32 n.5 (indicating that fate for new/amended contention submissions by a party relative to the Staff's SER and final EA is independent of any deadlines set by the Staff for general comments on these reports by the public). Thus, filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it, in and of itself, make timely a contention submitted in the first instance as a challenge to the final environmental document. *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 144 (2009) (noting that because the proponent of a late-filed contention filed rulemaking comments that mirrored contention's basis on the same day intervention petition was filed, the petitioner was aware of the facts and issues supporting the contention and could have included that contention with the original petition to intervene); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-27, 52 NRC 216, 221-24 (2000) (rejecting a late-filed contention challenging a June 2000 draft environmental impact statement (DEIS) because the contention was not based on previously unavailable information notwithstanding party's assertion that, upon learning of the relevant information, it "did not 'idly' wait until the

DEIS was published to make its concerns known” but adhered to the NEPA process by filing EIS scoping comments in May 1999).

Consequently, OST’s generic claim that its failure to submit any new or amended contentions relative to the draft EA should not be considered as a basis for finding its post-final EA submitted contentions untimely under section 2.309(c)(1) is without merit.¹³

D. Admissibility of OST’s New Contentions

1. *OST Contention A:*¹⁴ *Failure of the Final EA to Adequately Describe [CBR’s] Cessation of Operations; Proposal to Be Possession-Only License in “Standby Status” and Impacts of Decommissioning*

DISCUSSION: OST New Contentions at 10-16; Staff Response at 15-20; CBR Response at 4-6; OST Reply at 3-4.

RULING: *Inadmissible*, in that this contention lacks factual or expert opinion support and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

OST’s Contention A alleges that the Staff “fail[ed] to conduct the required ‘hard look’ analysis at impacts of the proposed mine associated with CBR’s maintenance of the [Crow Butte mine] in ‘standby status.’” OST New Contentions at 10. OST’s overarching argument is that because the MEA relies on the renewal site’s CPF to process the MEA’s uranium resin to yellowcake form, and CBR is ceasing all operations at the renewal site, NEPA requires that the final EA provide an updated discussion that accounts for the renewal site’s cessation of operations. More specifically, OST posits a variety of deficiencies based on the final EA’s omission of any discussion or analysis of CBR’s April 2, 2018 letter advising the Staff of the cessation of renewal site operations. *See id.* at 11-15 (citing Letter from Walt Nelson, CBR SHEQ Coordinator, to NRC Document Control Desk (Apr. 2, 2018) [hereinafter Cessation Letter] (ADAMS Accession No. ML18093A186)). These alleged insufficiencies include (1) in accord with Staff policy and guidance directive PG 1-27, the final EA should have indicated that CBR is seeking a possession-only license for the renewal site,

¹³ To the degree these OST assertions may be footed in concerns about the effective use of limited resources, such an argument is best addressed to the presiding officer in the context of a motion to extend the time for filing new or amended contentions relative to a draft environmental document.

¹⁴ Although OST used various headings to designate its new and renewed contentions, for uniformity we have adopted the style “OST Contention X.” We do not believe this will cause any confusion with OST’s previously submitted contentions that, like admitted Contention 2, were labeled with a numeric rather than an alpha designator. Likewise, we have adopted a standardized capitalization regime for OST’s contention titles.

id. at 12-13 (citing Division of Industrial and Medical Nuclear Safety, NMSS, Policy and Guidance Directive PG 1-27, Reviewing Requests to Convert Active Licenses to Possession-Only Licenses (rev. 0, Feb. 2000) [hereinafter PG 1-27] (ADAMS Accession No. ML003685598)); (2) the final EA should have discussed CBR's proposed decommissioning schedule and its request to delay the decommissioning of certain equipment at the renewal site, *id.* at 13; (3) conclusions throughout the final EA, such as the purpose and need statement and socioeconomic impact analysis, are now misleading and should be revised in light of the cessation letter, *id.* at 14, 16; and (4) the final EA's decommissioning section does not discuss CBR's decision to cease mining operations at the renewal site, *id.* at 13-14.¹⁵

Putting aside the question of whether this issue statement should have been filed by early May 2018 as a challenge to the adequacy of the draft EA,¹⁶

¹⁵ Also cited by OST in support of this contention is an April 3, 2018 CBR letter and accompanying April 3 license amendment request (LAR) for an alternate decommissioning schedule for renewal site mining units (MUs) 2-6, which are currently undergoing decommissioning. See OST New Contentions at 12 (citing Letter from Bob Tiensvold, CBR Restoration Manager, to NRC Document Control Desk (Apr. 3, 2018) [hereinafter 2018 LAR] (ADAMS Accession No. ML18102A539)). In addition to asserting that the April 2 cessation letter's reference to the reduced production and injection flows at renewal site MUs 7-11 means that there will now be "ten (10) [MUs] in restoration, consuming vast amounts of water volumes," OST maintains that the April 3 LAR's references to the possibility of seeking 10 C.F.R. Part 40, app. A, criterion 5B(5)(c) alternate concentration limits for MUs 2-6 means "[CBR] has acknowledged that it will never be able to return the water to its baseline condition." OST New Contentions at 12. Because these claims are restated with more specificity in Contention B, we address them in section II.D.2 *infra*.

¹⁶ Relative to this contention and the others in which the April 2 cessation letter and the April 3 LAR play a central role in supporting the contention, there is a significant question as to whether good cause for admission of those contentions exists under section 2.309(c)(1). For those aspects of the contention that are based on the April 2 cessation letter and the April 3 LAR, even if the information contained in those two documents was considered materially different, previously unavailable information under section 2.309(c)(1)(i) and (ii), those letters were made public on April 2 and 3, 2018, respectively, and, using their issuance dates as the "trigger dates" for submitting any new or amended contention based on their content, then such a contention arguably needed to be filed within 30 days from April 2 or 3, which is approximately a month before OST submitted its contentions to the Board.

That being said, in its reply filing, OST suggests that in assessing the section 2.309(c)(1)(iii) "availability" of this information, we should take into account the possibility that OST first had notice of these items via a May 2018 mandatory discovery disclosure that included the April 2 cessation letter and the April 3 LAR. See OST Reply at 4. There appears to be nothing in the CBR or Staff May 2018 mandatory disclosures in this proceeding regarding those letters. But in the Staff's May 1, 2018 mandatory disclosure for the CBR *North Trend* ISR expansion area license amendment proceeding, which was served on OST counsel, see Letter from David Cylkowski, NRC Staff Counsel, to Licensing Board, *Crow Butte Res., Inc.* (License Amendment for the North Trend Expansion Project), No. 40-8943, at unnumbered pp. 2, 5 (May 1, 2018), the Staff did reference an

(Continued)

we agree with the Staff and CBR that Contention A lacks the factual support necessary for an admissible contention pursuant to section 2.309(f)(1)(v), and also fails to demonstrate a genuine dispute with the final EA on a material issue per section 2.309(f)(1)(vi).

Looking to the substance of the April 2 cessation letter, the letter's purpose is to provide the NRC with operational information related to the renewal site in light of the public announcement by Cameco Resources, CBR's parent company, that it was ceasing production operations at its United States facilities, including the renewal facility, "due to continued low uranium prices." Cessation Letter at 1. The letter also gave updates regarding the production and injection flows for renewal site active units 7 through 11, as well as assurances that the licensee would "continue[] to perform all required environmental and health physics monitoring as required" by the Crow Butte License. *Id.* CBR further stated that it intends to submit alternate decommissioning schedules for the Crow Butte renewal site MUs to the NRC within twenty-one months of the date of the letter and will seek to change its license to a "possession-only" license in the second half of 2018, but that "[a]ll production equipment will remain in standby to provide the option to restart full operations in the future should market conditions warrant." *Id.*

OST characterized the April 2 cessation letter as CBR's declaration that it is permanently ceasing operations at the renewal site, including the Crow Butte mine and the CPF and, as such, the final EA must take this into account. The letter, however, explicitly states that there has not been a permanent cessation of operations, with the facility equipment in standby mode awaiting a more favorable economic climate. Further, although the letter states that a possession-only license will be sought for the renewal facility sometime before the end of 2018, CBR in its pleading before the Board indicated it has determined that a possession-only license is not necessary because of ongoing renewal site activities and it has no near-term plans to seek such a license.¹⁷ *See* CBR Response at 5 & n.10.

April 4, 2018 CBR letter indicating that "the uranium market has been significantly depressed for a number of years, and this fact [led] to [CBR parent] Cameco's decision to suspend production activities" at the renewal facility, Letter from Walter Nelson, CBR SHEQ Coordinator, to NRC Document Control Desk at 1 (Apr. 4, 2018) (ADAMS Accession No. ML18102A537). Using the date of this disclosure filing as the "trigger date," OST's May 30 contention filing arguably would be timely.

Nonetheless, given our finding that Contention A and the other contentions associated with these April letters are inadmissible on other grounds, we need not reach the question of what was the "trigger date" for timely filing regarding these contentions.

¹⁷ While this statement is in a representation of counsel rather than a submission by CBR for the
(Continued)

Clearly, the April 2 cessation letter does not support OST's central factual premise that there is now a permanent cessation of operations at the CBR renewal site, which in turn requires an additional EA discussion about a variety of matters. And this mischaracterization in OST's basis for this contention fatally undercuts the contention both factually and as framing the requisite material dispute. Further, even assuming PG 1-27 is applicable,¹⁸ in the face of CBR's declaration that there is no permanent cessation of equipment operations at the renewal site and that CBR will not seek a possession-only license, the Staff's "possession only" guidance statement on which OST relies for its claim that there must be additional decommissioning discussion in the EA does not support OST's assertion. See PG 1-27, at 4 (stating if licensee has not permanently ceased operations, license cannot be converted to possession-only status, but only to standby status that permits 24-month period of inactivity/decommissioning delay unless extended period of inactivity has been authorized). So too, OST's claims about the need to provide an EA discussion of decommissioning delays for well sites and equipment and to make revisions to the EA's purpose and need statement and socioeconomic impact analysis are premised on the assumption that CBR operations at the renewal site have permanently ceased, which is not what the April 2 cessation letter portends.

The April 2 cessation letter does not provide factual support for OST's assertion that CBR is permanently ceasing operations at the renewal site nor has OST, based on its assertions regarding that letter, carried its burden to show a dispute exists on a material issue of law or fact relative to the final EA. We thus find Contention A inadmissible as failing to fulfill the requirements of section 2.309(f)(1)(v) and (vi).

2. *OST Contention B: The Final EA Fails to Describe or Evaluate the Impacts from the New Restoration Timeline Stated in the Extension Amendment Request (April 3, 2018), Including Failure to Describe the Expected Increases in Consumptive Use of Water in Restoration*

DISCUSSION: OST New Contentions at 17-21; Staff Response at 20-22; CBR Response at 6-9; OST Reply at 4-5.

RULING: *Inadmissible*, in that this contention lacks factual or expert opinion support and does not provide sufficient information to show a genuine dis-

licensing docket, for the purpose of this proceeding it has the same legal effect and, if contradicted by subsequent CBR actions, could be the basis for, among other things, a new contention. See 10 C.F.R. § 2.304(d).

¹⁸ As the Staff notes, the policy guidance statement indicates it does not apply to "uranium milling." Staff Response at 18 (citing PG 1-27, at 1).

pute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

This contention involves the alleged NEPA violation of omitting any discussion or analysis in the Staff's final EA of the "impacts of the proposed extended timeline for restoration and the other information contained in the [April 3 LAR]," including consumptive water use arising from all ten of the renewal site mining units being in the restoration phase. OST New Contentions at 17. More specifically, OST asserts that the April 3 LAR's alternate and extended decommissioning schedule makes the timelines in final EA Figure 5-1, as well as "timelines of various portions" of the final EA, "inaccurate and misleading." *Id.* OST contends as well that CBR has submitted the April 3 LAR due to its difficulty returning the renewal site's MUs back to baseline groundwater standards, which OST interprets to mean CBR will have the same problem restoring the MEA's MUs back to baseline when the time comes, a situation that merits discussion in the final EA. *Id.* at 17-18.

Also with regard to baseline restoration, OST asserts that the final EA should have disclosed that one of the renewal site's active MUs is impacting the decommissioning of two of the inactive MUs so that "there is no assurance that restoration will ever be achieved to compl[y] with [10 C.F.R Part 2,] Appendix A, Criterion 5(B)." *Id.* at 19. OST maintains as well that with all ten renewal site MUs in restoration, "the result will be more consumptive use [of water] at very high usage rates" and that the final EA does not discuss or account for this increased water use. *Id.* at 19. Finally, OST declares that, based on the April 3 LAR, the final EA should have disclosed that CBR intends to "request [alternate concentration limits (ACL)] amendments in 2020" for the renewal site, which is during the MEA license amendment term, *id.* at 20, and finds the final EA's section 5 "Cumulative Impacts" analysis wanting because the mine restoration activities at the renewal site are not included in that EA section, *id.* at 21 (citing Final EA at 5-1).

Again putting aside timeliness considerations, *see supra* note 16, with regard to Contention B's concern about an omitted EA analysis of the impacts of very high consumptive water use as a result of all ten renewal site MUs being decommissioned during a single restoration phase,¹⁹ the contention is inadmissible as lacking a factual basis. Stating that "there have not been changes to restoration plans" regarding these units, the April 2 cessation letter neither contains an indication those operating units are in restoration nor specifies when restoration will occur, other than to indicate alternate decommissioning schedules will be submitted in twenty-one months that are subject to agency approval and will

¹⁹ Of the ten renewal site MUs, per the April 3 LAR, five are inactive and already being decommissioned, *see* 2018 LAR at 1, and, per the April 2 cessation letter, five are becoming inactive as a result of the cessation of operations, *see* Cessation Letter at 1.

reflect an integrated restoration schedule for all renewal site MUs. Cessation Letter at 1. Additionally, OST fails to provide a factual basis for any possible wellfield restoration relationship between the renewal site MUs and the MEA MUs, much less about any related or cumulative impacts to the MEA based on the renewal site April 3 LAR. As a result of this significant factual deficiency, Contention B is inadmissible under section 2.309(f)(1)(v).

Contention B also cannot be admitted to this proceeding because it fails to provide sufficient information to raise a genuine dispute with the final EA on a material factual or legal issue. A petitioner seeking admission of a contention contesting a NEPA document must not only point out what specific deficiencies exist, but also must demonstrate why the deficiencies raise a genuine material dispute relative to the NEPA document. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-37 (1999). Besides failing to acknowledge or challenge the final EA's assessment of consumptive use that takes into account the renewal site and the Three Crow, North Trend, and Marsland expansion sites, *see* Final EA at 4-16 to -19, OST also has not established a material factual dispute relative to its claim that the EA's Figure 5-1 schedules are "inaccurate and misleading," OST New Contentions at 17. We fail to see how the April 3 LAR, which makes no mention of the expansion areas, establishes any material factual dispute regarding this figure's schedules, particularly given that Figure 5-1 shows the renewal site's CPF supporting expansion area mining activities through the year 2041. Moreover, CBR has indicated that, notwithstanding the suspension of active mining at the renewal site, it has no plans to decommission the CPF that would be used for processing materials from these expansion sites. *See* CBR Response at 10 n.28. Therefore, OST's assertion that Figure 5-1 is inaccurate in light of the April 3 LAR fails to frame a material dispute.²⁰

As to OST's complaint that the final EA is deficient because of the Staff's twin failures to (1) discuss an April 3 LAR-identified problem involving an active MU possibly affecting CBR's restoration of two inactive MUs to baseline concentrations and (2) disclose that CBR indicated in the April 3 LAR that it will be seeking ACLs for renewal site units, OST again has failed to establish a genuine dispute on a material issue of law or fact for either claim. "A contention that simply alleges that some matter ought to be considered does not provide the basis for an admissible contention." *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993), *petition for review denied*, CLI-94-2, 39 NRC 91, 91 (1994). By failing to show the relevance of these renewal site situations to the MEA's

²⁰ Additionally, OST's undifferentiated reference to other EA "timelines" lacks sufficient specificity to provide the basis for an admissible contention. *See* 10 C.F.R. § 2.309(f)(1)(i).

circumstances, OST's claim is only an assertion of a baseline concentration at a CBR ISR facility MU so as to require an ACL at that facility. This is insufficient to require a NEPA analysis for ACL impacts for any other pending CBR ISR application, particularly given that an ACL can only be obtained for an MU at an ISR site via a license amendment request that is subject to NEPA examination and an adjudicatory hearing. *See Ross*, CLI-16-13, 83 NRC at 593.

3. *OST Contention C: Evaluating All Reasonable Alternatives — No-Action and Proposed Action Are Almost Identical — the Final EA Failed to Consider All Reasonable Alternatives in Light of Crow Butte Mine Cessation and Decommissioning*

DISCUSSION: OST New Contentions at 21-23; Staff Response at 22-23; CBR Response at 9-10; OST Reply at 5.

RULING: *Inadmissible*, in that this contention lacks factual or expert opinion support. *See* 10 C.F.R. § 2.309(f)(1)(v).

Apparently again relying for factual support on CBR's April 2 cessation letter for the currently operating Crow Butte renewal site MUs, with this contention OST asserts that because CBR "has ceased production and is entering full-time restoration and decommissioning [at the renewal site], the no-action alternative and the proposed action, in light of the decommissioning, are almost the same." OST New Contentions at 23. OST argues that the now "slight differences" between the proposed action and the no-action alternative should be considered and discussed, as the failure to do so violates NEPA. *Id.*

Putting timeliness concerns aside once more, *see supra* note 16, this contention is inadmissible under section 2.309(f)(1)(v) because, as was explained previously in our ruling on Contention A, *see supra* section II.D.1, the April 2 cessation letter does not provide a valid factual basis for the OST premise that the revised EA discussion of the no-action alternative is needed because the renewal site has permanently ceased production so that restoration and decommissioning now will commence for all MUs and, presumably, the CPF. Given that the basis for the no-action alternative discussion sought by OST must be the supposition that CBR's renewal site cessation action also will result in the MEA, should it be licensed, becoming an equally inactive facility, this contention's attempt to transfer this factual inaccuracy regarding the renewal site's status to the MEA facility is equally lacking.

Ignoring the illogic of the supposition that CBR would seek to license a facility it never intends to operate and thereby trigger the EA discussion sought by OST, as we noted above relative to Contention B, *see supra* section II.D.2, should ISR mining at the renewal site cease, the CPF will continue to be available at the renewal site for processing material from the MEA (and potentially other CBR extension facilities). Thus, as the Staff suggests, *see* Staff Response

at 23 n.93, even in the face of the April 2 cessation letter, the no-action alternative for the MEA must continue to be, as the final EA discusses, denial of the CBR license amendment request, a result that OST has failed to challenge with an admissible contention having factual support.

4. OST Contention D: Failure to Include Results of Cultural Survey Approach in Powertech Dewey Burdock in Discussion in Final EA — NRC, OST, and a Licensee Agreed on Approach in Similar Proceeding; Pertains to Discussion in Section 3.6 and 4.6 of Final EA

DISCUSSION: OST New Contentions at 23-25; Staff Response at 27-30; CBR Response at 10-12; OST Reply at 5-6.

RULING: *Inadmissible*, in that this contention lacks factual or expert opinion support. *See* 10 C.F.R. § 2.309(f)(1)(v).

With this contention, OST seeks to reopen the issue of the adequacy of the cultural resources portion of the Staff's EA by reference to recent developments in the *Dewey-Burdock* ISR licensing proceeding relating to a pending cultural resources contention. Specifically, OST cites a March 16, 2018 Staff letter that OST asserts outlines an agreed approach for satisfying the parties' respective obligations under NEPA and the National Historic Preservation Act (NHPA). From this, OST declares that the Staff's final EA in this proceeding is deficient because it fails to discuss this approach and its applicability to the MEA. *See* OST New Contentions at 4 (citing OST New Contentions ex. A (Letter from Cinthya I. Román, Chief, Environmental Review Branch, FCSE, NMSS, to Trina Lone Hill, Director, OST Cultural Affairs & Historic Preservation Office (Mar. 16, 2018))).

Putting aside the timeliness question of whether this issue statement should have been filed by mid-April 2018 as a challenge to the adequacy of the draft EA,²¹ we find it inadmissible because the factual basis for this contention is wanting. As indicated in both the Staff's June 19, 2018 letter to the *Dewey-Burdock* licensing board and a subsequent July 2, 2018 Staff status report, because of issues of coming to agreement on a methodology for the approach outlined in the March 2018 letter, the Staff has decided not to pursue that approach fur-

²¹ For this contention, and arguably for Contentions L and M as well, because OST asserts the mid-March Staff letter should be relevant to the Staff's environmental review, there is the question which Board-established deadline applies to the timely submission of a contention based on that letter relative to the good cause standard of section 2.309(c)(1)(iii), i.e., the May 30, 2018 deadline for filing new or amended contentions relative to the final EA or the generic deadline whereby a new/amended contention based on new and materially different information needed to be filed within 30 days of becoming available. Given that these contentions are inadmissible on other grounds, we need not reach that question either.

ther and will now seek summary disposition on the pending cultural resources contention without engaging in additional cultural resource activities. *See* Letter from Emily Monteith, NRC Staff Counsel, to Licensing Board, *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), No. 40-9075-MLA, at 2 (June 19, 2018); Letter from Emily Monteith, NRC Staff Counsel, to Licensing Board, *Dewey-Burdock*, No. 40-9075-MLA, at 1-2 (July 2, 2018); *see also* Licensing Board Order (Establishing Procedures for Filing Motions for Summary Disposition), *Dewey-Burdock*, No. 40-9075-MLA (July 19, 2018) at 4-5 (unpublished) (granting Staff motion to establish schedule for summary disposition motions and responses). Given the stated factual underpinning for this contention is no longer accurate, this contention lacks a sufficient basis and so must be dismissed.²² *See Georgia Power Co.* (Vogle Electric Generating Plant, Units 1 and 2), ALAB-872, 26 NRC 127, 136 (1987) (finding contention was appropriately dismissed as lacking a proper basis when factual support for the contention had been repudiated by its original source and no other independent information supporting the allegation had been offered).

5. *OST Contention E: The Final EA Fails to Take the Required Hard Look at the Pump Test Data Resulting in a Cascading Lack of Scientific Rigor in Assumptions and Modeling Relied on in the Analysis and Evaluation of Potential Impacts from the Licensed Activity*

DISCUSSION: OST New Contentions at 25-26; Staff Response at 30-32; CBR Response at 12-13; OST Reply at 7-8.

RULING: *Inadmissible*, in that this contention is not based on materially different, previously unavailable information and lacks factual or expert support. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii), (f)(1)(v).

OST claims in this contention that the final EA violates NEPA because it uses inappropriate methodologies and models in evaluating and analyzing pump test data, and “fails to enforce any degree of scientific rigor” relative to two hydrogeologic parameters, transmissivity and storativity. OST New Contentions at 26. Both the Staff and CBR argue that this contention is untimely because the relevant “methods and assumptions used to analyze the pumping test” were used in CBR’s ER and the Staff’s draft EA. *See* Staff Response at 30-31; CBR Response at 11. The Staff also maintains that the alleged deficiencies lack

²²We would observe that when finality attaches in this proceeding, OST may raise before the Commission in a petition for review any disagreement it has with this or any other ruling made today regarding the admission of a cultural resources contention or with the Board’s earlier summary disposition decision regarding OST’s cultural resources Contention 1 based on, among other things, developments in *Dewey-Burdock* or any other pending ISR adjudication. *See* 10 C.F.R. § 2.341(a).

adequate factual support because OST has provided no facts or expert opinions to support its various technical conclusions. *See* Staff Response at 31-32.

Contention E is not based on materially different, previously unavailable information. The challenged material, including the pump test data and the analyses that relied upon those data, was used in the ER and so has existed since the outset of this proceeding. *See, e.g.*, ER at 3-40 to -42. Not surprisingly, OST makes no assertion that the information was not previously available given that the admitted Contention 2 challenge relates to these same data and analyses. Furthermore, OST references no material difference between the challenged information as contained in sections 3.3.2.3 and 4.3.2.1 of the draft EA and the final EA.²³ As OST has not based this contention on any previously unavailable materially different information, the contention must be rejected. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii).

Additionally, Contention E is inadmissible because OST has not provided factual or expert support for this issue statement. *See id.* § 2.309(f)(1)(v). OST presents various technical and scientific conclusions as the basis for deeming the final EA's pump test data analysis inadequate. Yet, none of these conclusions is supported by expert affidavits or other evidence.²⁴ It is well established that a contention's sponsor must provide "documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (citation omitted). OST may not simply declare that "[u]nder no rational definition of the terms, can an aquifer with a transmissivity range from 230 [feet squared per day (ft²/day)] to 2,469 ft²/day and storativity range from 1.7×10^{-3} to 8.32×10^{-5} be considered homogeneous and isotropic," OST Reply at 7, or that "[m]ean values for transmissivity and storativity that deviate by at least an order of magnitude render the model and its drawdown predictions highly suspect," OST New Contentions at 26, without so much as a citation. Contention E is not admissible on this basis as well.

Nonetheless, we do find that parts of this contention fall validly within the scope of Contention 2 and so may be presented at the upcoming evidentiary hearing in litigating that contention. CBR states that, to the extent this contention

²³ Although OST cites to section 4.2.3.1, *see* OST New Contentions at 26, which does not exist in either the draft or final EA, *see* Draft EA at v; Final EA at v, given the page numbers also cited and the context, we assume the citation was a transposition and is intended to refer to section 4.3.2.1.

²⁴ Although OST does reference several American Society for Testing and Materials (ASTM) standards that it asserts were violated by CBR's use, and Staff's EA acceptance, of the Theis and Jacob's drawdown methods to establish MU hydraulic properties, *see* OST New Contentions at 25-26, we observe that those ASTM standards indicate how to conduct/evaluate a test and do not dictate which tests are best to use for a given site.

contests the adequacy of the pump test data used to develop the hydrogeologic model for the site, these bases are already contained in admitted Contention 2. See CBR Response at 12. But CBR continues, “the portion of the contention that challenges the methods used for analyzing pump test data or the discussion of transmissivity and storativity” is untimely because these are essentially new bases for challenges not specifically called out in the original petition, or the Board’s clarification of bases, see LBP-18-2, 87 NRC at 37, and, as such, are now too late. CBR Response at 13 & n.36.

We disagree. Licensing boards admit contentions, not bases. 10 C.F.R. § 2.309(a); see, e.g., *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 988 (2009) (citing *Entergy Nuclear Vermont Yankee, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147 (2006)); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 255 (2007). On the other hand, as they are intended “to put the other parties on notice as to what issues they will have to defend against or oppose,” bases can frame the scope of the contention. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff’d sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir.), *cert denied*, 502 U.S. 895 (1991). Nonetheless, the agency’s rules of practice only require that the petitioner “[p]rovide a brief explanation of the basis for the contention,” 10 C.F.R. § 2.309(f)(1)(ii), a recognition that mandating an exhaustive summary of all aspects of a petitioner’s argument would be tantamount to asking the petitioner to prove its case at the contention admissibility stage, see *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004). Brevity thus is permitted, although it also must be recognized that a petitioner takes a not insignificant risk in relying on just a few factual, technical, or legal points in framing a contention lest the presiding officer reject later attempts to “fill in the blanks” as being outside the scope of the contention.

In this instance, while both the Staff and CBR recognize that the challenged transmissivity and storativity parameters enunciated in this contention are related to Contention 2, both also contend that the issues defined in Contention E are distinctive from those issues that are within the scope of admitted Contention 2. See Staff Response at 30 n.117; CBR Response at 12-13 & n.36. We find, however, that these parameters are consistent with the breadth of Contention 2 as defined by OST’s four specific deficits that have been outlined in our previous decisions. See, e.g., LBP-13-6, 77 NRC at 289. To be sure, CBR protests that Contention 2 as admitted “specifically challenges the adequacy of certain parameters” that do not include transmissivity and storativity. CBR Response at 13 n.36. Yet this approach fails to give meaning to the wide-ranging phrase included in the deficiency summation relative to safety-related matters: “along with other information relative to the control and prevention of excursions.”

LBP-18-2, 87 NRC at 37 (quotations omitted). Moreover, the now-challenged parameters appear to be directly associated with the already-challenged bases, both as to safety and environmental matters, and are integrally related to those bases. While OST specifically challenged certain parameters in setting forth the bases for its contention, it also did not foreclose the possibility of challenging other, related parameters.

Therefore, while Contention E is rejected for the above reasons, to the degree it wishes to do so, OST as part of its case regarding Contention 2 may present evidence relating to storativity and transmissivity at the evidentiary hearing on this contention.

6. *OST Contention F: The Final EA's Failure to Critically Evaluate the Pump Test Data Renders the Analysis and Evaluation of Potential Impacts from Restoration Incomplete and Insufficiently Detailed to Inform the Public*

DISCUSSION: OST New Contentions at 26-29; Staff Response at 32-33; CBR Response at 13-14; OST Reply at 7-8.

RULING: *Inadmissible*, in that this contention is not based on materially different, previously unavailable information and lacks factual or expert support. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii), (f)(1)(v).

Relative to this contention, OST claims that because the final EA accepts pump test data that are based on “demonstrably inaccurate” assumptions, the final EA does not “sufficiently analyze the potential impacts of the proposed aquifer restoration program.” OST New Contentions at 27. In opposition, the Staff and CBR note that the information that is the basis for this contention was contained in the ER and so this contention is untimely. *See* Staff Response at 32; CBR Response at 15. Both also challenge OST’s failure to provide expert support for the contention. *See* Staff Response at 32-33; CBR Response at 15.

Contention F suffers from the same good cause deficiencies as Contention E. OST again cites to sections 3.3.2.3 and 4.3.2.1, as well as 4.3.2.2,²⁵ each of which is nearly identical in the final and draft version of the EA. *See* OST New Contentions at 27-28. The pump test data, and the assumptions that underlie that information, were available to OST in the ER and the draft EA. The information in the final EA was therefore previously available to OST, and is not materially different than that which was contained in the draft EA. Contention F thus may not be admitted as lacking good cause.

OST also has not provided factual or expert support for Contention F, and so

²⁵ Once again, the OST citation in its pleading to section 4.2.3.2 undoubtedly reflects a transposition. *See supra* note 23.

it must be rejected. *See* 10 C.F.R. § 2.309(f)(1)(v). OST asserts that the final EA's data do not support the aquifer being homogeneous, but rather are "indicative of a highly fractured system that allows imbibi[ng] of contaminants into the rock matrix, which is closer to a dual porosity model." OST New Contentions at 27. Here again, however, OST provides no expert support, let alone any citation, for this technical conclusion. Likewise, the rest of the contention is devoid of any citation to any document that would support the technical conclusions. An unsupported contention must be rejected.

CBR nonetheless recognizes that to some extent this contention also challenges "the adequacy of the pump test data collected and used to develop the hydrogeologic model of the site" and thus is litigable as within the scope of admitted Contention 2. *See* CBR Response at 14. We agree that this contention raises issues that fall within the scope of Contention 2 because it asserts that "an acceptable conceptual model of site hydrology" adequately supported by the data presented in the site characterization has not been developed. LBP-18-2, 87 NRC at 37. While Contention F is rejected for the above reasons, to the degree OST chooses to do so, OST as part of its case regarding Contention 2 may present evidence regarding the purported failure to employ an acceptable conceptual model.

7. *OST Contention G: The Final EA Fails to Provide an Adequate Baseline Groundwater Characterization or Demonstrate that Gro[und] Water and Surface Water Samples Were Collected in a Scientifically Defensible Manner Using Proper Sample Methodologies*

DISCUSSION: OST New Contentions at 29-31; Staff Response at 33-35; CBR Response at 14-15; OST Reply at 8.

RULING: *Inadmissible*, in that this contention is not based on materially different, previously unavailable information, lacks factual or expert opinion support, and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii), (f)(1)(v)-(vi).

The agency's regulations implementing NEPA require an environmental review to contain a description of the affected environment, 10 C.F.R. §§ 51.45(b), 51.71(a), 51.90, including a baseline characterization of groundwater and surface water that may be impacted, *see id.* Part 40, app. A, criterion 7. The baseline characterization is intended to show what the potentially affected environment looked like before any action is taken as an aid in determining what impacts the project will have. OST argues that the final EA fails to provide an adequate baseline characterization for the MEA or show that the background information was collected in a scientifically defensible manner. *See* OST New Contentions at 29. In essence, OST contends that because the baseline data were poorly

gathered, the modeling and analysis included in the final EA that relied upon that information do not create an adequate baseline. *See id.* at 30-31.²⁶ The Staff and CBR argue that this contention is untimely because the groundwater characterization was provided in the ER and/or included in the draft EA. *See* Staff Response at 34; CBR Response at 15. CBR also challenges this contention because OST provides no support for its conclusions, and because Contention G fails to raise a genuine dispute on a material issue in that OST “identifies no specific aspect of the application or Final EA that is alleged to be deficient, much less any particular data that is alleged to be suspect.” CBR Response at 15.

We find that OST does not have good cause to raise this contention now because the challenge it seeks to frame could have been proffered as contesting the groundwater characterization in the applicant’s ER. As CBR notes, *see id.*, ER section 6.1.2 is titled “Baseline Groundwater Monitoring,” ER at 6-4 to -9, and the draft EA contained several sections discussing groundwater resources, water use, and groundwater monitoring, *see* Draft EA at 3-39 to -52, 6-1 to -3. Because the background information on groundwater in the impacted area was available prior to the publication of the final EA, the contention is not based on previously unavailable information. Additionally, the relevant sections in the final EA are not materially different than those in the draft EA, and thus this contention cannot be based on previously unavailable information that is materially different, as is required to show good cause. *Compare* Draft EA at 3-39 to -52, *with* Final EA at 3-23 to -36, *and* Draft EA at 6-1 to -3, *with* Final EA at 6-1 to -3.

OST also fails to provide support for its contention. It is true that an accurate groundwater characterization is necessary to ensure that the project’s impacts are adequately analyzed. OST, however, supplies no support for its assertions that the background data here were inadequately collected, that the results cannot be replicated, that the technology used was not of proper “quality and calibration,” or for any of its other vague statements regarding the baseline characterization. *See* OST New Contentions at 30-31. While OST says the final EA is inadequate based on its “evidence,” *id.* at 31, the Board can find no citation to any specific fact or expert opinion that supports its contention. OST also does not challenge any specific portion of the final EA, any data set, any modeling or methodology,

²⁶ OST also alleges that the Staff has failed to explain how the MEA site will be able to operate “now that the [CPF] is being decommissioned.” OST New Contentions at 30. This aspect of the contention is not admissible because it lacks a factual basis under section 2.309(f)(1)(v). As noted above, *see supra* sections II.D.1 and II.D.2, the April 3 LAR does not state that the CPF will be decommissioned, but instead indicates that it will remain in standby mode to be used later if CBR desires. Therefore, the Staff does not need to explain the decommissioning of the CPF in the final EA.

any technology used, or any conclusion in the final EA that OST has deemed inadequate. To proffer an admissible contention, OST needed to show that a genuine dispute exists with the final EA on a material issue. Thus, in addition to lacking good cause for its admission, Contention G lacks factual or expert support and does not raise a genuine dispute on a material issue, and so must be rejected. 10 C.F.R. § 2.309(f)(1)(v)-(vi).

8. *OST Contention H: The Final EA Fails to Adequately Analyze Ground Water Quantity and Quality Impacts Due to Extended Restoration Timetable of April 2018 and Known Need for ACLs*

DISCUSSION: OST New Contentions at 31-36; Staff Response at 23-26; CBR Response at 15-17; OST Reply at 8-9.

RULING: *Inadmissible*, in that this contention lacks factual or expert opinion support and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

With this issue statement, OST claims that the Staff has not adequately analyzed the groundwater quantity and quality impacts associated with the extended restoration that will result from the April 2 cessation letter and the April 3 LAR. Further, according to OST, those impacts will be greater than stated because CBR, in decommissioning the renewal site, will not achieve restoration goals and will have to request ACLs. *See* OST New Contentions at 32 (referencing the April 3 LAR and April 2 cessation letter as acknowledging CBR's intent to seek ACLs in the future). Rather than questioning the use of ACLs in general, with this contention OST is challenging the Staff's failure to account for ACLs in its impact analysis, asserting that if the ACLs are granted and decommissioning occurs, more water will be consumed and the project will have a larger impact. *See id.* at 32-33.

Without regard to the question of timeliness, *see supra* note 16, to the extent this contention seeks to rely on the April 3 LAR and the April 2 cessation letter to establish its concerns about extended restoration, it suffers from the same deficiencies as Contention B already discussed above. Thus, as was the case with Contention B, this contention lacks factual support and does not raise a genuine dispute on a material issue as required by section 2.309(f)(1)(v)-(vi). *See supra* section II.D.2.

9. OST Contention I: The Final EA Fails to Adequately Analyze Cumulative Impacts that Include Decommissioning of [the CPF] and Existing Mining Units

DISCUSSION: OST New Contentions at 36-38; Staff Response at 26-27; CBR Response at 18; OST Reply at 9.

RULING: *Inadmissible*, in that this contention is not based on materially different, previously unavailable information and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii), (f)(1)(vi).

In its final new contention, which OST clearly recognizes is a contention of omission, *see* OST Reply at 9, OST maintains that the final EA violates NEPA and its implementing regulations because the final EA fails to provide a cumulative impact analysis that accounts for the decommissioning of the CPF or the rest of the renewal site. *See* OST New Contentions at 37. According to OST, the Staff was required to include the “decommissioning of the Crow Butte mine and the simultaneous restoration of all ten (10) [MUs]” because these are “reasonably foreseeable” future sites that could be developed for mining. *Id.* at 38 (referring to the requirement in 40 C.F.R. § 1508.7 that cumulative impacts include those from “other past, present, and reasonably foreseeable future actions”).

This contention fails to raise a genuine dispute with the final EA regarding a material issue because the purportedly missing information exists in the final EA. Initially, however, we note that neither the April 3 LAR nor the April 2 cessation letter provides there will be ten mines in restoration at the same time. As we have observed previously, *see supra* sections II.D.1 and II.D.2, because OST has mischaracterized the content of these letters, there is no genuine dispute in this regard. Moreover, the cumulative impact analysis discusses a groundwater model “to evaluate potential cumulative impacts caused by the consumptive use of groundwater at the MEA, [Three Crows Expansion Area], and existing Crow Butte license Area,” and specifically discussed the interplay between restoration at the renewal site and the impacts from the MEA. Final EA at 5-6. Because this is a contention of omission and the omission does not exist, there is no genuine dispute to support admission of this contention. 10 C.F.R. § 2.309(f)(1)(vi).

This contention also is not based on materially different, previously unavailable information. As discussed above, there is no omission in the final EA as OST claims. The information and analysis relating to the cumulative impacts of the various mining projects by CBR, including consumptive use from restoration in the final EA, was included in the draft EA as well, and is not materially different. *Compare* Draft EA at 5-5 to -6, *with* Final EA at 5-6. Thus, this contention cannot be admitted because it lacks good cause.

E. Admissibility of OST's "Renewed" Contentions

Although none previously were before this Board, *see supra* note 2 and accompanying text, in submitting these five "renewed" contentions, OST observed that they "are being re-submitted in order to perfect them for appeal and/or resolution at the international level." OST New Contentions at 1.

1. OST Contention J: Failure to Discuss or Demonstrate Lawful Federal Jurisdiction and Authority over Crow Butte's Activities

DISCUSSION: OST New Contentions at 38-53; Staff Response at 35-36; CBR Response at 19-20; OST Reply at 10-11.

RULING: *Inadmissible*, in that this contention is not based on previously unavailable information and is outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(c)(1)(i), (f)(1)(iii).

In this contention, OST claims that the final EA fails to discuss or demonstrate that the NRC, through the United States, has jurisdiction over the land upon which CBR seeks authorization to operate its ISR facility.²⁷ *See* OST New Contentions at 39. The Staff and CBR maintain that this contention is untimely because it is not based on new information, and is beyond the scope of the proceeding as the Supreme Court has already provided binding precedent on this question. *See* Staff Response at 35-36; CBR Response at 19.

Contention J fails to meet the required good cause standard for filing post-initial hearing petition contentions. Such new contentions "must be *based on new facts* not previously available," even when the proponent is challenging a new licensing document. *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 493 n.70 (2012). The facts upon which OST relies to show that the NRC lacks jurisdiction over the MEA are not new at all, but instead have been known by OST since the outset of the proceeding. Indeed, OST filed this same contention in the *Renewal Site* proceeding in 2015, based on the same information. *See* [OST] Renewed and New Contentions Based on the Final [EA] (October 2014), *Crow Butte Res., Inc.* (License Renewal for the In Situ Leach Facility, Crawford, Neb.), No. 40-8943 (Jan. 5, 2015) at 4-14 [hereinafter OST Renewal Site Petition]. Given that the information relied upon to support Contention J was

²⁷ While this is the first time OST has raised this jurisdictional challenge in this proceeding, OST did proffer this issue as "EA Contention F" in the *Renewal Site* proceeding. *See Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-15-11, 81 NRC 401, 410 (2015).

previously available to OST, this contention must be rejected as lacking good cause.²⁸ 10 C.F.R. § 2.309(c)(1)(i).

Contention J is also inadmissible because it is outside the scope of this proceeding. To admit this contention, the Board would necessarily have to question Supreme Court binding precedent determining that the United States is not bound by the Fort Laramie Treaty of 1868²⁹ and/or the Court's authority to make such a determination. Like the *Renewal Site* board, we find that the Supreme Court's holding in *United States v. Sioux Nation of Indians*, 448 U.S. 371 (1980), is controlling and requires us to reject this contention based on treaty rights. See *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 711-12 (2008), *aff'd*, CLI-09-9, 69 NRC 331, 337 (2009); see also *Crawford*, LBP-15-11, 81 NRC at 411. While OST may have the freedom to question the Court's determination or authority, see OST Reply at 10-11, we do not. The issue of the NRC's jurisdiction over the MEA is therefore beyond the scope of this proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

2. OST Contention K: Failure to Obtain the Consent of the Oglala Sioux Tribe as Required by Treaty and International Law

DISCUSSION: OST New Contentions at 53-56; Staff Response at 36-37; CBR Response at 20-22; OST Reply at 11-14.

RULING: *Inadmissible*, in that this contention is not based on previously unavailable information, is outside the scope of this proceeding; and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. See 10 C.F.R. § 2.309(c)(1)(i), (f)(1)(iii), (vi).

²⁸ In its reply, OST asserts that because this issue statement raises a "jurisdictional" question, it cannot be untimely. See OST Reply at 10. Putting aside the fact that (1) a licensing board is not necessarily governed by the constitutional Article III constraints that are the basis for OST's "jurisdictional" claim, see *Edlow International Co.* (Agent for the Government of India on Application to Export Special Nuclear Material), CLI-76-6, 3 NRC 563, 569-70 (1976); and (2) there is nothing in section 2.309(c)(1)'s good cause provisions (or elsewhere in the agency's rules) to suggest that timeliness concerns are waived for "jurisdictional" issues, this OST concern fails to account for the fact that in determining that issue we would not be writing upon a clean slate. Given the previous instances in which this issue has been raised in agency adjudications that preceded the start of this proceeding by several years, and the resulting outcome in those proceedings as described above in the context of whether this contention is within the scope of the proceeding, we do not perceive that our ruling does any damage to that precept.

²⁹ Treaty with the Sioux — Brulé, Oglala, Minicanjoe, Yanktoni, Hunkpapa, Blackfeet, Cuthead, Two Kettle, Sans Ares, and Santee — and Arapaho, Apr. 29, 1868, 15 Stat. 635.

In support of this contention,³⁰ OST asserts that the Fort Laramie Treaty of 1868 and Article 19 of the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UN DRIP) require the NRC to seek or acquire the “free, prior, and informed consent” of OST before authorizing any action at the MEA. OST New Contentions at 53-54 (quoting G.A. Res. 61/295, art. 19, United Nations Declaration on the Rights of Indigenous Peoples (Sept. 13, 2007)). According to OST, because the final EA does not show that OST has been adequately informed and provided its consent, and does not provide any justification for the NRC’s failure to obtain such consent, the final EA is inadequate. *See id.* at 56. In their responses, both the Staff and CBR maintain that this contention is untimely because it could have been raised at the outset of the proceeding. *See* Staff Response at 37; CBR Response at 22. The Staff also declares that, besides relying on what OST acknowledges is nonbinding international law, like Contention J this contention is outside the scope of the proceeding because this treaty-based claim, while focusing on consent, is still precluded by Supreme Court precedent. *See* Staff Response at 36-37. Additionally, CBR argues the contention does not show a genuine dispute with the final EA because OST fails to show that any of its legal authority applies to this proceeding so as to require this discussion be included in the final EA. *See* CBR Response at 20-21.

Like Contention J, OST has not shown good cause to admit Contention K because the information on which OST relies has been available to it since the outset of the proceeding. Our rules of practice require new contentions be based upon information that was not previously available. OST was then aware of the lack of the asserted free, prior, and informed consent, and the international treaties it cites, as well as the contents of the Fort Laramie Treaty. Additionally, as with Contention J, OST filed contentions with similar factual bases and so had actual knowledge of the information it needed to file this contention much earlier. *See supra* note 30. Therefore, this contention must be rejected as lacking good cause. *See* 10 C.F.R. § 2.309(c)(1)(i).

And for the same reason as Contention J, Contention K is outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii). Claims that consultation was inadequate or consent was not given, which are based on rights provided in the Fort Laramie Treaty, cannot be the basis for an admissible contention. Such a contention would require the Board to question the Supreme Court’s *Sioux Nation of Indians* decision that the treaty is no longer in effect, which the Board is in no position to do. *See supra* section II.E.1.

This contention also does not raise a genuine dispute regarding a material issue relative to the final EA. *See* 10 C.F.R. § 2.309(f)(1)(vi). OST relies pri-

³⁰ Again, this contention was not raised earlier in this proceeding. OST did raise the issue of free, prior, and informed consent in 2015 in the *Renewal Site* proceeding, in both EA Contention F and EA Contention 1. *See* OST Renewal Site Petition at 10-11, 16-17.

marily on two sources — the Fort Laramie Treaty and the UN DRIP — as legal authority that would require the Staff to provide a discussion of free, prior, informed consent in the final EA. Neither the Fort Laramie Treaty nor the UN DRIP imposes any legal obligation on the NRC, however. Because the treaty is no longer in effect, any duty levied by it cannot serve as a legal basis for requiring the Staff to include further discussion in the final EA. And, as OST recognizes, *see* OST New Contentions at 55, for its part the UN DRIP is a non-binding declaration that imposes no legal obligations on the NRC either. Moreover, while OST references various other international agreements, organs, and case law, all of these create no legal requirements for the Staff in composing the final EA, and thus cannot serve to create a genuine dispute on a material issue relative to the final EA.

3. *OST Contention L: Failure to Meet Applicable Legal Requirements Regarding Protection of Historical, Cultural, and Spiritual Resources*

DISCUSSION: OST New Contentions at 56-65; Staff Response at 37-38; CBR Response at 22-26; OST Reply at 14-15.

RULING: *Inadmissible*, in that this contention is untimely and lacks factual or expert opinion support. *See* 10 C.F.R. § 2.309(c)(1)(iii), (f)(1)(v).

Although similar to Contention D in that it relies on recent developments in the *Dewey-Burdock* proceeding as supporting its admittance, this cultural resources contention posits additional items as bases for admission, in particular a 2013 opinion letter from archaeologist Dr. Louis Redmond challenging the adequacy of the survey methodology utilized by the Staff in its draft and final MEA EA cultural resource analysis and the ruling on a cultural resources contention by the *Renewal Site* board. *See* OST New Contentions at 58-64 (citing ex. D (Letter from Louis A. Redmond, Ph.D., President/Owner, Red Feather Archeology, to David C. Frankel, Esq. (Jan. 28, 2013) [hereinafter Redmond Letter]), and *Crawford*, LBP-16-7, 83 NRC at 389, 390, 399-400, 402).

As we noted above in the discussion regarding Contention D, *see supra* section II.D.4, recent events have deprived the *Dewey-Burdock* developments relied upon by OST of any efficacy as a factual basis for this contention. And for the contention's survey adequacy and *Renewal Site* board ruling aspects, timeliness is a problem.³¹ Both the Redmond letter and the *Renewal Site* board ruling matters substantially predate the mid-December 2017 issuance of the Staff's

³¹ To whatever degree it might be argued that the March 2018 developments in the *Dewey-Burdock* case provided the impetus for a contention for which the Redmond letter and the *Renewal Site* board ruling simply provide additional support, the fact that the *Dewey-Burdock* situation now fails to support the contention does not provide a basis for ignoring the timeliness issues that attach to this supporting information as a basis for the contention.

draft EA. Because that draft incorporated the Staff's previously-issued cultural resources analysis that was, in turn, substantially unchanged in the final EA, *compare* Draft EA Cultural Resources Sections at 1-24, *with* Draft EA at 3-65 to -75, 4-36 to -38, 5-8 to -11, *and* Final EA at 3-50 to -61, 4-39 to -41, 5-8 to -11, the timely submission of any contention with the survey adequacy and *Renewal Site* board matters as a supporting basis needed to be submitted by mid-January 2018.³²

This contention thus is not admissible because it lacks both good cause and factual support. *See* 10 C.F.R. § 2.309(c)(1)(iii), (f)(1)(v).

4. *OST Contention M: Failure to Meet Applicable Legal Requirements Regarding Protection of Historical, Cultural, and Spiritual Resources by Reason of the Failure to Involve or Consult the Oglala Sioux Tribe as Required by Federal and International Law*

DISCUSSION: OST New Contentions at 65-79; Staff Response at 37-38; CBR Response at 22-26; OST Reply at 14-15.

RULING: *Inadmissible*, in that this contention is untimely. *See* 10 C.F.R. § 2.309(c)(1)(iii).

This cultural resources contention focuses on the alleged failure of the Staff to undertake properly the consultation process with OST and other tribes as part of the process for preparing the cultural resources analysis for the draft and final EA. As the basis for this contention, OST again references Dr. Redmond's 2013 opinion letter and the cultural resources ruling of the *Renewal Site* board as well as the 2016 Commission ruling affirming the cultural resources decision of the *Dewey-Burdock* licensing board, both of which considerably preceded the recent developments in the *Dewey-Burdock* proceeding that were the focus of Contentions D and L. *See* OST New Contentions at 69-71, 74-79 (citing Redmond Letter; *Crawford*, LBP-16-7, 83 NRC at 389, 390, 399-400, 402, 404; *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-16-20, 84 NRC 219, 249 (2016)).

As was the case with Contention L, *see supra* section II.E.3, the matters cited as support for this contention substantially predate the mid-December 2017 issuance of the Staff's draft EA, which included a cultural resources discussion. As we noted there, this required, at a minimum, the mid-January 2018 sub-

³² Moreover, as OST indicates in its new contentions pleading, the survey concerns were submitted to the Staff as part of OST's late January 2018 comments on the draft EA, thereby reflecting OST's awareness of this alleged deficiency as a potential basis for a contention. *See* OST New Contentions at 57. But as we noted in section II.C above, submitting public comments regarding the Staff's draft EA does not toll the deadline for timely submitting new or amended contentions regarding that document in this proceeding.

mission of any contention referencing those items as bases for the contention. Consequently, lacking the requisite good cause required by section 2.309(c)(1), this contention is inadmissible as well.

5. *OST Contention N: Failure to Take the Requisite “Hard Look” at Environmental Justice Impacts*

DISCUSSION: OST New Contentions at 79-84; Staff Response at 38-39; CBR Response at 26-29; OST Reply at 15-16.

RULING: *Inadmissible*, in that this contention is not based on materially different, previously unavailable information, lacks factual or expert opinion support, and does not provide sufficient information to show a genuine dispute exists with the final EA on a material issue. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii), (f)(1)(v)-(vi).

In its last contention,³³ OST alleges that the final EA failed to take a “hard look” at “whether relicensing the Crow Butte facility would cause disproportionate and adverse impacts on minority and low-income populations within a 50-mile environmental impact area around the facility.” OST New Contentions at 79. The contention claims that the use of the smaller 15-mile impact area in the final EA excluded the area where the Oglala Lakota people are located, which impermissibly allowed the Staff to forego a more detailed environmental justice analysis than should have been provided in the final EA. *See id.* at 82, 84. Both the Staff and CBR argue that this contention is untimely in that it could have been raised earlier. *See* Staff Response at 38-39; CBR Response at 28-29. Additionally, CBR contends that the final EA appropriately followed all legal requirements pertaining to an environmental justice review and that OST has provided neither an evidentiary basis for its contention, nor demonstrated a genuine dispute with the final EA. *See* CBR Response at 27-28.

This contention is not based on materially different, previously unavailable information.³⁴ The information and conclusions in the final EA concerning the environmental justice impacts of the license amendment are nearly identical to what was included in the draft EA. *Compare* Draft EA at 3-78 to -79, 4-40 to -43, *with* Final EA at 3-63 to -64, 4-43 to -45. The draft and final EAs also contained the same discussion of the impacts that the Pine Ridge

³³ Like the other “renewed” contentions, Contention N was not one of the original six contentions proffered by OST in this proceeding. *See supra* note 2 and accompanying text. A similar contention, however, was submitted by OST as EA Contention 3 in the *Renewal Site* proceeding. *See Crawford, LBP-15-11, 81 NRC at 415-17.*

³⁴ Although the *Renewal Site* board admitted a contention substantially similar to this one following the issuance of the final EA in that proceeding, *see id.* at 417, in that instance there was no established schedule for filing new or amended contentions relative to a draft EA, *see id.* at 405.

Indian Reservation would face if the license amendment was granted. *See* Draft EA at 4-42; Final EA at 4-45. The information challenged in the final EA relating to environmental justice was previously available to OST, which OST apparently acknowledges given that its contention notes that OST “included these deficiencies in its comments to the NRC Staff on the Draft EA.” OST New Contentions at 84. The challenged portions of the final EA are thus not materially different than previously available information. Accordingly, this contention lacks good cause and must be denied. *See* 10 C.F.R. § 2.309(c)(1)(i)-(ii).

But even if there were good cause demonstrated for admitting this contention, OST has not met at least two of the contention admissibility standards. First, OST has not provided factual support for its contention. OST alleges that “a full examination of all of the impacted [environmental justice] communities and institutions within the 50-mile radius of [the] CBR facility” is required. OST New Contentions at 82. NRC guidance, however, suggests that in a rural area an environmental justice analysis for a materials facility should encompass a four-mile radius, and that “a 50 mile radius is not automatically required.” Division of Waste Management, NMSS, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, NUREG-1748, at C-4 & n.3 (Aug. 2003) [hereinafter NUREG-1748] (ADAMS Accession No. ML032450279). While this guidance is not definitive on this question, OST provides no information that would explain why the Staff is required under NEPA to use a larger impact area.

By the same token, OST does not provide factual support to show that a larger impact area was warranted because of the disproportionate impacts that would befall OST members. While disproportionate religious and cultural impacts can provide the basis for an environmental justice-based contention, *see* NUREG-1748, at 5-22, 6-25, C-6; *see also Northern States Power Co.* (Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation), LBP-12-24, 76 NRC 503, 522 (2012), the proponent must make more than “generalized statements of concern . . . regarding these religious and cultural impacts,” *Crawford*, LBP-08-24, 68 NRC at 734; *see also Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 367 (2006). While OST observed that the final EA indicates there may be impacts to cultural resources, *see* OST New Contentions at 82, the final EA also explains that the Staff’s review “did not identify any specific examples of cultural or other resources . . . unique to [OST],” Final EA at A-40 (emphasis omitted). The burden thus is on OST to provide factual support for its claim that the final EA’s discussion is inadequate and the Staff needs to consider environmental justice impacts in greater detail by showing that the project would have disproportionately high

impacts on its historic, cultural, and spiritual interests. OST does not provide any such support.³⁵

Finally, OST does not raise a genuine dispute on a material issue relative to the final EA. Although OST alleges that “there is no mention of the Tribe and its people” in section 3.7.4, OST New Contentions at 83, the environmental justice impact section contained in section 4.7.2 contains a discussion specifically about the population of the Pine Ridge Indian Reservation, *see* Final EA at 4-45.

For these reasons, i.e., lack of good cause under 10 C.F.R. § 2.309(c)(1), failing to provide adequate factual support as required by 10 C.F.R. § 2.309(f)(1)(v), and failing to raise a genuine dispute on a material issue pursuant to 10 C.F.R. § 2.309(f)(1)(vi), OST’s Contention N regarding environmental justice impacts is rejected.

III. DEFINING THE SCOPE OF OST CONTENTION 2 AS MIGRATED

In section II.A above, we noted that OST’s declaration that its admitted Contention 2 be considered a challenge to the Staff’s final EA was not opposed. Consequently, below we set forth the language of that contention, as well as the four alleged hydrogeological deficiencies that have been identified as being within the scope of that contention. As we also have observed previously, *see* LBP-18-2, 87 NRC at 36, the Commission has acknowledged that, in the appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission. *See Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009); *see also Ross*, LBP-13-10, 78 NRC at 138. Given the complexity and technical nature of both the environmental and safety aspects of this contention, we continue to consider it important, in appropriate instances, to outline the scope of Contention 2 with as much specificity as possible.

Because our rulings in this decision afford such an opportunity, we now view the migrated contention to provide as follows:

OST Contention 2: Failure to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration

³⁵ For example, in the *Prairie Island* proceeding, the intervening tribe supported its environmental justice contention by describing, in detail, the “destruction and desecration of sacred burial mounds and other culturally and historically significant sites” in relation to the licensed activity at issue. Prairie Island Indian Community’s Request for Hearing and Petition to Intervene in License Renewal Proceedings for the Prairie Island Independent Spent Fuel Storage Installation, *Northern States Power Co.* (Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage), No. 72-10-ISFSI-2 (Aug. 24, 2012) at 45 (emphasis omitted).

The application and final environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet the requirements of 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2); the National Environmental Policy Act; and NUREG-1569 section 2.6. The application and final environmental assessment similarly fail to provide sufficient information to establish potential effects of the project on the adjacent surface and ground-water resources, as required by NUREG-1569 section 2.7, and the National Environmental Policy Act.

More specifically, the scope of the safety and environmental concerns encompassed by this contention include the following: (1) the adequacy of the descriptions of the affected environment for establishing the potential effects of the proposed MEA operation on the adjacent surface water and groundwater resources; (2) exclusively as a safety concern, the absence in the applicant's technical report, in accord with NUREG-1569 section 2.7, of a description of the effective porosity, hydraulic conductivity, and hydraulic gradient of site hydrogeology, along with other information relative to the control and prevention of excursions such as transmissivity and storativity; (3) the failure to develop, in accord with NUREG-1569 section 2.7, an acceptable conceptual model of site hydrology that is adequately supported by site characterization data so as to demonstrate with scientific confidence that the area hydrogeology, including horizontal and vertical hydraulic conductivity, will result in the confinement of extraction fluids and expected operational and restoration performance; and (4) whether the final EA contains unsubstantiated assumptions as to the isolation of the aquifers in the ore-bearing zones.

IV. CONCLUSION

For the reasons set forth above, we find that OST's admitted Contention 2 should migrate from being a challenge to the NRC Staff's draft EA to contesting the Staff's final EA. Additionally, we conclude that none of the fourteen new or renewed contentions proffered by OST as challenges to the Staff's final EA is admissible because they fail to fulfill the 10 C.F.R. § 2.309(c)(1) good cause standard for admitting a new or amended contention filed after the date for submitting an initial intervention petition and/or one or more of the section 2.309(f)(1) requirements governing contention admissibility.

For the foregoing reasons, it is, this twentieth day of July 2018, ORDERED that (1) Intervenor Oglala Sioux Tribe's admitted Contention 2 *migrates* to become a challenge to the NRC Staff's final EA, as specified in section III above;

and (2) OST's request to admit the fourteen new or renewed contentions set forth in its May 30, 2018 submission is *denied*.

THE ATOMIC SAFETY AND
LICENSING BOARD

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell
ADMINISTRATIVE JUDGE

Dr. Thomas J. Hirons
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 20, 2018

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Dr. Gary S. Arnold
Dr. Sue H. Abreu

In the Matter of

Docket No. 52-047-ESP
(ASLBP No. 17-954-01-ESP-BD01)
(Early Site Permit Application)

TENNESSEE VALLEY AUTHORITY
(Clinch River Nuclear Site)

July 31, 2018

This proceeding concerns the Tennessee Valley Authority's (TVA) application for an early site permit for two or more small modular reactors to be located at the Clinch River site in Oak Ridge, Tennessee. The Board considered two motions to dismiss Contention 2 from TVA and the NRC Staff, and a motion to file two new contentions from the Southern Alliance for Clean Energy (SACE) and the Tennessee Environmental Council (TEC). The Board ruled Contention 2 was moot, and the two new proffered contentions by SACE and TEC were inadmissible. There being no further contentions pending, the Board terminated the proceeding.

RULES OF PRACTICE: MOOTNESS

The NRC Staff may moot a contention of omission through its later issued environmental document.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY), "GOOD CAUSE" STANDARD

When the initial deadline for filing contentions has passed, Intervenors must

satisfy the “good cause” standard in 10 C.F.R. § 2.309(c)(1). “Good cause” exists when: (1) the information upon which the amended or new contention is based was not previously available; (2) the information upon which the filing is based is materially different from information previously available; and (3) the filing has been submitted in a timely fashion based on the availability of the subsequent information.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

To be admissible, a contention must: (1) state the specific legal or factual issue to be raised or controverted; (2) provide a brief explanation for the contention’s basis; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) concisely state the alleged facts or expert opinions that support the requestor’s position and on which the proponent intends to rely at hearing, including references to specific sources and documents on which the contention’s requestor intends to rely; and (6) show that a genuine dispute exists on a material issue of law or fact by referring to specific portions of the application that the requestor disputes or, if the application is alleged to be deficient, by identifying such deficiencies and the supporting reasons for this allegation. These rules are strict by design, and failure to fulfill any one of the contention admissibility requirements renders a contention inadmissible.

EARLY SITE PERMIT PROCEEDINGS: PLANT PARAMETER ENVELOPE

In an ESP proceeding, it is the applicant’s prerogative to set the Plant Parameter Envelope (PPE).

EARLY SITE PERMIT APPLICATION: RESPONSIBILITY OF NRC STAFF

Under 10 C.F.R. § 51.75(b), it is the responsibility of the NRC Staff to provide an evaluation of the environmental effects of construction and operation of a reactor or reactors that have design characteristics that fall within the site characteristics and design parameters for the early site permit application.

EARLY SITE PERMIT PROCEEDINGS: PLANT PARAMETER ENVELOPE

A PPE is a set of values of plant design parameters that an ESP applicant

expects will bound the design characteristics of a reactor or reactors that might be constructed at a given site, and it serves as a surrogate for actual reactor design information. PPE values do not reflect a specific design and are not to be reviewed by the NRC staff for correctness. The NRC Staff must instead focus on whether the PPE information is sufficient and whether the PPE values are not unreasonable. The combination of site characteristics and PPE values will comprise the ESP bases that will be the focus for comparison should a combined license application be submitted for the site.

EARLY SITE PERMIT APPLICATION: PLANT PARAMETER ENVELOPE

The applicant bears the risk if its final selected design falls outside the terms and conditions of the PPE within its ESP. If the applicant elects to submit a combined license (COL) application featuring design characteristics that are not bounded by the PPE for the ESP, those issues will be reviewed by the NRC Staff, and would be subject to challenge in a hearing request at that time.

EARLY SITE PERMIT PROCEEDINGS: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

When an assessment of benefits is neither required nor included in the DEIS, a Board must refuse to admit contentions proffered by any party concerning an assessment of the benefits or an analysis of alternative energy sources.

RULES OF PRACTICE: EXPERT OPINION

Interpretations of statutes and regulations are fair subjects for arguments by counsel or a party representative, but are not a proper subject of an expert opinion.

**MEMORANDUM AND ORDER
(Ruling on Motions to Dismiss and Motion for Leave
to File New Contentions)**

Before the Board are (1) two unopposed motions to dismiss Contention 2;¹

¹ Tennessee Valley Authority's [TVA] Motion to Dismiss Contention 2 as Moot (June 11, 2018) [hereinafter TVA Motion to Dismiss]; NRC Staff Motion to Dismiss Contention 2 as Moot and Answer to Intervenors' Motion for Leave to File Contention 4 and Contention 5 (June 11, 2018)
(Continued)

and (2) Intervenor's motion for leave to file two new contentions.² Because Contention 2 is now moot, we grant the motions to dismiss it. Because neither proffered new contention is admissible, we deny Intervenor's motion for leave to file. There being no contention pending, this proceeding is terminated.

I. BACKGROUND

The background of this proceeding is set forth in detail in earlier decisions of this Board and of the Commission,³ but is summarized below.

On May 12, 2016, the Tennessee Valley Authority (TVA) submitted an early site permit (ESP) application for two or more small modular reactors (SMRs) at the Clinch River Nuclear Site in Oak Ridge, Tennessee.⁴ Because TVA has not yet selected a design for any reactors that might be constructed at the site, its application uses a plant parameter envelope (PPE) that is based on several SMR designs currently under development.⁵ Approval to construct and operate a nuclear power plant at the Clinch River site would require a separate NRC authorization and would be the subject of a separate licensing proceeding, including an additional hearing opportunity.

The Southern Alliance for Clean Energy (SACE) and the Tennessee Environmental Council (TEC) (collectively, Intervenor) filed a timely petition challenging TVA's application and proffering three contentions.⁶ The Board ruled two contentions were admissible: Contention 2, challenging the failure of TVA's Environmental Report to address the consequences of spent fuel pool fires; and Contention 3, challenging allegedly impermissible discussion in the Environmental Report of energy alternatives and the need for power.⁷ The Commission affirmed the Board's admission of Contention 2, but reversed the admission of Contention 3.⁸

[hereinafter NRC Staff Motion to Dismiss and Response]. Intervenor do not oppose the motions to dismiss. Intervenor's Response to Motions to Dismiss Contention 2 as Moot (June 12, 2018) at 2 [hereinafter Intervenor's Response to Motions to Dismiss].

² Intervenor's Motion for Leave to File Contention 4 (Inadequate Discussion of Environmental Impacts of Spent Fuel Pool Fires) and Contention 5 (Impermissible Discussion of Energy Alternatives and Need for the Proposed SMR) (May 21, 2018) [hereinafter Intervenor's Motion to File New Contentions].

³ See generally CLI-18-5, 87 NRC 119 (2018); LBP-17-8, 86 NRC 138 (2017).

⁴ See TVA; Clinch River Nuclear Site, 81 Fed. Reg. 40,929, 40,929 (June 23, 2016).

⁵ TVA, Clinch River Nuclear Early Site Permit [ESP] Application, Part 2: Site Safety Analysis Report, at 2.0-1 (Rev. 0 May 2016) (ADAMS Accession No. ML16144A037).

⁶ Petition to Intervene and Request for Hearing (June 12, 2017) [hereinafter SACE/TEC Pet.].

⁷ LBP-17-8, 86 NRC at 138, 158, 161.

⁸ CLI-18-5, 87 NRC at 126-27, 129.

On April 26, 2018, the NRC published notice in the *Federal Register* of the availability of the Clinch River ESP Draft Environmental Impact Statement (DEIS).⁹ On May 21, 2018, Intervenors moved to file two new contentions.¹⁰ Although the DEIS now sets forth for the first time a separate discussion of the risks of spent fuel pool fires, proposed Contention 4 claims that discussion is inadequate.¹¹ Proposed Contention 5 challenges the DEIS for including an allegedly “impermissible discussion” of the need for power and energy alternatives.¹²

TVA and the NRC Staff oppose admission of either new contention, and also have moved without opposition to dismiss Contention 2 as moot.¹³

II. ANALYSIS

A. Motions to Dismiss Contention 2 as Moot

In LBP-17-8, the Board admitted Contention 2, which asserts that TVA’s Environmental Report “fails to satisfy [the National Environmental Policy Act] because it does not address the consequences of a fire in the spent fuel storage pool.”¹⁴ We admitted the contention “strictly [as] a contention of omission” with the caveat that any future discussion addressing spent fuel pool fires by TVA would moot the contention.¹⁵ As the Commission quoted from the Board’s decision when it affirmed admission of Contention 2: “TVA might not be able to say very much about the risk of spent fuel pool fires[] at this early stage, but SACE and TEC have made a plausible case that TVA must say something.”¹⁶

⁹ ESP Application: TVA; Clinch River Nuclear Site, 83 Fed. Reg. 18,354 (Apr. 26, 2018); Office of New Reactors, Environmental Impact Statement for an ESP at the Clinch River Nuclear Site, NUREG-2226 (Vol. 1 Apr. 2018) (ADAMS Accession No. ML18092A515) [hereinafter DEIS].

¹⁰ Intervenors’ Motion to File New Contentions.

¹¹ *Id.* at 3-12.

¹² *Id.* at 12-28.

¹³ TVA’s Answer Opposing Intervenors’ Motion for Leave to File Contention 4 and Contention 5 (June 15, 2018) [hereinafter TVA Response]; TVA Motion to Dismiss at 1; NRC Staff Motion to Dismiss and Response at 1-2; *see also* Intervenors’ Response to Motions to Dismiss at 2; Intervenors’ Reply to Responses in Opposition to Motion for Leave to File Contention 4 (Inadequate Discussion of Environmental Impacts of Spent Fuel Pool Fires) and Contention 5 (Impermissible Discussion of Energy Alternatives and Need for the Proposed SMR) (June 22, 2018) [hereinafter Intervenors’ Reply].

¹⁴ LBP-17-8, 86 NRC at 158.

¹⁵ *Id.* at 160. Although the Board stated that “TVA must say something” to cure the omission, *id.* at 160-61, the NRC Staff may also moot a contention of omission through its later issued environmental document. *See USEC Inc. (American Centrifuge Plant)*, CLI-06-9, 63 NRC 433, 444-45 (2006).

¹⁶ CLI-18-5, 87 NRC at 125 (quoting LBP-17-8, 86 NRC at 160).

As all parties agree,¹⁷ the DEIS now addresses the consequences of a spent fuel pool fire.¹⁸ The NRC Staff has cured the omission. Contention 2 is now moot and is dismissed.

B. Good Cause

Because the initial deadline for filing contentions has passed,¹⁹ Intervenors must satisfy the “good cause” standard in 10 C.F.R. § 2.309(c)(1).²⁰ “Good cause” exists when (1) the information upon which the amended or new contention is based was not previously available; (2) the information upon which the filing is based is materially different from information previously available; and (3) the filing has been submitted in a timely fashion based on the availability of the subsequent information.²¹

Although TVA and the NRC Staff argue otherwise,²² Intervenors satisfy the “good cause” test for each of their proffered contentions. Consistent with the Board’s Initial Scheduling Order, Intervenors proffered their new contentions within thirty days of the availability of the DEIS.²³ This was the first opportunity to challenge the *adequacy* of any discussion of spent fuel pool fires, which appeared for the first time in the DEIS. This was also the first opportunity to challenge language *in the DEIS* that was similar to language in TVA’s Environmental Report that Intervenors had tried to challenge through Contention 3.

C. Contention Admissibility

Although Intervenors have shown good cause for proffering their new contentions after the initial deadline, their contentions must also satisfy the usual standard for contention admissibility.

To be admissible, a contention must (1) state the specific legal or factual issue to be raised or controverted; (2) provide a brief explanation for the contention’s basis; (3) demonstrate that the issue raised is within the scope of the proceeding;

¹⁷ NRC Staff Motion to Dismiss and Response at 1; TVA Motion to Dismiss at 1-2; Intervenors’ Response to Motions to Dismiss at 2.

¹⁸ DEIS at 5-85 to -87.

¹⁹ TVA; Clinch River Nuclear Site ESP Application and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information, 82 Fed. Reg. 16,436, 16,437 (Apr. 4, 2017).

²⁰ See 10 C.F.R. § 2.309(b); see also *id.* § 2.309(f)(2).

²¹ *Id.* § 2.309(c)(1).

²² TVA Response at 15-18 (arguing Contention 4 is untimely); NRC Staff Motion to Dismiss and Response at 28-29 (arguing Contention 5 lacks good cause).

²³ Licensing Board Initial Scheduling Order (Dec. 7, 2018) at 4 (unpublished).

(4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) concisely state the alleged facts or expert opinions that support the requestor's position and on which the proponent intends to rely at hearing, including references to specific sources and documents on which the contention's requestor intends to rely; and (6) show that a genuine dispute exists on a material issue of law or fact by referring to specific portions of the application that the requestor disputes or, if the application is alleged to be deficient, by identifying such deficiencies and the supporting reasons for this allegation.²⁴ This rule is "strict by design,"²⁵ and "failure to fulfill any one of the contention admissibility requirements renders a contention inadmissible."²⁶

Neither Contention 4 nor Contention 5 satisfies this standard.

1. Contention 4

Contention 4 "challenges the adequacy of the [DEIS's] discussion of the environmental impacts of spent fuel pool accident risks."²⁷ It states:

The Draft EIS is inadequate to satisfy the National Environmental Policy Act ("NEPA") because its conclusion that environmental impacts of a spent fuel pool accident are small is based on non-conservative or otherwise invalid assumptions that are based on the design characteristics of a light water reactor ("LWR") and compliance by TVA with all current emergency planning requirements.

First, the NRC Staff makes assumptions about patterns of fuel usage and storage at LWRs that differ significantly from the characteristics of at least one SMR design included in the proposed "plant parameter envelope" ("PPE") on which the Staff's environmental analysis is based. The Draft EIS fails to analyze those key differences. Second, the NRC Staff makes assumptions in the Draft EIS about the PPE with respect to the quantity of fuel stored in the pool that are neither conservative nor bounding for at least one of the SMR designs that comprise the PPE. Finally, the Draft EIS's environmental analysis is based on the non-conservative assumption that the ten-mile emergency planning zone ("EPZ") around the proposed SMR will be evacuated, when in fact the NRC currently is considering a request by TVA to relax that requirement. Accordingly, the Draft EIS fails to support its assertion that the risk profile for spent fuel pool fires at an LWR is bounding for the proposed SMR.²⁸

²⁴ 10 C.F.R. § 2.309(f)(1)(i)-(vi); *see also* LBP-17-8, 86 NRC at 149-51.

²⁵ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *pet. for reconsideration denied*, CLI-02-1, 55 NRC 1 (2002).

²⁶ *Entergy Nuclear Operations, Inc.* (Indian Point, Unit 2), CLI-16-5, 83 NRC 131, 136 (2016).

²⁷ Intervenor's Motion to File New Contentions at 4.

²⁸ *Id.* at 3.

In other words, Intervenors contend that the DEIS's spent fuel pool accident analysis violates the National Environmental Policy Act (NEPA) because the PPE was not sufficiently conservative. Intervenors identify some parameters associated with the NuScale and mPower SMR designs that they claim should have been used.²⁹ They also claim the DEIS needs to further analyze the impacts of spent fuel pool fires for two-mile and site-boundary emergency planning zones (EPZs) because these EPZs allegedly have "been requested by TVA in Part 6 of its [ESP] application."³⁰

Intervenors cite no support for their claim that the DEIS's analyses must use more conservative parameters. In an ESP proceeding, it is the applicant's prerogative to set the PPE. Under 10 C.F.R. § 51.75(b), it is then the responsibility of the NRC Staff to provide "an evaluation of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the early site permit application."

As NRC Staff guidance correctly interprets the regulatory scheme: "A PPE is a set of values of plant design parameters that an ESP applicant expects will bound the design characteristics of a reactor or reactors that might be constructed at a given site, and it serves as a surrogate for actual reactor design information."³¹ "PPE values do not reflect a specific design and are not to be reviewed by the NRC staff for correctness."³² The NRC Staff must instead focus on whether the PPE information is sufficient and "whether the PPE values are not unreasonable."³³ "The combination of site characteristics and PPE values will comprise the ESP bases that will be the focus for comparison should a [combined license] application be submitted for the site."³⁴

TVA bears the risk if its final selected design falls outside the terms and

²⁹ For example, Intervenors identify concerns with (1) spent fuel inventory decay time (NuScale), *id.* at 7; (2) refueling patterns (NuScale), *id.* at 9; and (3) the quantity of fuel stored in the spent fuel pool (NuScale and mPower), *id.* at 10.

³⁰ *Id.* at 11 (citing TVA, Clinch River ESP Application, Part 6: Exemptions and Departures, at 2 (Rev. 0 May 2016) (ADAMS Accession No. ML16144A151) [hereinafter Application Exemptions and Departures] (requesting an exemption from standard dose methodology to possibly arrive at a justification for a two-mile or site-boundary EPZ)). Intervenors erroneously cited part 6 of TVA's "COL" application, but clearly intended to refer to its ESP application.

³¹ Office of Nuclear Reactor Regulation [NRR], Review Standard RS-002, Processing Applications for Early Site Permits, at 16 (May 2004) (ADAMS Accession No. ML040700236) [hereinafter RS-002]; *see also* NRR, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition, NUREG-0800, at 1.0-12 (Rev. 2 Dec. 2011).

³² RS-002, attach. 3, ESP Scope and Review Criteria for Environmental Report, at 2 (ADAMS Accession No. ML040700772).

³³ *Id.*

³⁴ RS-002, at 16.

conditions of the PPE within its ESP. If TVA elects to submit a combined license (COL) application featuring design characteristics that are not bounded by the PPE for the ESP, those issues will be reviewed by the NRC Staff, and would be subject to challenge in a hearing request at that time.³⁵

Intervenors also seize upon statements in the DEIS to the effect that the PPE “encompasses” four different SMR designs, including NuScale and mPower,³⁶ to advance an argument that the PPE must cover every aspect of each of the four designs.³⁷ They claim that, because one definition of “encompass” is “[t]o form a circle or ring around; surround,”³⁸ use of the word “encompass” violates “NEPA’s standard of veracity and reliability.”³⁹

Other phrasings in the DEIS demonstrate that the NRC Staff uses “encompass” interchangeably with similar terms. In context, it is clear that the DEIS states that the PPE is based upon the characteristics of SMR designs as they currently exist, but not that every aspect of each such design is necessarily bounded by the PPE. For example, section 3.2 of the DEIS states that the PPE was developed “*using* input from vendors of four SMR technologies.”⁴⁰ Section 5.11 of the DEIS states that the PPE was developed “*considering* four potential SMR technologies.”⁴¹ TVA does not yet know which design it might select, how that design might evolve, or even whether it might select a future design that does not yet exist.

Finally, Intervenors’ claims concerning the size of the EPZ are speculative and premature.⁴² Although TVA has requested a waiver to use a different methodology for determining the size of the EPZ,⁴³ the NRC Staff has not yet acted on its request. Even if its waiver request is granted, what size EPZ might be required is not yet known.

Although TVA’s PPE may not strictly bound all facets of all referenced SMRs as they exist today (or tomorrow), all possible spent fuel pool designs, or multiple EPZ options, the DEIS is based on TVA’s chosen PPE. That basis is sufficient for an ESP. Once TVA chooses a specific reactor design for the COL application, the public will have another opportunity to challenge alleged

³⁵ CLI-18-5, 87 NRC at 129.

³⁶ DEIS at 1-3.

³⁷ Intervenors’ Motion to File New Contentions at 6; Intervenors’ Reply at 3-5.

³⁸ Intervenors’ Reply at 5 (alteration in original).

³⁹ *Id.* at 4, 6.

⁴⁰ DEIS at 3-2 (emphasis added).

⁴¹ *Id.* at 5-68 (emphasis added); *see also id.* at 6-38 (referring to NUREG-0586 Supplement 1’s application to “SMR designs *included* in TVA’s PPE” (emphasis added)).

⁴² *See* Intervenors’ Motion to File New Contentions at 11.

⁴³ *See* LBP-17-8, 86 NRC at 152-57; *see also* Application Exemption and Departures at 1-2.

deficiencies.⁴⁴ Contention 4 does not identify a genuine dispute on a material issue of law or fact,⁴⁵ and therefore Contention 4 is not admitted.⁴⁶

2. Contention 5

Contention 5 challenges the DEIS's allegedly "impermissible inclusion of information about the technical and economic benefits of building and operating the proposed SMR."⁴⁷ It states:

The Draft EIS violates NEPA and NRC implementing regulations 10 C.F.R. §§ 51.75(b), 51.20(b), 51.104, and 52.21, by impermissibly incorporating and claiming to be "informed by" assertions by TVA regarding the economic, technical, and other benefits of the proposed SMR, including need for power and alternative energy sources. The Draft EIS also violates these NEPA regulations by presenting the "no-action" alternative as foregoing benefits (including the asserted benefits of operating the SMRs) rather than avoiding environmental impacts.

Because TVA elected not to address the need for power and energy alternatives in its Environmental Report discussion of the benefits associated with *building and operating* the SMR is prohibited from the Draft EIS by section 51.57(b) [sic]. By the same token, the Draft EIS' inclusion of construction and operation-related benefits in its "Purpose and Need" statement (Draft EIS at 1-9-1-10) goes far beyond the siting related benefits that are may be listed [sic] under 10 C.F.R. § 51.75(b) and the Commission's supporting rationale.

In addition, by incorporating TVA's assertions regarding the construction and operation-related benefits of the proposed SMR, at the same time as it claims *not* to have evaluated the need for power and energy alternatives, the NRC Staff raises a strong inference that it has included TVA's information in the Draft EIS without conducting its own independent evaluation, in violation of 10 C.F.R. § 51.70.

⁴⁴ See 10 C.F.R. § 52.39(c) (providing a hearing where, e.g., the reactor proposed in the COL does not fit the characteristics or design parameters from the ESP); see also *id.* § 51.75(c) (requiring an environmental impact statement, and therefore a hearing opportunity, if a COL does not reference an ESP).

⁴⁵ *Id.* § 2.309(f)(1)(vi).

⁴⁶ In ruling on Contention 4, the Board has considered the supporting affidavit of Dr. Edwin S. Lyman, who attests that "[t]he factual assertions in the contention are true and correct to the best of my knowledge, and the opinions expressed therein are based on my best professional judgment." Intervenor's Motion to File New Contentions, attach. 3, Decl. of Dr. Edwin S. Lyman in Support of Intervenor's Contention 4 (Inadequate Discussion of Environmental Impacts of Pool Fires) ¶5 (May 21, 2018). We find unpersuasive TVA's challenge to the form of the affidavit. Apparently TVA would prefer that the affidavit repeat verbatim each and every fact and opinion set forth in the contention itself. TVA Response at 24-25. A similar challenge to the form of affidavits was rejected in *U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 406-12 (2009).

⁴⁷ Intervenor's Motion to File New Contentions at 1.

Finally, Intervenor contend that the Draft EIS' assertions regarding the need for the proposed SMR and the benefits of the proposed SMR in relation to other energy alternatives are not supported, adequately analyzed, or valid. Yet, Intervenor are prohibited by 10 C.F.R. § 52.21 from challenging the assertions as a result of TVA's and NRC Staff's formal claims not to have addressed them in the Draft EIS. Intervenor respectfully submit that the NRC would violate NEPA's public participation requirements by including and claiming to rely on technical information in the Draft EIS, without permitting interested members of the public an opportunity to challenge the reliability of that information in a hearing.⁴⁸

Contention 5 asserts essentially two challenges: (1) that the DEIS improperly addresses construction and operation benefits despite stating it did not assess the need for power or energy alternatives;⁴⁹ and (2) that its presentation of the no-action alternative improperly focuses on foregone benefits rather than avoided adverse environmental impacts, and that the benefits discussed are those of future construction and operation, rather than of the ESP process itself.⁵⁰ At its core, Contention 5 challenges the DEIS for using information from TVA's Environmental Report that pertains to the "benefits" of SMR technology.

Intervenor contend the DEIS violates section 51.75(b),⁵¹ which prohibits the DEIS from including "an assessment of the economic, technical, or other benefits (for example, need for power) . . . or an evaluation of alternative energy sources, unless these matters are addressed in the early site permit environmental report."⁵² They claim the purpose and need section contains such an assessment.⁵³ We disagree.

In its Environmental Report, TVA explicitly deferred consideration of the economic, technical, or other SMR benefits.⁵⁴ In admitting Intervenor's Contention 3, which was very similar to Contention 5, the Board opined that the eventual inclusion of the challenged language in the DEIS could "arguably vi-

⁴⁸ *Id.* at 12-13 (citations omitted).

⁴⁹ *Id.* at 16-19. This contention also makes several related subsidiary claims, including (1) an alleged lack of an independent evaluation of these benefits by the NRC Staff, *id.* at 21-22; (2) inclusion in the DEIS of unsupported, inadequate, and invalid information, *id.* at 22-27; and (3) an allegedly improper insulation from public challenge of assessments in the DEIS of benefits of construction and operation of SMRs in violation of 10 C.F.R. § 51.104. *Id.* at 22. Each argument fails to show a genuine dispute of law or fact because it relies on the incorrect assertion, as explained *infra*, that there is an assessment of SMR benefits in the DEIS. 10 C.F.R. § 2.309(f)(1)(vi).

⁵⁰ Intervenor's Motion to File New Contentions at 19-21.

⁵¹ *Id.* at 12.

⁵² 10 C.F.R. § 51.75(b).

⁵³ Intervenor's Motion to File New Contentions at 17-18; *see also* DEIS at 1-9 to -10.

⁵⁴ TVA, Clinch River ESP Application, Part 3: Environmental Report, at 8-1, 9.2-1 (Rev. 1 Dec. 2017) (ADAMS Accession No. ML18003A447) [hereinafter Environmental Report].

olate 10 C.F.R. § 51.75(b).”⁵⁵ The Commission disagreed, explaining that “the determining factor” was “TVA’s express statement” that it had “exercised its option not to formally address these issues now.”⁵⁶ Therefore, there was “no reason to believe that TVA (or the Staff, for that matter) w[ould] recast the discussion of the project’s purpose into a need for power or energy alternatives discussion.”⁵⁷ And, indeed, the NRC Staff has not done so in the DEIS.

Although the DEIS does include the language from TVA’s Environmental Report that intervenors originally challenged,⁵⁸ for the reasons the Commission rejected Contention 3 the Board must also reject Contention 5. Like TVA’s Environmental Report statement, the determining factor is the NRC Staff’s express statement in the DEIS that it “does not include an assessment of the need for power or energy alternatives.”⁵⁹ Although the challenged paragraphs arguably sound like conclusions regarding the “benefits” of SMRs, TVA and the NRC Staff clearly state that the four points are merely “objectives” of the Clinch River SMR demonstration project.⁶⁰ The inclusion of these “extraneous statements” on the project’s purpose is irrelevant.⁶¹ Consistent with the Commission’s ruling on Contention 3, the Board takes the NRC Staff at its word. Because there is no assessment of benefits, intervenors raise no genuine dispute with the DEIS.⁶²

Intervenors’ claim that the DEIS inappropriately presents the no-action alternative also fails. Intervenors make two connected arguments. First, intervenors maintain that the DEIS “characteriz[es] [the no-action alternative] as an action that would forego benefits rather than avoid adverse impacts.”⁶³ Second, intervenors argue that the discussed foregone benefits impermissibly include benefits from construction and operation of an SMR, rather than benefits from the ESP process itself.⁶⁴ But neither is so.

DEIS section 9.1, “No-Action Alternative,” explicitly acknowledges the avoided environmental impacts:

Under the no-action alternative the NRC would not issue the ESP. There are no environmental impacts associated with not issuing the ESP, and the impacts

⁵⁵ LBP-17-8, 86 NRC at 164.

⁵⁶ CLI-18-5, 87 NRC at 129.

⁵⁷ *Id.*

⁵⁸ Compare, e.g., SACE/TEC Pet. at 16-18, with DEIS at 1-9 to -10.

⁵⁹ DEIS at 1-4; see also *id.* at 8-1.

⁶⁰ *Id.* at 1-9 (“TVA provided the following four main *objectives* of the CRN SMR Project.”) (emphasis added); Environmental Report at 9.1-1.

⁶¹ CLI-18-5, 87 NRC at 129.

⁶² 10 C.F.R. § 2.309(f)(1)(vi).

⁶³ Intervenors’ Motion to File New Contentions at 19.

⁶⁴ *Id.* at 20-21.

predicted in this EIS associated with building and operating two or more SMRs at the CRN Site or at any one of the alternative sites would not occur.⁶⁵

The no-action alternative also does not reference benefits of future construction and operation. Intervenors challenge language on pages 1-12 and 9-1 to 9-2,⁶⁶ but these portions of the DEIS only reference benefits of the ESP process itself. In fact, the challenged paragraph from pages 9-1 to 9-2 follows the basic format of the paragraph that Intervenors quote from the preamble to the 2007 amendments to the NRC's Part 52 regulations, which provides examples of the benefits that are associated with the ESP process and may be included in the EIS.⁶⁷

Intervenors are therefore wrong when they claim the no-action alternative addresses only lost benefits, rather than avoided impacts, and also are wrong when they claim the no-action alternative addresses anything other than benefits of the ESP process itself. There is no genuine dispute with the DEIS.⁶⁸ Intervenors will have the opportunity to address these issues if and when TVA files a COL (or construction permit) application.⁶⁹ Contention 5 is not admitted.⁷⁰

⁶⁵ DEIS at 9-1.

⁶⁶ Intervenors' Motion to File New Contentions at 20.

⁶⁷ Compare Final Rule: Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,430 (Aug. 28, 2007) (stating the benefits of the ESP process that may be discussed in the EIS), with DEIS at 9-1 to -2 (stating the foregone benefits of the no-action alternative).

⁶⁸ 10 C.F.R. § 2.309(f)(1)(vi).

⁶⁹ See CLI-18-5, 87 NRC at 129. Intervenors claim that these issues are improperly "insulated from challenge in this proceeding by § 52.21." Intervenors' Motion to File New Contentions at 22. However, because an assessment of benefits is neither required nor included in the DEIS, the Board *must* refuse to "admit contentions proffered by any party concerning an assessment of the benefits . . . or an analysis of alternative energy sources." 10 C.F.R. § 52.21. Further, because Intervenors will have an opportunity to raise concerns at the COL stage, including on the issue of need for power and energy alternatives, there is no violation of section 51.104(a)(2), as Intervenors claim. Intervenors' Motion to File New Contentions at 22. Intervenors also allege a violation of section 51.20(b), which requires an EIS for an ESP, but do not explain how this regulation has allegedly been violated. Intervenors' Motion to File New Contentions at 12, 28.

⁷⁰ In ruling on Contention 5, the Board has not considered the supporting affidavit of Dr. M.V. Ramana insofar as it attempts to interpret "NEPA and NRC implementing regulations 10 C.F.R. §§ 51.75(b), 51.20(b), and 52.21." Intervenors' Motion to File New Contentions, attach. 4, Decl. of Dr. M.V. Ramana in Support of Intervenors' New Contention 4 [sic] (Impermissible Discussion of Energy Alternatives and Need for Proposed SMR) ¶4 (May 18, 2018). Interpretations of statutes and regulations are fair subjects for arguments by counsel or a party representative, but are not a proper subject of an expert opinion. Even a lawyer may not offer expert testimony on these subjects, much less a non-lawyer trained in theoretical physics. See, e.g., *United States v. McIver*, 470 F.3d 550, 561-62 (4th Cir. 2006) ("[O]pinion testimony that states a legal standard or draws a

(Continued)

III. ORDER

For the foregoing reasons:

- A. TVA's and the NRC Staff's motions to dismiss Contention 2 as moot are *granted*. Contention 2 is *dismissed*.
- B. Intervenors' motion for leave to file new contentions is *denied*. Contention 4 and Contention 5 are *not admitted*.
- C. This proceeding is *terminated*.

Any appeal of this decision to the Commission shall be filed in conformity with 10 C.F.R. § 2.311.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. Sue H. Abreu
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 31, 2018

legal conclusion by applying law to the facts is generally inadmissible.”); *cf. Nieves-Villanueva v. Soto-Rivera*, 133 F.3d 92, 99-100 (1st Cir. 1997) (recognizing that the “well-recognized exception” to excluding expert testimony on purely legal issues is for questions of foreign law).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Brian E. Holian, Acting Director

In the Matter of

Docket Nos.: See Attached List
(License Nos.: See Attached List)

POWER REACTOR LICENSEES

August 2, 2018

By electronic mail dated January 24, 2017, as supplemented, Mr. Paul Gunter submitted a petition on behalf of Beyond Nuclear and co-petitioners (the Petitioners), under Title 10, "Energy," of the *Code of Federal Regulations* (10 C.F.R.) section 2.206, "Requests for Action Under This Subpart." The Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take the following emergency enforcement actions at several NRC-licensed nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation supplied by AREVA-Le Creusot Forge and its subcontractor, Japan Casting and Forging Corporation: (1) immediately suspend power operations or alternatively modify the operating licenses to require the affected operators to perform the petitioners' requested emergency enforcement actions at the next scheduled outage; (2) require either replacement of at-risk components or require licensees to submit license amendment requests to ensure a revised design basis is achievable; (3) issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for the potential carbon segmentation anomaly in the supply chain and the reliability of the quality assurance certification of those components; (4) confirm the sale, delivery, quality control, and quality assurance certification and installation of the replacement reactor pressure vessel head as supplied to Crystal River Unit 3 nuclear power station by then Framatome and now AREVA-Le Creusot Forge. With completion and confirmation [of those Crystal River Unit 3 actions], require modification of Duke Energy's current license for the permanently closed Crystal

River Unit 3 to inspect and conduct the appropriate material test(s) for carbon macrosegregation on sufficient samples harvested from the installed and now in-service-irradiated Le Creusot Forge reactor pressure vessel head.

As the basis of the requests, the petition described the review of a nuclear safety consultant identifying significant “irregularities” and “anomalies” in both the manufacturing process and quality assurance documentation of large reactor components manufactured by the AREVA-Le Creusot Forge for French reactors and reactors in other countries. The petition stated that the consultant’s review established that these potentially compromised components that make up the reactors’ all-important primary pressure boundary may be defective due to carbon anomalies in the forging process.

A Petition Review Board (PRB) was established to review the petition. On February 13, 2017, the PRB’s Petition Manager informed the Petitioners that none of the petition’s requested immediate actions were warranted because the NRC Staff had concluded that reasonable assurance of public health and safety and protection of the environment was maintained. On March 8, 2017, a public meeting was held to provide an opportunity for the Petitioners to address the PRB. In a letter dated August 30, 2017, the NRC Office of Nuclear Reactor Regulation informed the Petitioners that the petition request met the criteria for review under 10 C.F.R. § 2.206, but that Petitioners’ concern of potentially falsified quality assurance documentation would be referred to another NRC process.

The Office of Nuclear Reactor Regulation Director’s Decision was issued August 2, 2018, and stated that the actions requested by the Petitioners would not be granted. The Director’s Decision described the NRC’s preliminary safety assessment conclusion that even with the worst practical degree of carbon anomalies (“carbon segregation” or “carbon macrosegregation” (CMAC)) within the suspect components, the components would still have a lower failure probability than portions of the reactor pressure vessel that are known to have adequate toughness for safe operation. The Director’s Decision also identified a March 2017 NRC limited-scope vendor documentation inspection of an AREVA facility that did not identify any violations or nonconformances. In addition, the Director’s Decision described that the NRC Staff documented a risk-informed evaluation of the potential safety significance of CMAC in AREVA-produced U.S. plant components, and the options applicable to the evaluation of these components align directly with the Petitioners’ requests.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

On January 24, 2017,¹ Mr. Paul Gunter submitted a petition on behalf of Beyond Nuclear that represents numerous public interest groups (collectively referred to as the Petitioners) under Title 10 of the *Code of Federal Regulations* (10 C.F.R.) 2.206, "Requests for Action Under This Subpart." The Petitioners supplemented their petition by e-mails dated February 16,² March 6,^{3,4} June 16,⁵ June 22,⁶ June 27,⁷ June 30,⁸ and July 5, 2017.⁹ The June 16 and June 22, 2017, supplements added the Crystal River Unit 3 Nuclear Generating Plant (Crystal River Unit 3) to the list of plants subject to the petition and requested slightly different enforcement actions. The rest of the supplements did not expand the scope of the petition or request additional actions that should be considered as a new petition. The Petitioners asked the U.S. Nuclear Regulatory Commission (NRC) to take emergency enforcement action at U.S. nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation supplied by AREVA-Le Creusot Forge (ACF) and its subcontractor, Japan Casting and Forging Corporation (JCFC).¹⁰ Table 1 lists potentially affected components and the at-risk reactors identified in the petition.

Specifically, the Petitioners asked the NRC to take enforcement actions consistent with the following:

1. Suspend power operations of U.S. nuclear power plants that rely on ACF components and subcontractors pending a full inspection (including non-destructive examination by ultrasonic testing) and material testing. If carbon anomalies ("carbon segregation" or "carbon macrosegregation" (CMAC)) in excess of the design-basis specifications for at-risk component parts are identified, require the licensee to do one of the following:

¹ See Agencywide Documents Access and Management System (ADAMS) Accession No. ML17025A180.

² See ADAMS Accession No. ML17052A032.

³ See ADAMS Accession No. ML17068A061.

⁴ See ADAMS Accession No. ML17067A562.

⁵ See ADAMS Accession No. ML17174A087.

⁶ See ADAMS Accession No. ML17174A788.

⁷ See ADAMS Accession No. ML17179A288.

⁸ See ADAMS Accession No. ML17184A058.

⁹ See ADAMS Accession No. ML17187A026.

¹⁰ The petition incorrectly states that JCFC is a subcontractor to ACF.

Table 1. List of Potentially Affected Components and Reactors

| Reactor Pressure Vessels | Replacement Reactor Pressure Vessel Heads | Steam Generators | Steam Pressurizers |
|------------------------------------|--|---------------------------------|---------------------------|
| Prairie Island, Units 1 and 2 (MN) | Arkansas Nuclear One, Unit 2 (AR) | Beaver Valley, Unit 1 (PA) | Millstone, Unit 2 (CT) |
| | Beaver Valley, Unit 1 (PA) | Comanche Peak, Unit 1 (TX) | Saint Lucie, Unit 1 (FL) |
| | North Anna, Units 1 and 2 (VA) | V.C. Summer (SC) | |
| | Surry, Unit 1 (VA) | Farley, Units 1 and 2 (AL) | |
| | Crystal River, Unit 3 (FL) | South Texas, Units 1 and 2 (TX) | |
| | | Sequoyah, Unit 1 (TN) | |
| | | Watts Bar, Unit 1 (TN) | |

- a. Replace the degraded at-risk component(s) with quality-certified components.
 - b. For those at-risk degraded components that a licensee seeks to allow to remain in service, apply through the license amendment request process to demonstrate that a revised design basis is achievable and will not render the in-service component unacceptably vulnerable to fast fracture failure at any time and in any credible service condition throughout the current license of the power reactor.
2. Alternatively modify the licensees' operating licenses to require the licensees to perform the requested emergency enforcement actions at the next scheduled outage.
 3. Issue a letter to all U.S. light-water reactor operators under 10 C.F.R. § 50.54(f) requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitor-

ing contractors and subcontractors for the potential carbon segmentation anomaly in the supply chain and the reliability of the quality assurance certification of those components, and publicly release the responses.

The June 16 and June 22, 2017, supplements to the petitions added Crystal River Unit 3, which is currently shut down, and the licensee. Duke Energy, to the list of facilities for which the Petitioners requested the following fourth NRC action:

- a. Confirm the sale, delivery, quality control and quality assurance certification and installation of the replacement reactor pressure vessel head as supplied to Crystal River Unit 3 by then Framatome and now AREVA-Le Creusot Forge industrial facility in Charlon-St. Marcel, France and;
- b. With completion and confirmation [of the above Crystal River Unit 3 actions], the modification of Duke Energy's current license for the permanently closed Crystal River Unit 3 nuclear power station in Crystal River, Florida, to inspect and conduct the appropriate material test(s) for carbon macrosegregation on sufficient samples harvested from the installed and now inservice irradiated Le Creusot Forge reactor pressure vessel head [sic]. The Petitioners assert that the appropriate material testing include Optical Emissions Spectrometry (OES).

As the basis of their requests, the Petitioners cited the expert review by Large and Associates Consulting Engineers that identified significant irregularities and anomalies in both the manufacturing process and quality assurance documentation of large reactor components manufactured by the ACF for French reactors and reactors in other countries.¹¹

On February 2, 2017,¹² the Office of Nuclear Reactor Regulation (NRR) petition manager acknowledged receipt of the petition and offered an opportunity for the Petitioners to address NRR's 10 C.F.R. § 2.206 Petition Review Board (PRB) to discuss the petition. The Petitioners accepted the offer, and the meeting was held on March 8, 2017. The transcript¹³ of that meeting is publicly available.

On February 8, 2017, the PRB met internally to discuss the request for immediate actions and informed the Petitioners on February 13, 2017,¹⁴ that no actions were warranted at that time because the NRC has reasonable assurance

¹¹ See the report titled "Irregularities and Anomalies Relating to the Forged Components of Le Creusot Forge," dated September 26, 2016, Large and Associates Consulting Engineers, London, England (available at http://www.largeassociates.com/CZ3233/Note_LargeAndAssociates_EN_26092016.pdf).

¹² See ADAMS Accession No. ML17039A501.

¹³ See ADAMS Accession No. ML17081A418.

¹⁴ See ADAMS Accession No. ML17052A033.

of public health and safety and protection of the environment. The basis for the PRB's determination included the following:

- ***Extent of Condition.*** Internationally, CMAC has been found only in components produced by ACF using a specific processing route. Based on the Staff's knowledge as of February 2017, only a subset of the plants identified in the petition contain components that may have used the processing route that resulted in the excess CMAC found in international plants.
- ***Degree of Condition.*** If CMAC is present in a component, it occurs in a localized region of the forged component. It is not a bulk material phenomenon, does not go through thickness, and is not expected to affect the structural integrity of the component. In addition, based on the Staff's knowledge as of February 2017, the highest levels of CMAC observed internationally, if present in the postulated regions of U.S. components, are not expected to alter the mechanical properties of the material enough to affect the structural integrity of the components. Destructive examinations of components containing regions of CMAC have been conducted internationally to determine how CMAC affects mechanical properties and such examinations confirm that structural integrity has not been impacted. A summary of the international investigation is summarized in Section II.A, below, and details of the investigation and its impact on structural integrity are described in the Staff's evaluation dated February 22, 2018.¹⁵
- ***Safety Significance.*** The Staff's preliminary safety assessment concluded that the safety significance of CMAC to the U.S. nuclear power reactor fleet appears to be negligible. The Staff based its assessment on knowledge of the material processing, qualitative analysis, compliance of U.S. components with the American Society of Mechanical Engineers *Boiler Pressure and Vessel Code* (ASME Code), and the results of preliminary structural evaluations. The NRC subsequently presented the basis for this determination in a technical session, titled "Carbon Macrosegregation in Large Nuclear Forgings," at the NRC-sponsored Regulatory Information Conference on March 15, 2017.^{16,17}

On April 11, 2017, the PRB met to discuss the petition with respect to the criteria for consideration under 10 C.F.R. § 2.206. Based on that review, the

¹⁵ See ADAMS Accession No. ML18017A441.

¹⁶ See ADAMS Accession No. ML17171A108.

¹⁷ See ADAMS Accession No. ML17171A106.

PRB determined that the petition request meets the criteria for consideration under 10 C.F.R. § 2.206. On May 19, 2017, the petition manager informed the Petitioners that the initial recommendation was to accept the petition for review but to refer a portion of the petition (i.e., the concern of potentially falsified quality assurance documentation) to the NRC's allegation process for appropriate action.¹⁸ The petition manager also offered the Petitioners an opportunity to comment on the PRB's recommendations. On July 5, 2017, the petition manager clarified the initial recommendation and asked for a response as to whether the Petitioners wanted to address the PRB a second time to comment on its recommendations. The Petitioners did not request a second opportunity to address the PRB. Therefore, the PRB's initial recommendations to accept part of the petition for review under 10 C.F.R. § 2.206 and to refer a part to another NRC process became final. On August 30, 2017, the petition manager issued an acknowledgment letter to the Petitioners.¹⁹

By a letter to the Petitioners, which copied the licensees, dated June 6, 2018,²⁰ the NRC issued the proposed director's decision for comment. The Petitioners were asked to provide comments within 14 days on any part of the proposed director's decision considered to be erroneous or any issues in the petition that were not addressed. The NRC Staff did not receive any comments on the proposed director's decision.

The petition and other references related to this petition are available for inspection in the NRC's Public Document Room (PDR), located at O1F21, 11555 Rockville Pike (first floor), Rockville, MD 20852. Publicly available documents created or received at the NRC are accessible electronically through ADAMS in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR reference Staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail to pdr.resource@nrc.gov.

II. DISCUSSION

Under the 10 C.F.R. § 2.206(b) petition review process, the Director of the NRC office with responsibility for the subject matter shall either institute the requested proceeding or shall advise the person who made the request in writing that no proceeding will be instituted, in whole or in part, with respect to the

¹⁸ See ADAMS Accession No. ML17142A334.

¹⁹ See ADAMS Accession No. ML17198A329.

²⁰ See ADAMS Accession No. ML18107A402.

request and the reason for the decision. Accordingly, the decision of the NRR Director is provided below. As further discussed below, the petition is denied.

The NRC's policy is to have an effectively coordinated program to promptly and systematically review relevant domestic and applicable international operational experience (OpE) information. The program supplies the means for assessing the significance of OpE information, offering timely and effective communication to stakeholders, and applying the lessons learned to regulatory decisions and programs affecting nuclear reactors. The NRC Management Directive 8.7, "Reactor Operating Experience Program," dated February 1, 2018, describes the Reactor OpE Program.²¹ The NRR Office Instruction (OI) LIC-401, "NRR-NRO Reactor Operating Experience Program," Revision 3, addresses the specific implementation of the Reactor OpE Program.²²

As reported in internal NRC communications, AREVA notified France's nuclear safety authority, Autorité de Sûreté Nucléaire (ASN), of an anomaly in the composition of the steel in certain zones of the reactor pressure vessel (RPV) upper and lower heads of the Flamanville Nuclear Power Plant (Flamanville), Unit 3, in Manche, France. Both the upper and lower vessel heads were manufactured by ACF. According to ASN, chemical and mechanical property testing performed by AREVA in late 2014 (on a vessel head similar to that of the Flamanville European Pressurized Reactor (EPR)) revealed a zone of high carbon concentration (0.30 percent as opposed to a target value of 0.22 percent), which led to lower than expected mechanical toughness values in that area. Initial measurements confirmed the presence of this anomaly in the Flamanville, Unit 3, RPV upper and bottom heads.

In accordance with the process described in NRR OI LIC-401, the NRC's Reactor OpE Program Staff ensured that the appropriate technical experts within the NRC were aware of the issue and were evaluating these issues for relevance to the U.S. industry. In addition, the NRC has strong collaboration with the international community and was separately in contact with ASN to discuss this issue.

A. Description of the Issue

The CMAC is a known phenomenon that takes place during the casting of large ingots. The CMAC is a material heterogeneity in the form of a chemical (i.e., carbon) gradient that deviates from the nominal composition and may exceed specification limits. Portions of the ingot containing CMAC that exceed specification limits (positive CMAC) are purposefully removed and discarded as part of the material processing. Regions of positive CMAC that are not

²¹ See ADAMS Accession No. ML18012A156.

²² See ADAMS Accession No. ML12192A058.

appropriately removed result in localized regions near the surface of the final component with higher strength and lower toughness relative to the bulk material.

In April 2015, regions of positive CMAC were discovered in EPR RPV heads that were manufactured for the Flamanville plant. The ACF had produced the forgings for the Flamanville upper and lower RPV heads. The discovery of the CMAC in the heads prompted ASN to ask the operator, Électricité de France S.A. (EDF) (Electricity of France), to review in-service forged components at all of its plants to determine the potential extent of the condition. The review identified steam generator (SG) channel heads (also commonly referred to as SG primary heads) produced by ACF and JCFC as the components most likely to contain a region of CMAC. The ASN requested that nondestructive testing be performed on these SG channel heads to characterize the carbon content and confirm the absence of unacceptable flaws.

On October 18, 2016, ASN ordered the acceleration of the nondestructive testing of the potentially affected ACF and JCFC SG channel heads, which required completion of the remaining nondestructive testing within 3 months. The discovery of higher than expected carbon values measured on an in-service SG channel head produced by JCFC prompted the accelerated schedule. As a result, to perform the required nondestructive tests, EDF had to shut down its plants before their scheduled outages.

AREVA Inc. (AREVA Inc. or AREVA), located in Lynchburg, VA, provides safety-related products and services for U.S. operating nuclear power plants, including replacements for reactor coolant pressure boundary components. On February 3, 2017,²³ AREVA Inc. submitted a list to the NRC of the U.S. reactors that have received components fabricated with forgings from ACF. Operating U.S. plants have no known components from JCFC.

In September 2015, June 2016, and June 2017, ASN convened an Advisory Committee of Experts for Nuclear Pressure Equipment to obtain its technical opinion on the consequences of CMAC for the serviceability of the Flamanville EPR reactor vessel domes. The resulting series of publicly available reports (CODEP-DEP-2015-037971,²⁴ CODEP-DEP-2016-019209,²⁵ and CODEP-DEP-

²³ See ADAMS Accession No. ML17040A100.

²⁴ See ASN/Institut de Radioprotection et de Sûreté Nucléaire (IRSN) (Radioprotection and Nuclear Safety Institute) report CODEP-DEP-2015-037971, “Analysis of the Procedure Proposed by AREVA to Prove Adequate Toughness of the Dome of the Flamanville 3 EPR Reactor Pressure Vessel Lower Head and Closure Head,” English translation, dated September 16, 2015. <http://www.french-nuclear-safety.fr/Media/Files/00-Publications/Report-to-the-Advisory-Committee-of-Experts-for-Nuclear-Pressure-Equipment>.

²⁵ See ASN/IRSN report CODEP-DEP-2016-019209, “Procedure Proposed by AREVA to Prove
(Continued)

2017-019368²⁶) justified the continued use of the Flamanville heads. In this effort, AREVA conducted hundreds of mechanical and chemical property experiments on three full-scale replica heads that were manufactured by ACF using the same process as that used for the Flamanville heads. Using these experimental results, AREVA conducted a variety of code-related fracture and strength analyses that demonstrated that the risk of fast fracture from CMAC was extremely low. Through this effort, ASN concluded that the serviceability of the heads is acceptable as long as EDF conducts the required in-service inspections. However, because of its inability to conduct an adequate in-service inspection on the Flamanville upper head, ASN concluded that the upper head long-term serviceability could not be confirmed and that the head should be replaced after a few years of operation.

B. Initial Actions by the NRC and the U.S. Nuclear Industry

Beginning in December 2016, the NRC Staff conducted a preliminary safety assessment to determine the potential safety significance posed to the U.S. nuclear power reactor fleet by the CMAC observed in reactor coolant system (RCS) components overseas and concluded that the failure of an RPV/SG head component has a very low probability, even if the worst practical degree of CMAC occurs within that component. The NRC Staff used a qualitative failure comparison to assess the relative likelihood of failure of an RPV shell (which is not expected to be subject to positive CMAC) with RPV/SG head component types that could be affected by CMAC. Based on this comparison, the NRC determined the following:

- The RPV shell experiences higher stresses under both normal operations and postulated accident scenarios.
- The weld region of an RPV shell has a greater likelihood of having more flaws and larger fabrication flaws. The larger fabrication flaws typically have the higher potential to result in component failure.
- Although the initial toughness of an RPV shell material may be greater than an RPV/SG head with postulated positive CMAC, the shell tough-

Adequate Toughness of the Domes of the Flamanville 3 EPR Reactor Pressure Vessel Bottom Head and Closure Head,” English translation, dated June 17, 2016. <https://www.asn.fr/content/download/106732/811356/version/6/file/CODEP-DEP-2016-019209-advisorycommitte24june2016-summaryreport.pdf>.

²⁶ See ASN/IRSN report CODEP-DEP-2017-019368, “Analysis of the Consequences of the Anomaly in the Flamanville EPR Reactor Pressure Vessel Head Domes on Their Serviceability,” English translation, dated June 15, 2017. http://www.irsn.fr/FR/expertise/rapports_gp/Documents/GPESPN/IRSN-ASNDEP_GPESPN-Report_pressure-vessel-FA3_201706.pdf.

ness decreases as the result of radiation embrittlement after several years of operation. As a result, the current as-operated toughness of RPV shell material is expected to be lower than the toughness of RPV/SG head material with postulated CMAC. The RPV shell material is known to have adequate toughness for safe operation.

When combining all these individual attributes, an RPV/SG head component with postulated CMAC is much less likely to fail than an RPV shell. Past research and operating experience has demonstrated that failure of an RPV shell under normal operations or postulated accident scenarios has a very low probability of occurrence.^{27,28} Therefore, the failure of an RPV/SG head component also has a very low probability, even if the worst practical degree of CMAC occurs within that component. The NRC presented the basis for this preliminary determination in a technical session titled “Carbon Macrosegregation in Large Nuclear Forgings” (cited above) at the March 15, 2017, NRC-sponsored Regulatory Information Conference.

Concurrent with the NRC analyses, the U.S. industry initiated a research program in early 2017, conducted by the Electric Power Research Institute (EPRI), to address the generic safety significance of elevated carbon levels caused by CMAC in the components of interest. This program was divided into the following four main tasks, each aimed at developing both qualitative and quantitative information to make a safety determination:

1. extension of RPV probabilistic fracture mechanics (PFM) analyses to qualitatively bound other components
2. development of a robust technical basis to support the hypothesis that RPV integrity bounds other components
3. quantitative structural analyses to assess whether the results of the PFM analyses of the RPV beltline (Task 1) bound the other forged components
4. a white paper assessing the effect of CMAC on SG tubesheets based on expert judgment and experience with the fabrication of the tubesheets as large forgings

As of the writing of this document, Task 1 has been completed and has been publicly released as Materials Reliability Program (MRP)-417.²⁹ The other tasks are still under development with the expected release of the report(s) in 2018.

²⁷ See ADAMS Accession No. ML072830076.

²⁸ See ADAMS Accession No. ML072820691.

²⁹ EPRI Report No. 3002010331, “Materials Reliability Program: Evaluation of Risk from Carbon Macrosegregation in Reactor Pressure Vessels and Other Large Nuclear Forgings (MRP-417),” issued June 2017 (available at ADAMS Accession No. ML18054A862).

The MRP-417 addresses the structural significance of the potential presence of CMAC in large, forged pressurized-water reactor pressure-retaining components, including the RPV head, beltline and nozzle shell forgings, and the SG and pressurizer ring and head forgings through the end of an 80-year operating interval. The assessment was made using the NRC risk safety criterion of a 95th percentile through-wall crack frequency (TWCF) of less than 1×10^{-6} per year (yr^{-1}) (10 C.F.R. § 50.61a, “Alternative Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events”) for pressurized thermal shock (PTS) events and a conditional probability of failure (CPF) of less than 1×10^{-6} for normal operating transients. These analyses used many of the same assumptions and inputs as those used in the basis for the 10 C.F.R. § 50.61a alternate PTS rule.^{30,31} In addition, the analysts approximated the effect of carbon content on the fracture toughness of the steel through a review of the available literature.

The MRP-417 describes the analyses and results for bounding values for the RPV shell, RPV upper head, SG channel head, pressurizer shell, and pressurizer head components based on the analyses assumptions from the alternate PTS rule in conjunction with the effect of the CMAC on the material toughness. The report’s deterministic results suggest that the RPV vessel behavior bounds the behavior of the pressurizer components. In addition, the probabilistic results suggest that in all cases, assuming the maximum carbon content observed in the field, the calculated TWCF and CPF were below the NRC risk safety criterion of the 95th percentile TWCF of less than $1 \times 10^{-6} \text{ yr}^{-1}$ for PTS events and a CPF of less than 1×10^{-6} for normal operating transients. MRP-417 concludes that there is substantial margin against failure through an 80-year operating interval using the assumed CMAC distributions in the RPV, SG, and pressurizer rings and head forgings in pressurized-water reactors.

In March 2017, an NRC inspection team performed a limited-scope vendor inspection at the AREVA facility in Lynchburg, Virginia, to review documentation from ACF and assess AREVA’s compliance with the provisions of selected portions of Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” to 10 C.F.R. Part 50, and 10 C.F.R. Part 21, “Reporting of Defects and Noncompliance.” This inspection focused on AREVA’s documentation and evaluation of potential carbon macrosegregation issues in forgings supplied by AREVA for U.S. operating nuclear power plants. Specifically, the NRC inspection reviewed documentation to verify that forgings met the ASME Code requirements for carbon content and mechani-

³⁰ See ADAMS Accession No. ML072830076.

³¹ See ADAMS Accession No. ML072820691.

cal properties. The NRC issued the inspection report on May 10, 2017.³² The limited-scope inspection reviewed policies and procedures that govern implementation of AREVA's 10 C.F.R. Part 21 program, and nonconformance and corrective action policies and procedures under its approved quality assurance program related to the manufacturing processes used by ACF to fabricate in-service U.S. components and the resulting mechanical properties. The NRC inspection team used Inspection Procedure (IP) 43002, "Routine Inspections of Nuclear Vendors,"³³ and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance."³⁴ The inspection team did not identify any violations or nonconformances during the inspection.

The inspection report contains the following primary material processing and property observations:

- A population of the components produced by ACF has a low or no possibility of containing regions of CMAC.
- Carbon levels and mechanical properties for the components reviewed conformed to ASME Code requirements.
- The information reviewed did not challenge the NRC's preliminary determination on the CMAC topic (i.e., that the safety significance to the U.S. nuclear power reactor fleet appears to be negligible).

The NRC Staff also documented its risk-informed evaluation of the potential safety significance of CMAC in components produced by ACF, as it relates to the safe operation of U.S. plants, and options for addressing the topic using its risk-informed decision-making process in NRR OI LIC-504, "Integrated Risk-Informed Decision-Making Process for Emergent Issues," Revision 4, dated June 2, 2014,³⁵ to evaluate this issue.

C. Applicable NRC Regulatory Requirements and Guidance

The NRC requires U.S. nuclear reactor components fabricated with forgings from ACF to be manufactured and procured in accordance with all applicable regulations, as well as the ASME Code requirements that are incorporated by reference. The regulations most pertinent to the prevention and identification of CMAC in regions of RCS components are the ASME Code requirements incorporated by reference in 10 C.F.R. § 50.55a, "Codes and Standards," and

³² See ADAMS Accession No. ML17124A575.

³³ See ADAMS Accession No. ML13148A361.

³⁴ See ADAMS Accession No. ML113190538.

³⁵ See ADAMS Accession No. ML14035A143.

quality assurance requirements in 10 C.F.R. Part 50, Appendix B. In addition to the NRC regulations and ASME Code requirements that are focused on the process and quality controls for addressing CMAC, there are also regulations that focus on performance and design criteria that may be impacted by regions of CMAC. These regulations include: 10 C.F.R. § 50.60, “Acceptance criteria for fracture prevention measures for lightwater nuclear power reactors for normal operation,” Appendix A to 10 C.F.R. Part 50, “General Design Criteria for Nuclear Power Plants,” and Appendix G to 10 C.F.R. Part 50, “Fracture Toughness Requirements.” The applicability of specific NRC regulations and ASME Code requirements will, in part, depend on the dates that the regulations or requirements became effective relative to a component being put into operation. The plant-specific design basis and current licensing basis address the fundamental regulatory requirements pertaining to the integrity of the components of interest.

Appendix B to 10 C.F.R. Part 50 establishes quality assurance requirements for the design, manufacture, construction, and operation of the structures, systems, and components (SSCs) for nuclear facilities. Appendix B requirements apply to all activities affecting the safety-related functions of those SSCs. These activities include designing, purchasing, fabricating, handling, installing, inspecting, testing, operating, maintaining, repairing, and modifying SSCs. To accomplish these activities, licensees must contractually pass down the requirements of Appendix B through procurement documentation to suppliers of SSCs, as stated in the Appendix B criteria below.

Criterion IV, “Procurement Document Control,” of 10 C.F.R. Part 50, Appendix B, states the following:

Measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the applicant or by its contractors or subcontractors. To the extent necessary, procurement documents shall require contractors or subcontractors to provide a quality assurance program consistent with the pertinent provisions of this appendix.

Criterion VII, “Control of Purchased Material, Equipment, and Services,” of 10 C.F.R. Part 50, Appendix B, in part, states, the following:

Documentary evidence that material and equipment conform to the procurement requirements shall be available at the nuclear power plant or fuel reprocessing plant site prior to installation or use of such material and equipment. This documentary evidence shall be retained at the nuclear power plant or fuel reprocessing plant site and shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment.

The licensee is responsible for ensuring that the procurement documentation appropriately identifies the applicable regulatory and technical requirements and for determining whether the purchased items conform to the procurement documentation.

Criterion XV, “Nonconforming Materials, Parts, or Components,” of 10 C.F.R. Part 50, Appendix B, states the following:

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or re-worked in accordance with documented procedures.

Nonconformances identified by the supplier during manufacturing must be technically evaluated and dispositioned accordingly. If the supplier identifies a nonconformance, such as the presence of CMAC in the final product, it must perform an engineering evaluation and document the nonconformance on the associated certificate of conformance. The licensee is responsible for reviewing the certificate of conformance during receipt inspection for acceptance of the final product upon delivery.

Under 10 C.F.R. Part 21, the NRC requires both licensees and their suppliers to evaluate any condition or defect in a component that could create a substantial safety hazard. Regions of CMAC in RCS components suspected of having the potential to create a substantial safety hazard would be an example of a condition that licensees and their suppliers must evaluate. In addition, 10 C.F.R. Part 21 requires the entity to notify the NRC if it becomes aware of information that reasonably indicates that a basic component contains defects that could create a substantial safety hazard.

D. Summary of the NRC’s Evaluation

The NRC’s evaluation of this issue consisted of conducting preliminary safety analyses as described above, reviewing the testing and analyses performed by the French licensee, meeting with French and Japanese regulators to discuss their evaluation, reviewing the nuclear industry’s evaluation of the issue, conducting an onsite inspection of manufacturing and procurement records, and determining the final safety assessment using a risk-informed decision-making process. The Staff’s evaluation dated February 22, 2018, documents the NRC’s full evaluation of the CMAC topics as it relates to plants operating in the United States.

The Staff reviewed the publicly available ASN documentation on this issue (CODEP-DEP-2015-037971, CODEP-DEP-2016-019209, and CODEP-DEP-

2017-019368) and concluded that, although ASN's decisions and actions are based solely on French nuclear regulations which do not directly correlate to U.S. regulations, the experimental results and the fast fracture analyses can provide direct insight into the expected behavior of postulated CMAC in U.S.-forged components. As concluded by ASN, the analyses demonstrate that the fast fracture of the Flamanville heads from the impacts of CMAC can be ruled out in view of the margins determined by the analyses.

The NRC Staff reviewed the technical information in MRP-417 and concluded that it was credible for use in this assessment for the following reasons:

- The risk criteria used for the CPF and 95th percentile TWCF were identical to those used in the development of 10 C.F.R. § 50.61a.
- Major probabilistic inputs, such as flaw distribution, standard material properties, transients, and normal operating conditions were identical to those used in the development of 10 C.F.R. § 50.61a.
- The CMAC distribution and toughness relationships used were based on historical literature and empirical data.
- The assumptions made using the computational model were consistent with, or were conservative as compared to those used in the analyses for the development of 10 C.F.R. § 50.61a.

The NRC assessment of MRP-417 for this report does not constitute a regulatory endorsement of its full contents. The NRC Staff will assess the other industry reports on the CMAC topic in the same manner as such reports become available.

Although these evaluations provide useful information to address the impacts of postulated CMAC in forged components in service at U.S. operating reactors, the NRC Staff used an analysis approach, leveraging existing PFM results and examining them in the context of the NRC's approach to the risk-informed decision-making process described in NRR OI LIC-504.

Consistent with LIC-504, for this review, the NRC Staff considered the following five principles of risk-informed decision-making when considering options for addressing this issue:

- ***Principle 1.*** The proposed change must meet the current regulations unless it is explicitly related to a requested exemption or rule change.
- ***Principle 2.*** The proposed change shall be consistent with the defense-in-depth philosophy.
- ***Principle 3.*** The proposed change shall maintain sufficient safety margins.

- **Principle 4.** When the proposed change results in an increase in core damage frequency or risk, the increases should be small and consistent with the intent of the Commission’s safety goals.
- **Principle 5.** Monitoring programs should be in place.

The NRC Staff considered the following four options to address the potential impact of the international CMAC OpE on the U.S. nuclear power reactor fleet. Options 2, 3, and 4 align with the Petitioners’ requests.

- Option 1: Evaluate and Monitor
- Option 2: Issue a Generic Communication
- Option 3: Issue Orders Requiring Inspections
- Option 4: Issue Orders Suspending Operation

Option 1

This option consists of the NRC Staff continuing to monitor all domestic and international information associated with the CMAC topic. The Staff will evaluate new information, as it becomes available, to ensure that conservatism in the Staff’s final safety determination is maintained. Aspects of the Staff’s safety determination that may be evaluated against new information includes the extent of condition in the U.S., potential degree of CMAC on a generic basis, or data affecting the relationship between CMAC and mechanical performance. This information is to be evaluated to determine if there is reasonable assurance that adequate defense-in-depth, sufficient safety margin, and an acceptable level of risk is maintained with an appropriate degree of conservatism.

If new information becomes available that warrants evaluation and it is concluded that the Staff’s safety determination remains appropriately conservative, then no additional actions will be taken. Alternatively, if the Staff cannot conclude that there is reasonable assurance of structural integrity, additional action(s) will be considered. The NRC will communicate with applicable stakeholders, as appropriate.

Option 2

The second option involves issuing a generic letter (GL) to the licensees operating with components forged by ACF. The objective of the GL would be to confirm that the licensees’ 10 C.F.R. Part 50, Appendix B, quality assurance programs have verified that the components produced by ACF comply with the applicable NRC regulations and ASME Code requirements. The GL would

request that the licensees (1) provide the documentation necessary to confirm that the components in question meet all applicable NRC regulations and ASME Code requirements and (2) describe how their 10 C.F.R. Part 50, Appendix B, quality assurance programs verified that the components complied with all applicable NRC regulations and ASME Code requirements, specifically, those related to the manufacturing of the components relevant to the CMAC topic. Section II.C of this Director's Decision provides the regulatory requirements and the 10 C.F.R. Part 50, Appendix B, quality assurance program, as they relate to the CMAC topic. A GL can require a written response in accordance with 10 C.F.R. § 50.54(f).

Option 3

The third option involves issuing an order to the licensees operating with in-service components produced by ACF. The order would require licensees with components from ACF to conduct nondestructive examinations of these in-service components during the next scheduled outage. The objective of the examination would be to verify the condition of the components (e.g., no unacceptable flaw or indications) and to verify carbon levels. If the nondestructive examinations reveal a condition that is adverse to safety or does not conform to requirements, the plant would not be allowed to restart until the issue is addressed and until the NRC grants its approval.

Option 4

Option 4 is identical to Option 3, except that the NRC orders would require immediate plant shutdowns to perform the inspections. This Option would be preferable in the case of an immediate safety issue posing a clearly demonstrated significant and immediate risk to an operating plant. NRR OI LIC-504 defines a risk-significant condition as significant enough to warrant immediate action if the calculated large early release frequency (LERF) is on the order of 1×10^{-4} yr⁻¹.

Assessment of Options

The NRC Staff evaluated the relative merits of the four options discussed in the preceding section. The Staff has concluded that any of the four options proposed will adequately address the possible safety impact to the U.S. nuclear power reactor fleet posed by potential regions of CMAC in components produced by ACF. However, all four options are not equivalent or warranted, as discussed below.

Option 1: Evaluate and Monitor

To properly assess this option, the NRC assessed each of the five principles of the risk-informed decision-making process within the context of this option.

PRINCIPLE 1 — COMPLIANCE WITH EXISTING REGULATIONS

A licensee is responsible for ensuring that the applicable regulatory and technical requirements are appropriately identified in the procurement documentation and for evaluating whether the purchased items, upon receipt, conform to the procurement documentation, in accordance with 10 C.F.R. Part 50, Appendix B. The NRC expects that licensees and vendors subject to NRC jurisdiction affected by the potential presence of CMAC have verified compliance with applicable NRC requirements and regulations for each potentially affected component or, alternatively, performed an appropriate evaluation that concludes that the condition is not adverse to safety. The NRC has not received a 10 C.F.R. Part 21 notification from a component supplier or licensee associated with CMAC. The ongoing evaluations have not yet determined that a deviation exists under 10 C.F.R. Part 21. The NRC confirms licensee and vendor compliance with NRC requirements through submitted reports, routine inspections, and continuous oversight provided by the plant resident inspector. For example, the NRC reviews 10 C.F.R. Part 21 evaluations and the response to operational experience routinely as part of the Reactor Oversight Process (ROP). Specifically, IP 71152,³⁶ “Problem Identification and Resolution,” provides guidance on reviewing licensee evaluations to ensure that potential supplier deviations are adequately captured to identify and address potential defects. A review of the 10 C.F.R. Part 21 process is also part of the vendor inspection program. Any noncompliances identified through NRC oversight activities are addressed through the enforcement program to ensure compliance is restored. In addition, safety concerns identified through NRC’s oversight activities may be escalated, such as to conduct a reactive inspection or to issue a Confirmatory Action Letter or Safety Order. Therefore, Principle 1 is satisfied for Option 1.

PRINCIPLE 2 — CONSISTENCY WITH THE DEFENSE-IN-DEPTH PHILOSOPHY

The aspect of defense-in-depth of relevance to the potential presence of CMAC in regions of RCS components is “barrier integrity.” The reactor coolant pressure boundary is one of the three principal fission-product release barriers in a U.S. plant. Under 10 C.F.R. § 50.61a, the NRC established a 95th percentile TWCF of less than $1 \times 10^{-6} \text{ yr}^{-1}$ and a CDF of less than 1×10^{-6} as acceptable RPV failure probabilities. The conservative assessment performed

³⁶ See ADAMS Accession No. ML053490187.

by the industry and described earlier showed that the probability of compromising the barrier integrity function for the in-service U.S. components of interest are significantly below these acceptance levels. If a design-basis accident were to compromise the pressure boundary, the remaining two independent fission-product release barriers (i.e., fuel cladding and containment) would still provide adequate defense-in-depth. The NRC has reasonable assurance that U.S. plants with components produced by ACF maintain adequate defense-in-depth. Therefore, Principle 2 is satisfied for Option 1.

PRINCIPLE 3 — MAINTENANCE OF ADEQUATE SAFETY MARGINS

A region of CMAC in a component could reduce the margin against fracture. However, it has been shown that this reduction in margin does not affect the safe operation of the in-service components being evaluated. The ASN evaluation described earlier determined that the safety margin against fast fracture is maintained in all conditions analyzed. Industry determined in MRP-417 that the CMAC levels necessary to be considered significant to safety are more than 200 percent of those observed in components. Based on its review of these evaluations, the NRC has reasonable assurance that U.S. plants with components produced by ACF maintain sufficient safety margins. Therefore, Principle 3 is satisfied for Option 1.

PRINCIPLE 4 — DEMONSTRATION OF ACCEPTABLE LEVELS OF RISK

If it is conservatively assumed that the TWCF equates to the LERF (neglecting mitigating factors), the calculated 95th percentile TWCF for components with CMAC and thus the LERF is less than $1 \times 10^{-6} \text{ yr}^{-1}$. Because this is below the immediate safety determination limit, there is no immediate safety concern. Therefore, Principle 4 is satisfied for Option 1.

PRINCIPLE 5 — IMPLEMENTATION OF DEFINED PERFORMANCE MEASUREMENT STRATEGIES

Because there is no indication that the U.S. in-service components produced by ACF are noncompliant with the applicable regulations and because the NRC has reasonable assurance that defense-in-depth, safety margins, and risk levels are adequately maintained, the current monitoring programs at the plants are adequate, and additional performance measurement strategies are not warranted. However, the NRC Staff would continue to monitor the U.S. nuclear industry and international activities related to the CMAC topic to analyze any new information to determine whether additional performance measurement strategies are necessary. Therefore, Principle 5 is satisfied for Option 1.

Option 2: Issue a Generic Communication

This option reinforces the regulatory determination made in Option 1 by issuing a GL requesting that the documentation and evaluations performed by licensees and their component suppliers conclude that the components produced by ACF do not have defects or deviations that pose a substantial safety hazard. The NRC would not expect the information collected in the response to a GL to change any of the conclusions reached in Option 1, including those related to defense-in-depth, safety margins, or risk-level determinations. Therefore, all five principles of risk-informed decision-making would also be satisfied for Option 2. Additionally, the relevant vendors have informed the affected licensees of the CMAC topic. Vendors and licensees must meet their 10 C.F.R. Part 21 evaluation and reporting responsibilities if the condition warrants such action. As part of the ROP and vendor inspection program, the NRC reviews these evaluations for adequacy.

Option 3: Issue Orders Requiring Inspections

This option reinforces the determinations made in Option 1 by performing inspections to confirm that an appropriate degree of conservatism was used in the evaluations of the potential impact of CMAC on U.S. components produced by AFC. The NRC would not expect the information collected by performing nondestructive examinations of the in-service components to significantly affect the defense-in-depth, safety margins, or risk-level determinations made in Option 1. Therefore, all five principles of risk-informed decision-making would also be satisfied for Option 3.

Option 4: Issue Orders Suspending Operation

In evaluating the international, U.S. industry, and NRC safety assessments, the NRC determined that the impact of CMAC on the integrity of the U.S.-forged components in question is small and that the calculated 95th percentile TWCF for PTS and the CPF for normal operating conditions fall below the NRC's safety criteria of $1 \times 10^{-6} \text{ yr}^{-1}$ and 1×10^{-6} , respectively. Because the assumption that the TWCF is equivalent to the LERF because of mitigating factors is extremely conservative, the results indicate that the impacts of CMAC would result in a risk of LERF less than $1 \times 10^{-4} \text{ yr}^{-1}$. Therefore, because the NRC's risk criterion to shut down a plant is not met, the agency dismissed Option 4 without an evaluation of the five principles of risk-informed decision-making.

Final Assessment

The Staff determined that Option 1 was the most appropriate action based on the material and processing information reviewed by the Staff during the vender inspection of AREVA, experimental data and evaluation reported by ASN, PFM analyses conducted by the industry, the Staff's review of the open literature on CMAC in steel ingots and its effect on performance, and an evaluation demonstrating that Option 1 satisfies all five key principles of risk-informed decision-making. Additionally, this compilation of information reviewed affirms the Staff's preliminary safety assessment that the safety significance of CMAC to U.S. plants appears to be negligible and does not warrant immediate action. If new information becomes available that calls into question the conservatism of the evaluations supporting Option 1 or the regulatory compliance of the plants with in-service components from ACF, the NRC Staff will reevaluate the need for additional actions. The Staff's evaluation dated February 22, 2018, documents the NRC's full evaluation of the CMAC topics as it relates to plants operating in the United States.

E. Evaluation of the Petitioners' Requests

Petitioners' Request 1: Suspend power operations of U.S. nuclear power plants that rely on ACF components and subcontractors pending a full inspection (including nondestructive examination by ultrasonic testing) and material testing. If carbon anomalies ("carbon segregation" or "carbon macrosegregation") in excess of the design-basis specifications for at-risk component parts are identified, require the licensee to do one of the following:

- a. **replace the degraded at-risk component(s) with quality certified components, or**
- b. **for those at-risk degraded components that a licensee seeks to allow to remain in-service, make application through the license amendment request process to demonstrate that a revised design-basis is achievable and will not render the in-service component unacceptably vulnerable to fast fracture failure at any time, and in any credible service condition, throughout the current license of the power reactor.**

NRC Response

This request is essentially identical to Option 4 described above. The NRC has determined, through its PFM analyses, that the expected impact of CMAC

on the LERF is less than $1 \times 10^{-6} \text{ yr}^{-1}$. Therefore, the risk criterion to shut down a plant is not met.

Petitioners' Request 2: Alternatively modify the operating licenses to require the affected operators to perform the requested emergency enforcement actions at the next scheduled outage.

NRC Response

This request is essentially identical to Option 3 described above. As discussed above, performing nondestructive examinations of the in-service components is not expected to provide information that would significantly affect the defense-in-depth, safety margins, or risk-level determinations that would be provided by continued monitoring and evaluation of new information.

Petitioners' Request 3: Issue a letter to all U.S. light-water reactor operators under 10 C.F.R. § 50.54(f) requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for the potential carbon segmentation anomaly in the supply chain and the reliability of the quality assurance certification of those components, and publicly release the responses.

NRC Response

This request is essentially identical to Option 2 described above. As discussed above, the information collected through a 10 C.F.R. § 50.54(f) request for information or a GL is not expected to change any defense-in-depth, safety margins, or risk-level determinations that would be provided by continued monitoring and evaluation of new information. In addition, the relevant vendors and licensees must meet their 10 C.F.R. Part 21 evaluation and reporting responsibilities if the condition warrants such action. As part of the ROP and vendor inspection program, the NRC reviews these evaluations for adequacy.

Petitioners' Request 4: [The Petitioners added Crystal River Unit 3 to the plants for which they requested actions, which include the following]:

- a. **Confirm the sale, delivery, quality control and quality assurance certification and installation of the replacement reactor pressure vessel head as supplied to Crystal River Unit 3 by then Framatome**

and now AREVA-Le Creusot Forge industrial facility in Charlon-St. Marcel, France and;

- b. **With completion and confirmation [of the above Crystal River Unit 3 actions], the modification of Duke Energy's current license for the permanently closed Crystal River Unit 3 nuclear power station in Crystal River, Florida, to inspect and conduct the appropriate material test(s) for carbon macrosegregation on sufficient samples harvested from the installed and now in service irradiated Le Creusot Forge reactor pressure vessel head [sic]. The Petitioners assert that the appropriate material testing include OES.**

NRC Response

AREVA did not identify Crystal River Unit 3 as a plant that contained components from ACF,^{37,38} and the Staff has not confirmed that this unit contained any forgings manufactured from ingots produced by ACF. In addition, Crystal River Unit 3 is currently shut down and in the process of decommissioning. Therefore, the Petitioners' requests 1, 2, 3, and 4(a) do not apply to this plant. However, the acquisition and subsequent testing of irradiated and aged plant material from decommissioned plants could be a valuable research activity that might offer useful scientific information on the progress of aging mechanisms. The harvesting of reactor vessel material from plants that have been permanently shut down can be a complex and radiation-dose-intensive effort. The NRC's Office of Nuclear Regulatory Research has previously obtained samples appropriate for testing from shutdown plants. In regard to this request, the NRC may, in the future, seek to purchase samples. However, the identified facility has ceased operations, and there is no safety concern at those facilities that justifies enforcement-related action (i.e., to modify, suspend, or revoke the license) to give the NRC reasonable assurance of the adequate protection of public health and safety.

III. CONCLUSION

Based on the evaluations provided above, and documented in the February 22, 2018, NRC memorandum, the NRR Director has determined that the actions requested by the Petitioners, will not be granted in whole or in part.

³⁷ See ADAMS Accession No. ML17040A100.

³⁸ See ADAMS Accession No. ML17009A278.

As provided for in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time.

FOR THE U.S. NUCLEAR
REGULATORY COMMISSION

Brian E. Holian, Acting Director
Office of Nuclear Reactor
Regulation

Dated at Rockville, MD,
this 2d day of August 2018.

Attachment:
List of Affected Reactors

ATTACHMENT
List of Power Reactors Affected by the Petition

| Plant | Docket No. | Facility Operating License No. |
|---|-------------------|---------------------------------------|
| Prairie Island Nuclear Generating Plant, Unit 1 | 05000282 | DPR-42 |
| Prairie Island Nuclear Generating Plant, Unit 2 | 05000306 | DPR-60 |
| Arkansas Nuclear One, Unit 2 | 05000368 | NPF-6 |
| Beaver Valley Power Station, Unit 1 | 05000334 | DPR-66 |
| North Anna Power Station, Unit 1 | 05000338 | NPF-4 |
| North Anna Power Station, Unit 2 | 05000339 | NPF-7 |
| Surry Power Station, Unit 1 | 05000280 | DPR-32 |
| Comanche Peak Nuclear Power Plant, Unit 1 | 05000445 | NPF-87 |
| V.C. Summer Nuclear Station, Unit 1 | 05000395 | NPF-12 |
| Joseph M. Farley Nuclear Plant, Unit 1 | 05000348 | NPF-2 |
| Joseph M. Farley Nuclear Plant, Unit 2 | 05000364 | NPF-8 |
| South Texas Project, Unit 1 | 05000498 | NPF-76 |
| South Texas Project, Unit 2 | 05000499 | NPF-80 |
| Sequoyah Nuclear Plant, Unit 1 | 05000327 | DPR-77 |
| Watts Bar Nuclear Plant, Unit 1 | 05000390 | NPF-90 |
| Millstone Power Station, Unit 2 | 05000336 | NPF-65 |
| Saint Lucie Plant, Unit 1 | 05000335 | DPR-67 |
| Crystal River Unit 3 Nuclear Generating Plant | 05000302 | DPR-72 |

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Mark O. Barnett
G. Paul Bollwerk, III

In the Matter of

Docket No. 40-9075-MLA
(ASLBP No. 10-898-02-MLA-BD01)

POWERTECH USA, INC.
(Dewey-Burdock In Situ Uranium
Recovery Facility)

October 30, 2018

This order addresses two motions for summary disposition in an ongoing proceeding involving the Source Materials License issued to Powertech (USA), Inc. (Powertech). The Board denies the NRC Staff's motion for summary disposition of Contention 1A and reaffirms its conclusion that the NRC Staff has not satisfied its National Environmental Policy Act (NEPA) responsibility, finding that material issues of fact exist. The Board also finds that the Oglala Sioux Tribe has failed to show that there is no material factual dispute as to the reasonableness of the NRC Staff's survey methodology or the NRC Staff's overall implementation of an approach to address NEPA responsibilities. The Board directs that unless the NRC Staff indicates it wants to resume its attempt to implement the NRC Staff's March 2018 Approach, the parties must proceed to an evidentiary hearing.

RULES OF PRACTICE: SUMMARY DISPOSITION; STANDARDS

The standards governing summary disposition in Subpart L proceedings are set out in 10 C.F.R. § 2.1205, and "are based upon those the federal courts apply

to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure.” *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010).

RULES OF PRACTICE: SUMMARY DISPOSITION; STANDARDS

Summary disposition may be granted:

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

10 C.F.R. § 2.710(d)(2). This standard establishes a two-part test: First, a board must determine if any material facts remain genuinely in dispute; second, if no disputes remain, the board must determine if the movant’s legal position is correct. *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-31, 74 NRC 643, 648 (2011).

RULES OF PRACTICE: SUMMARY DISPOSITION; STANDARDS

For a simplified hearing governed by Subpart L of the regulations, 10 C.F.R. § 2.1205(c) states that “[i]n ruling on motions for summary disposition, the presiding officer shall apply the standards for summary disposition set forth in subpart G of this part.” *Id.* § 2.1205(c).

RULES OF PRACTICE: SUMMARY DISPOSITION; BURDEN OF PROOF

The moving party carries the burden of demonstrating that summary disposition is appropriate and must explain in writing the basis for the motion. *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993). To support its motion, the moving party must also “attach . . . a short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard.” 10 C.F.R. § 2.710(a). “The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

RULES OF PRACTICE: SUMMARY DISPOSITION

Summary disposition should not be granted if it would require the board

to engage in the making of “[c]redibility determinations, the weighing of the evidence, [or] the drawing of legitimate inferences from the facts.” *Anderson*, 477 U.S. at 255. Doing so would require the board to “conduct a trial on the written record by weighing the evidence and endeavoring to determine the truth of the matter.” *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-16-3, 83 NRC 169, 176 (2016). Instead, the board’s only role in deciding whether to grant a motion for summary disposition is to determine whether any genuine issue of material fact exists. *Anderson*, 477 U.S. at 249.

NEPA: PURPOSE OF INQUIRY

Congress enacted NEPA to protect and promote environmental quality, as well as to “preserve important historic, cultural, and natural aspects of our national heritage.” 42 U.S.C. § 4331. These goals are “realized through a set of ‘action-forcing’ procedures that require that agencies take a ‘hard look’ at environmental consequences,” and disseminate that information to the public. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976)).

NEPA: EIS; ADVERSE EFFECTS

Any proposed agency action “significantly affecting the quality of the human environment” requires a detailed environmental impact statement (EIS). 42 U.S.C. § 4332(C) (2012). Adverse effects that must be evaluated include “ecological . . . , aesthetic, historic, cultural, economic, social, or health” effects. 40 C.F.R. § 1508.8. The Supreme Court has recognized that “one important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences.” *Robertson*, 490 U.S. at 351. Such a discussion is important to show that the agency has taken a “hard look.” *Id.* at 352.

NEPA: EIS; MITIGATION

NEPA’s implementing regulations require the agency to discuss possible mitigation measures in defining the scope of the EIS, in discussing alternatives to the proposed action, and consequences of that action, and in explaining its ultimate decision. 40 C.F.R. §§ 1508.25(b), 1502.14(f), 1502.16(h), 1502.2(c). The Commission’s regulations require the NRC Staff to include in an EIS “an analysis of significant problems and objections raised by . . . any affected Indian tribes and by other interested persons.” 10 C.F.R. § 51.71(b).

NEPA: RULE OF REASON

NEPA does not “mandate particular results,” *Robertson*, 490 U.S. at 350, or require agencies to analyze every conceivable aspect of a proposed project. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002). Those risks that are “remote and speculative” or events that have a low probability of occurring are unnecessary to evaluate. *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 745 (3d Cir. 1989). Rather, NEPA analysis must take into account “reasonably foreseeable” results. *Private Fuel Storage*, CLI-02-25, 56 NRC at 348.

NEPA: RULE OF REASON; METHODOLOGY

In assessing impacts, agencies are free to “select their own methodology so long as that methodology is reasonable.” *Pilgrim*, CLI-10-11, 71 NRC at 316 (citing *Town of Winthrop v. FAA*, 535 F.3d 1, 11-13 (1st Cir. 2008)).

NEPA: INCOMPLETE INFORMATION

Through 40 C.F.R. § 1502.22, the Council on Environmental Quality (CEQ) has provided a legal mechanism for instances when an agency is unable to obtain complete information to fully assess foreseeable significant adverse effects on the human environment. When the required information “is incomplete or unavailable . . . the agency shall always make clear that such information is lacking.” 40 C.F.R. § 1502.22. Furthermore, if the incomplete information is “essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant,” the agency shall obtain the information and include it in the EIS. *Id.* § 1502.22(a).

NEPA: EXORBITANT COSTS FOR OBTAINING INFORMATION

If, on the other hand, the costs of obtaining the information are exorbitant, the agency must include in the EIS:

- (1) A statement that such information is incomplete or unavailable;
- (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;
- (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and
- (4) the agency’s evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

Id. § 1502.22(b). This standard provides a route for an agency to satisfy its NEPA obligation by disclosing and explaining its lack of information and providing a discussion of the potential impact to the best of its ability without the relevant information.

**COUNCIL ON ENVIRONMENTAL QUALITY REGULATIONS:
IMPACT ON AGENCY**

Council on Environmental Quality (CEQ) regulations are not binding on the NRC when they “have a substantive impact on the way in which the Commission performs its regulatory functions.” *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 444 & nn.94-95 (2011) (quoting Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments, 49 Fed. Reg. 9352, 9352 (Mar. 12, 1984)). The Commission has made clear that it accepts the procedural requirements included in 40 C.F.R. § 1502.22. Final Rule on Environmental Protection Regulations, 49 Fed. Reg. at 9356.

**NEPA: ENVIRONMENTAL ANALYSIS; INCOMPLETE
INFORMATION**

As part of its NEPA responsibilities, a federal agency must undertake reasonable efforts to acquire missing information. *See* 40 C.F.R. § 1502.22; *Winthrop*, 535 F.3d at 13; *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010).

**LICENSING BOARD(S): AUTHORITY TO ESTABLISH
PROCEDURES**

The Board cannot direct the NRC Staff to pursue a single avenue to meet its statutory NEPA obligations. The Board can, however, establish procedures to ensure the NEPA-required “hard look” is taken or a legally sufficient explanation is placed on the record as to why the required information is missing and not “reasonably obtainable.”

**MEMORANDUM AND ORDER
(Denying Motions for Summary Disposition as to Contention 1A)**

On August 17, 2018, the Nuclear Regulatory Commission Staff (NRC Staff) and Intervenor Oglala Sioux Tribe (Oglala Sioux Tribe or Tribe) filed separate motions for summary disposition of Contention 1A, the sole remaining con-

tention in this proceeding.¹ Previously, the Board found in favor of the Oglala Sioux Tribe and the Consolidated Intervenors on Contention 1A in its 2015 Partial Initial Decision, holding that the NRC Staff's obligation to assess the impacts to Native American cultural, religious, and historical resources under the National Environmental Policy Act (NEPA) had not been satisfied.² Thereafter, in October 2017, the Board denied the NRC Staff's previous motion for summary disposition and reaffirmed its conclusion that the NRC Staff had not yet satisfied its NEPA duty.³ The Board found that "the NRC Staff ha[d] failed to establish that there [we]re no material facts in dispute relative to the NRC Staff's NEPA burden to adequately address the impact of the Dewey-Burdock project on tribal cultural resources," particularly with regard to "the reasonableness of its method for assessing impacts from the Dewey-Burdock project on Sioux tribal cultural resources."⁴

Now, one year later, in this Memorandum and Order the Board again finds that the NRC Staff has failed to show that there is no material factual dispute as to whether the NRC Staff has met its NEPA burden and fulfilled its duty to adequately address impacts to Sioux tribal cultural resources at the Dewey-Burdock project site. We therefore deny the NRC Staff's current motion for summary disposition as to Contention 1A. While the NRC Staff's proposal for resolving the environmental matters at issue here (the March 2018 Approach),⁵ was agreed to by all parties and could constitute a valid path for resolving Contention 1A, material factual disputes still remain regarding the reasonableness of the NRC Staff's implementation of this approach, relating to (1) the survey methodology, and (2) the NRC Staff's unilateral decision to discontinue efforts to implement the March 2018 Approach during the first week of Phase One of the site survey.

We likewise deny the Oglala Sioux Tribe's motion for summary disposition and its request to stay or revoke the license of Powertech (USA), Inc. (Powertech). The Oglala Sioux Tribe has failed to show that there is no issue of material fact as to the reasonableness of the NRC Staff's survey methodology or the NRC Staff's overall implementation of the March 2018 Approach.

¹ NRC Staff's Motion for Summary Disposition of Contention 1A (Aug. 17, 2018) [hereinafter NRC Staff Motion]; Oglala Sioux Tribe's Motion for Summary Disposition (Aug. 17, 2018) [hereinafter OST Motion].

² LBP-15-16, 81 NRC 618, 653 (2015), *aff'd*, CLI-16-20, 84 NRC 219 (2016).

³ LBP-17-9, 86 NRC 167, 173-74 (2016), *pet. for review denied*, CLI-18-7, 88 NRC 1, 2 (2018).

⁴ *Id.*

⁵ *See infra* Section II.

I. BACKGROUND ASSOCIATED WITH THE NRC STAFF'S MARCH 2018 APPROACH

A. Procedural History Preceding the 2015 Partial Initial Decision

This proceeding⁶ began more than nine years ago when Powertech submitted a license application to construct and operate the proposed Dewey-Burdock in situ uranium recovery (ISR) facility in Custer and Fall River Counties, South Dakota.⁷ Thereafter, Consolidated Intervenor (two individuals and six organizations) filed a Request for Hearing and Petition for Leave to Intervene on March 8, 2010,⁸ and the Oglala Sioux Tribe filed a separate Request for Hearing and Petition for Leave to Intervene on April 6, 2010.⁹ The Board held oral argument on the petitions on June 8 and 9, 2010,¹⁰ and on August 5, 2010, the Board admitted the Oglala Sioux Tribe and Consolidated Intervenor as intervenors to the proceeding.¹¹ The Board admitted four of the Oglala Sioux Tribe's contentions¹² and three of the Consolidated Intervenor's contentions.¹³

After the Draft Supplemental Environmental Impact Statement (DSEIS) was issued on November 26, 2012, the Oglala Sioux Tribe and Consolidated Intervenor filed new and amended contentions.¹⁴ In a July 22, 2013 decision, the Board admitted nine contentions based on the new and original contentions.¹⁵

⁶ A detailed procedural history of this proceeding can be found in the Board's April 30, 2015 Partial Initial Decision. LBP-15-16, 81 NRC at 626-35.

⁷ Dewey-Burdock Project Supplement to Application for NRC Uranium Recovery License Dated February 2009 (Aug. 2009) (ADAMS Accession No. ML092870155).

⁸ Consolidated Request for Hearing and Petition for Leave to Intervene (Mar. 8, 2010).

⁹ Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe (Apr. 6, 2010) at 22-23 [hereinafter Oglala Sioux Tribe Petition].

¹⁰ Tr. at 1-405 (June 8-9, 2010). Throughout this proceeding, beginning with oral argument in 2010, the transcripts have continued with sequential numbering. However, the transcript from November 7, 2016, was numbered with pages 1-61, and the transcript from November 16, 2017, began the transcript page numbering again from page 1171, which had been the starting number for the transcript from August 21, 2014. To avoid any confusion, we provide the date of the transcript with each citation.

¹¹ LBP-10-16, 72 NRC 361, 376 (2010).

¹² *Id.* at 444.

¹³ *Id.* at 443.

¹⁴ See List of Contentions of the Oglala Sioux Tribe Based on the Draft Supplemental Environmental Impact Statement (Jan. 25, 2013); Consolidated Intervenor's New Contentions Based on DSEIS (Jan. 25, 2013).

¹⁵ LBP-13-9, 78 NRC 37, 112-13 (2013). The seven original contentions contesting the adequacy of various aspects of Powertech's Environmental Report were migrated to challenges of the applicable portions of the DSEIS. *Id.* at 50. Several of the original seven contentions were reformulated by the Board for a total of five admitted contentions, and of the three new contentions that were admitted, one was split into two contentions for a total of four new contentions. *Id.* at 112-13.

When the NRC Staff issued its Final Supplemental Environmental Impact Statement (FSEIS) on January 29, 2014, the previously admitted contentions migrated as challenges to the FSEIS.¹⁶ Subsequently, two of the admitted contentions were voluntarily withdrawn by the Oglala Sioux Tribe.¹⁷

On April 8, 2014, before a hearing was held on the admitted contentions, pursuant to 10 C.F.R. § 2.1202(a), the NRC Staff issued a 10 C.F.R. Part 40 source materials license to Powertech, authorizing Powertech to possess and use source and byproduct material in connection with the Dewey-Burdock project.¹⁸ On April 11, 2014, both the NRC Staff and the Oglala Sioux Tribe filed their first motions for summary disposition in this proceeding.¹⁹ The Board denied both parties' motions on June 2, 2014.²⁰ The Board then held an evidentiary hearing in Rapid City, South Dakota, from August 19-21, 2014, on the seven admitted contentions.²¹ On April 30, 2015, the Board issued a Partial Initial Decision on the merits of those contentions.²²

B. The 2015 Partial Initial Decision and the Commission's Review

The Board's April 30, 2015 Partial Initial Decision resolved all contentions in favor of the NRC Staff and Powertech except for Contentions 1A and 1B, on which the Oglala Sioux Tribe and Consolidated Intervenors prevailed.²³ Contention 1A pertained to the NRC Staff's NEPA obligation to assess the impacts to Native American cultural, religious, and historical resources.²⁴ The Board found that the NRC Staff failed to fulfill this NEPA obligation because the FSEIS did "not contain an analysis of the impacts of the project on the cultural, historical, and religious sites of the Oglala Sioux Tribe and the majority of the

¹⁶ LBP-15-16, 81 NRC at 631-32.

¹⁷ *Id.* at 633. Contentions 14A and 14B were withdrawn. *Id.*

¹⁸ *Id.* at 632. On April 30, 2014, the Board granted a temporary stay of the license in response to motions to stay from both Intervenors. *Id.* However, after oral argument on those motions, the Board lifted the temporary stay and denied the motions on May 20, 2014. *Id.*

¹⁹ NRC Staff's Motion for Summary Disposition on Safety Contentions 2 and 3 (Apr. 11, 2014) (seeking summary disposition on the safety aspects of Contentions 2 and 3); Oglala Sioux Tribe's Motion for Summary Disposition National Environmental Policy Act Contentions 1A and 6 — Mitigation Measures (Apr. 11, 2014) (seeking summary disposition of NEPA issues in Contentions 1A and 6).

²⁰ Licensing Board Order (Denying Motions for Summary Disposition) (June 2, 2014) at 7 (unpublished).

²¹ LBP-15-16, 81 NRC at 633.

²² *Id.* at 708-11.

²³ *Id.* at 708-10.

²⁴ *Id.* at 653.

other consulting Native American tribes.”²⁵ Accordingly, the Board concluded that “[w]ithout additional analysis as to how the Powertech project may affect the Sioux Tribes’ cultural, historical, and religious connections with the area, NEPA’s hard look requirement ha[d] not been satisfied, and potentially necessary mitigation measures ha[d] not been established.”²⁶

Contention 1B involved the NRC Staff’s National Historic Preservation Act (NHPA) obligation for government-to-government consultation with the Oglala Sioux Tribe.²⁷ Despite repeated concerns raised over five years by the Oglala Sioux Tribe about the consultation process, the NRC Staff held only large group meetings with members of multiple tribes, rather than a government-to-government session solely with members of the Oglala Sioux Tribe.²⁸ Further, while the NRC Staff sent many letters directly to the Oglala Sioux Tribe, the Board noted that “quantity does not necessarily equate with meaningful or reasonable consultation.”²⁹ The Board found that the “NRC Staff [wa]s at least partly at fault for the failed consultation process,” but also acknowledged that the Oglala Sioux Tribe shared “some responsibility for the inadequacy of the FSEIS and the lack of meaningful consultation” because “some of its demands to engage with the NRC Staff were patently unreasonable.”³⁰ The Board concluded that in order to satisfy this NHPA consultation requirement, the NRC Staff was obligated to undertake additional consultation with the Oglala Sioux Tribe, which is the tribe with “the most direct historical, cultural, and religious ties to the area.”³¹

The Board retained jurisdiction over this proceeding pending further consultation between the Oglala Sioux Tribe and the NRC Staff.³² In the interim, however, all four parties to the proceeding filed petitions for review of the Partial Initial Decision.³³ On December 23, 2016, the Commission found no error with the Board decision that the NRC Staff’s NEPA and NHPA efforts were inadequate, and affirmed the Board’s decision on Contentions 1A and 1B.³⁴ The Commission acknowledged the proceeding remained within the Board’s

²⁵ *Id.* at 655.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.* at 656.

²⁹ *Id.*

³⁰ *Id.* at 656-57. Specifically, the Board found that the cost of the Oglala Sioux Tribe’s Makoche Wowapi survey proposal, estimated at close to \$1 million, Tr. at 807 (Aug. 19, 2014), was unreasonable. LBP-15-16, 81 NRC at 657 n.229.

³¹ *Id.* at 656.

³² *Id.* at 658. This included monthly status reports submitted by the NRC Staff describing its updated consultation efforts with the Oglala Sioux Tribe. *Id.*

³³ See CLI-16-20, 84 NRC at 224-27.

³⁴ *Id.* at 262.

jurisdiction to resolve the deficiencies identified in the Partial Initial Decision.³⁵ Addressing Contention 1A, the Commission concluded that the Board did not commit “clear error” in its factual determination that the NRC Staff’s consideration of the Oglala Sioux Tribe’s and other Native Americans’ cultural resources failed to satisfy NEPA’s hard look standard.³⁶ In addressing Contention 1B, the Commission determined that “[t]he Board, after a merits hearing, reasonably concluded that the Staff’s consultation with the Tribe was insufficient to meet these requirements.”³⁷ Finally, the Commission found that the Board had not improperly retained jurisdiction and, in carrying out the Board’s order, the NRC Staff was “free to select whatever course of action it deems appropriate to address the deficiencies . . . including, but not limited to further government-to-government consultation.”³⁸

C. The D.C. Circuit’s Review of 2015 Partial Initial Decision

After the Commission affirmed the Board’s April 2015 Partial Initial Decision, the Oglala Sioux Tribe appealed the Commission’s decision to the United States Court of Appeals for the District of Columbia Circuit.³⁹ The Oglala Sioux Tribe challenged the decision to “leave the license in effect pending the Staff’s effort to cure the NEPA deficiencies,” as well as the merits of several of the unfavorable Commission/Board rulings on its contentions.⁴⁰ The District of Columbia Circuit declined to rule on the merits of its contention-based challenges, finding that the Commission’s order “as a whole is not final,” and therefore the court did not have jurisdiction to review those rulings.⁴¹ The court did, however, take review of the Commission’s holding in CLI-16-20 that allowed the Powertech license to remain in effect while the proceeding and the NRC Staff’s efforts to cure the NEPA-related deficiencies continued before the Board.⁴² Although the court found that the standard the Commission applied to allow the Powertech license to become effective was contrary to NEPA, the court did not vacate the Agency’s ruling. Instead, the court remanded the question of whether to allow the Powertech license to remain effective to the Commission.⁴³ On August 30, 2018, the Commission issued an order inviting the parties to this proceeding

³⁵ *Id.*

³⁶ *Id.* at 247-48.

³⁷ *Id.* at 249.

³⁸ *Id.* at 251.

³⁹ *Oglala Sioux Tribe v. NRC*, 896 F.3d 520 (D.C. Cir. 2018).

⁴⁰ *Id.* at 526.

⁴¹ *Id.* at 527.

⁴² *Id.* at 527-37.

⁴³ *Id.* at 538.

to provide their views on how the Agency should respond to the Court of Appeals' ruling and what legal standard the NRC should use in evaluating whether to vacate Powertech's license.⁴⁴

D. The 2017 Summary Disposition Decision and Commission's Review

While the Board's Partial Initial Decision was on appeal to the Commission, the NRC Staff reinitiated its government-to-government consultation efforts with the Oglala Sioux Tribe.⁴⁵ In June of 2015, letters were exchanged between the NRC Staff and the Oglala Sioux Tribe,⁴⁶ although nearly a year passed before a face-to-face consultation meeting actually took place. At that meeting, on May 19, 2016, in Pine Ridge, South Dakota, the Oglala Sioux Tribe voiced its objections to and concerns about the 2013 survey on the grounds that it "was incomplete and the survey methodology lacked scientific integrity."⁴⁷

Noting that another eighteen months had passed with essentially no substantive progress toward agreement upon a method to collect the missing cultural, religious, and historical data, the Board convened a teleconference among the parties on November 7, 2016.⁴⁸ As a result of the teleconference, the Oglala Sioux Tribe and the NRC Staff then participated in another consultative conference call on January 31, 2017, during which the NRC Staff again proposed an open-site survey, and the Oglala Sioux Tribe again objected.⁴⁹ During the con-

⁴⁴ Commission Order (Aug. 30, 2018) (unpublished).

⁴⁵ A more detailed history of the NRC Staff's efforts can be found in the Board's October 2017 summary disposition ruling. *See generally* LBP-17-9, 86 NRC at 174-83.

⁴⁶ Letter from Marissa G. Bailey, Director, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to John Yellow Bird Steele, President, Oglala Sioux Tribe (June 23, 2015) (ADAMS Accession No. ML15175A411); Letter from Denis Yellow Thunder, Tribal Historic Preservation Officer (THPO), Oglala Sioux Tribe, to Marissa G. Bailey, Director, Division of Fuel Cycle Safety, Safeguards, and Environmental Review (July 22, 2015) (ADAMS Accession No. ML15203A108).

⁴⁷ Summary of Meeting with the Oglala Sioux Tribe Regarding Dewey-Burdock In Situ Uranium Recovery Project (May 19, 2016) at 2 (ADAMS Accession No. ML16182A069) [hereinafter Pine Ridge Meeting Summary]. The 2013 survey methodology was an open-site survey, which allowed each tribe to send representatives to examine any area of the Dewey-Burdock site during a one-month period, and included per diem payments for three tribal representatives from each tribe, mileage reimbursement, and an unconditional grant from Powertech to each tribe of \$10,000. Letter from Kevin Hsueh, Chief, Environmental Review Branch, Division of Waste Management and Environmental Protection, to Tribal Historic Preservation Officer (THPO), Oglala Sioux Tribe at 1-2 (Feb. 8, 2013) (ADAMS Accession No. ML13039A336).

⁴⁸ LBP-17-9, 86 NRC at 180 (citing Licensing Board Memorandum and Order (Requesting Scheduling Information for Telephone Conference Call) (Oct. 13, 2016) (unpublished); NRC Staff's Consultation Status Update (June 1, 2016)).

⁴⁹ Summary of Teleconference with the Oglala Sioux Tribe Regarding the Dewey-Burdock In Situ Uranium Recovery Project (Jan. 31, 2017) (ADAMS Accession No. ML17060A260).

ference call, the Oglala Sioux Tribe reminded the NRC Staff of its preference for a more comprehensive approach, similar to the Makoche Wowapi approach proposed by the Oglala Sioux Tribe in 2012.⁵⁰ Following further email exchanges, in an April 14, 2017 letter to the Oglala Sioux Tribe's Tribal Historic Preservation Officer (THPO), the NRC Staff once again offered a two-week open-site survey proposal and requested the Oglala Sioux Tribe to either accept or reject the offer.⁵¹ The Oglala Sioux Tribe's reply letter, dated May 31, 2017,⁵² contained "significant discussion as to the types of methodologies that the Tribe expected would be included" in a cultural resources survey.⁵³ Specifically, the Oglala Sioux Tribe expressed a desire for the NRC Staff to engage a qualified contractor, involve other Sioux Tribes, involve tribal elders, and allow for multiple site trips.⁵⁴ Following the Oglala Sioux Tribe's May 31 letter, the NRC Staff terminated its consultation efforts, concluding that after more than two years, "further consultation [was] unlikely to result in a mutually acceptable settlement of the dispute," and that the NRC Staff had satisfied its consultation responsibilities.⁵⁵

On August 3, 2017, the NRC Staff moved for summary disposition of Contentions 1A and 1B.⁵⁶ On October 19, 2017, the Board granted summary disposition of Contention 1B, finding that the NRC Staff's attempts at consultation had satisfied its NHPA requirements.⁵⁷ Nonetheless, concluding that material factual disputes remained, the Board denied summary disposition of Contention 1A, noting that because the NRC Staff had performed no additional survey, the deficiencies in the FSEIS remained.⁵⁸

⁵⁰ *Id.* at 1. On September 27, 2012, the consulting tribes presented a cultural resources survey prepared by Makoche Wowapi/Mentz-Wilson Consultants to the NRC Staff as a means to identify resources in the area. LBP-15-16, 81 NRC at 646. The Makoche Wowapi proposal was estimated to cost approximately \$818,000. Makoche Wowapi/Mentz-Wilson Consultants, Proposal with Cost Estimate for Traditional Cultural Properties Survey for Proposed Dewey Burdock Project (Sept. 27, 2012) at 1 (ADAMS Accession No. ML15244B360).

⁵¹ Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Trina Lone Hill, THPO, Oglala Sioux Tribe at 1-3 (Apr. 14, 2017) (ADAMS Accession No. ML17103A500).

⁵² Letter from Trina Lone Hill, THPO, Oglala Sioux Tribe, to Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review (May 31, 2017) (ADAMS Accession No. ML17152A109) [hereinafter May 31 Letter].

⁵³ Oglala Sioux Tribe's Response in Opposition to NRC Staff Motion for Summary Disposition of Contentions 1A and 1B (Sept. 1, 2017) at 16 [hereinafter Oglala Sioux Tribe Opposition to 2017 NRC Staff Motion for Summary Disposition].

⁵⁴ May 31 Letter at 4-8.

⁵⁵ NRC Staff's Motion for Summary Disposition of Contentions 1A and 1B (Aug. 3, 2017) at 27.

⁵⁶ *Id.*

⁵⁷ LBP-17-9, 86 NRC at 188-90.

⁵⁸ *Id.* at 194.

Subsequently, Powertech filed an interlocutory appeal challenging the Board's denial of summary disposition of Contention 1A and requesting the Commission to reverse the decision and to "direct the Staff to supplement the [FSEIS], thereby ending this proceeding."⁵⁹ On July 24, 2018, the Commission denied Powertech's petition for review, and upheld the Board's decision.⁶⁰ In concluding that Powertech had failed to meet the standard for sustaining an interlocutory appeal, the Commission noted its approval of the Board's explanation that "consultation was necessary to achieve the *end* of meeting NEPA's 'hard look' requirement" and agreed that "the mere act of consultation" would not "in and of itself be sufficient."⁶¹ The Commission also emphasized that "NHPA and NEPA are separate statutes imposing different obligations on the Staff."⁶² Furthermore, the Commission found that the Board correctly denied summary disposition on Contention 1A, because a material factual dispute remained over what would "constitute a reasonable method to assess cultural resources at the site."⁶³

E. Efforts of the Parties Since LBP-17-9

Pursuant to the Board's October 19, 2017 order denying summary disposition as to Contention 1A,⁶⁴ the Board held a number of teleconferences with the parties to monitor their progress on resolving Contention 1A. The first teleconference took place on November 16, 2017, during which the NRC Staff indicated that it was internally discussing next steps and intended to reach out to Powertech and the Oglala Sioux Tribe before the end of the year.⁶⁵

After the first conference, the NRC Staff quickly proposed a new approach for remedying the deficiencies identified in Contention 1A. On December 6, 2017, the NRC Staff sent out its proposed approach to identify Lakota Sioux Tribe historical, cultural, and religious resources.⁶⁶ This December proposal aimed to

⁵⁹ CLI-18-7, 88 NRC at 2.

⁶⁰ *Id.*

⁶¹ *Id.* at 9.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ LBP-17-9, 86 NRC at 173-74.

⁶⁵ Licensing Board Order (Requesting Information for Second Telephonic Conference Call) (Nov. 21, 2017) at 2 (unpublished).

⁶⁶ Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Trina Lone Hill, Director, Cultural Affairs & Historic Preservation Office, Oglala Sioux Tribe (Dec. 6, 2017) (ADAMS Accession No. ML17340B365) [hereinafter December Proposal]; Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to

(Continued)

address the Oglala Sioux Tribe's previously-expressed concerns that the NRC Staff secure a contractor, meet with the Tribal Councils or Tribal Leaders of the Lakota Sioux Tribes to discuss the methodology, conduct oral history interviews with tribal elders, and coordinate a field survey at the site.⁶⁷ Although the NRC Staff's December proposal deferred selection of a specific survey methodology until a later date so that the participating tribes could provide input while working with the contractor, the NRC Staff proposed that tribal representatives would take approximately two 2-week periods to examine areas of their choosing within the Dewey-Burdock site and help the contractor identify important areas to study in a survey report.⁶⁸ The NRC Staff's proposal acknowledged that confidential "information concerning the location of any identified sites of historic, cultural, or religious significance to the tribes may be reported separately and directly to the NRC as a confidential appendix to the survey report so that this information will not be disclosed to the public."⁶⁹

During a second teleconference on December 12, 2017, the parties discussed their initial reactions to the NRC Staff's December proposal.⁷⁰ At that time, the Oglala Sioux Tribe and Consolidated Intervenor expressed tentative approval of the proposal.⁷¹ Powertech, however, expressed concern about the potential cost associated with this new approach.⁷² On January 19, 2018, the parties provided written responses to the NRC Staff's proposal.⁷³ The Oglala Sioux Tribe responded that the proposed approach "will provide a reasonable likelihood of satisfying NEPA and resolving the Oglala Sioux Tribe's long-standing NEPA contention with respect to the lack of an adequate cultural resources survey

John M. Mays, Chief Operating Officer, Azarga Uranium Corp. (Dec. 6, 2017) (ADAMS Accession No. ML17340B374); Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Consolidated Intervenor (Dec. 6, 2017) (ADAMS Accession No. ML17340B376).

⁶⁷ December Proposal at 1-2.

⁶⁸ *Id.* at 1.

⁶⁹ *Id.* at 3.

⁷⁰ Licensing Board Order (Scheduling Third Telephonic Conference Call) (Jan. 9, 2018) at 1-2 (unpublished).

⁷¹ Tr. at 1240-43 (Dec. 12, 2017).

⁷² Tr. at 1239 (Dec. 12, 2017).

⁷³ Letter from Trina Lone Hill, Cultural Affairs & Historic Preservation Office, Oglala Sioux Tribe, to Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review (Jan. 19, 2018) (ADAMS Accession No. ML18019B267) [hereinafter OST Response to December Proposal]; Letter from John Mays, Chief Operating Officer, Powertech (USA) Inc., to Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review (Jan. 19, 2018) (ADAMS Accession No. ML18019B268) [hereinafter Powertech Response to December Proposal]; Email from David Frankel, Consolidated Intervenor Counsel, to Emily Monteith, NRC Staff Counsel (Jan. 19, 2018, 8:13 PM) (ADAMS Accession No. ML18024A812).

. . . [although] several important details remain to be established” such as “the specific field survey methodology, timing of the surveys, and length of time necessary for the surveys.”⁷⁴ However, Powertech’s response enumerated many concerns, including “exorbitant” costs, lack of well-defined specifics, and ineffective deadlines.⁷⁵ Powertech proposed an alternative plan of an ethnographic study, limited solely to a literature survey.⁷⁶

A third teleconference was held on January 24, 2018, to discuss the parties’ respective positions on the NRC Staff’s December proposal.⁷⁷ The Oglala Sioux Tribe continued to assert its general approval, noting that the physical site survey is a fundamental requirement.⁷⁸ Powertech, on the other hand, stated its “unequivocal” rejection of the new proposed approach.⁷⁹ After hearing from the parties, the Board was concerned that, while the NRC Staff was moving quickly pursuant to the Board’s instructions, the other parties were not agreeable to proceeding in a similarly expeditious manner. The Board was particularly concerned that Powertech had “not yet provided the NRC Staff with answers on what components of the NRC Staff’s new proposal it would accept and what components it would not.”⁸⁰ Similarly, the Board was troubled that “the Oglala Sioux Tribe ha[d] yet to prepare a list of other Tribes it contemplates being a part of the survey — let alone reached out to those Tribes to determine if they are willing to participate.”⁸¹

During a fourth teleconference on February 23, 2018, the NRC Staff’s counsel suggested that the NRC Staff might be ready to provide the parties with its final decision on a potential method to resolve Contention 1A by the end of March.⁸²

II. THE NRC STAFF’S MARCH 2018 APPROACH

A. Development of the Staff’s March 2018 Approach

On March 16, 2018, the NRC Staff notified the parties and the Board it

⁷⁴ OST Response to December Proposal at 1-2.

⁷⁵ Powertech Response to December Proposal at 3-5.

⁷⁶ *Id.* at 7.

⁷⁷ Licensing Board Order (Requesting Information for Fourth Telephonic Conference Call) (Feb. 8, 2018) at 2-3 (unpublished) [hereinafter Fourth Teleconference Order].

⁷⁸ Tr. at 1273-74 (Jan. 24, 2018).

⁷⁹ Tr. at 1292 (Jan. 24, 2018).

⁸⁰ Fourth Teleconference Order at 4.

⁸¹ *Id.*

⁸² Tr. at 1320 (Feb. 23, 2018).

had selected an approach to resolve Contention 1A.⁸³ The NRC Staff asserted it chose the March 2018 Approach as a reasonable means to “remedy the deficiencies identified by the Board with respect to the Staff’s environmental review of tribal cultural resources that may be affected by the Dewey-Burdock project.”⁸⁴ The Board held its fifth conference call with the parties on March 27, 2018, to discuss the March 2018 Approach.⁸⁵ At that time, “neither Powertech nor the Oglala Sioux Tribe would commit then to participating in the NRC Staff’s March 2018 Approach, but indicated they would provide the NRC Staff with a definitive response” by March 30, 2018.⁸⁶ The Oglala Sioux Tribe raised concerns about “whether the Tribe would be reimbursed for expenses and compensated for time spent participating in the survey.”⁸⁷ Powertech did not specify any particular concerns, but would not commit to its previous offers of expense reimbursement.⁸⁸ The Board urged the parties to reach an agreement.⁸⁹

On March 30, 2018, the Oglala Sioux Tribe submitted a written response to the NRC Staff on its March 2018 Approach.⁹⁰ Overall, the Oglala Sioux Tribe expressed a commitment to participate in the March 2018 Approach, but warned that “the NRC Staff’s decisions on [two important] details could significantly affect the extent of the Tribe’s participation.”⁹¹ The two details that the Oglala Sioux Tribe identified as lacking were (1) “involvement by any of the affected

⁸³ Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Trina Lone Hill, Director, Cultural Affairs & Historic Preservation Office, Oglala Sioux Tribe (Mar. 16, 2018) (ADAMS Accession No. ML18075A499) [hereinafter March 2018 Approach]; Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to John M. Mays, Chief Operating Officer, Azarga Uranium Corp. (Mar. 16, 2018) (ADAMS Accession No. ML18075A500); Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Consolidated Intervenors (Mar. 16, 2018) (ADAMS Accession No. ML18075A501); Letter from Emily Monteith, NRC Staff Counsel, to Licensing Board (Mar. 16, 2018) (ADAMS Accession No. ML18075A498) [hereinafter NRC Staff Notification to Board].

⁸⁴ NRC Staff Notification to Board.

⁸⁵ Licensing Board Order (Requesting Information for Sixth Telephonic Conference Call) (Mar. 29, 2018) (unpublished) (recounting discussion at fifth conference call).

⁸⁶ *Id.* at 2.

⁸⁷ *Id.* at 2 (citing Tr. at 1357, 1362 (Mar. 27, 2018)).

⁸⁸ *Id.* at 2-3 (citing Tr. at 1358-60 (Mar. 27, 2018)).

⁸⁹ *See id.* (strongly encouraging each party to consider and discuss reimbursement options); Tr. at 1367-68 (Mar. 27, 2018) (“I don’t know if there’s anything else that the Board can do at this stage other than to remind the parties that . . . it looks like the last best approach to resolving the remaining contention and that the parties should take this opportunity to work with the staff to resolve this outstanding contention.”).

⁹⁰ Oglala Sioux Tribe’s Response to NRC Staff’s March 16, 2018 Cultural Resources Survey Proposal (Mar. 30, 2018) [hereinafter Oglala Sioux Tribe Response to March 2018 Approach].

⁹¹ *Id.* at 1-2.

Tribes in the selection of a qualified contractor”; and (2) information about “reimbursement for costs and staff time of any of the Tribes.”⁹² Additionally, the Oglala Sioux Tribe reiterated that “the specific field survey methodology ha[d] yet to be established.”⁹³

On March 30, 2018, Powertech submitted a written response to the March 2018 Approach.⁹⁴ Powertech’s response catalogued the costs it had already incurred for previous unsuccessful survey efforts related to the Dewey-Burdock site.⁹⁵ Powertech argued it could only agree to the March 2018 Approach if the Board (1) established enforceable timelines with repercussions for missed timelines; (2) provided confirmation that Contention 1A would be satisfied through the process; and (3) provided confirmation that any lack of participation by other tribes would not prevent resolution of Contention 1A.⁹⁶ Additionally, Powertech argued that the NRC Staff should not pass through as licensing fees the NRC Staff’s costs to address Contention 1A.⁹⁷

During an April 6, 2018 teleconference, the Oglala Sioux Tribe explained to the Board that its concerns about involvement in selecting the contractor would not bar its participation, and the “Tribe is comfortable” with the March 2018 Approach timeline.⁹⁸ Powertech clarified that it was not refusing to pay reimbursements and honoraria, but that it needed assurances there was a “light at the end of the tunnel.”⁹⁹ By the end of the teleconference, the Intervenor parties had generally agreed to follow the March 2018 Approach, provided that Powertech would reimburse out-of-pocket costs.¹⁰⁰ At the conference, Powertech’s counsel was unable to say whether the company would make such payments, but on April 11, 2018, Powertech confirmed that it “would like the NRC Staff to urgently proceed with the approach and timeline” and that it would pay each participating Lakota Sioux Tribe for lodging and per diem, mileage, and an honorarium.¹⁰¹ Thus, all the parties accepted the March 2018 Approach as reasonable, and the NRC Staff began to move forward with its implementation,

⁹² *Id.* at 2-3.

⁹³ *Id.* at 4.

⁹⁴ Letter from John M. Mays, Chief Operating Officer, Azarga Uranium Corp., to Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review at 1-2 (Mar. 30, 2018) (ADAMS Accession No. ML18089A656).

⁹⁵ *Id.* at 1-2.

⁹⁶ *Id.* at 3.

⁹⁷ *Id.*

⁹⁸ Tr. at 1386, 1395 (Apr. 6, 2018).

⁹⁹ Tr. at 1401 (Apr. 6, 2018).

¹⁰⁰ Tr. at 1379-80, 1435 (Apr. 6, 2018).

¹⁰¹ Letter from John M. Mays, Chief Operating Officer, Azarga Uranium Corp., to Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review (Apr. 11, 2018) (ADAMS Accession No. ML18101A223).

in accordance with the parties' expressions of support for the March 2018 Approach and its included timeline.

B. Oglala Sioux Tribe Concerns Addressed by the March 2018 Approach

The March 2018 Approach included five elements as part of the effort to cure the NEPA deficiency in the FSEIS: (1) hiring a qualified contractor; (2) involving other Lakota Sioux Tribes; (3) providing iterative opportunities for the site survey; (4) involving tribal elders; and (5) conducting a site survey using a scientific methodology determined by the contractor in collaboration with the tribes. Each of these elements was repeatedly asked for by the Oglala Sioux Tribe, and once these Oglala Sioux Tribe-requested elements were finally included in NRC Staff's plan to resolve Contention 1A, the parties agreed the March 2018 Approach was a reasonable method for the NRC Staff to satisfy its NEPA obligation.

1. Qualified Contractor

Since the Board first identified a NEPA deficiency in this proceeding, the Oglala Sioux Tribe has repeatedly indicated that hiring a contractor "with the necessary experience, training, and cultural knowledge to carry out and facilitate the survey" is necessary for an acceptable approach to satisfy the NRC Staff's NEPA obligations.¹⁰² To support this request, the Oglala Sioux Tribe pointed out that Dr. Paul Nickens, the contractor hired by the NRC Staff to help carry out the March 2018 Approach, previously testified that use of a facilitator, "along the lines of a cultural anthropologist" who would "provide logistics support, documentation, recording support, report preparation . . . [has] usually been the best approach."¹⁰³

In the March 2018 Approach, the NRC Staff granted the Oglala Sioux Tribe's request and agreed to "onboard[] a contractor to facilitate implementation of the approach."¹⁰⁴ The contractor was to "facilitate the survey, and document

¹⁰² *E.g.*, May 31 Letter at 4; *see also* Oglala Sioux Tribe Opposition to 2017 NRC Staff Motion for Summary Disposition, ex. 4, Emails Between Jeffery C. Parsons, Oglala Sioux Tribe Counsel, and David Cylkowski, NRC Staff Counsel, at unnumbered p. 68 (Apr. 28, 2017) ("[T]he Tribe's stated position [is] that key features of a survey should include a qualified contractor to coordinate a survey.").

¹⁰³ May 31 Letter at 4 (quoting Transcript of Proceedings, *Crow Butte Res., Inc.* (In Situ Leach Facility, Crawford, Neb.), Docket No. 40-8943-OLA, Tr. at 2023 (ADAMS Accession No. ML15244-B278) [hereinafter *Crow Butte Tr.*]).

¹⁰⁴ March 2018 Approach at 1.

findings and supporting information,” and subsequently “prepare a survey report documenting the results and findings of the first and second phase of the field survey.”¹⁰⁵ Additionally, the contractor would conduct oral history interviews with tribal elders.¹⁰⁶ The NRC Staff awarded the contract for the March 2018 Approach to Dr. Paul Nickens of S. Cohen and Associates (SC&A).¹⁰⁷

Although the Oglala Sioux Tribe requested that it be involved in the selection of the contractor, NRC Staff counsel made clear that this would not be possible.¹⁰⁸ The Oglala Sioux Tribe, while currently contesting the qualifications of the selected contractor,¹⁰⁹ nonetheless advised that its lack of input on the contractor selection would not prevent it from participating in the March 2018 Approach.¹¹⁰ Dr. Nickens and his team began working with the Oglala Sioux Tribe on June 1, 2018, to select a methodology for the survey.¹¹¹

2. Involvement of Other Lakota Sioux Tribes

The March 2018 Approach provided for Lakota Sioux Tribes other than the Oglala Sioux Tribe to participate in the site survey and the oral history interviews. While the Oglala Sioux Tribe has recognized that the “NRC Staff is under an obligation to conduct consultation meetings with the Oglala Sioux Tribe specifically,” it made clear that “in order to be competent in its analysis of Lakota Sioux cultural resources” and to satisfy its NEPA obligation, “a cultural resources survey must include the other Lakota Sioux tribal governments.”¹¹² The Oglala Sioux Tribe further maintains that being “engaged with and working with its other Sioux tribes” is a “central cultural tenet.”¹¹³ Therefore, under the March 2018 Approach the NRC Staff agreed to extend an invitation to Lakota Sioux Tribes that did not take part in the April 2013 survey to participate in the upcoming survey, as well as other elements of the March 2018 Approach, such as the oral history interviews.¹¹⁴ While these other tribes would not have the

¹⁰⁵ *Id.* at 2-3.

¹⁰⁶ *Id.* at 4.

¹⁰⁷ NRC Staff Motion, attach. 1, NRC Staff’s Statement of Material Facts to Support Motion for Summary Disposition of Contention 1A (Aug. 17, 2018) at 16 [hereinafter NRC Staff Motion Statement of Facts].

¹⁰⁸ Tr. at 1380-81 (Apr. 6, 2018).

¹⁰⁹ Oglala Sioux Tribe’s Response in Opposition to NRC Staff Motion for Summary Disposition of Contention 1A (Sept. 21, 2018) at 8 [hereinafter Oglala Sioux Tribe Response to Staff Motion].

¹¹⁰ Oglala Sioux Tribe Response to March 2018 Approach at 2; Tr. at 1386, 1389 (Apr. 6, 2018).

¹¹¹ NRC Staff Motion Statement of Facts at 17.

¹¹² May 31 Letter at 4.

¹¹³ Tr. at 1291 (Jan. 24, 2018).

¹¹⁴ March 2018 Approach at 2. The NRC Staff ultimately invited one Dakota Sioux Tribe as well. See NRC Staff Motion at 20 n.89.

opportunity to comment on the selected Approach as a whole, they would be able to be involved in selection of the methodology and be able to participate and provide input in the supplementation of the FSEIS.¹¹⁵

In response to questions posed by the NRC Staff, the Oglala Sioux Tribe indicated the Standing Rock Sioux and the Rosebud Sioux Tribe would likely be interested in participating in the March 2018 Approach, and confirmed that the NRC Staff should extend invitations to participate to the Standing Rock Sioux Tribe, Rosebud Sioux Tribe, Cheyenne River Sioux Tribe, Yankton Sioux Tribe, Crow Creek Sioux Tribe, and Flandreau Sioux Tribe.¹¹⁶ Only the Rosebud Sioux Tribe accepted the NRC Staff's invitation to join a webinar conference to discuss the survey methodology and participate in the March 2018 Approach.¹¹⁷

While the March 2018 Approach provided an opportunity for other tribes to become involved, the lack of willingness by other tribes to participate would not make this approach unreasonable.¹¹⁸ Thus, the Board previously made clear:

[I]f a Tribe doesn't participate, it would be pretty late in the game for them to come forward and try to come at this again. This is the opportunity that the staff has set forth to resolve this contention. And if any party or any entity out there doesn't take advantage of it, they will have missed their chance.¹¹⁹

Likewise, the Oglala Sioux Tribe recognized that each tribe is "allowed their own decision on whether or not to be involved in the survey, or the NEPA process more generally."¹²⁰

¹¹⁵ See, e.g., Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Kip Spotted Eagle, THPO, Yankton Sioux Tribe (Apr. 12, 2018) (ADAMS Accession No. ML18102B247) (asking for input from other tribes only on their willingness to participate in implementing the chosen approach and establishing a survey methodology).

¹¹⁶ Notice of Oglala Sioux Tribe's Response to NRC Staff Questions (Feb. 15, 2018) at unnumbered pp. 3-4 [hereinafter Oglala Sioux Tribe February Responses].

¹¹⁷ Summary of NRC Webinar and Teleconference Call Session to Discuss Survey Methodology for the Dewey-Burdock In Situ Uranium Recovery (ISR) Project at 7-9 (June 29, 2018) (ADAMS Accession No. ML18164A241) [hereinafter NRC Summary of Survey Methodology Sessions] (describing the participation of Ben Rhodd, THPO for the Rosebud Sioux Tribe, in the June 5, 2018 webinar).

¹¹⁸ See Tr. at 1408 (Apr. 6, 2018).

¹¹⁹ *Id.*

¹²⁰ Oglala Sioux Tribe February Responses at unnumbered p. 4.

3. *Iterative Opportunities to Survey the Site*

As part of a reasonable approach, the Oglala Sioux Tribe has requested the opportunity to make multiple trips to the survey location, declaring:

[T]he Tribe has always objected to one shot deals, to single visits that somehow bind them and has repeatedly suggested a process that includes a chance to go out into the field and have those boots on the ground, a chance to come back, talk amongst themselves, talk with their elders, go back again to address issues that come up during those talks, come back and iterate this a few times, not ad infinitum, but a few times.¹²¹

The March 2018 Approach, like the earlier December proposal, provided for “approximately four weeks for a field survey, which could be divided into two separate phases to accommodate the Tribe’s desire to conduct a few at a time.”¹²² Under the March 2018 Approach, Phase One of the survey was scheduled for June 11-22, 2018, and Phase Two was scheduled for September 3-14, 2018.¹²³ Citing problems settling on a methodology for the survey, Phase One of the field survey effort was terminated by the NRC Staff on June 15, halfway through the scheduled period, and was not completed.¹²⁴ Phase Two of the survey was never started. The record indicates that during the nearly two-and-a-half months between the scheduled first and second phases, the NRC Staff did not work to reconcile the issues associated with the selection of a methodology for the site survey.¹²⁵

4. *Involvement of the Tribal Elders*

The Oglala Sioux Tribe’s May 31st Letter asserts that the “ability to use tribal elders” was one of the “cultural needs of the Lakota Sioux” that should be accounted for in crafting a reasonable approach to satisfying the NRC Staff’s

¹²¹ Tr. at 1202 (Nov. 16, 2017).

¹²² Tr. at 1236 (Dec. 12, 2017) (describing December Proposal, the precursor to the March 2018 Approach).

¹²³ March 2018 Approach, encl. 1 [hereinafter March 2018 Approach Timeline].

¹²⁴ Email from Emily Monteith, NRC Staff Counsel, to Travis Stills, Oglala Sioux Tribe Counsel (June 15, 2018, 2:39 PM) (ADAMS Accession No. ML18173A263); Letter from Cinthya I. Román, Chief, Environmental Review Branch, Division of Fuel Cycle Safety, Safeguards, and Environmental Review, to Kyle White, Interim Director, Oglala Sioux Tribe Natural Resources Regulatory Agency (July 2, 2018) (ADAMS Accession No. ML18183A304) [hereinafter NRC Staff Letter Discontinuing March 2018 Approach].

¹²⁵ See, e.g., Letter from Emily Monteith, NRC Staff Counsel, to Licensing Board (Aug. 1, 2018) [hereinafter NRC Staff August 2018 Status Update] (“The Staff has undertaken no significant curative activities since the Staff’s last update on July 2, 2018.”).

NEPA obligation.¹²⁶ The Oglala Sioux Tribe also noted Dr. Paul Nickens' endorsement of the need to involve tribal elders in any approach, having previously testified that "probably the best [traditional cultural properties] survey approach is to involve Tribal Elders."¹²⁷

The March 2018 Approach incorporated tribal elder involvement in several ways. First, the contractor would conduct "oral history interviews with Tribal Elders of the Lakota Sioux Tribes."¹²⁸ These interviews were to focus "on gathering information about resources of significance to the Lakota Sioux Tribes that could be impacted by the Dewey-Burdock ISR project."¹²⁹ Additionally, as discussed *supra*, the March 2018 Approach provided for iterative opportunities to visit the survey location to allow for the Oglala Sioux Tribe to consult with its elders after Phase One.

In between Phase One and Phase Two of the field surveys, interviews with tribal elders were scheduled to occur from August 6 to August 17, 2018.¹³⁰ These two weeks were also intended to be an "opportunity for the Tribes and NRC staff to discuss preliminary findings and results of the first phase of the field survey."¹³¹ The NRC Staff, however, never reached this element of the March 2018 Approach. The NRC Staff decided to discontinue its efforts because of a breakdown of the survey methodology negotiations, and chose not to move forward with conducting oral history interviews. There is nothing in the record to show that the NRC Staff considered continuing with this element of the March 2018 Approach after terminating its efforts to resolve the site survey methodology issue.

Aside from the cost of renewed efforts, Powertech "appreciate[d] the inclusion of interviews with tribal councils, leaders and elders."¹³² The Oglala Sioux Tribe also approved of the "commitment as set forth in its proposal to engage both the Tribal elders and the Tribal councils of multiple Tribes" as "appropriate and welcome."¹³³

5. *A Scientific Site Survey Methodology*

The major impediment to resolving Contention 1A has been the NRC Staff's repeated offering of an "open-site" survey approach as the methodology of com-

¹²⁶ May 31 Letter at 8.

¹²⁷ *Id.* (citing *Crow Butte Tr.* at 2023).

¹²⁸ March 2018 Approach at 4.

¹²⁹ *Id.*

¹³⁰ March 2018 Approach Timeline.

¹³¹ March 2018 Approach at 4.

¹³² Powertech Response to December Proposal at unnumbered p. 2.

¹³³ OST Response to December Proposal at 2.

pleting the physical survey of the Dewey-Burdock site. An open-site survey, as the term has been used throughout the proceeding and described by counsel for the Oglala Sioux Tribe, is a survey “where there is no support from NRC staff or contractor . . . [a]nd it is essentially opening the site to the tribes to go out and do what they will do and be totally responsible for providing all the data and the analysis with no set protocol or methodology.”¹³⁴ The Oglala Sioux Tribe rejected this methodology at least twice before the March 2018 Approach was selected by the NRC Staff on the grounds that such a survey, “with no . . . protocols or approaches identified for making or documenting observations,” would be unsuitable for satisfying NEPA.¹³⁵ The Oglala Sioux Tribe made clear its position that such a “survey methodology lacks scientific integrity,”¹³⁶ and in its May 31st Letter rejecting the “open-site” survey for the second time, the Tribe detailed what it considered appropriate aspects of a survey, including “the types of methodologies that the Tribe expected would be included in any NRC Staff courses of action to remedy the NEPA . . . violations.”¹³⁷

The NRC Staff agreed to hire a contractor to facilitate the March 2018 Approach, but chose to defer selection of a survey methodology until the contract was awarded.¹³⁸ The March 2018 Approach included five days (May 28 to June 1) for the new contractor, the Oglala Sioux Tribe, and any other participating tribes, to collaborate and agree to a scientifically-valid survey methodology for use at the Dewey-Burdock site.¹³⁹ Although the Oglala Sioux Tribe was concerned that “the specific field survey methodology had yet to be established,” the Oglala Sioux Tribe looked positively on the opportunity to work with the “NRC Staff and with the benefit of the expertise and experience of the selected contractor” to determine the appropriate methodology for the site survey.¹⁴⁰

The March 2018 Approach established specific deadlines by which the NRC Staff intended to retain a contractor (mid-April 2018), and hold meetings with any interested tribes (starting May 28, 2018), in preparation for Phase One of the site survey (scheduled for June 11 to June 22, 2018).¹⁴¹ As described in

¹³⁴ Tr. at 1431 (Apr. 6, 2018).

¹³⁵ See May 31 Letter at 2, 8 (recounting the numerous times that the Oglala Sioux Tribe has rejected the open-site approach in letters to the NRC Staff).

¹³⁶ Pine Ridge Meeting Summary at 2.

¹³⁷ Oglala Sioux Tribe Opposition to 2017 NRC Staff Motion for Summary Disposition at 16 (describing May 31 Letter).

¹³⁸ March 2018 Approach at 2.

¹³⁹ *Id.* at 4 (“Once the NRC staff brings its contractor on board, the NRC plans to hold a meeting with Lakota Sioux Tribes interested in participating in the field survey to discuss and establish the survey methodology and potential areas to be examined during the field survey.”).

¹⁴⁰ Oglala Sioux Tribe Response to March 2018 Approach at 4.

¹⁴¹ March 2018 Approach Timeline.

section II.1 *supra*, the NRC Staff fell behind schedule and notified the tribes of contractor selection on May 16. The NRC Staff then scheduled two webinars during the first week of June to establish a scientific methodology for the site survey. The NRC Staff indicated the purpose of the webinar and teleconference was to “discuss and establish the methodology to be implemented at the field survey and the areas to be examined at the Dewey-Burdock facility.”¹⁴² At the webinars, Dr. Nickens presented two potential survey methodologies, both of which involved re-locating previously identified places and documenting them with the tribes’ help.¹⁴³ After the webinars of June 1 and June 4, and a follow-up teleconference on June 5, Dr. Nickens provided a slightly more detailed survey methodology proposal, the “initial work plan,” which included a “windshield survey.”¹⁴⁴ This “windshield survey” methodology would involve driving to approximately 3 to 5 locations, prioritizing previously studied sites, and preparation of “daily packages” by the contractors containing any known information on the previously studied sites.¹⁴⁵ The summary of the webinars and teleconference indicates “[t]he NRC contractor discussed a proposed initial work plan for conducting the field survey for consideration by the invited Tribes, but emphasized that he welcomed further comments and modifications from the invited tribes on the proposed plan.”¹⁴⁶

On June 5, 2018, the NRC Staff’s contractor provided the invited tribes a proposed plan of work consisting of an initial methodology for conducting the tribal field survey.¹⁴⁷ The NRC Staff’s contractor requested comments from the tribes on the proposed plan.¹⁴⁸ The proposed plan of work would have been followed for the first three or four days of the field effort, with subsequent field activities determined in consultation with the participating tribes.¹⁴⁹

On June 8, 2018, the NRC Staff informed the invited tribes of a meeting location and time for the tribal field survey effort commencing on June 11, 2018.¹⁵⁰

¹⁴² NRC Summary of Survey Methodology Sessions at 2.

¹⁴³ Slideshow for Webinar, Dr. Paul Nickens (June 1 and 4, 2018) at 22-23 (ADAMS Accession No. ML18152A676).

¹⁴⁴ Proposed Initial Work Plan for Phase 1 Tribal Field Survey at the Dewey-Burdock ISR Project Area, June 11-22, 2018 (June 5, 2018) (ADAMS Accession No. ML18157A092) [hereinafter Proposed Initial Work Plan].

¹⁴⁵ *Id.* at 1.

¹⁴⁶ NRC Summary of Survey Methodology Sessions at 8.

¹⁴⁷ See generally Proposed Initial Work Plan.

¹⁴⁸ Email to Invited Tribes from Paul Nickens, SC&A and NRC Contractor (June 5, 2018, 11:24 PM) (ADAMS Accession No. ML18157A108).

¹⁴⁹ Proposed Initial Work Plan at 1.

¹⁵⁰ Emails to Sioux Tribes from Diana Diaz-Toro, NRC Project Manager (June 8, 2018) (ADAMS Accession Nos. ML18163A252, ML18163A241, ML18163A250, ML18163A243, ML18163A256, ML18163A255).

Later that day, the Oglala Sioux Tribe responded to this email requesting the NRC Staff to plan not to go into the field on June 11 and informing the NRC Staff that the Oglala Sioux Tribe would be providing “a detailed response to the work plan today that sets out a proposed daily schedule with time, place, and tasks required to complete the necessary prerequisites.”¹⁵¹ The Oglala Sioux Tribe informed the NRC Staff that “the field survey protocols and methods will be worked out with the benefit of face-to-face discussions between NRC contractors and the Tribe’s professional staff, with the benefit of necessary protections for the Tribes’ cultural and religious interests.”¹⁵²

Subsequently, the Oglala Sioux Tribe sent the NRC Staff and other invited tribes a memorandum describing a proposed schedule for the June tribal field survey effort.¹⁵³ The Oglala Sioux Tribe’s memorandum set forth several prerequisites to any field activities undertaken with the Oglala Sioux Tribe and a schedule and plan of work for the two weeks of the June tribal field survey effort, which called for the NRC Staff to meet with the Oglala Sioux Tribe in Pine Ridge, South Dakota, on June 11 and 12, 2018, to discuss and agree upon “survey methodologies and protocols.”¹⁵⁴ Additionally, the schedule and plan of work included obtaining the Tribe’s “THPO Advisory Council approvals for field survey methodology and protection of cultural resources” on June 13, 2018.¹⁵⁵

C. The Oglala Sioux Tribe’s Proposals

On June 11-12, 2018, the NRC Staff’s project manager Diana Diaz-Toro and the NRC Staff’s contractor, Dr. Paul Nickens, met with Acting THPO Kyle White, and other representatives of the Oglala Sioux Tribe at the Tribal Historic Preservation Offices in Pine Ridge, South Dakota, to continue discussions with the Oglala Sioux Tribe regarding a methodology for the June tribal field survey.¹⁵⁶

On June 12, 2018, the Tribe presented Ms. Diaz-Toro and Dr. Nickens with a

¹⁵¹ Email from Travis Stills, Oglala Sioux Tribe Counsel, to Diana Diaz-Toro, NRC Project Manager (June 8, 2018, 11:33 AM) (ADAMS Accession No. ML18159A585).

¹⁵² *Id.*

¹⁵³ Email from Travis Stills, Oglala Sioux Tribe Counsel, to NRC Staff and Sioux Tribes (June 8, 2018, 1:16 PM) (ADAMS Accession No. ML18159A620).

¹⁵⁴ Memorandum from Travis Stills, Oglala Sioux Tribe Counsel, to Diana Diaz-Toro, NRC Project Manager, Paul Nickens, SC&A and NRC Staff Contractor (June 8, 2018) (ADAMS Accession No. ML18159A621) [hereinafter Oglala Sioux Tribe Counsel Memo on Proposed Schedule].

¹⁵⁵ *Id.* at 3.

¹⁵⁶ NRC Staff Motion, attach. 2, Aff. of Diana Diaz-Toro Concerning the NRC Staff’s Motion for Summary Disposition of Contention 1A ¶9 (Aug. 17, 2018).

memorandum entitled “Discussion Draft — Cultural Resources Survey Methodologies” that contained the following points:¹⁵⁷

1. The proposal, which was addressed only to Ms. Diaz-Toro and Dr. Nickens, instructed that it “shall not be disclosed or discussed with any federal employee or contractor not specifically addressed in this memo.”¹⁵⁸
2. The proposal stated that “the prerequisites set out in the [June 8, 2018 memo circulated by Travis Stills] must be satisfied before any cultural resource survey activities may take place that involve Lakota peoples or Lakota cultural, historical, or spiritual knowledge.”¹⁵⁹
3. The proposal stated there would be other “preliminary work,” not included in the proposal that was to be done during Phase One, and that would be based on an “analysis of publicly available information, and Powertech’s proposed [siting] of it[s] facilities.”¹⁶⁰
4. The proposal would entail the involvement and remuneration of several dozen Oglala Sioux Tribe technical staff, spiritual leaders, elders, and warrior society leaders.¹⁶¹
5. The proposal would entail using the NRC Staff’s contractor for specific aspects of the proposal.¹⁶²
6. The proposal would entail visits and encampments by the Oglala Sioux Tribe elders at the Dewey-Burdock site over several days during the different seasons of the year.¹⁶³
7. The proposal would entail a 10-meter (m) transect-based tribal cultural field survey of the entire Dewey-Burdock site, reasoning that “10-m intervals are required to obtain locations of [traditional cultural properties] which have been overlooked in past archaeological surveys.”¹⁶⁴

¹⁵⁷ NRC Staff Motion, attach. 3, Memorandum from Kyle White, Acting THPO, Oglala Sioux Tribe, to Diana Diaz-Toro, NRC Project Manager, Emily Monteith, NRC Staff Counsel, and Paul Nickens, SC&A and NRC Contractor (June 12, 2018) (ADAMS Accession No. ML18229A351) (non-public); *see also* NRC Staff Motion Statement of Facts at 20.

¹⁵⁸ NRC Staff Motion Statement of Facts at 20.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

8. The proposal would require more than a year to complete the fieldwork associated with the tribal cultural field survey and the oral history research and interviews.¹⁶⁵
9. By the Oglala Sioux Tribe's estimation, the "full budget to carry out the required survey" would exceed \$2 million.¹⁶⁶ The cost estimate for the proposal did not include (i.e., would be in addition to) the costs directly billable to Powertech for the NRC Staff's time and contractor support.¹⁶⁷
10. The proposal does not take into account or make provision for the involvement of other tribes.¹⁶⁸

On June 15, 2018, the Oglala Sioux Tribe provided the NRC Staff with the updated version of its June 12, 2018 proposal.¹⁶⁹ The Tribe concluded in its proposal that:

[i]t is now NRC's task to either accept the OST proposal or to propose an approach that limits the OST-proposed survey methodology to meet what NRC considers a reasonable budget. We also understand that NRC will make the final decision on the type of survey that NRC carries out, and the OST requests the opportunity to review and consult on NRC's proposal before it is finalized.¹⁷⁰

Nevertheless, that same day the NRC Staff informed the Oglala Sioux Tribe of its decision to discontinue the remainder of the June 11-22 fieldwork effort.¹⁷¹

¹⁶⁵ *Id.* at 21.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ NRC Staff Motion, attach. 4, Memorandum from Kyle White, Acting THPO, Oglala Sioux Tribe, to Diana Diaz-Toro, NRC Project Manager, Emily Monteith, NRC Staff Counsel, and Paul Nickens, SC&A and NRC Contractor (June 15, 2018) (ADAMS Accession No. ML18229A352) (non-public); *see also* NRC Staff Motion Statement of Facts at 21-23.

¹⁷⁰ NRC Staff Motion Statement of Facts at 23.

¹⁷¹ Email from Emily Monteith, NRC Staff Counsel, to Travis Stills Oglala Sioux Tribe Counsel (June 15, 2018, 2:39 PM) (ADAMS Accession No. ML18173A263) (explaining that the NRC Staff is "unable to move forward" given the "significantly different understanding about the progress that has been made this week toward final agreement on a survey methodology"); Email from Emily Monteith, NRC Staff Counsel, to Travis Stills, Oglala Sioux Tribe Counsel, (June 15, 2018, 5:40 PM) (ADAMS Accession No. ML18173A266) (reiterating the NRC Staff's decision as described in the previous email).

D. NRC Staff's Response to the Oglala Sioux Tribe's Proposals

On July 2, 2018, the NRC Staff responded to the Oglala Sioux Tribe's June 12 and June 15 proposals.¹⁷² The NRC Staff informed the Oglala Sioux Tribe that its proposal outlined an approach that is fundamentally incompatible with implementation of the March 2018 Approach, which was previously negotiated with the Oglala Sioux Tribe and parties and presented to the Board.¹⁷³ The NRC Staff stated that the Oglala Sioux Tribe's proposal included a wide range of activities and milestones that were not part of the negotiated approach; entailed a significantly larger scope, cost, and time to implement than the selected approach; and did not appear to contemplate the participation of other tribes or the costs associated with involving other tribes in such an approach.¹⁷⁴ And in response to the Oglala Sioux Tribe's June 15, 2018 request to accept its proposal or propose an alternative approach that tailored the Oglala Sioux Tribe's proposal to meet a reasonable budget, the NRC Staff informed the Oglala Sioux Tribe that it considered the selected March 2018 Approach to be a reasonable approach that is not cost-prohibitive, that reflected a reasoned assessment of both scope and cost, and that was premised upon extensive discussions with the Oglala Sioux Tribe and Powertech.¹⁷⁵ The NRC Staff stated that the Oglala Sioux Tribe's participation in the selected March 2018 Approach was essential to that Approach and, given how far apart the Oglala Sioux Tribe's June proposals were from the March 2018 Approach, the NRC Staff and the Oglala Sioux Tribe's approaches could not be reconciled to resolve the outstanding contention in this proceeding.¹⁷⁶ The NRC Staff informed the Oglala Sioux Tribe that the only appropriate course of action was to discontinue its efforts to implement the March 2018 Approach.¹⁷⁷

Thereafter, in a July 5, 2018 filing the NRC Staff informed the Board that because the Oglala Sioux Tribe's June 12 and June 15 proposals were fundamentally incompatible with the March 2018 Approach, the NRC Staff was discontinuing its efforts to implement the Approach and was requesting that the Board establish a schedule for filing summary disposition motions relative to Contention 1A that would, at the request of the Oglala Sioux Tribe, commence no earlier than August 17, 2018.¹⁷⁸ In response, the Board established

¹⁷²NRC Staff Letter Discontinuing March 2018 Approach.

¹⁷³*Id.* at 1.

¹⁷⁴*Id.*

¹⁷⁵*Id.*

¹⁷⁶*Id.*

¹⁷⁷*Id.* at 2.

¹⁷⁸Motion to Set Filing Deadline for Summary Disposition Motions (July 5, 2018) at 1-2.

the filing schedule for the instant NRC Staff and Oglala Sioux Tribe dispositive motions.¹⁷⁹

III. STANDARDS FOR SUMMARY DISPOSITION

The standards governing summary disposition in Subpart L proceedings are set out at 10 C.F.R. § 2.1205, and “are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure.”¹⁸⁰ Summary disposition may be granted

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.¹⁸¹

This standard establishes a two-part test: First, a board must determine if any material facts remain genuinely in dispute; second, if no such disputes remain, the board must determine if the movant’s legal position is correct.¹⁸²

The moving party carries the burden of demonstrating that summary disposition is appropriate and must explain in writing the basis for the motion.¹⁸³ To support its motion, the moving party must also “attach . . . a short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard.”¹⁸⁴ “The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor.”¹⁸⁵

Alternatively, summary disposition should not be granted if it would require the board to engage in the making of “[c]redibility determinations, the weighing of the evidence, [or] the drawing of legitimate inferences from the facts.”¹⁸⁶

¹⁷⁹ Licensing Board Order (Establishing Procedures for Filing Motions for Summary Disposition) (July 19, 2018) at 4-5 (unpublished).

¹⁸⁰ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010).

¹⁸¹ 10 C.F.R. § 2.710(d)(2). Although this proceeding is a simplified hearing governed by Subpart L of the regulations, 10 C.F.R. § 2.1205(c) states that “[i]n ruling on motions for summary disposition, the presiding officer shall apply the standards for summary disposition set forth in subpart G of this part.” *Id.* § 2.1205(c).

¹⁸² See *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-31, 74 NRC 643, 648 (2011).

¹⁸³ *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993); 10 C.F.R. § 2.1205(a).

¹⁸⁴ 10 C.F.R. § 2.710(a).

¹⁸⁵ *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

¹⁸⁶ *Id.*

Doing so would require the board to “conduct a trial on the written record by weighing the evidence and endeavoring to determine the truth of the matter.”¹⁸⁷ Instead, the board’s only role in deciding whether to grant a motion for summary disposition is to determine whether any genuine issue of material fact exists.¹⁸⁸

IV. DISCUSSION

A. The NRC Staff’s NEPA Hard-Look Responsibility

1. *Legal Standards Under the National Environmental Policy Act*

Congress enacted NEPA to protect and promote environmental quality, as well as to “preserve important historic, cultural, and natural aspects of our national heritage.”¹⁸⁹ These goals are “realized through a set of ‘action-forcing’ procedures that require that agencies take a ‘hard look’ at environmental consequences,”¹⁹⁰ and disseminate that information to the public. Any proposed agency action “significantly affecting the quality of the human environment” requires a detailed environmental impact statement (EIS).¹⁹¹ Adverse effects include “ecological . . . aesthetic, historic, cultural, economic, social, or health” effects.¹⁹² The Supreme Court has recognized that “one important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences.”¹⁹³ Such a discussion is important to show that the agency has taken a “hard look.”¹⁹⁴ Accordingly, NEPA’s implementing regulations require the agency to discuss possible mitigation measures in defining the scope of the EIS,¹⁹⁵ in discussing alternatives to the proposed action,¹⁹⁶ and consequences of that action,¹⁹⁷ and in explaining its ultimate decision.¹⁹⁸ Additionally, the Commission’s regulations require the NRC Staff to include in an EIS “an

¹⁸⁷ *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-16-3, 83 NRC 169, 176 (2016).

¹⁸⁸ *Anderson*, 477 U.S. at 249.

¹⁸⁹ 42 U.S.C. § 4331.

¹⁹⁰ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976)).

¹⁹¹ 42 U.S.C. § 4332(C).

¹⁹² 40 C.F.R. § 1508.8. The NRC is not bound by Council on Environmental Quality regulations; however, the regulations are entitled to considerable deference. LBP-15-16, 81 NRC at 636.

¹⁹³ *Robertson*, 490 U.S. at 351.

¹⁹⁴ *Id.* at 352.

¹⁹⁵ 40 C.F.R. § 1508.25(b).

¹⁹⁶ *Id.* § 1502.14(f).

¹⁹⁷ *Id.* § 1502.16(h).

¹⁹⁸ *Id.* § 1505.2(c).

analysis of significant problems and objections raised by . . . any affected Indian tribes and by other interested persons.”¹⁹⁹

However, NEPA does not “mandate particular results,”²⁰⁰ or require agencies to analyze every conceivable aspect of a proposed project.²⁰¹ Those risks that are “remote and speculative” or events that have a low probability of occurring are unnecessary to evaluate.²⁰² Rather, NEPA analysis must take into account “reasonably foreseeable” results.²⁰³ In assessing impacts, agencies are free to “select their own methodology so long as that methodology is reasonable.”²⁰⁴

2. The Hard-Look Requirement Has Not Been Met

In both April 2015²⁰⁵ and October 2017,²⁰⁶ this Board found that the NRC Staff failed to satisfy its NEPA obligation to address the impacts on tribal cultural, historical, and religious sites at the Dewey-Burdock project site. Specifically, the Board concluded that the NRC Staff “must conduct a study or survey of tribal cultural resources before granting a license.”²⁰⁷ Moreover, since “the cultural, historical, and religious sites of the Oglala Sioux Tribe have not been adequately catalogued, the [EIS] does not include mitigation measures sufficient to protect this Native American Tribe’s cultural, historical, and religious sites that may be affected by the Powertech project.”²⁰⁸ Based on the record before us, these deficiencies have yet to be properly remedied. Once more, we conclude that the NRC Staff has failed to fulfill its obligation, and there is a material factual dispute as to the reasonableness of the NRC Staff’s implementation of the March 2018 Approach. Accordingly, summary disposition cannot be granted.

The NRC Staff’s March 2018 Approach, as agreed to by the parties, constituted a valid and reasonable approach for resolving Contention 1A. In developing the March 2018 Approach, the NRC Staff attempted to address the main concerns previously expressed by the Oglala Sioux Tribe. For example, as described in section II, *supra*, after the Oglala Sioux Tribe challenged the

¹⁹⁹ 10 C.F.R. § 51.71(b).

²⁰⁰ *Robertson*, 490 U.S. at 350.

²⁰¹ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002).

²⁰² *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 745 (3d Cir. 1989).

²⁰³ *Private Fuel Storage*, CLI-02-25, 56 NRC at 348.

²⁰⁴ *Pilgrim*, CLI-10-11, 71 NRC at 316 (citing *Town of Winthrop v. FAA*, 535 F.3d 1, 11-13 (1st Cir. 2008)).

²⁰⁵ LBP-15-16, 81 NRC 618.

²⁰⁶ LBP-17-9, 86 NRC 167.

²⁰⁷ LBP-15-16, 81 NRC at 653.

²⁰⁸ *Id.* at 655.

lack of a trained surveyor or ethnographer to coordinate the site survey, the NRC Staff hired Dr. Paul Nickens to facilitate the survey.²⁰⁹ Likewise, after the Oglala Sioux Tribe challenged the number of tribes invited to participate in the survey, the NRC Staff not only extended invitations to participate to the Standing Rock Sioux Tribe, Rosebud Sioux Tribe, Cheyenne River Sioux Tribe, Yankton Sioux Tribe, Crow Creek Sioux Tribe, Flandreau Santee Sioux Tribe, and Lower Brule Sioux Tribe,²¹⁰ but also coordinated a webinar series and communicated the participation details via letter, email, and telephone call to these tribes.²¹¹ Moreover, after the Oglala Sioux Tribe challenged the length of time provided for the survey, the NRC Staff doubled the amount of time and provided iterative opportunities to survey the site.²¹² These efforts by the NRC Staff are commendable and demonstrate that the parties can negotiate with each other to develop and implement an acceptable plan of action to resolve Contention 1A. If the March 2018 Approach had been followed to completion, the NRC Staff's "hard look" into the cultural, historical, and religious sites of the Oglala Sioux Tribe might well have been satisfied.

However, as described *supra* in section II, the entire March 2018 Approach was terminated during the first week of Phase One, and the majority of the agreed upon elements were never fully implemented. The March 2018 Approach designated June 11-22, 2018, as the two weeks for Phase One of the survey, but before the survey could take place, the NRC Staff's contractor had to work with the tribes to find an appropriate survey methodology. A survey was never agreed upon, and, as a result, the first week of the field survey was instead spent discussing an appropriate survey methodology.²¹³ Further, although the Oglala Sioux Tribe stated its intent to continue with the scheduled "windshield tour" during the second week of Phase One (the week of June 18-22) so as to provide "important information to help prepare for oral interviews and the

²⁰⁹ NRC Staff Motion at 23.

²¹⁰ NRC Staff Motion Statement of Facts at 15, 17.

²¹¹ NRC Staff Motion at 18-20. Only the Rosebud Sioux Tribe accepted the NRC Staff's invitation to join a webinar conference to discuss the survey methodology and participate in the March 2018 Approach, but this does not diminish the NRC Staff's efforts to implement this element. NRC Summary of Survey Methodology Sessions at 7-9 (describing the participation of Ben Rhodd, THPO for the Rosebud Sioux Tribe in the June 5th webinar).

²¹² NRC Staff Motion at 22.

²¹³ See Email from Travis Stills, Oglala Sioux Tribe Counsel, to Diana Diaz-Toro, NRC Project Manager (June 8, 2018, 11:33 AM) (ADAMS Accession No. ML18159A585) (refusing to allow Phase One to start on June 11 until a methodology could be agreed upon); Oglala Sioux Tribe Advisory Council Meeting Agenda (June 13, 2018) (ADAMS Accession No. ML18173A206) (listing discussion between NRC, Dr. Nickens, and the Advisory Council regarding the Oglala Sioux Tribe's June 12 cultural resource survey proposal).

September field visits,”²¹⁴ the NRC Staff cancelled all further efforts related to the March 2018 Approach, having determined that discontinuation was the only appropriate course of action.²¹⁵ This meant that not only was selection of the methodology and the site survey never completed, but several other elements of the March 2018 Approach were not completed either. First, the promised iterative opportunities to visit the site did not occur because, after Phase One was cancelled, Phase Two of the survey never occurred. The record indicates, that during the nearly two and a half months between the scheduled first and second phase, the NRC Staff did not work to reconcile the issues associated with the selection of a methodology for the site survey so that Phase Two might be conducted.²¹⁶ Likewise, there were no oral interviews of tribal elders. There is nothing in the record to show that the NRC Staff considered continuing with this element after terminating its efforts to resolve the site survey methodology issue.

The record indicates that while both parties made alienating decisions and caused schedule delays, the NRC Staff has not yet completed the task of taking the “hard look” required by NEPA. The NRC Staff has not implemented the mutually agreed-upon March 2018 Approach or any alternative approach to gather information about sites of cultural, historical, or religious significance to the tribes. Specifically, the NRC Staff did not (1) use its contractor to negotiate a detailed survey methodology that would be acceptable to the Oglala Sioux Tribe; (2) communicate with tribal elders, and identify specific cultural resources of significance to those elders; or (3) go onto the land with representatives of the Oglala Sioux Tribe to document significant tribal sites, and identify specific mitigation measures for impacts of the project on those sites. Instead, the NRC Staff has presented us with its original FEIS from January 2014, supplemented only by information that does not reflect additional survey work and analysis. This is essentially the same material we have previously reviewed and found to be insufficient to resolve Contention 1A.²¹⁷ Powertech admits that the only completed effort since the last summary disposition motion, amounting to a literature review report compiled and presented to the Oglala Sioux Tribe as background information for the proposed field survey effort, “is not materially different from information already assessed by NRC Staff in the

²¹⁴ Email from Travis Stills, Oglala Sioux Tribe Counsel, to Emily Monteith, NRC Staff Counsel (June 15, 2018, 3:14 PM) (ADAMS Accession No. ML18170A154).

²¹⁵ Email from Emily Monteith, NRC Staff Counsel, to Travis Stills, Oglala Sioux Tribe Counsel (June 15, 2018, 2:39 PM) (ADAMS Accession No. ML18173A263); NRC Staff Letter Discontinuing March 2018 Approach.

²¹⁶ *See, e.g.*, NRC Staff August 2018 Status Update (“The Staff has undertaken no significant curative activities since the Staff’s last update on July 2, 2018.”).

²¹⁷ LBP-15-16, 81 NRC at 654-55; LBP-17-9, 86 NRC at 198.

FSEIS and [contains] no new information about sites of historic, cultural, or religious significance to these Tribes.”²¹⁸ The NRC Staff thus has not fulfilled its NEPA obligation to take a “hard look” at the Dewey-Burdock project’s potential adverse impacts to specific cultural, historical, or religious resources of importance to the Oglala Sioux Tribe. Whether the NRC Staff’s aborted implementation of the March 2018 Approach, including the survey methodology presented and the NRC Staff’s decision to discontinue its efforts, was reasonable remains a question of material fact, not law. At this summary disposition stage, we may not make credibility determinations or weigh the evidence.²¹⁹ As a matter of law, the NRC Staff has failed to implement the March 2018 Approach, or otherwise adequately explained why its failure was reasonable.

B. The Staff Likewise Has Failed to Establish the Reasonableness of Its Actions Under CEQ Guidance on NEPA Responsibility When Required Information Is Lacking

Notwithstanding the Staff’s failure to obtain additional information so as to establish that it has taken the requisite “hard look” under NEPA, Council of Environmental Quality (CEQ) guidelines provide an alternative approach for addressing such a deficiency. However, as we outline below, material factual disputes make it impossible at this point for the NRC Staff to invoke this guidance as a basis for a merits ruling in its favor on Contention 1A.

1. Legal Standard

Through 40 C.F.R. § 1502.22, the Council on Environmental Quality (CEQ) has provided a legal mechanism for instances when an agency is unable to obtain complete information to fully assess foreseeable significant adverse effects on the human environment. When the required information “is incomplete or unavailable . . . the agency shall always make clear that such information is lacking.”²²⁰ Furthermore, if the incomplete information is “essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant,” the agency shall obtain the information and include it in the EIS.²²¹ If, on the other hand, the costs of obtaining the information are exorbitant, the agency must include in the FSEIS:

²¹⁸ Powertech (USA), Inc.’s Response to Pleadings on Legal Standards (Oct. 19, 2018) at 4 (ADAMS Accession No. ML18293A000).

²¹⁹ *Anderson*, 477 U.S. at 255.

²²⁰ 40 C.F.R. § 1502.22.

²²¹ *Id.* § 1502.22(a).

(1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.²²²

This standard provides a route for an agency to satisfy its NEPA obligation by disclosing and explaining its lack of information and providing a discussion of the potential impact to the best of its ability without the relevant information. As was noted *supra*, CEQ regulations are not binding on the agency when they “have a substantive impact on the way in which the Commission performs its regulatory functions.”²²³ The Commission made clear that it accepts the procedural requirements included in section 1502.22(b),²²⁴ so their applicability in these circumstances continues to be appropriate.

2. The Requirements of 40 C.F.R § 1502.22 Have Not Been Met

In LBP-17-9, we noted that “if the NRC Staff chooses a methodology that does not include complete information about adverse effects on the Tribe’s cultural resources, the NRC Staff would need to include an explanation that satisfies the requirements of 40 C.F.R. § 1502.22.”²²⁵ We further stated that “if the NRC Staff concludes there is no affordable alternative to the open-site survey for assessing the missing Native American cultural resources, it must at a minimum provide an explanation of this type to satisfy NEPA that is specific to

²²² *Id.* § 1502.22(b).

²²³ *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 444 & nn.94-95 (2011) (quoting Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments, 49 Fed. Reg. 9352, 9352 (Mar. 12, 1984) [hereinafter Final Rule on Environmental Protection Regulations]).

²²⁴ *See* Final Rule on Environmental Protection Regulations at 9356 (Commission has no problems with provisions of section 1502.22(b) under which agency must decide for itself whether the information that is not known is relevant to adverse impacts and, if relevant, whether the information is important to the decision and whether the agency wishes to proceed with the action in the absence of needed information).. This can be contrasted with the worst case analysis provision that previously was a part of this section that, while deemed a substantive requirement, *see id.*, is no longer part of the regulatory text, *compare* National Environmental Policy Act Regulations, 50 Fed. Reg. 32,234, 32,236-37 (proposed Aug. 9, 1985), *with* National Environmental Policy Act Regulations; Incomplete or Unavailable Information, 51 Fed. Reg. 15,618 (Apr. 25, 1986).

²²⁵ LBP-17-9, 86 NRC at 200.

the cultural resources of the Oglala Sioux Tribe and the other Native American tribes currently missing from the FSEIS.”²²⁶

The NRC Staff now alleges that although it has not conducted a site survey or completed any other aspects of the March 2018 Approach (aside from hiring a contractor), it has satisfied section 1502.22 and thus its NEPA obligations. To justify its failure to implement the March 2018 Approach, the NRC Staff asserts that “the Tribe’s unforeseen, eleventh-hour proposal of a new approach [] was incompatible with the implementation of the selected approach and greatly exceeded [it], in cost, timeframe, and scope,” thereby rendering it “not reasonably feasible for the Staff to obtain the information from the Tribe.”²²⁷ As a substitute for the information that would have been obtained through the March 2018 Approach, the NRC Staff offers its original FSEIS from 2014, supplemented by the information in the adjudicatory record of this proceeding.²²⁸ Yet, as we outline below, several material factual disputes exist regarding this NRC Staff explanation that make summary disposition on this point wholly inappropriate.

Moreover, some of these same material factual disputes preclude us from granting the Oglala Sioux Tribe’s dispositive motion as well.

3. Disputed Issues of Material Fact Remain

On the record before us, we are unable to conclude that no material factual dispute exists such that either the NRC Staff or the Oglala Sioux Tribe is entitled to judgment as a matter of law. Specifically, we see two key remaining material issues of fact.

i. The Reasonableness of the Survey Methodology

The Oglala Sioux Tribe contests whether the survey methodology, proposed by the NRC Staff and its contractor, as described in section II.5, *supra*, was reasonable. The Oglala Sioux Tribe argues that:

Due to budget and timing constraints, NRC Staff never prepared a methodology . . . [i]nstead, in preparing for the conference calls and webinars for the purpose of going into the field on June 11, 2018, NRC Staff contractors provided only a basic outline of a work plan limited to a “windshield tour” and [a] revisit [to] the poorly document[ed] sites identified by the 2013 survey — without providing for having any survey methodology in place.²²⁹

²²⁶ *Id.*

²²⁷ NRC Staff Motion at 32-33.

²²⁸ *Id.* at 38.

²²⁹ Oglala Sioux Tribe Response to Staff Motion at 6.

As such, the Oglala Sioux Tribe contends, “[t]he initial work plan presented by NRC Staff contained no identifiable scientific methodology for a cultural resources survey” and “constituted nothing more than the equivalent to the ‘open-site’ survey that the Tribe had repeatedly rejected.”²³⁰

This is not the first time the Oglala Sioux Tribe has raised these objections regarding the methodology being offered by the NRC’s contractor. The NRC Staff’s memorandum summarizing the interactions between the contractor and the tribes to determine the survey methodology noted that at the June 5th teleconference the Oglala Sioux Tribe objected to the proposed methodology, stating, “beginning the survey on June 11 would be tantamount to an open site survey, and that going out without a methodology in place is objectionable.”²³¹ The Oglala Sioux Tribe additionally restated its concerns with the methodology in an email from its counsel to Dr. Nickens (with the NRC Staff carbon-copied), in which the Oglala Sioux Tribe reiterated that “the work plan looks like NRC Staff’s previous use of an open site survey, which has been rejected by the Sioux Tribes and orders of the ASLB, and the Commission.”²³² The Oglala Sioux Tribe’s counsel stated that Dr. Nickens had acknowledged that “an open site approach is not an accepted methodology.”²³³ On June 8, the Oglala Sioux Tribe again stated its concerns regarding the “skeletal survey methodology proposal.”²³⁴

The Oglala Sioux Tribe accepted the March 2018 Approach as reasonable to resolve Contention 1A and does not challenge the reasonableness of the March 2018 Approach as written. Further, we agree with the Oglala Sioux Tribe that this should not prevent the Tribe from “maintain[ing] objection[s] to issues regarding a field survey methodology.”²³⁵ We also disagree with the NRC Staff that the Oglala Sioux Tribe has not provided support for its description of “the June tribal field survey effort as a mere offer of an open-site survey.”²³⁶ Instead, we find that the Oglala Sioux Tribe has raised a material factual dispute as to the reasonableness of the NRC Staff’s survey methodology, one important element of the March 2018 Approach.

²³⁰ *Id.* at 7.

²³¹ NRC Summary of Survey Methodology Sessions at 8.

²³² Email from Travis Stills, Oglala Sioux Tribe Counsel, to Paul Nickens, SC&A and NRC Staff Contractor (June 6, 2018, 2:30 PM) (ADAMS Accession No. ML18159A134).

²³³ *Id.*

²³⁴ Email from Travis Stills, Oglala Sioux Tribe Counsel, to Emily Monteith, NRC Staff Counsel (June 8, 2018, 7:50 PM) (ADAMS Accession No. ML18159A624).

²³⁵ Oglala Sioux Tribe Response to Staff Motion at 9.

²³⁶ NRC Staff Motion at 31.

ii. *The Reasonableness of the NRC Staff's Decision to Discontinue Work*

A material factual dispute also exists as to the reasonableness of the NRC Staff's decision to discontinue work *completely* on June 15, 2018. We reach this conclusion based on the objections raised by the Oglala Sioux Tribe on this issue.

First, the Oglala Sioux Tribe objects to the NRC Staff's depiction of the June 12 and 15 proposals as an ultimatum.²³⁷ In its pleadings, the Oglala Sioux Tribe claims it "expected NRC Staff to review the Tribe's input and continue working on the methodology."²³⁸ While the NRC Staff contends that the proposals were a constructive rejection, the Oglala Sioux Tribe argues it intended the proposals to "facilitate the discussions and provide NRC Staff and its contractors information on the type of methodologies the Tribe would like to incorporate to the degree possible into the field survey."²³⁹ Contrary to being an ultimatum, the record shows that the Oglala Sioux Tribe actually attempted to restart the negotiation immediately upon being informed that the NRC Staff would be discontinuing its implementation of the March 2018 Approach. In an email dated June 15, counsel for the Oglala Sioux Tribe stated that he believed there had been a "misunderstanding," and reiterating that the Oglala Sioux Tribe still planned to go ahead with the "windshield tour" that was scheduled for the week of June 18.²⁴⁰ The June 15 email further stated it was "appropriate for the THPO(s) and others to go into the field next week," and could provide "important information to help prepare for oral interviews and the September field visits."²⁴¹ The contradicting characterizations of the Oglala Sioux Tribe's June 12 and 15 proposals demonstrate there is a material factual dispute, i.e., whether the new proposals were a constructive rejection, as the NRC Staff seeks to characterize them, or simply were "necessitated by the NRC Staff's continued reliance on an informal open site survey instead of a methodologically sound survey developed by qualified contractors, with the Tribe's input."²⁴² This dispute impacts the reasonableness of the NRC Staff's decision to discontinue work.

At the same time, we acknowledge that while the Oglala Sioux Tribe characterized the June 12 and June 15 proposals as proposals for a "methodology," those proposals may have been an attempt to renegotiate the entire approach, per

²³⁷ Oglala Sioux Tribe Response to Staff Motion at 13.

²³⁸ *Id.* at 7.

²³⁹ *Id.*

²⁴⁰ Email from Travis Stills, Oglala Sioux Tribe Counsel, to Emily Monteith, NRC Staff Counsel (June 15, 2018, 3:14 PM) (ADAMS Accession No. ML18170A154).

²⁴¹ *Id.*

²⁴² NRC Staff Motion at 31 (quoting Oglala Sioux Tribe's Response to NRC Staff Motion to Set Filing for Summary Disposition Motions (July 16, 2018) at 2).

the NRC Staff's interpretation.²⁴³ During the April 6, 2018 teleconference, the NRC Staff explained that "notwithstanding the sort of open nature of what the survey might entail" it believed the Oglala Sioux Tribe, during survey methodology negotiations, would be "committed to working within the parameters set out in the [March 2018] approach."²⁴⁴ As discussed *supra*, in section II.E and section IV.A, the Oglala Sioux Tribe's June proposals went far beyond just suggesting a methodology for the site survey, i.e., a scientific method for how the site should be traversed, catalogued, etc., by expanding the budget, the time frame, and the geographic area involved. It may have been reasonable for the NRC Staff to view this as an attempt to establish a new approach, but we cannot make that determination based on the pleadings. The Oglala Sioux Tribe's and NRC Staff's different understandings of the Oglala Sioux Tribe's proposed "survey methodology" demonstrates that a material factual dispute exists as to whether the new proposals were a rejection, or a starting point for further negotiation, and whether it was reasonable for the NRC Staff to discontinue its efforts to complete the site survey.

Second, the Oglala Sioux Tribe raises a material factual dispute as to the reasonableness of the NRC Staff's decision to forgo the remaining elements of the March 2018 Approach. The Oglala Sioux Tribe disputes the NRC Staff's view that negotiations had ended at an impasse: "With a full week left in the original schedule for field work, NRC Staff left Pine Ridge on June 15, 2018," thereby curtailing the "positive steps made by the in-person discussions."²⁴⁵ Regardless of the progress, or lack thereof, made during the first week, the timeline set forth in the NRC Staff's March 2018 Approach shows that the parties still had scheduled one more week in June, and two weeks in September to implement the field survey.²⁴⁶ The timeline set forth in the March 2018 Approach projected two weeks of oral history interviews with tribal elders in August.²⁴⁷ It is unclear from the record why the NRC Staff could not have moved forward and, at the very least, conducted the oral history interviews in August. The Oglala Sioux Tribe raises a valid material factual dispute about the reasonableness of the NRC Staff's decision to discontinue all aspects of the March 2018 Approach.

Accordingly, finding there remain material facts in dispute regarding Con-

²⁴³ *Id.* at 30.

²⁴⁴ Tr. at 1433-34 (Apr. 6, 2018).

²⁴⁵ Oglala Sioux Tribe Response to Staff Motion at 13.

²⁴⁶ March 2018 Approach Timeline.

²⁴⁷ *Id.*

tention 1A, we deny both the NRC Staff's and Oglala Sioux Tribe's motions for summary disposition as to Contention 1A.²⁴⁸

V. CONTINUING OBLIGATIONS AND FURTHER PROCEDURES

A. Mandatory Disclosures

As we explained in LBP-17-9, 10 C.F.R. § 2.336 provides for “general discovery” in Subpart L proceedings.²⁴⁹ The regulation requires that “all parties . . . shall . . . disclose and provide . . . all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions.”²⁵⁰ The regulation establishes that each party's duty to submit these mandatory disclosures is ongoing, and that each party must make these mandatory disclosures once a month and without the filing of a discovery request by other parties.²⁵¹ Going forward, the parties must continue to disclose any documents relevant to the NRC Staff's efforts to resolve Contention 1A.

B. Further Procedures

As part of its NEPA responsibilities, a federal agency must undertake reasonable efforts to acquire missing information.²⁵² The Board cannot direct the NRC Staff to pursue a single avenue to meet its statutory NEPA obligations. The Board can, however, establish procedures to ensure the NEPA-required “hard look” is taken or a legally sufficient explanation is placed on the record as to why the required information is missing and not “reasonably obtainable.” The Board, therefore, will establish procedures for the resolution of Contention 1A. The NRC Staff has two avenues available to it to conclude expeditiously the litigation of the issues in this case. The two alternative avenues are: (1) the NRC Staff can resume the implementation of its March 2018 Approach, with appropriate adjustments to the dates in the original timetable;²⁵³ or (2) the parties

²⁴⁸ The Board need not address the issue of license vacature raised in the Oglala Sioux Tribe's summary disposition motion, as that matter is before the Commission on remand from the District of Columbia Circuit. *See* section I.C, *supra*.

²⁴⁹ Although 10 C.F.R. § 2.336 is contained in Subpart C to the agency's Part 2 rules of procedure, Subpart C is generally applicable to all adjudications pursuant to the Atomic Energy Act, including Subpart L proceedings. 10 C.F.R. §§ 2.300, 2.1200.

²⁵⁰ *Id.* § 2.336(a)(2)(i).

²⁵¹ *Id.* § 2.336(a), (d).

²⁵² *See* 40 C.F.R. § 1502.22; *Winthrop*, 535 F.3d at 13; *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010).

²⁵³ Although the choice of an approach is one for the NRC Staff to make, *see supra* p. 127, as a practical matter at this point, the March 2018 Approach is the only NRC Staff-generated alternative approach on the table.

can prepare for a prompt evidentiary hearing, where testimony and evidence will be taken on the questions raised by the motions for summary disposition filed August 17, 2018.

1. Alternative 1: Continue the Efforts Embodied in the March 2018 Approach

The Oglala Sioux Tribe first raised its concern with the protection of cultural and religious resources in a proposed contention filed in 2010.²⁵⁴ Almost nine years have passed and these concerns have not been resolved. As described *supra*, the parties reached an agreement on what appeared to be a reasonable approach to address the Oglala Sioux Tribe's concerns and satisfy the NRC Staff's NEPA obligations with the March 2018 Approach. What remains is implementation of the mutually agreed upon Approach. The NRC Staff may wish to reconsider its abandonment of the March 2018 Approach and move forward on the remaining elements of the March 2018 Approach.

Key progress has already been made towards implementing the March 2018 Approach. The NRC Staff has located and contracted with a qualified facilitator, experienced in conducting tribal surveys. The NRC Staff has made arrangements for the participation of other interested Lakota Sioux Tribes and has agreed to iterative trips to the sites to be studied. The NRC Staff and its contractor have provided for the involvement of tribal elders and the collection of oral histories. The March 2018 Approach has a budget that both the NRC Staff and Powertech supported. The Oglala Sioux Tribe has stated that it desires to move forward and cooperate with the NRC Staff to implement site survey and oral history portions of the March 2018 Approach. Now the NRC Staff must decide whether to continue with this progress.

If the NRC Staff chooses to move forward with the March 2018 Approach, and restart communication between its contractor and the participating tribes to develop a scientific methodology for the site survey, the *only* aspect of the Approach that is open for discussion is the site survey methodology.²⁵⁵ That is, any tribal negotiating position or proposal should *only* encompass the specific scientific method that would fit into the two-week periods set out in the March 2018 Approach for visiting the physical site, i.e., how the contractor and Tribe

²⁵⁴ Oglala Sioux Tribe Petition at 12-17.

²⁵⁵ As previously suggested at a number of the telephone conferences with the Board and in LBP-17-9, the parties may submit a joint motion to request the appointment of a Settlement Judge to conduct settlement negotiations to assist in the resolution of this dispute pursuant to 10 C.F.R. § 2.338, and pursue that avenue in an attempt to reach a settlement and dismissal of the contention. Additionally, the parties might consider seeking assistance from the NRC Tribal Liaison to bring the NRC Staff and the Oglala Sioux Tribe closer to agreement.

members will walk the site and mark or record located tribal resources. While we understand the need to be sensitive to the cultural tenets and needs of the Oglala Sioux Tribe, given that the time period for the site survey phases was agreed to by the Oglala Sioux Tribe, and that it is the Oglala Sioux Tribe that has continually pushed for a scientific methodology, negotiations and proposals must remain within these constraints.

Finally, some of the documents in the record indicate that SUNSI and confidentiality issues may be a sticking point to further progress on the March 2018 Approach.²⁵⁶ If any party believes that the Protective Order already in place for this proceeding needs revision, it may file a request for such a revision with the Board.²⁵⁷

2. *Alternative 2: Evidentiary Hearing to Receive Evidence and Explanation to Resolve Remaining Disputed Material Issues of Fact*

There are three interrelated disputed material issues of fact that must be addressed before Contention 1A will be ripe for resolution by summary disposition. First, the NRC Staff must show that its March 2018 Approach contained a reasonable methodology for the conduct of the site survey. Second, the NRC Staff must show that its decision to discontinue work *completely* on June 15, 2018, was reasonable. Finally, consistent with 40 C.F.R. § 1502.22, the NRC Staff must show that proposed tribal alternatives to its March 2018 Approach would be cost prohibitive. With respect to the cost prohibitive factual dispute, the NRC Staff must provide information establishing the 40 C.F.R. § 1502.22(b)(3) and (4) requirements that set forth a “summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts [of the Dewey-Burdock project] on the human environment,”²⁵⁸ and “the agency’s evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.”²⁵⁹ In other

²⁵⁶ Oglala Sioux Tribe Counsel Memo on Proposed Schedule at 1-2 (proposing a new schedule with “prerequisites for going into the field” including the need for updated confidentiality and SUNSI agreements); Emails between Emily Monteith, NRC Staff Counsel, and Travis Stills, Oglala Sioux Tribe Counsel (June 7, 8, and 11, 2018) (ADAMS Accession No. ML18173A166) (discussing the conflicting ideas about how sensitive information revealed from the March 2018 Approach would be protected).

²⁵⁷ At the outset of this proceeding, this Protective Order granting access to requested Sensitive Unclassified Non-Safeguards Information (SUNSI) was issued by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel to the Oglala Sioux Tribe. *See* Memorandum and Order of Chief Administrative Judge E. Roy Hawkens (Protective Order Governing the Disclosure of Sensitive Unclassified Non-Safeguards Information (SUNSI)) (Mar. 5, 2010) (unpublished).

²⁵⁸ 40 C.F.R. § 1502.22(b)(3).

²⁵⁹ *Id.* § 1502.22(b)(4).

words, in these circumstances, if the NRC Staff concludes there is no affordable alternative to the open-site survey for assessing the missing Native American cultural resources, to satisfy NEPA, the NRC Staff must at a minimum provide a sufficiently detailed explanation addressing the cultural resources analysis for the Oglala Sioux Tribe and the other Native American tribes that is currently missing from the FSEIS.²⁶⁰

Should the NRC Staff, after consultation with the parties,²⁶¹ choose not to continue with its progress on the March 2018 Approach, we will move forward with an expeditious evidentiary hearing to address the unresolved material issues of fact that arise from the August 17, 2018 motions for summary disposition. The NRC Staff shall inform the Board of its decision as to which alternative it wishes to pursue on or before November 30, 2018. The Board will convene an all-parties status conference December 5, 2018.

If the NRC Staff elects to proceed to an evidentiary hearing, the parties will file position statements and pre-filed direct testimony no later than January 4, 2019, in conjunction with a list of potential witnesses. Rebuttals to the position statements and pre-filed rebuttal testimony are to be filed no later than January 18, 2019. Motions in limine and party responses regarding both the initial and rebuttal pre-filed testimony will be allowed, as provided by the schedule in Appendix A. Any proposed cross-examination questions for the evidentiary hearing shall be submitted to the Board no later than February 15, 2019. The hearing itself will be scheduled for February 26-28, 2019, in South Dakota.

Following the conclusion of the evidentiary hearing, parties are to submit their proposed findings of fact and conclusions of law no later than March 30, 2019, and replies to the findings of fact and conclusions of law shall be filed no later than April 12, 2019.

Consistent with this schedule, as fully set forth in Appendix A to this Memorandum and Order, the Board anticipates issuing an initial decision on these matters by June 1, 2019. The Board will contact the parties with the details of the all-parties status conference in the near term.

²⁶⁰ See LBP-15-16, 81 NRC at 655; *see also* LBP-17-9, 86 NRC at 200.

²⁶¹ In providing the Staff with 30 days to advise the Board of its decision in this regard, we recognize that (1) any Staff decision to proceed is likely to be based on the expressed willingness of the Oglala Sioux Tribe and Powertech to continue under the March 2018 Approach; and (2) at least one meeting among the parties will be required to discuss going forward under the Approach. Given the parties' past problems, it seems that a vital element of that meeting (and any follow-up meetings) will be to establish a common, concrete understanding of what elements are involved in each of the phases of the March 2018 Approach. Trying to "kick the can down the road" is no longer an option.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Dr. Mark O. Barnett
ADMINISTRATIVE JUDGE

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Rockville, Maryland
October 30, 2018

APPENDIX A

**SCHEDULE — Powertech USA, Inc.
(Dewey-Burdock In Situ Uranium Recovery
Facility) Proceeding**

| Event | Date |
|--|----------------------|
| Licensing Board Order Denying Staff Dispositive Motion on Contention 1A | October 30, 2018 |
| NRC Staff Decision on Which Alternative to Pursue to Resolve Contention 1A | November 30, 2018 |
| All Parties Status Conference | December 5, 2018 |
| Evidentiary Hearing Schedule | |
| Positions Statements/Prefiled Direct Testimony from All Parties Due | January 4, 2019 |
| Rebuttal Statements/Prefiled Rebuttal Testimony from All Parties Due | January 18, 2019 |
| In Limine Motions on Prefiled Testimony Due | January 25, 2019 |
| In Limine Motion Responses Due | February 1, 2019 |
| Licensing Board Ruling on In Limine Motions | February 8, 2019 |
| Proposed Cross-Examination Questions Due | February 15, 2019 |
| Evidentiary Hearing | February 26-28, 2019 |
| Proposed Findings of Fact/Conclusions of Law Due | March 30, 2019 |
| Reply Findings of Fact/Conclusions of Law Due | April 12, 2019 |
| Licensing Board Initial Decision | June 1, 2019 |

Additional Views of Bollwerk, A.J.

Although I agree fully with the Licensing Board's disposition of the August 17, 2018 summary disposition motions of the NRC Staff and intervenor Oglala Sioux Tribe, I write separately to observe that given what has transpired, the parties may be inclined to "let the lawyers deal with it" in an evidentiary hearing rather than trying to move forward with collecting and recording additional tribal cultural resources information as was contemplated in the Staff's March 2018 Approach described in detail in the Board's opinion. Nonetheless, it is my hope they will use the thirty days provided by the Board's schedule to explore seriously whether that information-gathering process can be resumed and completed.

Certainly, if the time pressure associated with the delay in hiring a Staff cultural resources contractor and the need to conduct the site surveys before inclement weather intervened contributed to the events that resulted in the March 2018 Approach process being halted, those should no longer be factors. The Staff's contractor is onboard and the schedule can be "rebooted" to begin the onsite work in the early spring, perhaps after initiating an ethnographic outreach effort with tribal elders during the coming winter months to help inform the pedestrian surveys.

Though the Board is fully prepared to conduct an evidentiary hearing as outlined in its decision, it is hard to imagine that the goals of the National Environmental Policy Act, as well as the public interest generally, are best served by expending Board and party resources litigating the events of June 2018 that halted the cultural resources information-gathering process, as compared to devoting those resources to undertaking and completing that process so as to endeavor to fulfill the Staff's NEPA responsibilities. Moreover, the possibility exists that by June 2019 when the Board issues an initial decision after months of litigation, the parties could find themselves having to begin the same information-gathering process that, if resumed now, could be mostly finished by next June, with the Staff's environmental assessment supplement possibility completed by this time next year.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Kristine L. Svinicki, Chairman
Jeff Baran
Stephen G. Burns
Annie Caputo
David A. Wright

In the Matter of

Docket No. 40-8943-OLA

CROW BUTTE RESOURCES, INC.
(License Renewal for the *In Situ*
Leach Facility, Crawford, Nebraska)

November 29, 2018

The Commission denies a petition for review of an Atomic Safety and Licensing Board decision.

APPELLATE REVIEW

The Commission reviews questions of law *de novo*, but generally defers to a Board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence.

ENVIRONMENTAL REVIEW

The Commission has long held that on National Environmental Policy Act (NEPA) issues the initial decision(s) of a Presiding Officer, and the Commission's own decision, augment and become part of the environmental record of decision. Evidence presented as part of the hearing record may serve to refine, amplify, or correct a point made in the NRC Staff's environmental review document.

ENVIRONMENTAL REVIEW

The NRC Staff need not formally supplement its NEPA review document every time new information or analysis comes to light. To determine whether supplementation is required, the NRC considers whether the new information shows that the proposed action would affect the environment in a significant manner or to a significant extent not already considered. To require supplementation, the information must present a seriously different picture of the environmental impact of the proposed project from what was previously considered.

MATERIALS LICENSE PROCEEDINGS

While NRC rules permit the Staff to issue a materials license pending completion of an adjudicatory proceeding, the license effectively remains provisional until the adjudicatory proceeding is completed. The NRC will not have reached a final decision on the licensing action until the adjudicatory proceeding provided under the Atomic Energy Act is completed.

MATERIALS LICENSE RENEWAL PROCEEDINGS

To the extent that additional analysis may be required under NEPA, NRC regulations governing materials license renewal provide that the original license will remain in effect pending a final determination on the license renewal application.

MEMORANDUM AND ORDER

Today we address the Consolidated Intervenor's petition for review of the Atomic Safety and Licensing Board's second partial initial decision, LBP-16-13. For the reasons outlined below, we deny the petition.

I. INTRODUCTION

This adjudicatory proceeding concerns the Crow Butte Resources, Inc. application to renew its source materials license for an *in situ* leach uranium recovery facility, located near Crawford, Nebraska. Following an evidentiary hearing on nine admitted environmental contentions, the Board issued two separate partial initial decisions. The Board's first decision, LBP-16-7, addressed one contention (Contention 1), resolving it partially in favor of the Consolidated Intervenor and the Oglala Sioux Tribe (together, the Intervenor), and partially in favor of

the NRC Staff.¹ Our decision today addresses the Board’s second partial initial decision, which resolved the remaining eight contentions: Contentions A, C, D, F, 6, 9, 12, and 14.

In LBP-16-13, the Board ruled in favor of the Staff on most issues, with the exception of a limited portion of one contention, designated as Contention 12B.² Contentions 12A and 14 challenged whether the Environmental Assessment (EA) adequately discusses the environmental risk of tornadoes and earthquakes, respectively. The remaining six contentions — A, C, D, F, 6, and 9 — raised hydrogeological issues. These six contentions concerned whether the Staff’s EA adequately addressed the potential pathways for mining-related contaminants to migrate offsite from the Crow Butte License Area. Related concerns included whether the Staff adequately examined potential subsurface connections between the License Area and the Pine Ridge Indian Reservation in South Dakota.³

For the six hydrogeology-related contentions, the Intervenors did not present all of their evidence on a contention-specific basis. Instead, as the Board described, the Intervenors challenged the EA’s analysis of various “related hydrogeologic issues that cut across” multiple contentions.⁴ The Board therefore chose to first address the “overarching factual issues and disputes” before turning to the specific contentions.⁵

¹ LBP-16-7, 83 NRC 340 (2016). Contention 1 concerned the Staff’s assessment of impacts on historical and cultural resources. Crow Butte has petitioned for review of LBP-16-7; we will address that petition separately. See Petition for Review of LBP-15-11 and LBP-16-7 (June 20, 2016). In LBP-16-7, the Board outlined the procedural history of this long-pending proceeding. See LBP-16-7, 83 NRC at 347-49.

² Contention 12 as admitted encompassed both the risk of tornadoes and an unrelated issue regarding the potential application of *in situ* leach (ISL) wastewater on land. See LBP-15-11, 81 NRC 401, 438, 442 (2015). The Board in LBP-16-13 addressed the two issues separately as Contention 12A (tornadoes) and Contention 12B (land application of wastewater). Contention 12B focused on the potential environmental impacts of land application of ISL wastewater as they relate to the effects of selenium on wildlife. See LBP-16-13, 84 NRC 271, 425-434 (2016). Crow Butte has also petitioned for review of the Board’s ruling on Contention 12B, which we will address separately. See Petition for Review of LBP-15-11 and LBP-16-13 (Dec. 29, 2016).

³ See LBP-16-13, 84 NRC at 302-03. Members of the Oglala Sioux Tribe reside at the reservation, and some of the Consolidated Intervenors are members of the Tribe.

⁴ *Id.* at 285.

⁵ *Id.*

Consolidated Intervenor now seek review of LBP-16-13, challenging several Board findings.⁶ The NRC Staff and Crow Butte oppose the petition.⁷

II. BACKGROUND

Because most of the technical issues we address relate to the potential for contaminants to migrate away from the License Area, we provide below a brief description of the relevant hydrogeology of the area, the *in situ* leach process, and Crow Butte's program to detect mining fluids that may be migrating away from a wellfield.

A. Relevant Area Hydrogeology

Crow Butte recovers uranium from a sandstone layer known alternatively as the Basal Chadron Formation or the Chamberlain Pass Formation (its more recent name).⁸ Crow Butte recovers uranium from a target Ore Zone, 10 to 80 feet thick, located entirely within the Basal Chadron/Chamberlain Pass Formation Aquifer.⁹ The Board described the Aquifer as having "generally poor water quality" and a "high radionuclide content."¹⁰

Crow Butte conducts its operations in a License Area, which includes a Central Processing Plant, evaporation ponds, and individual mine units with associated injection, production, and monitoring wells. Most of the License Area is underlain by 130- to 480-foot-thick portions of the Upper Brule Aquifer, which Crow Butte designated as the overlying aquifer for the Ore Zone. The Upper

⁶ Consolidated Intervenor Petition for Review (Jan. 3, 2017) (Petition). Consolidated Intervenor include the Western Nebraska Resources Council, Owe Aku/Bring Back the Way, Debra White Plume, Beatrice Long Visitor Holy Dance (now deceased), Joe American Horse & Tiospaye, Thomas Cook, and Loretta Afraid-of Bear Cook & Tiwahe. Debra White Plume, Joe American Horse, and Loretta Afraid-of-Bear Cook are members of the Oglala Sioux Tribe. *Id.* at 1 n.1. The Tribe did not join Consolidated Intervenor's appeal.

⁷ See NRC Staff's Answer Opposing Consolidated Intervenor's Petition for Review of LBP-16-13 (Jan. 30, 2017) (Staff Answer); Response to Consolidated Intervenor's Petition for Review of LBP-16-13 (Jan. 30, 2017) (Crow Butte Answer).

⁸ The Board throughout its decision acknowledged both names by referring to the formation as the Basal Chadron/Chamberlain Pass Formation, or BC/CPF.

⁹ See LBP-16-13, 84 NRC at 289, 298-99. When referring merely to the "geologic formation or structure," the Board referred to the "Formation." When discussing the "groundwater contained in the pores and fractures" of the Formation, the Board referred to the "Aquifer." See *id.* at 288-89 n.43.

¹⁰ *Id.* at 297 (citing Ex. NRC-010, Final Environmental Assessment for the License Renewal of U.S. Nuclear Regulatory Commission License No. SUA-1534 (Oct. 2014), at 47 (EA)).

Brule Aquifer “produces sufficient quantities of water suitable for domestic and agricultural purposes.”¹¹

The uranium-rich Ore Zone is separated geologically from the Upper Brule Aquifer by a continuous, thick layer referenced in the Board’s decision as the Upper Confining Unit, made up of the Lower Brule Formation, and the Middle and Upper Chadron Formations.¹² The Upper Confining Unit ranges in thickness from approximately 100 to 500 feet, depending on its location. The Ore Zone is confined on the bottom by the Pierre Shale Lower Confining Unit. All parties agreed that the Pierre Shale has very low vertical hydraulic conductivity and would prevent Crow Butte’s mining liquids from flowing downward past the base of the Basal Chadron/Chamberlain Pass Formation Aquifer.¹³

B. The ISL Process and Excursion Monitoring

The *in situ* leach uranium recovery process involves injecting a leach solution or “lixiviant” into wells drilled into the uranium-bearing formation, here the Ore Zone aquifer.¹⁴ The lixiviant solution consists of native groundwater with added hydrogen peroxide or gaseous oxygen (or both) and sodium bicarbonate. These solutions are delivered to the Ore Zone through an injection well. They oxidize and mobilize uranium contained in the ore body. The resulting uranium-rich solution is then recovered through surrounding extraction wells and piped to a processing facility for removal of the uranium through an ion exchange process.¹⁵

Several of the issues we address today pertain to the potential for offsite groundwater impacts from “excursions.” An excursion is “the unintended spread of processing liquids beyond” the mining units.¹⁶ Excursions can occur either horizontally or vertically.

The Board described at length Crow Butte’s excursion monitoring program, which contains steps to limit, detect, and correct unintended releases of mining liquids beyond the operating wellfield. To detect excursions, Crow Butte has installed excursion monitoring wells in the overlying aquifer (the Upper Brule Aquifer) and in perimeter rings surrounding all mine units. The monitoring wells placed in the overlying Upper Brule Aquifer are intended to provide early detection of a vertical excursion (an unwanted vertical flow of process fluids up from the production zone), while the perimeter ring of monitoring wells —

¹¹ *Id.* at 290-91, 297.

¹² *Id.* at 291-92.

¹³ *Id.* at 296.

¹⁴ *See id.* at 287; Ex. NRC-010, EA, at 15.

¹⁵ *See* LBP-16-13, 84 NRC at 287; Ex. NRC-010, EA, at 15.

¹⁶ *See* LBP-16-13, 84 NRC at 286.

screened at the depth of the Ore Zone where the mining occurs — is intended to provide early notice of a horizontal excursion.

License conditions govern numerous aspects of the Crow Butte excursion monitoring program, including distance between monitoring wells, frequency and density of well sampling, corrective actions to be taken in the event of excursions, and excursion reporting requirements.¹⁷ Crow Butte must sample monitoring wells at least every 14 days and more frequently if an excursion is detected. Crow Butte samples the monitoring wells for the following three parameters, which are intended to serve as early “indicators” of an excursion: chloride, conductivity, and total alkalinity. Reaching specified upper control limits of one or more of these parameters in a monitoring well serves as a warning that mining process fluids may have migrated away from the wellfield.

Upon confirmation of an excursion, Crow Butte must take corrective actions. Corrective measures may include adjusting the injection or production rates (or both) in the area of the monitoring well to draw fluids back towards the production zone; pumping wells to increase the recovery of mining solutions; and stopping the injection of lixiviant within the affected area of the mine unit until the excursion is corrected.

III. ANALYSIS

In our discretion, we may grant a petition for review, giving due weight to whether a petition raises a substantial question regarding any of the following:

- (i) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
- (ii) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
- (iii) A substantial and important question of law, policy, or discretion has been raised;
- (iv) The conduct of the proceeding involved a prejudicial procedural error; or
- (v) Any other consideration which we may deem to be in the public interest.¹⁸

We review questions of law *de novo*, but we generally defer to a Board’s

¹⁷ See, e.g., Ex. NRC-012, Materials License No. SUA-1534 (Nov. 5, 2014) (License) (License Conditions 11.5, Excursion Monitoring; 11.4, Establishment of Upper Control Limits; 10.4, Monitor Well Spacing); see also LBP-16-13, 84 NRC at 287-88, 350-53.

¹⁸ 10 C.F.R. § 2.341(b)(4).

plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence. The Board's main role in our adjudicatory process is to carefully review testimony and exhibits to resolve factual disputes. Where a Board, aided by its technical judges, has "rendered reasonable, record-based" factual findings, we will typically decline to undertake a *de novo* review of underlying facts, absent a substantial question of a "clearly erroneous" material finding.¹⁹

Consolidated Intervenors seek review of LBP-16-13 on both factual and legal questions. After carefully considering all of Consolidated Intervenors' claims, we conclude there is no basis warranting Commission review.

A. Challenges to Board Findings on Excursions

1. Board Findings

In LBP-16-13, the Board evaluated the potential for groundwater impacts from excursions. Although noting that "excursions have occurred," the Board found "no evidence that those excursions resulted in the transport of contaminants outside of the License Area."²⁰ Based on monitoring data collected over the course of Crow Butte's more than 20 years of uranium recovery operations, the Board found that "Crow Butte satisfactorily addressed its excursions and . . . no long-term impacts have appeared to date," either from vertical or horizontal excursions.²¹

The Board additionally found it unlikely that an "undetected excursion" would occur given specific aspects of Crow Butte's excursion monitoring program and its operations, specifically (1) the close proximity of the excursion monitoring wells; (2) the low flow rate from the wellfield; and (3) the use of "bleed water that removes more liquid from the aquifer than is reinjected," a process that maintains an inward hydraulic gradient.²²

The Board therefore agreed with the EA's conclusion that "the long-term impacts on groundwater from excursions will be SMALL."²³ The Board based

¹⁹ See *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 98-99 (2010); see also *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 45-46 (2012); *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 2 (2006).

²⁰ LBP-16-13, 84 NRC at 357.

²¹ *Id.*

²² *Id.* As described in the Board's decision, Crow Butte experts testified that they use a "bleed" process in which they extract a greater volume of liquids (leach solution and native groundwater) from the mine unit than the volume of leach solution that they inject, causing "an inflow of groundwater into the production area" to prevent the loss and migration of leach solution. See *id.* at 351.

²³ *Id.* at 357.

this finding on the EA's analysis of the excursions that occurred during Crow Butte's prior license term, which included the groundwater monitoring data collected during Crow Butte's operations. The Board also based its finding on Crow Butte's continuing obligation under its license to "detect and take corrective action to resolve any excursion."²⁴

2. Consolidated Intervenors' Claims

Consolidated Intervenors challenge the Board's finding on the potential groundwater impacts from excursions. They claim that the EA's "SMALL impact conclusion" is "impossible to legally justify . . . when there have been long-term, unexplained excursions" in Mine Unit 6 and Mine Unit 8.²⁵ They also claim that the Board erred in concluding that additional monitoring requirements imposed under License Condition 11.12 would mitigate excursions occurring in Mine Units 6 and 8.²⁶ They further argue that the National Environmental Policy Act (NEPA) requires "analytical data demonstrating" how a mitigation measure "will constitute an adequate buffer" against the potential adverse impacts from the authorized activity.²⁷ They claim that here, "even with License Condition 11.12," Crow Butte's excursion monitoring program "fails" as a mitigation measure in regard to excursions in Mine Units 6 and 8 because the program can detect "impacts only after they occurred."²⁸

These arguments do not raise a substantial question with the Board's findings. Consolidated Intervenors' argument suggests that once an excursion is detected, it is already too late to prevent offsite impacts. But the excursion monitoring program's purpose is to prevent offsite impacts by providing a timely alert, thereby prompting corrective actions to stop an excursion *before* any mining fluids can leave the License Area. Crow Butte's excursion monitoring program accordingly encompasses actions both to detect and to terminate excursions. After considering extensive record evidence, the Board found no evidence that any excursion during the course of Crow Butte's many years of operation caused long-term groundwater quality impacts or that any excursion (including those in Mine Units 6 and 8) resulted in contaminants leaving the License Area.

Consolidated Intervenors also do not identify what further "analytical data" NEPA requires. The Board addressed the excursion monitoring program in

²⁴ *Id.* at 356-57; *see also id.* at 352-53 (describing corrective actions).

²⁵ *See* Petition at 3.

²⁶ While Consolidated Intervenors refer to License Condition 11.1, we understand them to mean License Condition 11.12, which imposes additional excursion monitoring requirements in the event of excursions in Mine Unit 6 or Mine Unit 8.

²⁷ *Id.* at 4.

²⁸ *Id.*

detail. The Board's decision notes that there are currently 333 excursion monitoring wells from which Crow Butte conducts bi-weekly sampling for the three excursion parameters, with sampling increased to a weekly basis for any well placed on "excursion status."²⁹ The Board based its findings regarding groundwater impacts on water quality monitoring data gathered during Crow Butte's operating history and specific program requirements imposed by license condition.³⁰ Although NEPA does not require that an environmental impact statement (much less an EA) contain a complete mitigation plan, Crow Butte's excursion monitoring program is an established program, set forth in detail, and governed by prescriptive license conditions.

Nor do Consolidated Intervenor's references to excursions that occurred in Mine Units 6 and 8 indicate Board error. In its EA, the Staff disclosed that a "continued number of excursions" have occurred in Mine Units 6 and 8.³¹ The EA states that these vertical excursion events coincided with precipitation events and do "not appear to be a consequence of the migration of lixiviant from the production aquifer."³² But because particular wells located in Mine Units 6 and 8 have continued to experience excursion events and the Staff remains uncertain as to all of the events' origins, the Staff imposed License Condition 11.12 to aid in determining the underlying cause of excursions in these two mine units.³³

License Condition 11.12 applies only in the event that an excursion is confirmed in an excursion monitoring well located in Mine Unit 6 or 8. In that circumstance, Crow Butte must sample the well for natural uranium, in addition to sampling for the three standard excursion indicator parameters (chloride, con-

²⁹ LBP-16-13, 84 NRC at 353.

³⁰ The circumstances are very different than those encountered in *National Parks & Conservation Ass'n v. Babbitt*, on which Consolidated Intervenor's rely for their claim that a "court must be able to review, in advance, how specific measures will bring projects into compliance with environmental standards." See Petition at 4 (citing 241 F.3d 722 (9th Cir. 2001)). In *National Parks & Conservation*, the "intensity or practical consequences" of expected impacts were simply unknown because of an absence of information, and the agency had no evidence that proposed mitigation measures would "combat the mostly 'unknown' or inadequately known effects." See *id.* at 732-34. Here, in contrast, the Board considered water quality monitoring data and other information gathered during Crow Butte's 20-year history of uranium recovery at the site.

³¹ See Ex. NRC-010, EA, at 92.

³² See *id.*

³³ Crow Butte attributed all but one of these recorded vertical excursion events to natural fluctuations of the water quality within the overlying aquifer, where the Mine Units 6 and 8 monitoring wells placed on excursion status are located. The Staff, however, represented that there is insufficient information to reach a definitive conclusion, citing the possibility of spills or other unintended releases of mining fluids as potential causes. See, e.g., Ex. NRC-010, EA, at 92. Crow Butte concluded that one of the recorded vertical excursion events actually was an unintended spill of process fluids, which Crow Butte remediated. The Board agreed that this event was a spill, not an excursion. See LBP-16-13, 84 NRC at 357.

ductivity, and total alkalinity).³⁴ This additional testing for natural uranium is intended to help identify the source of the excursion, and by extension, to help identify any potential recurring issue that may be causing excursions to occur in these particular areas.³⁵

The Board acknowledged that “some uncertainty remains as to the precise cause” of excursions that occurred in Mine Units 6 and 8, noting the Staff’s view.³⁶ But the Board itself agreed with Crow Butte on the excursions’ cause. The Board found that the recorded events in Mine Units 6 and 8 (with the one exception concluded to have been a spill) were due to “natural seasonal fluctuations in groundwater quality” of the overlying Upper Brule Aquifer.³⁷ The Board stressed that there was no evidence in the record that migration of lixiviant from the Crow Butte production zone aquifer had caused the events in Mine Units 6 and 8. Nevertheless, as an additional matter, the Board noted that whatever the underlying cause of any future need to place a well in one of these two units on excursion status, License Condition 11.12 would help ensure that Crow Butte would be able to address the cause.³⁸

Contrary to Consolidated Intervenors’ argument, the Board’s conclusions on groundwater quality impacts from excursions do not hinge on the additional uranium-testing requirement imposed by License Condition 11.12. The Board’s core conclusions rest on the EA’s analysis of groundwater quality data “from excursions in the prior license period,” and on Crow Butte’s continuing obligation to conduct monitoring to detect, and to take corrective actions to resolve, any excursions.³⁹

Consolidated Intervenors’ arguments regarding excursions in Mine Units 6 and 8 do not raise a substantial question of a material factual error or abuse of discretion in the Board’s findings regarding excursion impacts. The Board found the cause of the excursions to have been sufficiently explained by Crow Butte, and Consolidated Intervenors have not raised a substantial question as to whether this finding is clearly erroneous. Consolidated Intervenors also have not identified any offsite impacts from excursions that took place in Mine Units

³⁴ LBP-16-13, 84 NRC at 355 (citing License Condition 11.12).

³⁵ See Ex. NRC-001-R, NRC Staff’s Initial Testimony (May 8, 2015), at 14 (Staff’s Initial Testimony) (“the requirement to sample for natural uranium in these mine units is for the purpose of discovering the source of an already identified excursion, not for detecting the excursion itself”).

³⁶ See LBP-16-13, 84 NRC at 355.

³⁷ See *id.* at 367.

³⁸ See *id.*

³⁹ See *id.* at 357; Ex. NRC-012, License, at 12 (License Condition 11.5); see also Tr. at 1641 (where the Staff’s expert stated that even taking into account potential recurrences of excursions in Mine Units 6 and 8, the Staff concluded “the impact would be small” because of required corrective actions).

6 and 8. The Board found reasonable the EA's conclusion that the long-term impacts on groundwater from excursions will be small, given Crow Butte's operational history, the license requirements, and the nature of Crow Butte's operational practices (e.g., low flow rate from the wellfield). Indeed, the Board stressed that to date "no corrective actions by Crow Butte" had been required to terminate the excursion events that occurred in Mine Units 6 and 8.⁴⁰

B. Other Claims of Error of Fact or Law Regarding Contaminant Migration and Leaks

In Section II.B of their petition, Consolidated Intervenors raise various claims that appear to dispute Board findings on groundwater quality impacts or findings on surface water impacts. We address these claims in turn below.

1. Testing for Contaminants

Consolidated Intervenors challenge the Board's conclusion that there is no evidence of excursions having transported contaminants outside of the License Area.⁴¹ Specifically, they argue that the Board failed to "logically connect" its conclusion "to the fact that Crow Butte is *not* required to test for any such contaminants because they are not excursion parameters."⁴² Consolidated Intervenors further claim that "no one is testing for the migration of contaminants that may be caused by leachate that leaks from the mining operation in the form of excursions or leaks."⁴³ They argue that the NRC "has not justified not requiring that data to be obtained and reported by Crow Butte," and that the Board erred in not requiring "a supplemental NEPA document to confirm whether there has been contamination off-site."⁴⁴

Consolidated Intervenors direct the above arguments to the Board's finding on potential groundwater impacts from excursions. In a nutshell, they suggest that more water quality testing is necessary to determine if there have been groundwater quality impacts. They leave unclear, however, whether they are challenging the adequacy of Crow Butte's testing of the excursion monitoring wells or Crow Butte's water quality testing at other locations (e.g., private water supply wells). Nor do Consolidated Intervenors specify the additional test data that they believe are necessary.

⁴⁰ See LBP-16-13, 84 NRC at 357; see also Ex. NRC-010, EA, at 92.

⁴¹ Petition at 4 (citing LBP-16-13, 84 NRC at 357).

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

In any event, these generalized claims do not identify error in the Board's conclusion that excursions have not caused offsite contamination. The potential for contaminants from Crow Butte's operations to migrate offsite was a primary focus of this adjudicatory proceeding and therefore the frequent focus of hearing testimony, Board questioning, and other record evidence. The Board based its groundwater-impacts findings on numerous inter-related considerations, none of which Consolidated Intervenors specifically address or challenge.

As we outline further below, Consolidated Intervenors had the opportunity to, and to a large extent did, challenge the adequacy of the water quality testing that Crow Butte performs. For example, the Board received the Intervenors' testimony both on the adequacy of Crow Butte's sampling of the excursion monitoring wells and its sampling of private wells. In its decision, the Board considered an array of water quality tests and ultimately found that all the test results supported its conclusion that mining fluids have not migrated outside of the Crow Butte License Area. Consolidated Intervenors do not identify error in the Board's reasoning.

a. Water Quality Testing of Excursion Monitoring Wells

The purpose of establishing and testing a network of excursion monitoring wells is to be able to detect the migration of process fluids — fluids that could carry contaminants — “long before” these solutions “could seriously degrade the quality of ground-water outside the well field area.”⁴⁵ Excursion parameters therefore are selected to provide “the earliest warning” of a lixiviant excursion, and “not because they are the chemicals of most concern in groundwater protection.”⁴⁶ A number of factors bear on the effectiveness of excursion monitoring, including the excursion parameters selected for testing, the placement

⁴⁵ See Ex. NRC-013, Standard Review Plan for In Situ Leach Uranium Extraction License Applications, Final Report, J. Lusher (June 2003), at 5-38 (SRP).

⁴⁶ *Strata Energy, Inc. (Ross In Situ Uranium Recovery Project)*, CLI-16-13, 83 NRC 566, 600 (2016), *aff'd*, *Nat. Res. Def. Council & Powder River Basin Res. Council v. NRC*, 879 F.3d 1202 (D.C. Cir. 2018). In LBP-16-13, the Board outlined the reasons why Crow Butte selected chloride, conductivity, and alkalinity as the excursion indicators. As the Board described, Crow Butte's experts testified that chloride is highly mobile in groundwater, and therefore would be expected to “show up quickly in a monitoring well if lixiviant escapes the wellfield.” See LBP-16-13, 84 NRC at 375 (referencing Crow Butte testimony). Chloride also is introduced into the lixiviant itself through the ion exchange process used to recover uranium, thereby rendering chloride a good indicator of lixiviant movement. And Crow Butte's experts testified that chloride is simple to detect because the native groundwater in the area has low background levels of chloride. See *id.* As to alkalinity, Crow Butte stated that because bicarbonate is a major constituent added to the lixiviant, in the event of an excursion event one would expect an increase in the total alkalinity concentration of the groundwater. Crow Butte's experts also testified that conductivity is an excellent indicator of overall groundwater quality. See *id.*

of and distance between the monitoring wells, the frequency of well sampling, the thickness of the overlying aquifer that is being monitored, and the parameter concentrations established as the upper control limits to determine when to place a well on excursion status.⁴⁷ The hearing encompassed evidence on all these factors.

Notably, the Intervenor litigated the adequacy of Crow Butte's water quality sampling of the excursion monitoring wells. Contention A, as admitted and litigated, questioned (1) whether Crow Butte should also be required to test for uranium as an excursion indicator, and (2) whether the frequency of Crow Butte's routine bi-weekly excursion well sampling is "sufficient to identify the potential impacts of non-radiological contaminants."⁴⁸

The Board ruled in favor of Crow Butte and the Staff on Contention A, both on the adequacy of the three selected excursion parameters and the frequency of the well sampling. The Board found "no record evidence that the addition of uranium as a standard excursion indicator would provide any significant information beyond that obtained from using only chloride, conductivity, and total alkalinity."⁴⁹ Similarly, the Board also rejected as unnecessary the introduction of "tracers" into the mine units to identify subsurface flow paths as a method to assess the influence of *in situ* leach solutions on groundwater. Although acknowledging that the use of tracers recommended by two of the Intervenor's experts "could be scientifically sound," the Board stated that the experts were unable to suggest "why chloride, conductivity, and total alkalinity do not already serve the same function as would these tracers."⁵⁰ Therefore, Consolidated Intervenor's challenge to the Board's findings regarding the choice of parameters used in the excursion monitoring program does not identify any substantial question for review.

b. Testing of Private Wells' Water Quality

Crow Butte does not limit its water quality testing to the excursion monitoring wells. As part of its environmental monitoring program, Crow Butte also conducts quarterly groundwater testing at private water supply wells lo-

⁴⁷ See Ex. NRC-013, SRP, at 5-38.

⁴⁸ LBP-16-13, 84 NRC at 373. The Staff states that Contention A as admitted did not encompass whether the excursion monitoring should test for additional "constituents 'or contaminants'" other than uranium. See Staff Answer at 9 n.40.

⁴⁹ LBP-16-13, 84 NRC at 377. The Board noted that its finding regarding the excursion indicators is based on the Crow Butte operation and site, and might not apply equally to another proceeding. See *id.* at 377-78 n.752.

⁵⁰ *Id.* at 377.

cated within a one-kilometer radius of an individual wellfield.⁵¹ Crow Butte samples nineteen private wells for natural uranium and radium-226. The EA states that this testing is intended to detect impacts to groundwater quality in aquifers surrounding the wellfields “[i]n the unlikely event that a ground water excursion is not detected and corrected.”⁵² Crow Butte provides the results of these quarterly tests to the NRC in semi-annual reports.⁵³ The water sampling of the private wells is an additional layer of screening to help ensure that migration of lixiviant is detected.

As the Board described, the EA concludes that water quality remained consistent with baseline levels recorded before Crow Butte began its uranium recovery operations, with “no discernible trends in the monitoring data.”⁵⁴ Staff experts testified that the data from the private wells do “not indicate that mining liquid has migrated beyond the individual mine sites within the License Area.”⁵⁵ The Board agreed that the water quality test data from the private wells show that the groundwater “has not exceeded radiological background levels.”⁵⁶ And because all but one of the private wells are placed in the overlying aquifer (the Upper Brule Aquifer), the Board found that the test data also show that vertical excursions, spills, and leaks from Crow Butte’s operations have not had an adverse impact on the overlying aquifer.

We note, further, that the Board specifically questioned the parties’ experts regarding the need to sample for additional parameters other than uranium and radium.⁵⁷ The Board was able to review and weigh the experts’ differing opinions on whether testing the private wells for additional parameters was warranted. While more expansive testing may provide added assurance that there has been no offsite contamination, here the Board was satisfied that the water sampling already conducted, together with all other evidence presented, indicated contaminants from the mining operations have remained within the License Area.⁵⁸

⁵¹ See *id.* at 350-51, 355-56, 376. The Board noted that some documents in the record describe the required radial distance for private well sampling as one mile instead of one kilometer, but that this discrepancy did not affect its findings. *Id.* at 351 n.555.

⁵² See Ex. NRC-010, EA, at 94.

⁵³ See, e.g., Ex. CBR-018, Crow Butte Uranium Project, Radiological Effluent and Environmental Monitoring Report for Third and Fourth Quarters, 2013 (Feb. 28, 2014), app. A (Monitoring Report).

⁵⁴ See LBP-16-13, 84 NRC at 355.

⁵⁵ See *id.*

⁵⁶ *Id.* at 358.

⁵⁷ See, e.g., Tr. at 1436-45, 1475-76 (referencing Ex. INT-047, Expert Testimony of Mickel Wireman (Apr. 29, 2015), at 8).

⁵⁸ See, e.g., LBP-16-13, 84 NRC at 346-48, 358, 363-64, 370-72, 386-96. The Board also extensively addressed Crow Butte’s groundwater restoration program, which includes baseline water quality tests that were performed for a number of constituents. The Board found that, based on

(Continued)

Consolidated Intervenors may disagree with the Board's ultimate findings, but they have neither addressed the relevant evidence in the record nor otherwise identified Board error or abuse of discretion.

2. *Surface Water Quality Impacts*

In addition to the groundwater quality testing, Crow Butte also monitors for potential impacts to surface waters. In its EA, the Staff stated that potential impacts to surface waters would be most likely to impact nearby surface streams and impoundments.⁵⁹ Pursuant to license requirements, Crow Butte quarterly tests for uranium and radium-226 at two nearby surface streams, Squaw Creek and English Creek, sampling locations both upstream and downstream of the Crow Butte facility.⁶⁰ Crow Butte further tests sediment samples taken annually from specific locations on Squaw Creek and English Creek, upstream and downstream from the Crow Butte facility, and from three impoundments on English Creek.⁶¹ Sediment samples are tested for natural uranium, radium-226, and lead-210. Crow Butte provides this sampling data to the NRC in semi-annual effluent monitoring reports.⁶²

Crow Butte and the Staff testified that the surface water samples show that neither stream has been adversely affected by Crow Butte's operations and that "there was also no evidence of any contamination being transported to surface waters outside the License Area."⁶³ The Board agreed that the impact of "Crow Butte's excursions, spills, and daily operations on surface water is small."⁶⁴

a. *Lead-210 Claims*

Consolidated Intervenors claim that the Board "abused its discretion and was clearly erroneous" in concluding that mining impacts on surface waters would be small, given "unexplained increases in radioactive Lead-210 readings at the

"record evidence . . . relating to the number of constituents the NRC Staff requires to be monitored to comply with its restoration program," Crow Butte's "selection of parameters to test for groundwater contamination and its obligation to continue to test for those parameters in its renewed license is sufficient to detect migration of groundwater constituents, including uranium." *See id.* at 420. The Board additionally noted other water quality monitoring, offsite or regional, performed by the South Dakota Department of Environmental and Natural Resources or the Nebraska Department of Environmental Quality. *See, e.g., id.* at 359, 363, 383, 388.

⁵⁹ *See* Ex. NRC-010, EA, at 83.

⁶⁰ LBP-16-13, 84 NRC at 381-82; Ex. NRC-001-R, Staff's Initial Testimony, at 19.

⁶¹ LBP-16-13, 84 NRC at 382; Ex. NRC-010, EA, at 83.

⁶² *See, e.g.,* Ex. CBR-018, Monitoring Report, at 4 & app. H.

⁶³ *See* LBP-16-13, 84 NRC at 382 (Board describing Staff's conclusion in EA).

⁶⁴ *See id.* at 387-89 (citing Ex. NRC-010, EA, at 82-85).

English Creek drainage.”⁶⁵ They argue that the Board should have required the Staff to issue a “supplemental NEPA document to explain the increases in Lead-210.”⁶⁶

The Board, however, specifically considered the evidence from “Crow Butte’s quarterly sampling of surface water and its annual sampling of stream sediment in Squaw and English Creeks,” concluding that the sampling results from more than 20 years of operation indicate that “contaminants from Crow Butte’s operations have remained within the License Area.”⁶⁷ With no elaboration or other support, Consolidated Intervenors cite to a two-page discussion in the EA of surface water quality monitoring. But the Board cited the same discussion to support its conclusions.⁶⁸ The Board also referenced a 2014 environmental monitoring report, which contains more recent creek and stream sediment sampling results than the EA.⁶⁹

Consolidated Intervenors do not address any of the English Creek sampling data on lead-210. They do not, for example, identify any discernible trend in lead-210 levels, or point to evidence of significant increases over preoperational levels. Their argument appears to be based on the EA’s acknowledgment that there have been some elevated lead-210 readings that may not yet be definitively explained. But the EA also states that lead-210 levels were already high in pre-operational samples taken from certain English Creek locations.⁷⁰ Based on its review of the evidentiary record, and specifically taking into account English Creek, the Board agreed with the EA’s assessment that potential impacts to surface waters from Crow Butte’s operations historically have been and in the renewed license term “will be SMALL.”⁷¹ Because Consolidated Intervenors neither address any lead-210 monitoring data nor address any evidence presented on this issue,⁷² we have insufficient basis to question the Board’s overall assessment of surface water quality impacts.

⁶⁵ See Petition at 4.

⁶⁶ *Id.* at 5.

⁶⁷ LBP-16-13, 84 NRC at 388.

⁶⁸ See *id.* at 387-88 (citing Ex. NRC-010, EA, at 83-85); see also *id.* at 364 (“the EA states that sampling of surface waters and sediments . . . yielded no evidence of contamination”).

⁶⁹ See *id.* at 382 n.797; Ex. CBR-018, Monitoring Report, § 3.3 & app. H. The report also notes that pre-operational samples taken from the English Creek drainage showed elevated levels of natural uranium and lead-210 compared to other surface water locations.

⁷⁰ See Ex. NRC-010, EA, at 84.

⁷¹ See LBP-16-13, 84 NRC at 387-89 (citing Ex. NRC-010, EA, at 85).

⁷² The Staff states that the Intervenors did not raise this issue before the Board during the hearing. See Staff Answer at 12 n.59.

b. Evaporation Pond Leaks

In another challenge to the Board's findings on surface water impacts, Consolidated Intervenors claim that the Board "erred in failing to find that the [evaporation] pond liners are subject to deterioration," and that as a result "there may be unknown leaks through the bottom" of Crow Butte's wastewater evaporation ponds.⁷³ More specifically, they refer to the testimony of Intervenors' expert Ms. Linsey McLean, who stated that the plastics used in the pond liners may easily degrade, causing the liners to become brittle and leak.

But the Board did not conclude that the liners would not be subject to deterioration. Rather, it found that Crow Butte has sufficient protective measures in place to detect potential evaporation pond leaks. These measures include the following: (1) the daily monitoring of pond water levels; (2) the monitoring of shallow wells installed around the ponds to detect leaks; (3) dikes and berms to divert runoff away from the ponds; (4) the use of both a primary and a secondary pond liner; and (5) a leak detection system (in the underdrain system) installed between the primary and secondary liners.⁷⁴ While the Board acknowledged Ms. McLean's testimony on pond liner degradation, it found "no record evidence" to suggest that the liner material would degrade "soon after its two year warranty."⁷⁵ But no matter the lifespan of the pond liners' integrity or how soon leaks can occur due to degradation, the Board found that Crow Butte, through its protective measures, sufficiently "minimized potential leaks and spills from these ponds."⁷⁶

Consolidated Intervenors also argue that "no evidence was provided by [the Staff] or Crow Butte of any monitoring underneath the evaporation ponds."⁷⁷ But the Board specifically questioned Crow Butte on how leaks to the bottom pond liner would be detected.⁷⁸ Crow Butte's expert testified that leaks to the bottom liner would be detected by the monitoring wells that are installed around the ponds.⁷⁹ He further testified that in his eight years of experience at the Crow Butte site, pond leaks have only occurred near the upper water line and no leaks have occurred at the bottom of the pond.⁸⁰

Consolidated Intervenors do not address the Board's reasoning, and we discern no reason to second-guess the Board's findings regarding the potential for

⁷³ Petition at 5.

⁷⁴ See LBP-16-13, 84 NRC at 384-85, 390-91.

⁷⁵ *Id.* at 390-91.

⁷⁶ *Id.* at 390.

⁷⁷ Petition at 5.

⁷⁸ See Tr. at 1537-41, 1811-12.

⁷⁹ *Id.* at 1539, 1811-12.

⁸⁰ See *id.* at 1541.

evaporation pond leaks to impact surface water quality. No support is provided for the claim that the EA “should be supplemented to state greater impacts” due to “unknown but clearly possible and unmonitored leaks from the bottom of the evaporation ponds.”⁸¹

c. Small Chronic Leaks

As a final challenge to the Board’s findings on surface water quality impacts and monitoring, Consolidated Intervenors argue that the Board abused its discretion and made a clearly erroneous finding that small chronic pipe leaks would not have significant environmental impacts.⁸² Specifically, Consolidated Intervenors argue that a long-term leak “had existed at the Crow Butte mine resulting in lixiviant leaking into the ground,” and there “has never been any testing of the environmental consequences of this long term leak.”⁸³ They further claim that due to the impacts of small chronic leaks, the Board should have required the Staff both to withdraw its Finding of No Significant Impact (FONSI) and to prepare an environmental impact statement.

But here the Board considered the potential impacts of leaks. The Board addressed the EA’s analysis of leaks from pipes, wells, evaporation ponds, and vertical excursions that occurred in the earlier license term. And the Board considered protective measures in place to prevent and minimize the impacts of spills and leaks. Given Crow Butte’s monitoring results and its actions to resolve leaks, the Board agreed with the EA’s conclusion that the impacts of spills and leaks to surface waters to date have been negligible.⁸⁴ The Board also acknowledged the Intervenors’ argument that “Crow Butte may have experienced small chronic pipe leaks,” but it found no record evidence that any such leaks would be likely to occur in the future, or that, even were they to occur, they would cause significant impacts.⁸⁵ Consolidated Intervenors do not address any evidence in the record on chronic leaks, the impacts that they may have caused, or their likelihood of recurrence. We therefore find no basis to review the Board’s findings on surface water quality impacts.

C. Challenges to Aquifer Pumping Tests

Consolidated Intervenors next challenge the Board’s findings related to the

⁸¹ Petition at 5.

⁸² *Id.* at 5 (citing LBP-16-13, 84 NRC at 387).

⁸³ *Id.* at 6.

⁸⁴ LBP-16-13, 84 NRC at 387-89.

⁸⁵ *Id.* at 387 (additionally taking into account record evidence on plausible hydrogeological pathways for contaminants).

adequacy and interpretation of aquifer pump tests that Crow Butte conducted. Because this issue is technically complex, we first provide a brief background on the topic.

1. Aquifer Tests

Crow Butte conducted aquifer tests to evaluate the hydraulic characteristics of the ore-bearing Basal Chadron/Chamberlain Pass Aquifer and the integrity of the confining layers in the Upper Confining Unit above the Ore Zone. Crow Butte conducted these tests between 1992 and 2002 as it developed its operations.⁸⁶ These were long-term tests with pumping durations that ranged from 51 to 72 hours and pumping rates that varied from 24 gallons per minute (gpm) to 51 gpm, depending on the test.

As a general matter, aquifer tests measure an aquifer's response to the induced stress of pumping. They typically involve pumping groundwater from a pump well at a specific rate for a specific time while monitoring for changes in the water levels of the pumping well and of surrounding observation wells. The level of "drawdown" observed in a well refers to how much (if any) the groundwater level in the well dropped during the pumping. Drawdown curves can be plotted to show the drawdown versus log time. Once the pumping stops, water levels again are monitored to determine the aquifer's recovery time. Aquifer test results, including the drawdown and recovery data, are used to assess the aquifer's hydraulic conductivity, transmissivity, and storativity.⁸⁷

2. Consolidated Intervenor's Claims

a. Test 2: Recharge Boundary Claim

In LBP-16-13, the Board agreed with Crow Butte and the Staff that the results of all four aquifer tests indicated no hydraulic connection between the Basal Chadron/Chamberlain Pass Formation Aquifer (of which the Ore Zone is a portion), and the overlying Upper Brule Aquifer.⁸⁸ Consolidated Intervenor now challenge the Board's findings regarding the second aquifer test, which we refer to as Test 2. They claim that the Board misrepresented their position, and made clearly erroneous findings by relying on incorrect data interpretations that the Staff and Crow Butte provided. Consolidated Intervenor highlight the

⁸⁶ The first test was conducted in November 1982, the second in June 1987, the third in September 1996, and the fourth in August 2002.

⁸⁷ "Storativity" refers to the volume of available water within an aquifer, expressed as a coefficient.

⁸⁸ *Id.* at 329.

testimony of Dr. David Kreamer who, in evaluating the results of Test 2, found evidence of a recharge boundary.⁸⁹

At issue is whether Test 2 demonstrated a recharge boundary indicating a hydraulic connection between the Basal Chadron/Chamberlain Pass Formation and the Upper Brule Aquifer. For Test 2, three observation wells (to observe drawdown) were placed in the Basal Chadron/Chamberlain Pass Formation Aquifer, and an additional observation well was placed in the overlying Upper Brule Aquifer. The test also involved the use of piezometers, two-inch diameter tubes with highly sensitive stone porous caps, used to measure changes in moisture and pressure. One piezometer was placed in the Upper Confining Unit, at a level approximately 15 feet above the top of the Basal Chadron/Chamberlain Pass Formation. Another was placed below the Basal Chadron/Chamberlain Pass Formation in the Lower Confining Unit.

As Consolidated Intervenor describe, Dr. Kreamer testified that the results of a drawdown semi-logarithmic plot for Test 2 showed a “recharge boundary appearing at a little more than 30 minutes into the test.”⁹⁰ Specifically, he stated that while the plot depicting the drawdown results from one of the observation wells in Test 2 used “only the late time data,” he had modified the plot to contain “additional early time interpretation.”⁹¹ With the new data, he concluded that the redrawn curve showed a “clear recharge boundary, which can be interpreted as additional vertical flow.”⁹² The Staff and Crow Butte disputed Dr. Kreamer’s analysis on several grounds.

Among their arguments, both the Staff and Crow Butte claimed that data from the early part of the aquifer test are not representative of aquifer properties and behavior, and therefore should not be used to evaluate whether a recharge boundary exists.⁹³ As the Board described, they stated that the equations underlying relevant analyses assume that the well discharge remains constant, and that release of water stored in the aquifer “is immediate and directly proportional to the rate of decline of the pressure.”⁹⁴ But in actuality, the Staff and Crow Butte claimed, there may be a “time lag between the pressure decline and the release

⁸⁹ The term “recharge” refers to water entering an aquifer. A “recharge boundary” reflects “an area or zone of the aquifer with increased groundwater flow,” such as a water source that may continue to replenish the aquifer. *See id.* at 320.

⁹⁰ Petition at 7.

⁹¹ Ex. INT-079, Supplemental Testimony of Dr. David Kreamer (Sept. 16, 2015), at 7 (Kreamer Supplemental Testimony); *see also* LBP-16-13, 84 NRC at 323.

⁹² Ex. INT-079, Kreamer Supplemental Testimony, at 7.

⁹³ *See, e.g.*, LBP-16-13, 84 NRC at 323-24 (citing Ex. NRC-103, NRC Staff’s Supplemental Rebuttal Testimony (June 8, 2015), at 24-25 (Staff Supplemental Rebuttal Testimony)); Ex. CBR-074, Supplemental Testimony of Crow Butte Resources (Sept. 28, 2015), at 13-15 (Crow Butte Supplemental Testimony).

⁹⁴ *See* LBP-16-13, 84 NRC at 321.

of stored water,” and “initially also the well discharge may vary as the pump is adjusting itself to the changing head.”⁹⁵ They went on to state that “as the time of pumping extends, these effects are minimized and closer agreement may be attained.”⁹⁶

Crow Butte and the Staff also argued that the amount of water stored in the pumped well, which the Board refers to as “wellbore storage,” can affect the early-time drawdown data of the pumping and observation wells.⁹⁷ Crow Butte argued that due to water stored in pumping and observation wells, the “measured drawdown in early time is less than what . . . should theoretically be observed using analytical type-curve matching techniques,” and therefore the use of early time data could give a “false impression of aquifer leakage.”⁹⁸ Crow Butte’s expert testified that the well used in the aquifer tests had a 500 foot head and could store “well in excess of 500 gallons considering just the casing, and not even including the gravel pack,” which he stated also should be considered in determining the effects of wellbore storage on drawdown data.⁹⁹

In short, Crow Butte and the Staff claimed that only the later-time drawdown data from an aquifer test should be used to assess whether a recharge boundary exists, that the Test 2 report properly excluded early-time data from the drawdown curve, and that Dr. Kreamer improperly used early-time data in his redrawn curve.¹⁰⁰ The Board agreed that “later-time drawdown data is superior for estimating aquifer parameters and detecting leakage,” and therefore found that Dr. Kreamer had not discredited the results for Test 2.¹⁰¹

Consolidated Intervenor now claim that the Board erroneously discounted Dr. Kreamer’s evidence of a recharge boundary. In particular, they claim that the Board’s “decision to disregard ‘early time data’” was based on “an incomplete understanding of how to use ‘early time data’ in an aquifer test.”¹⁰² Consolidated Intervenor also contend that the Board relied on Crow Butte and Staff arguments that misrepresented how to properly evaluate and analyze aquifer test data. They argue that “no evidence” exists to support the Board’s conclusion

⁹⁵ See Ex. NRC-103, Staff Supplemental Rebuttal Testimony, at 16 (quoting Ex. NRC-110, Kruseman, G.P., and N.A. de Ridder, Analysis and Evaluation of Pumping Test Data, International Institute for Land Reclamation and Improvement, Publication 47 (1994), at 64 (page 2 of Ex. NRC-110) (Kruseman and de Ridder). A longer excerpt of the Kruseman and de Ridder publication was admitted into evidence as Ex. CBR-081.

⁹⁶ *Id.*

⁹⁷ See, e.g., LBP-16-13, 84 NRC at 321-23, 324; Ex. NRC-103, Staff Supplemental Rebuttal Testimony, at 25.

⁹⁸ Ex. CBR-074, Crow Butte Supplemental Testimony, at 12.

⁹⁹ See Tr. at 2539-40.

¹⁰⁰ See LBP-16-13, 84 NRC at 323-24.

¹⁰¹ *Id.* at 330.

¹⁰² See Petition at 7.

that wellbore storage could influence aquifer test results “so far into the test” — that is, “at a little more than 30 minutes into the test,” at which point on the drawdown plot Dr. Kreamer discerned what he interpreted to be evidence of a clear recharge boundary.¹⁰³ They also argue that Crow Butte misrepresented the aquifer test data evaluation and analysis methods described in a technical publication (authored by Kruseman and de Ridder), and conclude that a proper interpretation of the publication supports Dr. Kreamer’s position.¹⁰⁴

We decline to revisit the Board’s findings on Test 2. While we have the authority to review factual questions *de novo*, we are disinclined to do so when a Board has issued a plausible decision that rests on carefully rendered findings of fact, supported by the record. As we see the record, a variety of evidence supports the Board’s conclusion that Test 2 did not demonstrate the presence of a recharge boundary.

Crow Butte and the Staff presented ample evidence in support of their argument that “early time” data may be less reliable and that instead “late time” data should be used to assess whether a recharge boundary exists.¹⁰⁵ The referenced Kruseman and de Ridder publication, for example, notes that wellbore storage “effects may last from a few minutes to many minutes, depending on the storage capacity of the well.”¹⁰⁶ At the hearing, the Board questioned the parties extensively on the use of early-time data. Dr. Kreamer opined that by “about seven or eight minutes in,” the wellbore storage effects “would be insignificant.”¹⁰⁷ Crow Butte’s expert (Mr. Robert Lewis) disagreed that the drawdown data would be valid by that point in pumping time and argued that “early time data less than about 37 minutes” would be unreliable “in this type of analysis.”¹⁰⁸ As part of this discussion, Dr. Kreamer and Mr. Lewis disagreed over the choice of a value to use in a formula provided in the Kruseman and de Ridder paper, relating to the evaluation of aquifer pump test data to estimate hydraulic properties.¹⁰⁹ These were highly technical fact-specific discussions, reflecting a “battle of the experts” over how long into Test 2 the potential effects of wellbore storage, and other factors separate from the aquifer’s response to the pumping, may have influenced and thereby invalidated drawdown data recorded for the well.

Consolidated Intervenors now argue that in considering the specific pumping rate used in Test 2, the “maximum” time it would have taken to remove the

¹⁰³ *Id.*

¹⁰⁴ *See id.* at 7-8 (referencing Ex. CBR-081, Kruseman and de Ridder).

¹⁰⁵ *See, e.g.*, LBP-16-13, 84 NRC at 321-24.

¹⁰⁶ *See* Ex. CBR-081, Kruseman and de Ridder, at 52.

¹⁰⁷ *See* Tr. at 2526.

¹⁰⁸ *See id.* at 2536; Ex. CBR-074, Crow Butte Supplemental Testimony, at 14-15 (addressing the Cooper-Jacob method of analysis).

¹⁰⁹ *See* Tr. at 2537-40 (referencing Ex. CBR-081, Kruseman and de Ridder).

stored water from the well would have been less than 9 minutes.¹¹⁰ As the Staff notes, Consolidated Intervenors' calculation using the Test 2 pump rate does not appear to have been submitted to the Board such that the other parties had the opportunity to respond.¹¹¹ The argument therefore appears inappropriately raised for the first time on appeal.¹¹² In any event, the Board's decision does not hinge on the question of wellbore storage effects.

But even if we assume that the effects of wellbore storage were diminished by the 9-minute mark of pumping on Dr. Kreamer's re-drawn curve, the Board outlined other evidence contesting Dr. Kreamer's interpretation of the curve. As we describe in more detail below, Staff and Crow Butte experts disagreed that Dr. Kreamer's curve demonstrated a recharge boundary because, in their opinion, "when a recharge boundary is encountered the drawdown does not continue along the same slope" in the plot.¹¹³ The Board moreover considered and weighed the parties' differing interpretations of the drawdown curve in light of other results from Test 2, other evidence from the three additional aquifer tests, and "other lines of evidence" presented on the integrity of the Upper Confining Unit.¹¹⁴ In light of the extensive record, Consolidated Intervenors have not identified any clear error or overlooked material evidence warranting review of the interpretation of Test 2 results.

Significantly, Crow Butte and the Staff did not focus purely on the use of early-time test data, but contested Dr. Kreamer's opinion regarding the presence of a recharge boundary on several grounds. First, Mr. David Back testified for the Staff that if a recharge boundary "had been encountered within the first 30 minutes of the test," the water "would have to have been derived from the overlying and underlying confining units, and water changes would have been detected" by the highly sensitive piezometer placed in the Upper Confining Unit, which was located just 81 feet away from the pumping well and only 15 feet above the top of the Basal Chadron Sandstone.¹¹⁵ Yet as the Board noted, "neither the overlying confining layer piezometer nor the overlying aquifer [Upper Brule Aquifer] monitor well showed any response to the pumping from the

¹¹⁰ See Petition at 7.

¹¹¹ See Staff Answer at 14 n.70.

¹¹² See *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, NM 87313, CLI-06-29, 64 NRC 417, 421 (2006)); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 383 (2001) (arguments not raised before Board are deemed waived).

¹¹³ Ex. NRC-103, Staff Supplemental Rebuttal Testimony, at 25. Moreover, even if we presume, for purposes of argument, that the drawdown data were valid from the 9-minute point, it is not clear to what extent Dr. Kreamer considered earlier time drawdown data points in determining where to redraw the curve.

¹¹⁴ See, e.g., LBP-16-13, 84 NRC at 323-27, 328-30; see also *id.* at 346-48.

¹¹⁵ See Ex. NRC-103, Staff Supplemental Rebuttal Testimony, at 25; see also LBP-16-13, 84 NRC at 323-24, 328.

[Basal Chadron/Chamberlain Pass Formation] [A]quifer during the test.”¹¹⁶ The Board also found that in none of the four aquifer tests had there been any “groundwater response in any of the Upper Brule Aquifer observation wells.”¹¹⁷ In other words, despite the continuous pumping durations of 51 to 72 hours, there were no water level changes — no drawdown — detected in the observation wells placed in the overlying Upper Brule Aquifer.

Second, in disputing Dr. Kreamer’s claim that his re-drawn plot showed a recharge boundary, Mr. Back testified that a plot showing a recharge boundary would “not continue along the same slope,” but instead “continues to curve upward, as opposed to following a line of a constant slope, as the cone of depression moves outward and encounters greater recharge.”¹¹⁸ Mr. Back stated that “when a boundary condition is hit in an aquifer pumping test, it provides a continuous source of water,” and therefore the plot “*would continue* to move off of that straight line as you moved out with time,” the “whole curve would curl up,” and “[y]ou would never get back to that straight line again.”¹¹⁹ In other words, Mr. Back testified that Dr. Kreamer’s re-drawn plot for the Test 2 observation well did not show evidence of a hydraulic connection to the overlying aquifer because the deviation from the theoretical drawdown line did not curve upward.¹²⁰

The Board described the same principle in addressing the Test 4 results. The Board noted Mr. Back’s argument that “for the data to indicate a recharge boundary, the plot of time vs. drawdown would continue to deviate from the straight line plot with increasing time,” meaning the plot would “never return to the straight line again.”¹²¹ The Board further observed that Dr. Kreamer, in discussing Test 4, had “agreed with Mr. Back that the plot would continue to deviate from the straight line drawdown curve when a recharge boundary had been encountered.”¹²²

Third, the Staff and Crow Butte did not dispute that the Test 2 results may have detected relatively “small amounts of water” coming from the clay of a confining unit, “squeezed from storage due to pore pressure changes during the

¹¹⁶ LBP-16-13, 84 NRC at 328.

¹¹⁷ *Id.* at 394.

¹¹⁸ *See* Ex. NRC-103, Staff Supplemental Rebuttal Testimony, at 25; *see also* Tr. at 2527 (describing that an example of “what a recharge boundary looks like in a straight line analysis” can be seen at Ex. NRC-108, C.W. Fetter, Jr., Applied Hydrogeology, University of Wisconsin-Oshkosh (undated), at 3 (Applied Hydrogeology)).

¹¹⁹ *See* Tr. at 1303-05 (emphasis added).

¹²⁰ *See* Ex. NRC-108, Applied Hydrogeology, at 3 (example of semi-logarithmic drawdown-time curve depicting recharge boundary).

¹²¹ LBP-16-13, 84 NRC at 327.

¹²² *See id.* (citing Tr. at 1307-08, where Dr. Kreamer stated that he “agreed with Mr. Back that a classic recharge would have continued out”).

aquifer pumping test.”¹²³ But both parties testified that any amounts of water were relatively insignificant, and further that the aquifer test report estimated that it would take “more than 2.8 million years for a molecule of water to move through” the Upper Confining Unit.¹²⁴ The Board agreed that a “small” recharge “observed in some aquifer pumping test data” resulted from “the extensive stress applied to the confining units during these aquifer pumping tests,” but that otherwise all four aquifer tests showed “virtually no leakage” through the Upper Confining Unit.¹²⁵

Fourth, Crow Butte’s witnesses testified that core samples of clay strata taken from the Upper Confining Unit were analyzed for their hydraulic properties and found to be “very impermeable.”¹²⁶ As an additional matter, Mr. Wade Beins testified for Crow Butte that the data gathered during the operating history of the 203 excursion monitoring wells placed across the overlying Upper Brule Aquifer also could be seen as akin to a long-term “pumping test across the entire site.”¹²⁷ He stated that data routinely collected from these monitoring wells have not indicated a reduction in the water levels in the Upper Brule Aquifer, another indication of the lack of transmissivity between the Upper Brule Aquifer and the Basal Chadron/Chamberlain Pass Formation Aquifer.¹²⁸ The Board agreed that the water level data confirm that “there has been no drawdown in the Upper Brule Aquifer due to Crow Butte’s pumping from the [Basal Chadron/Chamberlain Pass Formation] Aquifer during its mining operations.”¹²⁹

In short, the Board found multiple lines of evidence to be consistent with the findings that “there is no significant hydraulic connection between” the Upper Brule Aquifer and the Basal Chadron/Chamberlain Pass Formation Aquifer, and similarly, that there is “adequate confinement of the Basal Chadron/Chamberlain

¹²³ See *id.* at 324.

¹²⁴ See *id.* at 325, 328; see also, e.g., Tr. at 1333 (where Dr. Elise Striz, for the Staff, testified that any leakage or small recharge detected in aquifer tests was “miniscule and would not contribute in any significant manner to this huge Basal Chadron aquifer over the lifetime of the mine operations”); Tr. at 2517 (Mr. Back’s statement that tests detected potential leakage of only “small amounts” of water). For Test 1, water volume calculations based on the pumping period reflected a reading of 0.00001884 gallons per square foot. See Tr. at 2519.

¹²⁵ LBP-16-13, 84 NRC at 394; see also *id.* at 330.

¹²⁶ See *id.* at 325 (noting vertical hydraulic conductivities of less than 1×10^{-10} cm/sec).

¹²⁷ See Tr. at 1315.

¹²⁸ See also Ex. NRC-076-R2, NRC Staff’s Rebuttal Testimony (June 8, 2015), at 36 (continuous operations over 20 years “have essentially acted as a surrogate for a very long aquifer pumping test,” and while the “potentiometric surface of the Basal Chadron Sandstone aquifer has decreased approximately” 15 meters “there has been very little change in the potentiometric surface in the overlying Brule aquifer”).

¹²⁹ LBP-16-13, 84 NRC at 349.

Pass Formation Aquifer.”¹³⁰ Consolidated Intervenors have not articulated a substantial question with respect to these determinations.¹³¹

b. Test Design and Test Interpretation Methods

Consolidated Intervenors also argue that the pump test results may have been analyzed using inappropriate methods.¹³² They claim that the Board “accepted less than rigorous pump test designs and interpretations for the characterizations of pre-mining aquifers.”¹³³ But Consolidated Intervenors neither support these claims with evidence from the record nor otherwise call into question the Board’s findings regarding the adequacy of the tests’ design and implementation.

The Board questioned Dr. Kreamer on whether he had any evidence that the tests were not conducted “consistent with the industry standard techniques used for this type of test.”¹³⁴ While Dr. Kreamer did not view the tests as “optimal,”

¹³⁰ See *id.* at 330; see also *id.* at 348-49 (the “plethora” of water data taken from the excursion monitoring wells in the Upper Brule Aquifer show there has been “little drawdown in the Upper Brule Aquifer from the time” operations began at the License Area).

¹³¹ We note two additional arguments raised in regard to Dr. Kreamer’s claim of a recharge boundary. Consolidated Intervenors argue that there was “uncontroverted evidence” that Dr. Kreamer’s “conclusion regarding the existence of a recharge boundary” in Test 2 was “more than 98% accurate.” See Petition at 8. This claim was part of the dispute over the validity of the early-time drawdown data that Dr. Kreamer had considered in redrawing the curve in the semi-logarithmic plot; specifically, Dr. Kreamer challenged Crow Butte’s claim that drawdown data from earlier than 37 minutes into the pumping should be disregarded as invalid. Referencing the Kruseman and de Ridder publication, Dr. Kreamer claimed that by introducing 2% error into Crow Butte’s calculation, the results would show that drawdown data from an earlier time (e.g., 7.4 minutes) should be considered valid. See Tr. at 2538-39. But Mr. Lewis disputed this argument on more than one ground, including that Dr. Kreamer was using for his calculations a particular value that was “an exception to the rule . . . not the rule.” See Tr. at 2539-40. Thus, this evidence was not uncontroverted, and the argument does not call the Board’s overall conclusions into substantial question. More significantly, whether Dr. Kreamer’s redrawn curve using earlier drawdown times depicts the presence of a recharge boundary is a *separate* question — also contested — going to the interpretation of his plot. We therefore disagree that the referenced Kruseman and de Ridder publication or other evidence “unequivocally demonstrates that Dr. Kreamer’s conclusion” that his redrawn plot shows a recharge boundary “is more than 98% accurate.” See Petition at 8.

Consolidated Intervenors additionally claim that Dr. Kreamer identified corroborating evidence of a recharge boundary in the “residual time-drawdown data” for an observation well in Test 2, and that “no evidence was introduced to counter” his claim. See Petition at 8 (citing Ex. INT-079, Dr. Kreamer’s Supplemental Testimony, at 7). But Mr. Lewis disagreed that the curve at issue showed evidence of a recharge boundary. See Tr. at 2544-46. And both Crow Butte and the Staff also testified that there was no indication of recharge in the recovery graphs for aquifer Test 2. See LBP-16-13, 84 NRC at 323 & n.330; see also Tr. at 2516.

¹³² See Petition at 9.

¹³³ See *id.*

¹³⁴ See Tr. at 1275.

he stated that he had no opinion regarding whether “the standards were or were not met.”¹³⁵ As the Board highlighted, Dr. Kreamer agreed that the test analysis methods that were used are “common industry-accepted tests for evaluating the results of aquifer pumping tests.”¹³⁶ The Board acknowledged that the methods assume that the aquifer will have “homogeneous, isotropic responses,” a criticism raised by Dr. Kreamer.¹³⁷ But the Board found that Crow Butte recognized the simplified underlying assumptions of the tests, and “was prepared to make appropriate allowances for the use of more complex algorithms if there were any deviations” in the actual test data from the assumed aquifer characteristics.¹³⁸ The Board concluded that none of the data from the actual tests “indicated sufficient deviations” from the underlying aquifer assumptions “to necessitate the use of more complex models.”¹³⁹ Consolidated Intervenors do not identify any evidence in the record calling these findings into question.

As part of their argument challenging the pump test designs and interpretations, Consolidated Intervenors also list three American Society of Testing Materials (ASTM) standards for the proposition that these standards should have been used, but were not.¹⁴⁰ But Consolidated Intervenors do not specify how these standards identify material error in the Board’s decision, or even whether these standards were addressed in the record.¹⁴¹ The Board addressed the adequacy of the aquifer tests at various points in its decision.¹⁴² Consolidated Intervenors have not sufficiently called into question the Board’s conclusions on the overall adequacy of the tests and test interpretation methods.

¹³⁵ *See id.*

¹³⁶ *See id.* at 1299; *see also* LBP-16-13, 84 NRC at 319.

¹³⁷ *See* LBP-16-13, 84 NRC at 319. The Board used “homogeneous” to mean an aquifer that has constant hydraulic properties (e.g., the same permeability) at all distances and depths, and “isotropic” to mean an aquifer that has constant hydraulic properties in all directions, vertical and horizontal. *See id.* at 319 n.295. In contrast, the Board used “heterogeneous” to refer to a geologic formation with hydraulic properties (e.g., permeability) that vary with distance and depth.

¹³⁸ *See id.* at 330; *see also* Tr. at 1298-99 (where Dr. Kreamer agreed that deviations from assumed homogeneity would show up in actual data results).

¹³⁹ *See* LBP-16-13, 84 NRC at 330.

¹⁴⁰ *See* Petition at 9.

¹⁴¹ The Staff claims that two of the listed ASTM standards do not appear to have been raised before the Board at all (in which case they would be inappropriately raised on appeal). The Staff further notes that the third standard is listed on a Staff exhibit identifying the standards Crow Butte used to analyze the aquifer tests. *See* Staff Answer at 15 & n.73; Ex. NRC-080, ASTM Standards for the Analysis of Hydraulic Characteristic of Aquifer by Aquifer Pumping Tests.

¹⁴² *See, e.g.,* LBP-16-13, 84 NRC at 316-20, 328, 330, 394.

D. Augmentation of the Staff's Environmental Review

Consolidated Intervenor also argue that the Board abused its discretion by correcting “mistakes in the Final EA.”¹⁴³ More specifically, they argue that the EA contained incorrect information regarding tornadoes, but that the Board “during the hearing . . . corrected the mistake and inserted the correct information into the record.”¹⁴⁴ Similarly, they state that to correct deficiencies in the EA, the Board improperly inserted information concerning earthquakes into the record.¹⁴⁵ Additionally, Consolidated Intervenor argue that the Board both deleted material information, “such as the White River modeling,” and added “material items such as earthquake and tornado and hydrogeological analyses in order to cure NEPA violations.”¹⁴⁶ Consolidated Intervenor claim that the Board should have “required the NRC Staff to prepare and publish for public comment a supplemental NEPA document” containing corrected information.¹⁴⁷

Consolidated Intervenor's arguments do not identify legal error or abuse of discretion regarding the Board's augmentation of the record of decision. Following a hearing involving an extensive case record, the Board issued a comprehensive decision addressing at length the evidence presented. Consistent with longstanding NRC practice, the Board in LBP-16-13 augmented the environmental record of decision with additional information from the hearing record, none of which materially altered the Staff's conclusions on the potential impacts of the proposed licensing action.

We long have held that initial decisions of the presiding officer on NEPA issues, and our own decisions, augment and “become part of the environmental ‘record of decision.’”¹⁴⁸ Our hearings provide in-depth scrutiny of the contested aspects of the Staff's environmental review. Evidence presented as part of the hearing record therefore often may refine, amplify, or correct a point made in the Staff's environmental review document. For an adjudicatory decision on the Staff's NEPA document to note available, amplifying information that aids in comprehending the Staff's review and conclusions — including the sufficiency

¹⁴³ See Petition at 6.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ See *id.* at 2.

¹⁴⁷ See *id.* at 6.

¹⁴⁸ *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-06-15, 63 NRC 687, 707 n.91 (2006); see also, e.g., *Strata*, CLI-16-13, 83 NRC at 595 (the “hearing record, and subsequent decision on a contested environmental matter augment the environmental record of decision”); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998) (“The adjudicatory record and Board decision (and, of course, any Commission appellate decisions) become, in effect, part of the FEIS.”); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001).

of, or any deficiency in, those conclusions — enhances public disclosure and the NRC’s decisionmaking. As we discuss below, the Board’s determination that the EA did not provide sufficient information was cured by analysis of additional information provided by the Staff via testimony throughout the hearing. None of the additional analysis of information from the hearing record that the Board referenced in its decision changed the Staff’s overall conclusions on the potential impacts of the Crow Butte uranium recovery operations during the renewed license term.¹⁴⁹

Consolidated Intervenor do not suggest that any of the Board’s additional discussion about earthquakes or tornadoes is inaccurate, or that more information on these topics is necessary to adequately evaluate the environmental impacts of Crow Butte’s continued operations. Nor do they claim that the environmental record, as augmented, depicts a seriously different environmental picture than that outlined in the EA.¹⁵⁰ Their complaint, as we understand it, is that the Board made corrections and added analysis, not that the corrections or analyses are incorrect, or that they change the impacts picture in any significant way.

Turning to the specific topics raised in the petition, we discern no necessity for a new NEPA document or new round of public comment.¹⁵¹ For example, with regard to tornadoes, the Board found that the Staff “did not violate NEPA by failing to discuss tornadoes in the EA.”¹⁵² In other words, the Board found no deficiency in the EA as written because tornado-related impacts are “remote and speculative” possibilities that do not warrant analysis in the EA.¹⁵³ Consolidated Intervenor do not argue otherwise.

As to the EA’s seismic assessment, the Board found that, while the Staff had addressed the historical earthquakes in Nebraska, the EA was deficient because the Staff also should have considered “recent earthquakes in South Dakota and eastern Wyoming” — particularly, two seismic events in 2011 that occurred in South Dakota about 25 miles north-northwest of the license area that were felt

¹⁴⁹ We do not mean to suggest that gaps in an EA necessarily can be cured by a presiding officer or Commission adjudicatory decision. Certain material deficiencies may warrant further Staff analysis. In such a circumstance, it may be necessary to evaluate whether the license should remain in effect, taking into account the nature of the NEPA deficiency and any other appropriate considerations. *See Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 536-38 (D.C. Cir. 2018).

¹⁵⁰ We note, also, that Consolidated Intervenor had full opportunity during the hearing to challenge any evidence presented.

¹⁵¹ And with respect to EAs, an agency has “significant discretion in determining when public comment is required.” *See WildEarth Guardians v. U.S. Fish and Wildlife Serv.*, 784 F.3d 677, 698 (2015) (quoting *Taxpayers of Michigan Against Casinos v. Norton*, 433 F.3d 852, 861 (D.C. Cir. 2006)); *see also* 40 C.F.R. § 1501.4(b).

¹⁵² *See* LBP-16-13, 84 NRC at 424.

¹⁵³ *See id.* The Board further noted that the Staff in its Safety Evaluation Report had addressed the probability of a tornado strike. *See id.* at 423-24.

in Crawford, Nebraska.¹⁵⁴ However, the Board concluded that Staff witnesses' testimony cured this defect by demonstrating that including data from these additional earthquakes would not change the EA's conclusions. The Staff at the hearing provided analysis on the characteristics and hazards of *all* earthquakes within a 100-mile radius of the License Area, regardless of the state in which they occurred. Because these additional earthquake data fell within the range of magnitudes and hazards already identified and analyzed in the EA, the Board agreed with the Staff that none of the new earthquake data changed the accuracy of the EA's current analysis.¹⁵⁵ And the Board further noted that the Intervenor had presented no evidence to the contrary. The Board therefore found that adding the new earthquake information "would not affect the EA's description of typical seismic activity and level of seismic hazard," and "that this additional analysis cures this deficiency in the EA."¹⁵⁶

Consolidated Intervenor does not argue that the Board's overall finding on the earthquake analysis is incorrect or that further earthquake analysis is necessary. Here, the hearing served to examine the earthquake issue in depth. The Board's concern over the omitted information on earthquakes from neighboring states, which it characterized as a deficiency, was that the information might affect the EA's conclusions. But the Staff dispelled any uncertainty over the additional data's effect on the analysis by showing that the new information was consistent with that already considered. Consolidated Intervenor does not suggest otherwise.

In short, by referencing the Staff's analysis of the nearby states, the Board appropriately cured any deficiencies and amplified the NEPA record of decision with evidence from the hearing — with absolutely no change to the assessment of potential seismic impacts. To require the Staff to formally supplement the EA with additional, already-reviewed information that no party suggests has a material impact on the EA's conclusions — and that indeed strengthens the Staff's conclusions — would serve no important NEPA goal.¹⁵⁷

Consolidated Intervenor also claim that the Board inappropriately deleted from the EA a discussion involving "White River modeling."¹⁵⁸ Over the course of the hearing, the Staff determined that it would no longer rely on "its hydro-

¹⁵⁴ See *id.* at 438.

¹⁵⁵ *Id.* at 436-38.

¹⁵⁶ *Id.* at 438.

¹⁵⁷ See *NRDC*, 879 F.3d at 1210-12 (where Board augmented environmental record of decision with additional information but the information did not alter Board's conclusion, no "harmful consequence of the supplementation" was identified and there was therefore "nothing to be gained by . . . consider[ing] the same information again"); *Friends of the River v. FERC*, 720 F.2d 93, 106 (D.C. Cir. 1983) (declining to remand for new environmental impact statement where agency, in response to public comments, already had investigated and addressed issues in publicly accessible opinion).

¹⁵⁸ Petition at 2.

geologic modeling of the White River Feature” because the Staff was missing information on the underlying assumptions used in the modeling.¹⁵⁹ The Staff therefore requested that the Board accord the modeling no weight. The Staff nonetheless maintained that it was not necessary to revise the EA because the modeling was “only one of a number of bases” for the Staff’s conclusions regarding the White River Feature.¹⁶⁰

The Board agreed that the modeling was not necessary to the Staff’s White River Feature analysis. Even disregarding the modeling results, the Board found that the Staff had taken a “hard look” at the structure of the White River Feature and its transmissivity.¹⁶¹ Consolidated Intervenors do not contest the Board’s conclusions on the White River Feature, only that the Board’s decision effectively amended the EA to eliminate any further reliance on the modeling. But we view the Board’s action as an appropriate refinement of the environmental record that does not alter the Staff’s conclusions.

In short, the Staff need not formally supplement its NEPA review document every time new information or analysis comes to light. We consider whether new information shows the proposed action would affect the environment “in a significant manner or to a significant extent not already considered.”¹⁶² The information must present “‘a seriously different picture of the environmental impact of the proposed project’ from what was previously envisioned.”¹⁶³ We also look to whether additional information is necessary to reach a determination on the adequacy of the Staff’s conclusions on a material issue — whether the Staff has taken the necessary “hard look” at reasonably foreseeable environmental impacts. Consolidated Intervenors have not identified any matter warranting further analysis or supplementation of the EA.

Consolidated Intervenors also argue that because the Staff issued the renewed license while the adjudication was ongoing, the “federal action occurred” and therefore it was too late for the Board to augment the environmental record with information from the hearing record.¹⁶⁴ While our rules permitted the Staff to issue the license pending completion of the adjudicatory proceeding, the license effectively remains provisional until the adjudicatory proceeding is completed. Our rules allowed the Staff to issue the renewed license after it had completed its safety and environmental reviews, concluded issuance of the license would not endanger the public health and safety or the common defense and security,

¹⁵⁹ See LBP-16-13, 84 NRC at 314.

¹⁶⁰ See *id.* at 307.

¹⁶¹ See *id.* at 314 (noting “several different lines of compelling evidence” for the Staff’s position).

¹⁶² See *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 374 (1989).

¹⁶³ See, e.g., *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-04-39, 60 NRC 657, 659 (2004) (quoting *Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)).

¹⁶⁴ See Petition at 2.

and issued a FONSI.¹⁶⁵ The presiding officer, however, has the authority to make findings of fact and conclusions of law on matters put into controversy in an adjudicatory proceeding.¹⁶⁶ Depending on the resolution of those matters, the Staff may “issue, deny, or appropriately condition” the license, in accordance with adjudicatory findings.¹⁶⁷ Until this adjudicatory proceeding provided under the Atomic Energy Act (AEA) is completed, the agency will not have reached a final decision on the licensing action. And while no further action is required with respect to the matters addressed in this decision for the reasons described above, to the extent that additional analysis may be required under NEPA for other issues, our regulations governing license renewal provide that the original license will remain in effect pending a final determination on the renewal application.¹⁶⁸

In sum, Consolidated Intervenors have not identified any issue on which the Board abused its discretion or violated NEPA requirements. Because NEPA itself does not require an agency to conduct environmental hearings, our hearings held under the AEA serve to probe and publicly ventilate the details of the Staff’s review.¹⁶⁹ An adjudicatory decision following a hearing on an EA (or an environmental impact statement) therefore often will contain some further detail on the Staff’s review. But none of the information that Consolidated Intervenors raised as warranting issuance of a new “corrected” NEPA document presents a seriously different picture of the environmental impacts associated with Crow Butte’s license renewal application. Nor do Consolidated Intervenors identify any matter necessitating further Staff analysis, or any information materially changing the Staff’s assessment of impacts. The Board’s detailed discussion of the hearing record, and our decision today, augments and refines the agency’s publicly available environmental record of decision, consistent with our longstanding practice and NEPA’s goals.

IV. CONCLUSION

For the reasons discussed above, Consolidated Intervenors’ petition for review of LBP-16-13 is *denied*.

¹⁶⁵ See, e.g., 10 C.F.R. §§ 2.103(a); 2.1202(a).

¹⁶⁶ See *id.* § 2.340(e)(1); see also *id.* § 2.1210(a).

¹⁶⁷ See *id.* § 2.340(e)(2).

¹⁶⁸ See *id.* §§ 2.109(a); 40.42(a).

¹⁶⁹ See *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), CLI-15-6, 81 NRC 340, 388 (2015) (citation omitted) (NRC hearings allow for “more rigorous public scrutiny . . . than does the usual ‘circulation for comment’”).

IT IS SO ORDERED.¹⁷⁰

For the Commission

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 29th day of November 2018.

¹⁷⁰ Commissioner Burns did not participate in this matter.

Additional Views of Commissioner Baran

Although I join the majority in denying Consolidated Intervenors' petition for review, I disagree with much of the reasoning in section III.D. of the decision. I write separately because I continue to believe that the NRC Staff should prepare and consider an adequate NEPA environmental review before making a licensing decision. That is a core requirement of NEPA.¹ If the Commission allows the Board to augment and "cure" an inadequate NEPA document *after* the agency has already made a licensing decision, then a fundamental purpose of NEPA is frustrated. In two recent cases, the D.C. Circuit has expressed the same concern.

The Court's decision in *NRDC v. NRC* was hardly an endorsement of the Commission's practice of permitting the Board to augment an inadequate NEPA document after the fact. While the Court found that there was no concrete harm in that particular case, the Court stated:

We do not mean to imply the procedure the Board followed was ideal or even desirable. Certainly it would be preferable for the FEIS to contain all relevant information and the record of decision to be complete and adequate before the license is issued.²

In *Oglala Sioux Tribe*, the Court of Appeals went even further in broadly criticizing the agency's practice. The Court explained:

The National Environmental Policy Act, however, obligates every federal agency to prepare an adequate environmental impact statement *before* taking any major action, which includes issuing a uranium mining license. The statute does not permit an agency to act first and comply later. Nor does it permit an agency to condition performance of its obligation on a showing of irreparable harm.³

The Court added:

The agency's decision in this case and its apparent practice are contrary to NEPA. The statute's requirement that a detailed environmental impact statement be made

¹ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

² *NRDC v. NRC*, 879 F.3d 1202, 1212 (D.C. Cir. 2018).

³ *Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 520 (D.C. Cir. 2018).

for a “proposed” action make clear that agencies must take the required hard look *before* taking that action.⁴

This is the same underlying principle that I discussed in my separate opinions in *Powertech*, *Turkey Point*, and *Strata*.⁵ In each of those cases, the Board identified significant deficiencies in the NEPA reviews on which the Staff relied in making its licensing decisions. As a result, the agency did not have a complete picture of the environmental impacts of the proposed licensing actions before the Staff made its licensing decisions in those cases.

Here, however, with respect to the issues raised in Consolidated Intervenors’ petition for review, the hearing revealed that the environmental impacts of the proposed licensing action were appropriately identified in the EA. The hearing showed that, without augmentation, the Staff’s EA provided an adequate basis for NRC to make a licensing decision. For example, with respect to tornadoes, the Board identified no deficiency in the EA as written because it found that tornado-related impacts were “remote and speculative” possibilities that did not warrant analysis in the EA.⁶ The Staff also introduced seismic information at the hearing from a wider geographic range than that considered in the EA, but the Board found that adding this additional information “would not affect the EA’s description of typical seismic activity and level of seismic hazard.”⁷ And with regard to the EA’s discussion concerning hydrogeologic modeling of the White River Feature, which the Staff ultimately recommended should be given no weight, the Board determined that the modeling was not necessary to the Staff’s White River Feature analysis. Even without the modeling results, the Board found that the Staff had taken a “hard look” at the structure of the White River Feature and its transmissivity and had included sufficient information in the EA to reach its conclusion.⁸

In other words, the Board ultimately found no significant deficiency in the NEPA analysis regarding the issues that Consolidated Intervenors raise here. With respect to these issues, the agency had an adequate EA on which to make a licensing decision at the time of that decision. Rather than augmenting or “curing” a significantly deficient NEPA analysis, the information obtained through the Board’s hearing process actually confirmed the sufficiency of the Staff’s

⁴ *Id.* at 532.

⁵ *Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-16-20, 84 NRC 219, 269 (2016); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-16-18, 84 NRC 167, 177-78 (2016); *Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 603-05 (2016).

⁶ LBP-16-13, 84 NRC 271, 424 (2016).

⁷ *Id.* at 438.

⁸ *See id.* at 314 (noting “several different lines of compelling evidence” for the Staff’s position).

review. Because the hearing revealed that the EA was adequate with respect to the issues raised in Consolidated Intervenors' petition for review, I agree with my colleagues that it is not necessary to require the Staff to prepare a supplemental NEPA document or make a new licensing decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Nicholas G. Trikouros
Dr. Gary S. Arnold

In the Matter of

Docket No. 72-1050-ISFSI
(ASLBP No. 19-959-01-ISFSI-BD01)

INTERIM STORAGE PARTNERS LLC
(WCS Consolidated Interim Storage
Facility)

December 13, 2018

This proceeding concerns Interim Storage Partners LLC's application to be licensed to construct a consolidated interim storage facility to be located near Andrews, Texas. The Board considered a motion to disqualify each of the Board's three members lodged by some petitioners. The Board concluded that the petitioners' motion had cited no valid legal basis for disqualification of the Board, and denied the motion. The Board subsequently referred the motion to the Commission as required by regulation.

**RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR
DISQUALIFICATION)**

The controlling statute, 28 U.S.C. § 455(a), provides that a federal judge "shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned." The professed concern, however, must be objectively reasonable.

ADJUDICATORY BOARDS: DISQUALIFICATION (STANDARD)

What must be determined in applying 28 U.S.C. § 455(a) is whether the facts presented might lead a fully informed reasonable person to question the judge's impartiality in the present proceeding.

ADJUDICATORY BOARDS: BIAS

While petitioners have a right to impartial judges, they do not have a right to the judge of their choice.

MEMORANDUM AND ORDER (Denying and Referring Motion to Disqualify Board)

Before the Board is a motion by some petitioners (the Moving Petitioners) to disqualify each of the Board's three members.¹ The NRC Staff opposes the motion,² and the other participants have not responded.³ Because the Moving Petitioners have not cited a valid legal basis for disqualification of the Board, we deny the motion and refer it to the Commission as required by 10 C.F.R. § 2.313(b)(2).

I. BACKGROUND

This proceeding involves a license application to construct and operate a consolidated interim storage facility for spent nuclear fuel and high-level nuclear waste in Andrews County, Texas. The Board is comprised of three Administrative Judges who were appointed by the Chief Administrative Judge to preside

¹ Motion of Sierra Club, Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace, Sustainable Energy and Economic Development (SEED) Coalition and Leona Morgan, Individually for Disqualification of Atomic Safety and Licensing Board (Nov. 26, 2018) [hereinafter Motion].

² NRC Staff Response to Motion for Disqualification of Atomic Safety and Licensing Board (Dec. 6, 2018).

³ The Moving Petitioners represent that, when they solicited the agreement of other counsel, as required by 10 C.F.R. § 2.323(b), "[c]ounsel for Interim Storage Partners LLC and the NRC Staff declined to consent, stating that the disqualification request does not state a lawful reason." Motion at 6. Reportedly, the other petitioners took no position. *Id.*

over the proceeding.⁴ Previously, the same three Administrative Judges were appointed by the Chief Administrative Judge to preside over a proceeding that involves a license application for another consolidated interim storage facility that would be constructed and operated in Lea County, New Mexico.⁵ To date, the Board has not issued a substantive ruling in either proceeding.

The Moving Petitioners do not allege bias based on the conduct of any Board member. Rather, they allege that appointment of the same three Administrative Judges to both the New Mexico proceeding and to this proceeding “suggests the appearance of bias and requires appointment of a different [Atomic Safety and Licensing Board (ASLB)] panel to preside over this case.”⁶ According to the Moving Petitioners, while the two storage facility proposals “have some similarities to one another,” in other ways they differ.⁷ Likewise, although the Moving Petitioners acknowledge the similarity of some of the anticipated legal issues, they caution that decisions nonetheless “will have to be made in light of the individual facts of the respective license requests.”⁸ Therefore, they conclude, the two adjudications must be assigned to “separate, non-overlapping ASLB panels to dispel any appearance or suggestion that the complex and controversial decisions in one case are being made, but in short-shrift or summary fashion, by the same judges in the other . . . case.”⁹

II. ANALYSIS

The controlling statute is 28 U.S.C. § 455(a), which provides that a federal judge “shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned.”¹⁰ The professed concern, however, must be objectively reasonable. What must be determined in applying section 455(a) is whether the facts presented “might lead a fully informed reasonable person

⁴ Establishment of Atomic Safety and Licensing Board: Interim Storage Partners LLC, 83 Fed. Reg. 59,424 (Nov. 23, 2018).

⁵ Establishment of Atomic Safety and Licensing Board: Holtec International, 83 Fed. Reg. 55,578, 55,578-79 (Nov. 6, 2018).

⁶ Motion at 1.

⁷ *Id.* at 2.

⁸ *Id.* at 4.

⁹ *Id.* at 6.

¹⁰ See *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 203 (2010) (finding that while the statute is not specifically aimed at administrative judges, it “provides a helpful framework” for assessing a motion for disqualification); *Hydro Resources, Inc.* (2929 Coors Rd., Suite 101, Albuquerque, NM 87120), CLI-98-9, 47 NRC 326, 331 (1998); *Public Service Electric & Gas Co.* (Hope Creek Generating Station, Unit 1), ALAB-759, 19 NRC 13, 20-21 (1984).

to question [the judge's] impartiality in the present proceeding.”¹¹ While the Moving Petitioners have a right to impartial judges, “they do not have a right to the judge of their choice.”¹²

The Moving Petitioners cite no case from any jurisdiction that has ever held assigning cases with some factual or legal similarities to the same judge or judges raises a reasonable question of bias, and the Board is aware of none. On the contrary, arguments much like the Moving Petitioners’ have been rejected both by another Licensing Board and by the Commission.¹³

The Moving Petitioners set forth no reasonable grounds for their fear that the Board will be unable to distinguish between the facts of separate cases, or that we will address in one case only in “short-shrift or summary fashion” issues that have been addressed in the context of the other case.¹⁴ Indeed, as counsel for the Moving Petitioners represent many of the same petitioners in both cases, they should have opportunities to point out material differences.

Not only does the Moving Petitioners’ motion fail to raise a lawful ground for disqualification, but its fundamental premise would appear to challenge established practices throughout the federal system that are designed to promote the efficient administration of justice. Rather than disperse cases that present common issues, federal courts routinely consolidate them. Thus, cases that “involve the same parties” or “are based on the same or similar claims” or “present common issues of fact” are regularly assigned or transferred to the same judge.¹⁵

III. ORDER

The Moving Petitioners’ motion to disqualify the Board is *denied*.

As required by 10 C.F.R. § 2.313(b)(2), the motion is *referred* to the Commission.

¹¹ *Hope Creek*, ALAB-759, 19 NRC at 22.

¹² *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-85-5, 21 NRC 566, 568, *aff’d sub nom. Three Mile Island Alert, Inc. v. NRC*, 771 F.2d 720 (3d Cir. 1985).

¹³ *See, e.g., Public Service Electric & Gas Co.* (Atlantic Nuclear Generating Station, Units 1 and 2), LBP-78-5, 7 NRC 147, 148-49 (1978) (denying a motion for disqualification for, among other things, frivolously challenging the objectivity of the Board); *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-80-11, 11 NRC 511, 512-13 (1980) (denying a petition for review to disqualify a board member because the movant proffered no evidence of bias).

¹⁴ Motion at 6.

¹⁵ *See, e.g., U.S. Ct. Fed. Claims R. 40.2; D.D.C. Loc. R. 40.5; S.D.N.Y. R. 13; E.D.N.Y. R. 50.3.1; see also 28 U.S.C. § 1407(a)* (transfer for coordinated or consolidated pretrial proceedings “civil actions involving one or more common questions of fact”).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 13, 2018

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CROW BUTTE RESOURCES, INC.
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MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Denying Admission of New
and Renewed Contentions); Docket No. 40-8943-MLA-2 (ASLBP No. 13-926-01-MLA-BD01);
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POWERTECH (USA) INC.
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MATERIALS LICENSE; MEMORANDUM AND ORDER (Denying Motions for Summary Disposition
as to Contention 1A); Docket No. 40-9075-MLA (ASLBP No. 10-898-02-MLA-BD01); LBP-18-5, 88
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for Leave to File New Contentions); Docket No. 52-047-ESP (ASLBP No. 17-954-01-ESP-BD01);
LBP-18-4, 88 NRC 55 (2018)

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- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993)
movant carries the burden of demonstrating that summary disposition is appropriate and must explain in writing the basis for the motion; LBP-18-5, 88 NRC 123 (2018)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993)
standards governing summary disposition are based on those that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; CLI-18-7, 88 NRC 8 (2018)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 476 (2008)
intervenor may not litigate the adequacy of NRC Staff's safety review, and so any safety-related contention must be based on the content of the application; LBP-18-3, 88 NRC 25 n.11 (2018)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986) board's only role in deciding whether to grant a motion for summary disposition is to determine whether any genuine issue of material fact exists; LBP-18-5, 88 NRC 124 (2018)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) evidence of summary disposition opponent is to be believed, and all justifiable inferences are to be drawn in his favor; LBP-18-5, 88 NRC 123 (2018)
summary disposition should not be granted if it would require the board to engage in the making of credibility determinations, the weighing of the evidence, or the drawing of legitimate inferences from the facts; LBP-18-5, 88 NRC 123, 128 (2018)
- Calvert Cliffs 3 Nuclear Project, LLC, and Unistar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 732 (2010)
intervenor must contest information in a draft environmental review document contemporaneously with its publication, and may not wait to see whether the challenge is resolved when the final environmental document is issued; LBP-18-3, 88 NRC 28 (2018)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 383 (2001)
arguments not raised before the licensing board are deemed waived; CLI-18-8, 88 NRC 163 n.112 (2018)
- Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986)
summary disposition movant has the initial burden of showing that no genuine issue of material fact remains in the proceeding; CLI-18-7, 88 NRC 8 (2018)
- Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986)
opponent of summary disposition motion cannot rest on the allegations or denials of a pleading but must go beyond the pleadings and designate specific facts showing that there is a genuine issue for trial; CLI-18-7, 88 NRC 8 (2018)
- Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-01-25, 54 NRC 368, 373-74 (2001)
increased litigation resulting from the admission of a contention does not constitute serious or irreparable harm; CLI-18-7, 88 NRC 7 n.32 (2018)
- Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-01-25, 54 NRC 368, 374 (2001)
expansion of issues for resolution and the continuation of litigation that results from admitting a contention does not necessarily have a pervasive and unusual effect on the litigation; CLI-18-7, 88 NRC 7 n.32 (2018)

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- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 711-12 (2008), *aff'd*, CLI-09-9, 69 NRC 331, 337 (2009)
contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 46 (2018)
- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 734 (2008)
proponent of environmental justice contention must make more than generalized statements of concern about religious and cultural impacts; LBP-18-3, 88 NRC 51 (2018)
- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-15-11, 81 NRC 401, 411 (2015)
contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 46 (2018)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-18-2, 87 NRC 21, 30 (2018)
environmental challenge may migrate to subsequently issued National Environmental Policy Act-related review documents without the contention's proponent resubmitting the contention; LBP-18-3, 88 NRC 24 (2018)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-18-2, 87 NRC 21, 31-32 n.5 (2018)
submitting comments on NRC Staff environmental document during public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication; LBP-18-3, 88 NRC 28 (2018)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-18-2, 87 NRC 21, 36 n.7 (2018)
it is not clear that migration tenet can be applied to already admitted safety contentions; LBP-18-3, 88 NRC 25 n.11 (2018)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009)
in appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission; LBP-18-3, 88 NRC 52 (2018)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *pet. for reconsideration denied*, CLI-02-1, 55 NRC 1 (2002)
contention admission rule is strict by design; LBP-18-4, 88 NRC 61 (2018)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-1, 81 NRC 1, 7 (2015)
intervenor challenging NRC Staff's environmental review documents who delays filing new contentions until Staff's final document is issued risks the possibility that there will not be a material difference between the draft and final environmental review documents, thus rendering any newly proposed contentions on previously available information impermissibly late; LBP-18-3, 88 NRC 28 (2018)
new or amended contention must be raised at the earliest possible opportunity; LBP-18-3, 88 NRC 26 (2018)
petitioners who choose to wait to raise contentions that could have been raised earlier do so at their peril; LBP-18-3, 88 NRC 26 (2018)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-37 (1999)
petitioner seeking admission of a contention contesting a NEPA document must not only point out what specific deficiencies exist, but also must demonstrate why the deficiencies raise a genuine material dispute with the NEPA document; LBP-18-3, 88 NRC 34 (2018)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048-49 (1983)
filing of an environmental concern based on the environmental report will not be deferred because NRC Staff may provide a different analysis in the draft environmental impact statement; LBP-18-3, 88 NRC 28 (2018)
institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention; LBP-18-3, 88 NRC 28 (2018)
- Edlow International Co.* (Agent for the Government of India on Application to Export Special Nuclear Material), CLI-76-6, 3 NRC 563, 569-70 (1976)
licensing board is not necessarily governed by the constitutional Article III constraints that are the basis for petitioner's jurisdictional claim; LBP-18-3, 88 NRC 46 n.28 (2018)
- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 34 (2008)
grant of summary disposition motion, where other contentions are pending in the proceeding, is interlocutory; CLI-18-7, 88 NRC 6 n.28 (2018)

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- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010)
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- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010)
in assessing environmental impacts, agencies are free to select their own methodology as long as that methodology is reasonable; LBP-18-5, 88 NRC 125 (2018)
- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 203 (2010)
although 28 U.S.C. § 455(a) is not specifically aimed at administrative judges, it provides a helpful framework for assessing a motion for disqualification; LBP-18-6, 88 NRC 179 (2018)
- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010)
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- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 45-46 (2012)
where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 147 (2018)
- Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 493 n.70 (2012)
new contentions must be based on new facts not previously available, even when proponent is challenging a new licensing document; LBP-18-3, 88 NRC 45 (2018)
- Entergy Nuclear Operations, Inc.* (Indian Point, Unit 2), CLI-16-5, 83 NRC 131, 136 (2016)
failure to fulfill any one of the contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) renders a contention inadmissible; LBP-18-4, 88 NRC 61 (2018)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 135 (2009)
Commission has uniformly rejected arguments that expenses of any kind constitute irreparable injury; CLI-18-7, 88 NRC 7 n.32 (2018)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-10-30, 72 NRC 564, 569 (2010)
increased litigation and delay do not justify interlocutory review; CLI-18-7, 88 NRC 7 n.32 (2018)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 810-11 (2011)
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- Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), CLI-15-6, 81 NRC 340, 388 (2015)
because NEPA does not require an agency to conduct environmental hearings, the hearings held under the Atomic Energy Act serve to probe and publicly ventilate the details of NRC Staff's review; CLI-18-8, 88 NRC 172 n.169 (2018)
- Entergy Nuclear Vermont Yankee and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147 (2006)
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- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012)
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- Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-16-18, 84 NRC 167, 177-78 (2016)
National Environmental Policy Act's requirement that a detailed environmental impact statement be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 175 (2018)

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- Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-16-3, 83 NRC 169, 176 (2016)
in making credibility determinations, weighing of evidence, or drawing legitimate inferences from the facts in ruling on summary disposition motion would require the board to conduct a trial on the written record by weighing the evidence and endeavoring to determine the truth of the matter; LBP-18-5, 88 NRC 123-24 (2018)
- Friends of the River v. FERC*, 720 F.2d 93, 106 (D.C. Cir. 1983)
remand for new environmental impact statement was declined where agency, in response to public comments, already had investigated and addressed issues in publicly accessible opinion; CLI-18-8, 88 NRC 170 n.157 (2018)
- Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), ALAB-872, 26 NRC 127, 136 (1987)
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- Ground Zero Ctr. for Non-Violent Action v. U.S. Dept. of the Navy*, 383 F.3d 1082, 1089-90 (9th Cir. 2004)
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- Hydro Resources, Inc.* (2929 Coors Rd., Suite 101, Albuquerque, NM 87120), CLI-98-9, 47 NRC 326, 331 (1998)
although 28 U.S.C. § 455(a) is not specifically aimed at administrative judges, it provides a helpful framework for assessing a motion for disqualification; LBP-18-6, 88 NRC 179 (2018)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; CLI-18-8, 88 NRC 168 n.148 (2018)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-04-39, 60 NRC 657, 659 (2004)
supplementation of NEPA review document is required if new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-18-8, 88 NRC 171 (2018)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 2 (2006)
where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 147 (2018)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, NM 87313, CLI-06-29, 64 NRC 417, 421 (2006)
arguments raised for the first time on appeal are deemed waived; CLI-18-8, 88 NRC 163 (2018)
- Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976)
NEPA goals are realized through a set of action-forcing procedures that require agencies to take a hard look at environmental consequences and disseminate that information to the public; LBP-18-5, 88 NRC 124 (2018)
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 745 (3d Cir. 1989)
risks that are remote and speculative or events that have a low probability of occurring are unnecessary to evaluate in an environmental impact statement; LBP-18-5, 88 NRC 125 (2018)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; CLI-18-8, 88 NRC 168 n.148 (2018)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004)
mandating an exhaustive summary of all aspects of a petitioner's argument at the contention admission stage would be tantamount to asking petitioner to prove its case at that stage; LBP-18-3, 88 NRC 39 (2018)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-06-15, 63 NRC 687, 707 n.91 (2006)
initial decisions of the presiding officer on NEPA issues and Commission decisions augment and become part of the environmental record of decision; CLI-18-8, 88 NRC 168 (2018)
- Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 374 (1989)
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- supplementation of NEPA review document is required if new information shows the proposed action would affect the environment in a significant manner or to a significant extent not already considered; CLI-18-8, 88 NRC 171 (2018)
- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-85-5, 21 NRC 566, 568, *aff'd sub nom. Three Mile Island Alert, Inc. v. NRC*, 771 F.2d 720 (3d Cir. 1985)
petitioners have a right to impartial judges, but they do not have a right to the judge of their choice; LBP-18-6, 88 NRC 180 (2018)
- National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722 (9th Cir. 2001)
court must be able to review, in advance, how specific measures will bring projects into compliance with environmental standards; CLI-18-8, 88 NRC 149 n.30 (2018)
- National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 732-34 (9th Cir. 2001)
intensity or practical consequences of expected impacts were simply unknown because of an absence of information, and the agency had no evidence that proposed mitigation measures would combat the most likely unknown or inadequately known effects; CLI-18-8, 88 NRC 149 n.30 (2018)
- Nieves-Villanueva v. Soto-Rivera*, 133 F.3d 92, 99-100 (1st Cir. 1997)
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- Northern States Power Co.* (Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation), LBP-12-24, 76 NRC 503, 522 (2012)
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- NRDC & Powder River Basin Res. Council v. NRC*, 879 F.3d 1202, 1210-12 (D.C. Cir. 2018)
where board augmented environmental record of decision with additional information but the information did not alter board's conclusion, no harmful consequence of the supplementation was identified and there was therefore nothing to be gained by considering the same information again; CLI-18-8, 88 NRC 170 n.157 (2018)
- NRDC & Powder River Basin Res. Council v. NRC*, 879 F.3d 1202, 1212 (D.C. Cir. 2018)
it would be preferable for the final environmental impact statement to contain all relevant information and the record of decision to be complete and adequate before the license is issued; CLI-18-8, 88 NRC 174 (2018)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203 (2011)
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- Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 367 (2006)
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- Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 520 (D.C. Cir. 2018)
National Environmental Policy Act does not permit an agency to act first and comply later or to condition performance of its obligation on a showing of irreparable harm; CLI-18-8, 88 NRC 174 (2018)
National Environmental Policy Act obligates every federal agency to prepare an adequate environmental impact statement before taking any major action, which includes issuing a uranium mining license; CLI-18-8, 88 NRC 174 (2018)
- Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 520, 532 (D.C. Cir. 2018)
National Environmental Policy Act's requirement that a detailed environmental impact statement be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 174-75 (2018)
- Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 527 (D.C. Cir. 2018)
where Commission order as a whole is not final, the court lacks jurisdiction to review those rulings; LBP-18-5, 88 NRC 104 (2018)
- Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 527-37 (D.C. Cir. 2018)
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- Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 536-38 (D.C. Cir. 2018)
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- Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-80-11, 11 NRC 511, 512-13 (1980)
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- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 444 & nn.94-95 (2011)
Council on Environmental Quality regulations are not binding on NRC when they have a substantive impact on the way in which the Commission performs its regulatory functions; LBP-18-5, 88 NRC 129 (2018)
- Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-16-20, 84 NRC 219, 249 (2016)
contention that applicant fails to meet applicable legal requirements regarding protection of historical, cultural, and spiritual resources because of failure to involve or consult the tribe is inadmissible; LBP-18-3, 88 NRC 49 (2018)
- Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-16-20, 84 NRC 219, 269 (2016)
National Environmental Policy Act's requirement that a detailed environmental impact statement be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 175 (2018)
- Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-15-16, 81 NRC 618, 636 (2015), *affid.* CLI-16-20, 84 NRC 219 (2016)
NRC is not bound by Council on Environmental Quality regulations but they are entitled to considerable deference; LBP-18-5, 88 NRC 124 (2018)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002)
NEPA analysis must take into account reasonably foreseeable results; LBP-18-5, 88 NRC 125 (2018)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002)
NEPA does not require agencies to analyze every conceivable aspect of a proposed project; LBP-18-5, 88 NRC 125 (2018)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998)
contention's sponsor must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention; LBP-18-3, 88 NRC 38 (2018)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-27, 52 NRC 216, 221-24 (2000)
filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 28 (2018)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 97 (2001)
intervenor may not litigate the adequacy of NRC Staff's safety review, and so any safety-related contention must be based on the content of the application; LBP-18-3, 88 NRC 25 n.11 (2018)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-11-10, 74 NRC 251 (2011)
board denial of a motion for summary disposition is an interlocutory decision; CLI-18-7, 88 NRC 6 n.28 (2018)

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- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 144 (2009)
filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 28 (2018)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-31, 74 NRC 643, 648 (2011)
summary disposition standard requires a board to determine if any material facts remain genuinely in dispute and, if no such disputes remain, the board must determine if movant's legal position is correct; LBP-18-5, 88 NRC 123 (2018)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir.), *cert denied*, 502 U.S. 895 (1991)
contention basis is intended to put other parties on notice as to what issues they will have to defend against or oppose and can frame the scope of the contention; LBP-18-3, 88 NRC 39 (2018)
- Public Service Electric & Gas Co.* (Atlantic Nuclear Generating Station, Units 1 and 2), LBP-78-5, 7 NRC 147, 148-49 (1978)
motion for disqualification denied for, among other things, frivolously challenging the objectivity of the board; LBP-18-6, 88 NRC 180 n.13 (2018)
- Public Service Electric & Gas Co.* (Hope Creek Generating Station, Unit 1), ALAB-759, 19 NRC 13, 20-21 (1984)
although 28 U.S.C. § 455(a) is not specifically aimed at administrative judges, it provides a helpful framework for assessing a motion for disqualification; LBP-18-6, 88 NRC 179 (2018)
- Public Service Electric & Gas Co.* (Hope Creek Generating Station, Unit 1), ALAB-759, 19 NRC 13, 22 (1984)
in applying 28 U.S.C. § 455(a) to a disqualification motion, board must determine whether the facts presented might lead a fully informed reasonable person to question the judge's impartiality in the present proceeding; LBP-18-6, 88 NRC 179-80 (2018)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)
NRC Staff should prepare and consider an adequate NEPA environmental review before making a licensing decision; CLI-18-8, 88 NRC 174 (2018)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)
NEPA does not mandate particular results; LBP-18-5, 88 NRC 125 (2018)
NEPA goals are realized through a set of action-forcing procedures that require agencies to take a hard look at environmental consequences; LBP-18-5, 88 NRC 124 (2018)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989)
one important ingredient of an environmental impact statement is the discussion of steps that can be taken to mitigate adverse environmental consequences; LBP-18-5, 88 NRC 124 (2018)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)
discussion of mitigation steps in environmental impact statement is important to show that the agency has taken a hard look; LBP-18-5, 88 NRC 124 (2018)
- Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993), *petition for review denied*, CLI-94-2, 39 NRC 91, 91 (1994)
contention that simply alleges that some matter ought to be considered does not provide the basis for an admissible contention; LBP-18-3, 88 NRC 34 (2018)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 61-62 (1994)
denial of motion for summary disposition or dismissal does not constitute serious or irreparable harm; CLI-18-7, 88 NRC 7 n.32 (2018)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 62-63 (1994)
expansion of issues for resolution and continuation of litigation that results from denying summary disposition does not necessarily have a pervasive and unusual effect on the litigation; CLI-18-7, 88 NRC 7 n.32 (2018)

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- Sierra Club v. Froehke*, 816 F.2d 205, 210 (5th Cir. 1987)
supplementation of NEPA review document is required if new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-18-8, 88 NRC 171 (2018)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 98-99 (2010)
Commission reviews questions of law de novo, but generally defers to a board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence; CLI-18-8, 88 NRC 146-47 (2018)
licensing board's main role in the adjudicatory process is to carefully review testimony and exhibits to resolve factual disputes; CLI-18-8, 88 NRC 147 (2018)
where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 147 (2018)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 255 (2007)
licensing boards admit contentions, not bases; LBP-18-3, 88 NRC 39 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), CLI-16-13, 83 NRC 566, 593 (2016)
alternate concentration limit can only be obtained for a mining unit at an in situ recovery site via a license amendment request that is subject to NEPA examination and an adjudicatory hearing; LBP-18-3, 88 NRC 35 (2018)
- Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 595 (2016), *aff'd*, *Nat. Res. Def. Council & Powder River Basin Res. Council v. NRC*, 879 F.3d 1202 (D.C. Cir. 2018)
hearing record and subsequent decision on a contested environmental matter augment the environmental record of decision; CLI-18-8, 88 NRC 168 n.148 (2018)
- Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 600 (2016), *aff'd*, *Nat. Res. Def. Council & Powder River Basin Res. Council v. NRC*, 879 F.3d 1202 (D.C. Cir. 2018)
excursion parameters for monitoring wells are selected to provide the earliest warning of a lixiviant excursion, and not because they are the chemicals of most concern in groundwater protection; CLI-18-8, 88 NRC 152 (2018)
- Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 603-05 (2016)
National Environmental Policy Act's requirement that a detailed environmental impact statement be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 175 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 130 (2013)
to show good cause for a new or amended contention, intervenor must demonstrate that information was not previously available and is materially different from information previously available and filing has been submitted in a timely fashion based on availability of the subsequent information; LBP-18-3, 88 NRC 26 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 130-31 (2013)
section 2.309(c)(1)(iii) does not define "timely," providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely; LBP-18-3, 88 NRC 26 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 132 n.7 (2013)
it is not clear that migration tenet can be applied to already admitted safety contentions; LBP-18-3, 88 NRC 25 n.11 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 133 (2013), *petition for review denied*, CLI-16-13, 83 NRC 566, 601 (2016), *petition for review denied sub nom.*, *NRDC v. NRC*, 879 F.2d 1202, 1206-07 (D.C. Cir. 2018)
contention may migrate where information in NRC Staff's environmental review document is sufficiently similar to the material in the previously issued licensing document; LBP-18-3, 88 NRC 24-25 (2018)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 138 (2013)
in appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission; LBP-18-3, 88 NRC 52 (2018)

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- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-13-10, 78 NRC 117, 143 n.15 (2013)
intervenor is neither required to submit a migration declaration nor to plead the migration standards unless NRC Staff or licensee challenges the contention's migration; LBP-18-3, 88 NRC 25 n.12 (2018)
- Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-16-13, 83 NRC 566, 570 n.17 (2016)
contention may migrate where information in NRC Staff's environmental review document is sufficiently similar to material in the previously issued licensing document; LBP-18-3, 88 NRC 24-25 (2018)
- Taxpayers of Michigan Against Casinos v. Norton*, 433 F.3d 852, 861 (D.C. Cir. 2006)
agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 169 n.151 (2018)
- Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 988 (2009)
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- Town of Winthrop v. FAA*, 535 F.3d 1 (1st Cir. 2008)
agencies need only undertake reasonable efforts to acquire missing information; CLI-18-7, 88 NRC 11 n.1 (2018)
- Town of Winthrop v. FAA*, 535 F.3d 1, 11-13 (1st Cir. 2008)
in assessing environmental impacts, agencies are free to select their own methodology as long as that methodology is reasonable; LBP-18-5, 88 NRC 125 (2018)
- Town of Winthrop v. FAA*, 535 F.3d 1, 13 (1st Cir. 2008)
as part of its NEPA responsibilities, federal agency must undertake reasonable efforts to acquire missing information; LBP-18-5, 88 NRC 134 (2018)
- United States v. McIver*, 470 F.3d 550, 561-62 (4th Cir. 2006)
opinion testimony that states a legal standard or draws a legal conclusion by applying law to the facts is generally inadmissible; LBP-18-4, 88 NRC 67-68 n.70 (2018)
- United States v. Sioux Nation of Indians*, 448 U.S. 371 (1980)
contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 46 (2018)
- U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 406-12 (2009)
challenge to the form of an affidavit requiring that the affidavit repeat verbatim each and every fact and opinion set forth in the contention itself has been rejected; LBP-18-4, 88 NRC 64 n.46 (2018)
- USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 444-45 (2006)
NRC Staff may moot a contention of omission through its later-issued environmental document; LBP-18-4, 88 NRC 59 n.15 (2018)
- Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1026-27 (9th Cir. 1980)
under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 5 n.19 (2018)
- WildEarth Guardians v. U.S. Fish and Wildlife Serv.*, 784 F.3d 677, 698 (2015)
agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 169 n.151 (2018)

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- 10 C.F.R. 2.103(a)
NRC Staff may issue a renewed license after it has completed its safety and environmental reviews, if issuance of the license would not endanger the public health and safety or the common defense and security, and a finding of no significant impact has been issued; CLI-18-8, 88 NRC 171-72 (2018)
- 10 C.F.R. 2.109(a)
original license will remain in effect pending a final determination on the renewal application; CLI-18-8, 88 NRC 172 (2018)
- 10 C.F.R. 2.206
request that NRC take emergency enforcement actions at nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation is denied; DD-18-3, 88 NRC 71-93 (2018)
- 10 C.F.R. 2.206(b)
Director of NRC office with responsibility for the subject matter shall either institute the requested proceeding or advise the petitioner in writing that no proceeding will be instituted and the reason for the decision; DD-18-3, 88 NRC 75-76 (2018)
- 10 C.F.R. 2.300
Subpart C is generally applicable to all adjudications pursuant to the Atomic Energy Act, including Subpart L proceedings; LBP-18-5, 88 NRC 134 (2018)
- 10 C.F.R. 2.304(d)
statement in a representation of counsel rather than a submission by licensee for the licensing docket, for the purpose of the proceeding, has the same legal effect and, if contradicted by subsequent licensee actions, could be the basis for a new contention; LBP-18-3, 88 NRC 31-32 n.17 (2018)
- 10 C.F.R. 2.309(a)
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- 10 C.F.R. 2.309(b)
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- 10 C.F.R. 2.309(c)(1)
good cause exists when information on which amended or new contention is based was not previously available and is materially different from information previously available and the filing has been submitted in a timely fashion based on availability of the subsequent information; LBP-18-4, 88 NRC 60 (2018)
good cause must be shown for submitting a new or amended contention; LBP-18-3, 88 NRC 26 (2018)
good cause provisions do not suggest that timeliness concerns are waived for jurisdictional issues; LBP-18-3, 88 NRC 46 n.28 (2018)
- 10 C.F.R. 2.309(c)(1)(i)
contention that applicant failed to obtain the consent of the Oglala Sioux tribe as required by treaty and international law is inadmissible; LBP-18-3, 88 NRC 46 (2018)
contention that licensee fails to discuss or demonstrate lawful federal jurisdiction and authority over its activities is inadmissible; LBP-18-3, 88 NRC 45 (2018)
- 10 C.F.R. 2.309(c)(1)(i)-(ii)
contention that final environmental assessment fails to adequately analyze cumulative impacts that include decommissioning of facility and existing mining units is inadmissible; LBP-18-3, 88 NRC 44 (2018)

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- contention that final environmental assessment fails to provide an adequate baseline groundwater characterization or demonstrate that ground water and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 41 (2018)
- contention that final environmental assessment fails to take the required hard look at the pump test data is inadmissible; LBP-18-3, 88 NRC 37 (2018)
- contention that final environmental assessment's failure to critically evaluate pump test data renders the analysis and evaluation of potential impacts from restoration incomplete and insufficiently detailed to inform the public is inadmissible; LBP-18-3, 88 NRC 40 (2018)
- contention that licensee fails to take the requisite hard look at environmental justice impacts is inadmissible; LBP-18-3, 88 NRC 50 (2018)
- new or amended contention must be based on previously unavailable, materially different information or the contention will be rejected; LBP-18-3, 88 NRC 38 (2018)
- 10 C.F.R. 2.309(c)(1)(i)-(iii)
to show good cause for a new or amended contention, intervenor must demonstrate that the information was not previously available and is materially different from information previously available and filing has been submitted in a timely fashion based on availability of the subsequent information; LBP-18-3, 88 NRC 26 (2018)
- 10 C.F.R. 2.309(c)(1)(iii)
contention that applicant fails to meet applicable legal requirements regarding protection of historical, cultural, and spiritual resources because of failure to involve or consult the tribe is inadmissible; LBP-18-3, 88 NRC 48, 49 (2018)
question of whether board-established deadline applies to timely submission of new or amended contentions relative to the final environmental assessment or the generic deadline applies whereby a new/amended contention is based on new and materially different information is discussed; LBP-18-3, 88 NRC 36 n.21 (2018)
"timely" is not defined, providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely; LBP-18-3, 88 NRC 26 (2018)
- 10 C.F.R. 2.309(c)(4)
new or amended contentions must meet the six admissibility factors in section 2.309(f)(1); LBP-18-3, 88 NRC 27 (2018)
- 10 C.F.R. 2.309(f)(1)(i)
petitioner's undifferentiated reference to other environmental assessment timelines lacks sufficient specificity to provide the basis for an admissible contention; LBP-18-3, 88 NRC 34 n.20 (2018)
- 10 C.F.R. 2.309(f)(1)(i)-(vi)
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- 10 C.F.R. 2.309(f)(1)(ii)
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- 10 C.F.R. 2.309(f)(1)(iii)
contention that applicant failed to obtain the consent of the Oglala Sioux tribe as required by treaty and international law is inadmissible; LBP-18-3, 88 NRC 46, 47 (2018)
contention that licensee fails to discuss or demonstrate lawful federal jurisdiction and authority over its activities is inadmissible; LBP-18-3, 88 NRC 45 (2018)
- 10 C.F.R. 2.309(f)(1)(v)
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contention that final environmental assessment failed to consider all reasonable alternatives in light of mine cessation and decommissioning is inadmissible; LBP-18-3, 88 NRC 35 (2018)
contention that final environmental assessment fails to take the required hard look at the pump test data is inadmissible; LBP-18-3, 88 NRC 37 (2018)
contention that final environmental assessment's failure to critically evaluate pump test data renders the analysis and evaluation of potential impacts from restoration incomplete and insufficiently detailed to inform the public is inadmissible; LBP-18-3, 88 NRC 40 (2018)

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- contention that licensee fails to meet applicable legal requirements regarding protection of historical, cultural, and spiritual resources is inadmissible; LBP-18-3, 88 NRC 48 (2018)
- contention without factual or expert support must be rejected; LBP-18-3, 88 NRC 40-41 (2018)
- 10 C.F.R. 2.309(f)(1)(v)-(vi)
- contention lacking factual or expert support that does not raise a genuine dispute on a material issue must be rejected; LBP-18-3, 88 NRC 43 (2018)
- contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 43 (2018)
- contention that final environmental assessment fails to adequately describe licensee's cessation of operations, proposal to be possession-only licensee in standby status, and impacts of decommissioning is inadmissible; LBP-18-3, 88 NRC 29 (2018)
- contention that final environmental assessment fails to describe or evaluate impacts from new restoration timeline stated in extension amendment request, including failure to describe expected increases in consumptive use of water in restoration, is inadmissible; LBP-18-3, 88 NRC 32-33 (2018)
- contention that final environmental assessment fails to provide an adequate baseline groundwater characterization or demonstrate that ground water and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 41 (2018)
- contention that licensee fails to take the requisite hard look at environmental justice impacts is inadmissible; LBP-18-3, 88 NRC 50 (2018)
- 10 C.F.R. 2.309(f)(1)(vi)
- contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of the emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 64 (2018)
- contention challenging draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 64 (2018)
- contention claiming that the no-action alternative addresses only lost benefits, rather than avoided impacts is inadmissible; LBP-18-4, 88 NRC 65 (2018)
- contention that final environmental assessment fails to adequately analyze cumulative impacts that include decommissioning of facility and existing mining units is inadmissible; LBP-18-3, 88 NRC 44 (2018)
- where the omission cited in is a contention of omission does not exist, there is no genuine dispute to support admission of the contention; LBP-18-3, 88 NRC 44 (2018)
- 10 C.F.R. 2.309(f)(2)
- new or amended contentions must satisfy the good cause standard in section 2.309(c)(1); LBP-18-4, 88 NRC 60 (2018)
- 10 C.F.R. 2.313(b)(2)
- motion for disqualification of the board is denied for failure to cite a valid legal basis for disqualification and referred to the Commission; LBP-18-6, 88 NRC 178, 180 (2018)
- 10 C.F.R. 2.323(b) petitioners seeking disqualification of judges must solicit agreement of other counsel; ; LBP-18-6, 88 NRC 178 (2018)
- 10 C.F.R. 2.336
- although this rule is contained in Subpart C of Part 2, Subpart C is generally applicable to all adjudications pursuant to the Atomic Energy Act, including Subpart L proceedings; LBP-18-5, 88 NRC 134 (2018)
- general discovery is provided for in Subpart L proceedings; LBP-18-5, 88 NRC 134 (2018)
- 10 C.F.R. 2.336(a)
- each party's duty to submit mandatory disclosures is ongoing, and each party must make these mandatory disclosures once a month and without the filing of a discovery request by other parties; LBP-18-5, 88 NRC 134 (2018)
- 10 C.F.R. 2.336(a)(2)(i)
- all parties shall disclose and provide all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions; LBP-18-5, 88 NRC 134 (2018)

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- 10 C.F.R. 2.336(d)
each party's duty to submit mandatory disclosures is ongoing, and each party must make these mandatory disclosures once a month and without the filing of a discovery request by other parties; LBP-18-5, 88 NRC 134 (2018)
- 10 C.F.R. 2.338
parties may submit a joint motion to request appointment of a Settlement Judge to conduct settlement negotiations to assist in the resolution of a dispute; LBP-18-5, 88 NRC 135 n.255 (2018)
- 10 C.F.R. 2.340(e)(1)
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- 10 C.F.R. 2.340(e)(2)
depending on resolution of matters put into controversy in an adjudicatory proceeding, NRC Staff may issue, deny, or appropriately condition the license, in accordance with adjudicatory findings; CLI-18-8, 88 NRC 172 (2018)
- 10 C.F.R. 2.341(a)
when finality attaches in the proceeding, petitioner may appeal any disagreement it has with any ruling made regarding admission of a cultural resources contention or with the board's earlier summary disposition decision; LBP-18-3, 88 NRC 37 n.22 (2018)
- 10 C.F.R. 2.341(b)
standard for review in this regulation governs petitions for review of final board decisions; CLI-18-7, 88 NRC 7 n.30 (2018)
- 10 C.F.R. 2.341(b)(4)
in its discretion, Commission may grant a petition for review, giving due weight to whether the petition raises a substantial question regarding any of the requirements of this regulation; CLI-18-8, 88 NRC 146 (2018)
- 10 C.F.R. 2.341(f)(2)(i)-(ii)
interlocutory review is granted only where petitioner can show that it is threatened with immediate and serious irreparable impact or the board's decision affects the basic structure of the proceeding in a pervasive and unusual manner; CLI-18-7, 88 NRC 6-7 (2018)
- 10 C.F.R. 2.710(a)
standards governing summary disposition are set forth; CLI-18-7, 88 NRC 8 (2018)
summary disposition is appropriate where there is no remaining material issue of fact; CLI-18-7, 88 NRC 8 (2018)
summary disposition movant must attach a short and concise statement of the material facts as to which movant contends that there is no genuine issue to be heard; LBP-18-5, 88 NRC 123 (2018)
- 10 C.F.R. 2.710(d)(2)
summary disposition may be granted if filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with statements of parties and affidavits, if any, show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law; LBP-18-5, 88 NRC 123 (2018)
- 10 C.F.R. Part 21
both licensees and their suppliers must evaluate any condition or defect in a component that could create a substantial safety hazard; DD-18-3, 88 NRC 83, 87 (2018)
NRC confirms licensee and vendor compliance with NRC requirements through submitted reports, routine inspections, and continuous oversight provided by the plant resident inspector; DD-18-3, 88 NRC 87 (2018)
suppliers must notify NRC if it becomes aware of information that reasonably indicates that a basic component contains defects that could create a substantial safety hazard; DD-18-3, 88 NRC 83, 87 (2018)
- 10 C.F.R. 40.42(a)
original license will remain in effect pending a final determination on the renewal application; CLI-18-8, 88 NRC 172 (2018)

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- 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2)
contention that application and draft environmental assessment fail to provide sufficient information regarding geological setting of the area to meet the requirements of these criteria is inadmissible; LBP-18-3, 88 NRC 24 (2018)
contention that applicant failed to include adequate hydrogeological information to demonstrate ability to contain fluid movement migrates as a challenge to NRC Staff's environmental assessment; LBP-18-3, 88 NRC 53 (2018)
- 10 C.F.R. Part 40, Appendix A, Criterion 7
environmental review must contain a description of the affected environment, including a baseline characterization of groundwater and surface water that may be impacted; LBP-18-3, 88 NRC 41 (2018)
- 10 C.F.R. 50.54(f)
generic letter to licensees can require a written response; DD-18-3, 88 NRC 86, 91 (2018)
information collected through a request for information or a generic letter is not expected to change any defense-in-depth, safety margins, or risk-level determinations that would be provided by continued monitoring and evaluation of new information; DD-18-3, 88 NRC 91 (2018)
request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 72-73, 91 (2018)
- 10 C.F.R. 50.55a
regulations most pertinent to prevention and identification of carbon macrosegregation in regions of RCS components are the ASME Code requirements incorporated by reference in this regulation and quality assurance requirements in 10 C.F.R. Part 50, Appendix B; DD-18-3, 88 NRC 81-82 (2018)
- 10 C.F.R. 50.61a
acceptable reactor pressure vessel failure probabilities are discussed; DD-18-3, 88 NRC 87-88 (2018)
structural significance of carbon macrosegregation in reactor pressure vessel components through the end of an 80-year operating interval was assessed using NRC risk safety criterion for pressurized thermal shock events and a conditional probability of failure for normal operating transients; DD-18-3, 88 NRC 80, 84, 87-88 (2018)
- 10 C.F.R. Part 50, Appendix B
licensee is responsible for ensuring that applicable regulatory and technical requirements are appropriately identified in the procurement documentation and for evaluating whether the purchased items, upon receipt, conform to the procurement documentation; DD-18-3, 88 NRC 87 (2018)
quality assurance requirements for design, manufacture, construction, and operation of structures, systems, and components for nuclear facilities apply to all activities affecting safety-related functions of those SSCs; DD-18-3, 88 NRC 80 (2018)
- 10 C.F.R. Part 50, Appendix B, Criteria IV, VII
licensees must contractually pass down requirements of Appendix B through procurement documentation to suppliers of structures, systems, and components; DD-18-3, 88 NRC 82 (2018)
- 10 C.F.R. Part 50, Appendix B, Criterion XV
licensee is responsible for ensuring that procurement documentation appropriately identifies applicable regulatory and technical requirements and for determining whether the purchased items conform to the procurement documentation; DD-18-3, 88 NRC 83 (2018)
- 10 C.F.R. 51.20(b)
contention challenging draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 64, 67 nn.69, 70 (2018)
- 10 C.F.R. 51.45(b), 51.71(a), 51.90
environmental review must contain a description of the affected environment; LBP-18-3, 88 NRC 41 (2018)
- 10 C.F.R. 51.70
NRC Staff may not include applicant's information in the draft environmental impact statement without conducting its own independent evaluation; LBP-18-4, 88 NRC 64 (2018)

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- 10 C.F.R. 51.71(b)
NRC Staff must include in an environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes and by other interested persons; LBP-18-5, 88 NRC 124-25 (2018)
- 10 C.F.R. 51.75(b)
contention challenging draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating a proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 64, 65-66, 67 n.70 (2018)
- 10 C.F.R. 51.75(c)
environmental impact statement, and therefore a hearing opportunity, is required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 64 n.44 (2018)
- 10 C.F.R. 51.104
contention challenging draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 64, 65 n.49 (2018)
- 10 C.F.R. 51.104(a)(2)
because intervenors will have an opportunity to raise concerns at the combined license stage, including on issues of need for power and energy alternatives, there is no violation of this section; LBP-18-4, 88 NRC 67 (2018)
- 10 C.F.R. 52.21
because an assessment of benefits is neither required nor included in the DEIS, the board must refuse to admit contentions proffered by any party concerning an assessment of benefits or analysis of alternative energy sources; LBP-18-4, 88 NRC 65 (2018)
contention challenging the draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 64, 65, 67 nn.69, 70 (2018)
- 10 C.F.R. 52.39(c)
hearing will be provided if the reactor design proposed in the combined license for a small modular reactor does not fit the characteristics or design parameters from the early site permit; LBP-18-4, 88 NRC 64 n.44 (2018)
- 36 C.F.R. 800.2(c)(2)(ii)(A)
board erred in seeking to determine which party or specific action led to the impasse preventing an adequate tribal cultural survey instead of determining whether NRC Staff had provided the Tribe a reasonable opportunity for consultation; CLI-18-7, 88 NRC 11 (2018)
- 40 C.F.R. 1501.4(b)
agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 169 n.151 (2018)
- 40 C.F.R. 1502.14(f)
possible mitigation measures must be discussed in the alternatives to the proposed action; LBP-18-5, 88 NRC 124 (2018)
- 40 C.F.R. 1502.16(h)
consequences of a proposed action must be discussed in the environmental impact statement; LBP-18-5, 88 NRC 124 (2018)
- 40 C.F.R. 1502.22
agencies need only undertake reasonable efforts to acquire missing information; CLI-18-7, 88 NRC 11 n.1 (2018); LBP-18-5, 88 NRC 134 (2018)
Council on Environmental Quality has provided a legal mechanism for instances when an agency is unable to obtain complete information to fully assess foreseeable significant adverse effects on the human environment; LBP-18-5, 88 NRC 128 (2018)
NRC Staff must show that proposed tribal alternatives to its proposed cultural resource surveillance approach would be cost prohibitive; LBP-18-5, 88 NRC 136 (2018)
when required information is incomplete or unavailable, the agency shall always make clear in the environmental impact statement that such information is lacking; LBP-18-5, 88 NRC 128 (2018)

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- 40 C.F.R. 1502.22(a)
if the incomplete information is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall obtain the information and include it in the environmental impact statement; LBP-18-5, 88 NRC 128 (2018)
- 40 C.F.R. 1502.22(b)
Commission has no problems with provisions of this section under which agency must decide for itself whether the information that is not known is relevant to adverse impacts and, if relevant, whether the information is important to the decision and whether the agency wishes to proceed with the action in the absence of needed information; LBP-18-5, 88 NRC 129 (2018)
if costs of obtaining the information are exorbitant, the agency must include in the final supplemental environmental impact statement information described in this regulation; LBP-18-5, 88 NRC 128-29 (2018)
- 40 C.F.R. 1502.22(b)(3)
to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 136 (2018)
- 40 C.F.R. 1502.22(b)(4)
NRC Staff must show that evaluation of cultural resource impacts is based upon theoretical approaches or research methods generally accepted in the scientific community; LBP-18-5, 88 NRC 136 (2018)
- 40 C.F.R. 1505.2(c)
agency must discuss possible mitigation measures, and consequences of a proposed action must be discussed in explaining its ultimate decision in the environmental impact statement; LBP-18-5, 88 NRC 124 (2018)
- 40 C.F.R. 1508.7
cumulative impacts include those from other past, present, and reasonably foreseeable future actions; LBP-18-3, 88 NRC 44 (2018)
- 40 C.F.R. 1508.8
adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 124 (2018)
- 40 C.F.R. 1508.25(b)
agency must discuss possible mitigation measures in defining the scope of the environmental impact statement; LBP-18-5, 88 NRC 124 (2018)

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- 28 U.S.C. § 455(a)
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- 28 U.S.C. § 1407(a)
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- Fort Laramie Treaty of 1868, 15 Stat. 635
contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 46 (2018)
- National Environmental Policy Act, 42 U.S.C. § 4331
goals are to protect and promote environmental quality, as well as to preserve important historic, cultural, and natural aspects of our national heritage; LBP-18-5, 88 NRC 124 (2018)
- National Environmental Policy Act, 42 U.S.C. § 4332(C)
any proposed agency action significantly affecting the quality of the human environment requires a detailed environmental impact statement; LBP-18-5, 88 NRC 124 (2018)

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- D.D.C. Loc. R. 40.5
cases that involve the same parties or are based on the same or similar claims or present common issues of fact are regularly assigned or transferred to the same judge; LBP-18-6, 88 NRC 180 n.15 (2018)
- E.D.N.Y. R. 50.3.1
cases that involve the same parties or are based on the same or similar claims or present common issues of fact are regularly assigned or transferred to the same judge; LBP-18-6, 88 NRC 180 n.15 (2018)
- Fed. R. Civ. P. 56
standards governing summary disposition are based on those the federal courts apply to motions for summary judgment; LBP-18-5, 88 NRC 123 (2018)
- S.D.N.Y. R. 13
cases that involve the same parties or are based on the same or similar claims or present common issues of fact are regularly assigned or transferred to the same judge; LBP-18-6, 88 NRC 180 n.15 (2018)
- United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, art. 19 (Sept. 13, 2007)
declaration is a nonbinding statement that imposes no legal obligations on the NRC; LBP-18-3, 88 NRC 48 (2018)
- treaty-based claim that focuses on consent is precluded by Supreme Court precedent; LBP-18-3, 88 NRC 47 (2018)
- U.S. Ct. Fed. Claims R. 40.2
cases that involve the same parties or are based on the same or similar claims or present common issues of fact are regularly assigned or transferred to the same judge; LBP-18-6, 88 NRC 180 n.15 (2018)

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contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

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because NEPA does not require an agency to conduct environmental hearings, the hearings held under the Atomic Energy Act serve to probe and publicly ventilate the details of NRC Staff's review; CLI-18-8, 88 NRC 141 (2018)

depending on resolution of matters put into controversy in an adjudicatory proceeding, NRC Staff may issue, deny, or appropriately condition the license, in accordance with adjudicatory findings; CLI-18-8, 88 NRC 141 (2018)

AESTHETIC IMPACTS

adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

AFFIDAVITS

challenge to form of an affidavit requiring that the affidavit repeat verbatim each and every fact and opinion set forth in the contention itself has been rejected; LBP-18-4, 88 NRC 55 (2018)

ALTERNATE CONCENTRATION LIMITS

ACL can only be obtained for a mining unit at an in situ recovery site via a license amendment request that is subject to NEPA examination and an adjudicatory hearing; LBP-18-3, 88 NRC 13 (2018)

contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for ACLs is inadmissible; LBP-18-3, 88 NRC 13 (2018)

APPEALS

argument raised for the first time on appeal are deemed waived; CLI-18-8, 88 NRC 141 (2018)

when finality attaches in the proceeding, petitioner may appeal any disagreement it has with any ruling made regarding admission of a cultural resources contention or with the board's earlier summary disposition decision; LBP-18-3, 88 NRC 13 (2018)

APPEALS, INTERLOCUTORY

board denial of a motion for summary disposition is an interlocutory decision; CLI-18-7, 88 NRC 1 (2018)

grant of summary disposition motion, where other contentions are pending in the proceeding, is interlocutory; CLI-18-7, 88 NRC 1 (2018)

increased litigation and delay do not justify interlocutory review; CLI-18-7, 88 NRC 1 (2018)

review is granted only where petitioner can show that it is threatened with immediate and serious irreparable impact or the board's decision affects the basic structure of the proceeding in a pervasive and unusual manner; CLI-18-7, 88 NRC 1 (2018)

APPELLATE REVIEW

Commission reviews questions of law de novo, but generally defers to a board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence; CLI-18-8, 88 NRC 141 (2018)

court must be able to review, in advance, how specific measures will bring projects into compliance with environmental standards; CLI-18-8, 88 NRC 141 (2018)

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expansion of issues for resolution and the continuation of litigation that results from admitting a contention does not necessarily have a pervasive and unusual effect on the litigation; CLI-18-7, 88 NRC 1 (2018)

in its discretion, Commission may grant a petition for review, giving due weight to whether a petition raises a substantial question regarding any of the requirements of 10 C.F.R. 2.341(b)(4); CLI-18-8, 88 NRC 141 (2018)

increased litigation and delay do not justify interlocutory review; CLI-18-7, 88 NRC 1 (2018)
standard for review in 10 C.F.R. 2.341(b) governs petitions for review of final board decisions; CLI-18-7, 88 NRC 1 (2018)

where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 141 (2018)

where Commission order as a whole is not final, the court lacks jurisdiction to review those rulings; LBP-18-5, 88 NRC 95 (2018)

APPROVAL OF LICENSE

depending on resolution of matters put into controversy in an adjudicatory proceeding, NRC Staff may issue, deny, or appropriately condition the license, in accordance with adjudicatory findings; CLI-18-8, 88 NRC 141 (2018)

it would be preferable for the final environmental impact statement to contain all relevant information and the record of decision to be complete and adequate before the license is issued; CLI-18-8, 88 NRC 141 (2018)

NRC Staff may issue a renewed license after it has completed its safety and environmental reviews, if issuance of the license would not endanger the public health and safety or the common defense and security, and a finding of no significant impact has been issued; CLI-18-8, 88 NRC 141 (2018)

ASME CODE

regulations most pertinent to prevention and identification of carbon macrosegregation in regions of reactor coolant system components are the ASME Code requirements incorporated by reference in 10 C.F.R. 50.55a and quality assurance requirements in 10 C.F.R. Part 50, Appendix B; DD-18-3, 88 NRC 69 (2018)

ATOMIC ENERGY ACT

because NEPA does not require an agency to conduct environmental hearings, the hearings held under the Atomic Energy Act serve to probe and publicly ventilate the details of NRC Staff's review; CLI-18-8, 88 NRC 141 (2018)

BENEFIT-COST ANALYSIS

contention challenging the draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contentions concerning assessment of benefits or analysis of alternative energy sources in draft environmental impact statement for early site permit for small modular reactor are inadmissible; LBP-18-4, 88 NRC 55 (2018)

See also Costs; Economic Effects

BIAS

petition for review to disqualify a board member was denied because movant proffered no evidence of bias; LBP-18-6, 88 NRC 177 (2018)

CASE MANAGEMENT

board may define timeliness by specifying a deadline for timely filing new or amended contention following a triggering event that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention; LBP-18-3, 88 NRC 13 (2018)

COMBINED LICENSE APPLICATION

environmental impact statement, and therefore a hearing opportunity, is required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 55 (2018)

hearing will be provided if reactor proposed in combined license application for small modular reactor does not fit characteristics or design parameters from the early site permit; LBP-18-4, 88 NRC 55 (2018)

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COMPLIANCE

NRC confirms licensee and vendor compliance with NRC requirements through submitted reports, routine inspections, and continuous oversight provided by the plant resident inspector; DD-18-3, 88 NRC 69 (2018)

CONSIDERATION OF ALTERNATIVES

because an assessment of benefits is neither required nor included in the DEIS, the board must refuse to admit contentions concerning assessment of benefits or analysis of alternative energy sources; LBP-18-4, 88 NRC 55 (2018)

because intervenors will have an opportunity to raise concerns at the combined license stage, including on the issue of need for power and energy alternatives, there is no violation of 10 C.F.R. 51.104(a)(2); LBP-18-4, 88 NRC 55 (2018)

contention claiming that no-action alternative addresses only lost benefits, rather than avoided impacts, is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention that final environmental assessment failed to consider all reasonable alternatives in light of mine cessation and decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)

if the incomplete information is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall obtain the information and include it in the environmental impact statement; LBP-18-5, 88 NRC 95 (2018)

possible mitigation measures must be discussed in the alternatives to the proposed action; LBP-18-5, 88 NRC 95 (2018)

CONSULTATION DUTY

board erred in seeking to determine which party or specific action led to the impasse preventing an adequate tribal cultural survey instead of determining whether NRC Staff had provided the Tribe a reasonable opportunity for consultation; CLI-18-7, 88 NRC 1 (2018)

claims that consultation was inadequate or consent was not given, which are based on rights provided in the Fort Laramie Treaty, cannot be the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)

petitioners seeking disqualification of judges must solicit agreement of other counsel; LBP-18-6, 88 NRC 177 (2018)

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all parties shall disclose and provide all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions; LBP-18-5, 88 NRC 95 (2018)

basis is intended to put other parties on notice as to what issues they will have to defend against or oppose and can frame the scope of a contention; LBP-18-3, 88 NRC 13 (2018)

NRC Staff may moot a contention of omission through its later issued environmental document; LBP-18-4, 88 NRC 55 (2018)

CONTENTIONS, ADMISSIBILITY

because an assessment of benefits is neither required nor included in the DEIS, the board must refuse to admit contentions concerning an assessment of benefits or analysis of alternative energy sources; LBP-18-4, 88 NRC 55 (2018)

claims that consultation was inadequate or consent was not given, which are based on rights provided in the Fort Laramie Treaty, cannot be the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)

contention admission rule is strict by design; LBP-18-4, 88 NRC 55 (2018)

contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of the emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention challenging draft environmental impact statement's inclusion of information about technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention claiming that no-action alternative addresses only lost benefits, rather than avoided impacts, is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention may migrate where information in NRC Staff's environmental review document is sufficiently similar to the material in the previously issued licensing document; LBP-18-3, 88 NRC 13 (2018)

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- contention that applicant failed to include adequate hydrogeological information to demonstrate ability to contain fluid movement migrates as a challenge to NRC Staff's environmental assessment; LBP-18-3, 88 NRC 13 (2018)
- contention that applicant failed to obtain consent of Native American tribe as required by treaty and international law is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that application and draft environmental assessment fail to provide sufficient information regarding geological setting of the area to meet the requirements is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that failure to include results of cultural survey approach in discussion in final environmental assessment is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment failed to consider all reasonable alternatives in light of mine cessation and decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to adequately analyze cumulative impacts that include decommissioning of facility and existing mining units is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to adequately describe licensee's cessation of operations, proposal to be possession-only licensee in standby status, and impacts of decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to describe or evaluate impacts from new restoration timeline stated in extension amendment request, including failure to describe expected increases in consumptive use of water in restoration is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that final environmental assessment fails to take the required hard look at the pump test data is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that licensee fails to discuss or demonstrate lawful federal jurisdiction and authority over its activities is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that licensee fails to meet applicable legal requirements regarding protection of historical, cultural, and spiritual resources is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that licensee fails to take the requisite hard look at environmental justice impacts is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that simply alleges that some matter ought to be considered does not provide the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)
- contention was appropriately dismissed as lacking a proper basis when factual support for the contention had been repudiated by its original source and no other independent information supporting the allegation had been offered; LBP-18-3, 88 NRC 13 (2018)
- contention's sponsor must provide documents or other factual information or expert opinion that sets forth necessary technical analysis to show why the proffered bases support its contention; LBP-18-3, 88 NRC 13 (2018)
- disproportionate religious and cultural impacts can provide the basis for an environmental justice-based contention; LBP-18-3, 88 NRC 13 (2018)
- environmental challenge may migrate to subsequently issued National Environmental Policy Act-related environmental review documents without the contention's proponent resubmitting the contention; LBP-18-3, 88 NRC 13 (2018)
- expansion of issues for resolution and the continuation of litigation that results from admitting a contention does not necessarily have a pervasive and unusual effect on the litigation; CLI-18-7, 88 NRC 1 (2018)
- failure to comply with any one of the section 2.309(f)(1) requirements is grounds for dismissing a contention; LBP-18-3, 88 NRC 13 (2018)
- failure to fulfill any one of the contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) renders a contention inadmissible; LBP-18-4, 88 NRC 55 (2018)

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filing of an environmental concern based on the environmental report will not be deferred because NRC Staff may provide a different analysis in the draft EIS; LBP-18-3, 88 NRC 13 (2018)

good cause exists when information on which amended or new contention is based was not previously available and is materially different from information previously available and the filing has been submitted in a timely fashion based on the availability of the subsequent information; LBP-18-4, 88 NRC 55 (2018)

good cause must be shown for submitting a new or amended contention; LBP-18-3, 88 NRC 13 (2018)

in appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission; LBP-18-3, 88 NRC 13 (2018)

institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention; LBP-18-3, 88 NRC 13 (2018)

intervenor challenging NRC Staff's environmental review documents who delays filing new contentions until Staff's final document is issued risks the possibility that there will not be a material difference between the draft and final environmental review documents, thus rendering any newly proposed contentions on previously available information impermissibly late; LBP-18-3, 88 NRC 13 (2018)

intervenor is neither required to submit a migration declaration nor to plead the migration standards unless NRC Staff or licensee challenges the contention's migration; LBP-18-3, 88 NRC 13 (2018)

intervenor may not litigate adequacy of NRC Staff's safety review, and so any safety-related contention must be based on content of the application; LBP-18-3, 88 NRC 13 (2018)

intervenor must contest information in a draft environmental review document contemporaneously with its publication, and may not wait to see whether the challenge is resolved when the final environmental document is issued; LBP-18-3, 88 NRC 13 (2018)

it is not clear that migration tenet can be applied to already admitted safety contentions; LBP-18-3, 88 NRC 13 (2018)

licensing boards admit contentions, not bases; LBP-18-3, 88 NRC 13 (2018)

mandating an exhaustive summary of all aspects of petitioner's argument at contention admission stage would be tantamount to asking petitioner to prove its case at the contention admission stage; LBP-18-3, 88 NRC 13 (2018)

new contentions must also satisfy the usual standard for contention admissibility; LBP-18-4, 88 NRC 55 (2018)

new or amended contention must be based on previously unavailable, materially different information or the contention will be rejected; LBP-18-3, 88 NRC 13 (2018)

new or amended contentions must meet the six admissibility factors in section 2.309(f)(1); LBP-18-3, 88 NRC 13 (2018)

new or amended contentions must satisfy the good cause standard in section 2.309(c)(1); LBP-18-4, 88 NRC 55 (2018)

petitioner must only provide a brief explanation of the basis for the contention; LBP-18-3, 88 NRC 13 (2018)

petitioner seeking admission of a contention contesting a NEPA document must not only point out what specific deficiencies exist, but also must demonstrate why the deficiencies raise a genuine material dispute relative to the NEPA document; LBP-18-3, 88 NRC 13 (2018)

petitioner's undifferentiated reference to other environmental assessment timelines lacks sufficient specificity to provide the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)

proponent of an environmental justice contention must make more than generalized statements of concern about religious and cultural impacts; LBP-18-3, 88 NRC 13 (2018)

question of whether board-established deadline applies to timely submission of new or amended contentions relative to the final environmental assessment or the generic deadline applies whereby a new/amended contention is based on new and materially different information is discussed; LBP-18-3, 88 NRC 13 (2018)

statement in a representation of counsel rather than a submission by licensee for the licensing docket, for the purpose of the proceeding has the same legal effect and, if contradicted by subsequent licensee actions, could be the basis for a new contention; LBP-18-3, 88 NRC 13 (2018)

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submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication; LBP-18-3, 88 NRC 13 (2018)

to show good cause for a new or amended contention, intervenor must demonstrate that information was not previously available and is materially different from information previously available and filing has been submitted in a timely fashion based on availability of the subsequent information; LBP-18-3, 88 NRC 13 (2018)

when finality attaches in the proceeding, petitioner may appeal any disagreement it has with any ruling made regarding admission of a cultural resources contention or with the board's earlier summary disposition decision; LBP-18-3, 88 NRC 13 (2018)

where the omission cited in a contention of omission does not exist, there is no genuine dispute to support admission of the contention; LBP-18-3, 88 NRC 13 (2018)

without factual or expert support, contention must be rejected; LBP-18-3, 88 NRC 13 (2018)

CONTENTIONS, LATE-FILED

board may define timeliness by specifying a deadline for timely filing a new or amended contention following a triggering event that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention; LBP-18-3, 88 NRC 13 (2018)

filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 13 (2018)

good cause exists when information on which amended or new contention is based was not previously available and is materially different from information previously available and the filing has been submitted in a timely fashion based on the availability of the subsequent information; LBP-18-3, 88 NRC 13 (2018); LBP-18-4, 88 NRC 55 (2018)

good cause must be shown for submitting a new or amended contention; LBP-18-3, 88 NRC 13 (2018)

good cause provisions do not suggest that timeliness concerns are waived for jurisdictional issues; LBP-18-3, 88 NRC 13 (2018)

institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information was available early enough to provide the basis for the timely filing of that contention; LBP-18-3, 88 NRC 13 (2018)

intervenor challenging NRC Staff's environmental review documents who delays filing new contentions until the Staff's final document is issued risks the possibility that there will not be a material difference between the draft and final environmental review documents, thus rendering any newly proposed contentions on previously available information impermissibly late; LBP-18-3, 88 NRC 13 (2018)

new contentions must also satisfy the usual standard for contention admissibility; LBP-18-4, 88 NRC 55 (2018)

new contentions must be based on new facts not previously available, even when proponent is challenging a new licensing document; LBP-18-3, 88 NRC 13 (2018)

new or amended contention must be based on previously unavailable, materially different information or the contention will be rejected; LBP-18-3, 88 NRC 13 (2018)

new or amended contention must be raised at the earliest possible opportunity; LBP-18-3, 88 NRC 13 (2018)

new or amended contentions must meet the six admissibility factors in section 2.309(f)(1); LBP-18-3, 88 NRC 13 (2018)

new or amended contentions must satisfy the good cause standard in section 2.309(c)(1); LBP-18-4, 88 NRC 55 (2018)

petitioners who choose to wait to raise contentions that could have been raised earlier do so at their peril; LBP-18-3, 88 NRC 13 (2018)

"timely" is not defined in 10 C.F.R. 2.309(c)(1)(iii), providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely; LBP-18-3, 88 NRC 13 (2018)

CONTRACTORS

licensees must contractually pass down requirements of Appendix B through procurement documentation to suppliers of structures, systems, and components; DD-18-3, 88 NRC 69 (2018)

SUBJECT INDEX

request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)

CONTRACTS

licensee is responsible for ensuring that applicable regulatory and technical requirements are appropriately identified in the procurement documentation and for evaluating whether the purchased items, upon receipt, conform to the procurement documentation; DD-18-3, 88 NRC 69 (2018)

COSTS

if costs of obtaining information are exorbitant, the agency must include information described in 40 C.F.R. 1502.22(b) in its final supplemental environmental impact statement; LBP-18-5, 88 NRC 95 (2018)

if the incomplete information is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall obtain the information and include it in the environmental impact statement; LBP-18-5, 88 NRC 95 (2018)

NRC Staff must show that proposed tribal alternatives to its proposed cultural resource surveillance approach would be cost prohibitive; LBP-18-5, 88 NRC 95 (2018)

to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 95 (2018)

See also Benefit-Cost Analysis; Economic Effects

COUNCIL ON ENVIRONMENTAL QUALITY

CEQ regulations are not binding on NRC when they have a substantive impact on the way in which the Commission performs its regulatory functions; LBP-18-5, 88 NRC 95 (2018)

legal mechanism for instances when an agency is unable to obtain complete information to fully assess foreseeable significant adverse effects on the human environment is provided in 40 C.F.R. 1502.22; LBP-18-5, 88 NRC 95 (2018)

NRC is not bound by CEQ regulations but they are entitled to considerable deference; LBP-18-5, 88 NRC 95 (2018)

COUNSEL

petitioners seeking disqualification of judges must solicit agreement of other counsel; LBP-18-6, 88 NRC 177 (2018)

statement in a representation of counsel rather than a submission by licensee for the licensing docket, for the purpose of the proceeding has the same legal effect and, if contradicted by subsequent licensee actions, could be the basis for a new contention; LBP-18-3, 88 NRC 13 (2018)

CULTURAL RESOURCES

adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

board erred in seeking to determine which party or specific action led to the impasse preventing an adequate tribal cultural survey instead of determining whether NRC Staff had provided the Tribe a reasonable opportunity for consultation; CLI-18-7, 88 NRC 1 (2018)

contention that failure to include results of cultural survey approach in discussion in final environmental assessment is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that licensee fails to meet applicable legal requirements regarding protection of historical, cultural, and spiritual resources is inadmissible; LBP-18-3, 88 NRC 13 (2018)

NRC Staff must show that evaluation of cultural resource impacts is based upon theoretical approaches or research methods generally accepted in the scientific community; LBP-18-5, 88 NRC 95 (2018)

NRC Staff must show that proposed tribal alternatives to its proposed cultural resource surveillance approach would be cost prohibitive; LBP-18-5, 88 NRC 95 (2018)

to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 1 (2018)

CULTURAL SENSITIVITY

NRC Staff must include in an environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes and by other interested persons; LBP-18-5, 88 NRC 95 (2018)

CUMULATIVE IMPACTS ANALYSIS

contention that final environmental assessment fails to adequately analyze cumulative impacts that include decommissioning of facility and existing mining units is inadmissible; LBP-18-3, 88 NRC 13 (2018)
impacts include those from other past, present, and reasonably foreseeable future actions; LBP-18-3, 88 NRC 13 (2018)

DEADLINES

board may define timeliness by specifying a deadline for timely filing a new or amended contention following a triggering event that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention; LBP-18-3, 88 NRC 13 (2018)
question of whether board-established deadline applies to timely submission of new or amended contentions relative to final environmental assessment or the generic deadline applies whereby a new/amended contention is based on new and materially different information is discussed; LBP-18-3, 88 NRC 13 (2018)

DECISION ON THE MERITS

mandating an exhaustive summary of all aspects of petitioner's argument at the contention admission stage would be tantamount to asking petitioner to prove its case at that stage; LBP-18-3, 88 NRC 13 (2018)

DECOMMISSIONING PLANS

contention that final environmental assessment fails to adequately describe licensee's cessation of operations, proposal to be possession-only licensee in standby status, and impacts of decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)

DEFERRAL OF RULING

filing of an environmental concern based on the environmental report will not be deferred because NRC Staff may provide a different analysis in the draft EIS; LBP-18-3, 88 NRC 13 (2018)

DEFICIENCIES

board did not err in augmenting information on characteristics and hazards of all historic earthquakes within a 100-mile radius of the license area to cure a deficiency in the environmental assessment; CLI-18-8, 88 NRC 141 (2018)
Commission decision to allow license to remain in effect while the proceeding and the NRC Staff's efforts to cure the NEPA-related deficiencies continued before the board was remanded; LBP-18-5, 88 NRC 95 (2018)
material deficiencies in an environmental assessment may warrant further Staff analysis to evaluate whether the license should remain in effect, taking into account the nature of the NEPA deficiency and any other appropriate considerations; CLI-18-8, 88 NRC 141 (2018)

DENIAL OF LICENSE

depending on resolution of matters put into controversy in an adjudicatory proceeding, NRC Staff may issue, deny, or appropriately condition the license, in accordance with adjudicatory findings; CLI-18-8, 88 NRC 141 (2018)

DISCLOSURE

all parties shall disclose and provide all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions; LBP-18-5, 88 NRC 95 (2018)
each party's duty to submit mandatory disclosures is ongoing, and each party must make these mandatory disclosures once a month and without the filing of a discovery request by other parties; LBP-18-5, 88 NRC 95 (2018)

DISCOVERY

general discovery is provided for in Subpart L proceedings; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

DISQUALIFICATION

although 28 U.S.C. § 455(a) is not specifically aimed at administrative judges, it provides a helpful framework for assessing a motion for disqualification; LBP-18-6, 88 NRC 177 (2018)

in applying 28 U.S.C. § 455(a) to a disqualification motion, board must determine whether the facts presented might lead a fully informed reasonable person to question the judge's impartiality in the present proceeding; LBP-18-6, 88 NRC 177 (2018)

motion for disqualification is denied for, among other things, frivolously challenging the objectivity of the board; LBP-18-6, 88 NRC 177 (2018)

motion for disqualification of the board is denied for failure to cite a valid legal basis for disqualification and is referred to the Commission; LBP-18-6, 88 NRC 177 (2018)

petition for review to disqualify a board member was denied because movant proffered no evidence of bias; LBP-18-6, 88 NRC 177 (2018)

petitioners seeking disqualification of judges must solicit agreement of other counsel; LBP-18-6, 88 NRC 177 (2018)

DOCUMENTATION

licensee is responsible for ensuring that procurement documentation appropriately identifies applicable regulatory and technical requirements and for determining whether the purchased items conform to the procurement documentation; DD-18-3, 88 NRC 69 (2018)

DRAFT ENVIRONMENTAL IMPACT STATEMENT

because an assessment of benefits is neither required nor included in the DEIS, the board must refuse to admit contentions proffered by any party concerning an assessment of benefits or an analysis of alternative energy sources; LBP-18-4, 88 NRC 55 (2018)

contention challenging adequacy of DEIS's discussion of environmental impacts of spent fuel pool accident risks and size of the emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention challenging DEIS's inclusion of information about the technical and economic benefits of building and operating proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention claiming that no-action alternative addresses only lost benefits, rather than avoided impacts, is inadmissible; LBP-18-4, 88 NRC 55 (2018)

NRC Staff may not include applicant's information in the DEIS without conducting its own independent evaluation; LBP-18-4, 88 NRC 55 (2018)

EARLY SITE PERMIT PROCEEDINGS

because intervenors will have an opportunity to raise concerns at the combined license stage, including on the issue of need for power and energy alternatives, there is no violation of 10 C.F.R. 51.104(a)(2); LBP-18-4, 88 NRC 55 (2018)

EARLY SITE PERMITS

because an assessment of benefits is neither required nor included in the draft environmental impact Statement, the board must refuse to admit contentions proffered by any party concerning an assessment of the benefits or an analysis of alternative energy sources; LBP-18-4, 88 NRC 55 (2018)

environmental impact statement, and therefore a hearing opportunity, is required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 55 (2018)

EARTHQUAKES

board did not err in augmenting information on characteristics and hazards of all historic earthquakes within a 100-mile radius of the license area to cure a deficiency in the environmental assessment; CLI-18-8, 88 NRC 141 (2018)

ECONOMIC EFFECTS

adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

see also Benefit-Cost Analysis; Costs

ECONOMIC INJURY

Commission has uniformly rejected arguments that expenses of any kind constitute irreparable injury; CLI-18-7, 88 NRC 1 (2018)

SUBJECT INDEX

EFFECTIVENESS

material deficiencies in an environmental assessment may warrant further NRC Staff analysis to evaluate whether the license should remain in effect, taking into account the nature of the NEPA deficiency and any other appropriate considerations; CLI-18-8, 88 NRC 141 (2018)

EMERGENCY PLANNING ZONES

contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of EPZ for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

ENVIRONMENTAL ANALYSIS

court must be able to review, in advance, how specific measures will bring projects into compliance with environmental standards; CLI-18-8, 88 NRC 141 (2018)

ENVIRONMENTAL ASSESSMENT

agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 141 (2018)

board did not err in augmenting information on earthquakes within a 100-mile radius of license area to cure a deficiency in the EA; CLI-18-8, 88 NRC 141 (2018)

board did not err in augmenting information on tornadoes to cure a deficiency in the EA; CLI-18-8, 88 NRC 141 (2018)

contention that application and draft EA fail to provide sufficient information regarding geological setting of the area to meet requirements is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that failure to include results of cultural survey approach in discussion in final EA is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA failed to consider all reasonable alternatives in light of mine cessation and decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA fails to adequately analyze cumulative impacts that include decommissioning of facility and existing mining units is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA fails to adequately describe licensee's cessation of operations, proposal to be possession-only licensee in standby status, and impacts of decommissioning is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final EA fails to take the required hard look at the pump test data is inadmissible; LBP-18-3, 88 NRC 13 (2018)

filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 13 (2018)

material deficiencies in EA may warrant further NRC Staff analysis to evaluate whether the license should remain in effect, taking into account the nature of the NEPA deficiency and any other appropriate considerations; CLI-18-8, 88 NRC 141 (2018)

NEPA review document need not be supplemented every time new information or analysis comes to light; CLI-18-8, 88 NRC 141 (2018)

petitioner's undifferentiated reference to other environmental assessment timelines lacks sufficient specificity to provide the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)

submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication; LBP-18-3, 88 NRC 13 (2018)

supplementation of NEPA review document is required if new information shows the proposed action would affect the environment in a significant manner or to a significant extent not already considered; CLI-18-8, 88 NRC 141 (2018)

SUBJECT INDEX

ENVIRONMENTAL EFFECTS

adverse effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

Council on Environmental Quality has provided a legal mechanism for instances when an agency is unable to obtain complete information to fully assess foreseeable significant adverse effects on the human environment; LBP-18-5, 88 NRC 95 (2018)

ENVIRONMENTAL IMPACT STATEMENT

agency must discuss possible mitigation measures in defining the scope of the EIS; LBP-18-5, 88 NRC 95 (2018)

any proposed agency action significantly affecting the quality of the human environment requires a detailed EIS; LBP-18-5, 88 NRC 95 (2018)

as part of its statutory responsibilities, federal agency must undertake reasonable efforts to acquire missing information; LBP-18-5, 88 NRC 95 (2018)

Commission decision to allow license to remain in effect while the proceeding and NRC Staff's efforts to cure the NEPA-related deficiencies continued before the board was remanded; LBP-18-5, 88 NRC 95 (2018)

consequences of a proposed action must be discussed in the EIS; LBP-18-5, 88 NRC 95 (2018)

discussion of mitigation steps in EIS is important to show that the agency has taken a hard look; LBP-18-5, 88 NRC 95 (2018)

every federal agency is required to prepare an adequate EIS before taking any major action, which includes issuing a uranium mining license; CLI-18-8, 88 NRC 141 (2018)

filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 13 (2018)

hearing opportunity and EIS are required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 55 (2018)

if the incomplete information is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall obtain the information and include it in the EIS; LBP-18-5, 88 NRC 95 (2018)

intensity or practical consequences of expected impacts were simply unknown because of an absence of information, and the agency had no evidence that proposed mitigation measures would combat the mostly unknown or inadequately known effects; CLI-18-8, 88 NRC 141 (2018)

National Environmental Policy Act's requirement that a detailed EIS be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 141 (2018)

NEPA review document need not be supplemented every time new information or analysis comes to light; CLI-18-8, 88 NRC 141 (2018)

NRC Staff must include in an EIS an analysis of significant problems and objections raised by any affected Indian tribes and by other interested persons; LBP-18-5, 88 NRC 95 (2018)

one important ingredient of an EIS is discussion of steps that can be taken to mitigate adverse environmental consequences; LBP-18-5, 88 NRC 95 (2018)

possible mitigation measures must be discussed in the alternatives to the proposed action; LBP-18-5, 88 NRC 95 (2018)

remand for new EIS was declined where agency, in response to public comments, already had investigated and addressed issues in publicly accessible opinion; CLI-18-8, 88 NRC 141 (2018)

risks that are remote and speculative or events that have a low probability of occurring are unnecessary to evaluate in an EIS; LBP-18-5, 88 NRC 95 (2018)

submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication; LBP-18-3, 88 NRC 13 (2018)

under 40 C.F.R. 1502.22(b), NRC must decide for itself whether information that is not known is relevant to adverse impacts and, if relevant, whether the information is important to the decision and whether the agency wishes to proceed with the action in the absence of needed information; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

when required information is incomplete or unavailable, the agency shall always make clear in the EIS that such information is lacking; LBP-18-5, 88 NRC 95 (2018)

ENVIRONMENTAL ISSUES

contention may migrate to subsequently issued National Environmental Policy Act-related environmental review documents without the contention's proponent resubmitting the contention; LBP-18-3, 88 NRC 13 (2018)

contention may migrate where information in NRC Staff's environmental review document is sufficiently similar to the material in the previously issued licensing document; LBP-18-3, 88 NRC 13 (2018)

initial decisions of the presiding officer on NEPA issues and Commission decisions augment and become part of the environmental record of decision; CLI-18-8, 88 NRC 141 (2018)

intervenor challenging NRC Staff's environmental review documents who delays filing new contentions until the Staff's final document is issued risks the possibility that there will not be a material difference between the draft and final environmental review documents, thus rendering any newly proposed contentions on previously available information impermissibly late; LBP-18-3, 88 NRC 13 (2018)

NRC Staff may moot a contention of omission through its later issued environmental document; LBP-18-4, 88 NRC 55 (2018)

petitioner seeking admission of a contention contesting a NEPA document must not only point out what specific deficiencies exist, but also must demonstrate why the deficiencies raise a genuine material dispute relative to the NEPA document; LBP-18-3, 88 NRC 13 (2018)

ENVIRONMENTAL JUSTICE

contention that licensee fails to take the requisite hard look at EJ impacts is inadmissible; LBP-18-3, 88 NRC 13 (2018)

disproportionate religious and cultural impacts can provide the basis for a contention; LBP-18-3, 88 NRC 13 (2018)

proponent of an EJ contention must make more than generalized statements of concern about religious and cultural impacts; LBP-18-3, 88 NRC 13 (2018)

ENVIRONMENTAL REPORT

filing of an environmental concern based on the ER will not be deferred because NRC Staff may provide a different analysis in the draft environmental impact statement; LBP-18-3, 88 NRC 13 (2018)

intervenor must contest information in a draft environmental review document contemporaneously with its publication, and may not wait to see whether the challenge is resolved when the final environmental document is issued; LBP-18-3, 88 NRC 13 (2018)

ENVIRONMENTAL REVIEW

agencies need only undertake reasonable efforts to acquire missing information; CLI-18-7, 88 NRC 1 (2018)

in assessing environmental impacts, agencies are free to select their own methodology as long as that methodology is reasonable; LBP-18-5, 88 NRC 95 (2018)

NEPA analysis must take into account reasonably foreseeable results; LBP-18-5, 88 NRC 95 (2018)

NEPA does not mandate particular results; LBP-18-5, 88 NRC 95 (2018)

NEPA does not require agencies to analyze every conceivable aspect of a proposed project; LBP-18-5, 88 NRC 95 (2018)

NRC Staff may not include applicant's information in the draft environmental impact statement without conducting its own independent evaluation; LBP-18-4, 88 NRC 55 (2018)

NRC Staff must describe the affected environment, including a baseline characterization of groundwater and surface water that may be impacted; LBP-18-3, 88 NRC 13 (2018)

NRC Staff must show that proposed tribal alternatives to its proposed cultural resource surveillance approach would be cost prohibitive; LBP-18-5, 88 NRC 95 (2018)

NRC Staff should prepare and consider an adequate NEPA environmental review before making a licensing decision; CLI-18-8, 88 NRC 141 (2018)

to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

- under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 1 (2018)
- EQUIPMENT, SAFETY-RELATED**
- both licensees and their suppliers must evaluate any condition or defect in a component that could create a substantial safety hazard; DD-18-3, 88 NRC 69 (2018)
- request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)
- ERROR**
- board sought to determine which party or specific action led to the impasse preventing an adequate tribal cultural survey instead of determining whether NRC Staff had provided the Tribe a reasonable opportunity for consultation; CLI-18-7, 88 NRC 1 (2018)
- where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 141 (2018)
- EVIDENCE**
- contention's sponsor must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention; LBP-18-3, 88 NRC 13 (2018)
- petition for review to disqualify a board member was denied because movant proffered no evidence of bias; LBP-18-6, 88 NRC 177 (2018)
- to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 95 (2018)
- EVIDENTIARY HEARINGS**
- licensing board's main role is to carefully review testimony and exhibits to resolve factual disputes; CLI-18-8, 88 NRC 141 (2018)
- EXCEPTIONS**
- well-recognized exception to excluding expert testimony on purely legal issues is for questions of foreign law; LBP-18-4, 88 NRC 55 (2018)
- FEDERAL RULES OF CIVIL PROCEDURE**
- standards governing summary disposition are based on those the federal courts apply to motions for summary judgment under Rule 56; LBP-18-5, 88 NRC 95 (2018)
- FINAL ENVIRONMENTAL IMPACT STATEMENT**
- adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the FEIS; CLI-18-8, 88 NRC 141 (2018)
- if costs of obtaining information are exorbitant, the agency must include information described in 40 C.F.R. 1502.22(b) in its final supplemental EIS; LBP-18-5, 88 NRC 95 (2018)
- it would be preferable for the FEIS to contain all relevant information and the record of decision to be complete and adequate before the license is issued; CLI-18-8, 88 NRC 141 (2018)
- FINALITY**
- where Commission order as a whole is not final, the court lacks jurisdiction to review those rulings; LBP-18-5, 88 NRC 95 (2018)
- FINDING OF NO SIGNIFICANT IMPACT**
- NRC Staff may issue a renewed license after it has completed its safety and environmental reviews, if issuance of the license would not endanger the public health and safety or the common defense and security, and a finding of no significant impact has been issued; CLI-18-8, 88 NRC 141 (2018)
- FINDINGS OF FACT**
- Commission reviews questions of law de novo, but generally defers to a board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence; CLI-18-8, 88 NRC 141 (2018)

SUBJECT INDEX

GENERIC LETTERS

information collected through a request for information or a generic letter is not expected to change any defense-in-depth, safety margins, or risk-level determinations that would be provided by continued monitoring and evaluation of new information; DD-18-3, 88 NRC 69 (2018)
written response from licensee can be required; DD-18-3, 88 NRC 69 (2018)

GEOLOGIC CONDITIONS

contention that application and draft environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet requirements is inadmissible; LBP-18-3, 88 NRC 13 (2018)
hydrology and geology of in situ leach mining site are discussed; CLI-18-8, 88 NRC 141 (2018)

GROUNDWATER

contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)
contention that final environmental assessment fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 13 (2018)

GROUNDWATER CONTAMINATION

excursion parameters for monitoring wells are selected to provide the earliest warning of a leachant excursion, and not because they are the chemicals of most concern in groundwater protection; CLI-18-8, 88 NRC 141 (2018)

HEALTH EFFECTS

adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

HEARING REQUIREMENTS

environmental impact statement, and therefore a hearing opportunity, is required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 55 (2018)
hearing will be provided if the reactor proposed in the combined license for a small modular reactor does not fit the characteristics or design parameters from the early site permit; LBP-18-4, 88 NRC 55 (2018)

HEARING RIGHTS

petitioners have a right to impartial judges, but they do not have a right to the judge of their choice; LBP-18-6, 88 NRC 177 (2018)

HISTORIC SITES

adverse environmental effects include ecological, aesthetic, historic, cultural, economic, social, or health effects; LBP-18-5, 88 NRC 95 (2018)

HYDROGEOLOGY

contention that applicant failed to include adequate hydrogeological information to demonstrate ability to contain fluid movement migrates as a challenge to NRC Staff's environmental assessment; LBP-18-3, 88 NRC 13 (2018)
hydrology and geology of in situ leach mining site are discussed; CLI-18-8, 88 NRC 141 (2018)

IMMEDIATE EFFECTIVENESS

Commission decision to allow license to remain in effect while the proceeding and the NRC Staff's efforts to cure the NEPA-related deficiencies continued before the board was remanded; LBP-18-5, 88 NRC 95 (2018)

NRC Staff may issue a renewed license after it has completed its safety and environmental reviews, if issuance of the license would not endanger the public health and safety or the common defense and security, and a finding of no significant impact has been issued; CLI-18-8, 88 NRC 141 (2018)

IMPARTIALITY

federal judge shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned; LBP-18-6, 88 NRC 177 (2018)
in applying 28 U.S.C. § 455(a) to a disqualification motion, board must determine whether the facts presented might lead a fully informed reasonable person to question the judge's impartiality in the present proceeding; LBP-18-6, 88 NRC 177 (2018)

SUBJECT INDEX

- petitioners have a right to impartial judges, but they do not have a right to the judge of their choice;
LBP-18-6, 88 NRC 177 (2018)
- IN SITU URANIUM SOLUTION MINING**
alternate concentration limit can only be obtained for a mining unit at an in situ recovery site via a
license amendment request that is subject to NEPA examination and an adjudicatory hearing; LBP-18-3,
88 NRC 13 (2018)
excursion parameters for monitoring wells are selected to provide the earliest warning of a lixiviant
excursion, and not because they are the chemicals of most concern in groundwater protection; CLI-18-8,
88 NRC 141 (2018)
hydrology and geology of site are discussed; CLI-18-8, 88 NRC 141 (2018)
- INCORPORATION BY REFERENCE**
regulations most pertinent to prevention and identification of carbon macrosegregation in regions of
reactor coolant system components are the ASME Code requirements incorporated by reference in 10
C.F.R. 50.55a and quality assurance requirements in 10 C.F.R. Part 50, Appendix B; DD-18-3, 88 NRC
69 (2018)
- INITIAL DECISIONS**
decisions of the presiding officer on NEPA issues and Commission decisions augment and become part of
the environmental record of decision; CLI-18-8, 88 NRC 141 (2018)
- IRREPARABLE INJURY**
Commission has uniformly rejected arguments that expenses of any kind constitute irreparable injury;
CLI-18-7, 88 NRC 1 (2018)
denial of motion for summary disposition or dismissal does not constitute serious or irreparable harm;
CLI-18-7, 88 NRC 1 (2018)
increased litigation and delay do not justify interlocutory review; CLI-18-7, 88 NRC 1 (2018)
- JURISDICTION**
contention that licensee fails to discuss or demonstrate lawful federal jurisdiction and authority over its
activities is inadmissible; LBP-18-3, 88 NRC 13 (2018)
good cause provisions do not suggest that timeliness concerns are waived for jurisdictional issues;
LBP-18-3, 88 NRC 13 (2018)
where Commission order as a whole is not final, the court lacks jurisdiction to review those rulings;
LBP-18-5, 88 NRC 95 (2018)
- LICENSE CONDITIONS**
depending on resolution of matters put into controversy in an adjudicatory proceeding, NRC Staff may
issue, deny, or appropriately condition the license, in accordance with adjudicatory findings; CLI-18-8,
88 NRC 141 (2018)
- LICENSE EXPIRATION**
original license will remain in effect pending a final determination on the renewal application; CLI-18-8,
88 NRC 141 (2018)
- LICENSE RENEWAL APPLICATIONS**
original license will remain in effect pending a final determination on the renewal application; CLI-18-8,
88 NRC 141 (2018)
- LICENSEES**
licensee is responsible for ensuring that applicable regulatory and technical requirements are appropriately
identified in the procurement documentation and for evaluating whether the purchased items, upon
receipt, conform to the procurement documentation; DD-18-3, 88 NRC 69 (2018)
- LICENSES**
material deficiencies in an environmental assessment may warrant further Staff analysis to evaluate
whether the license should remain in effect, taking into account the nature of the NEPA deficiency and
any other appropriate considerations; CLI-18-8, 88 NRC 141 (2018)
See also Approval of License; Denial of License; License Conditions; License Expiration
- LICENSING BOARD DECISIONS**
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of
the final environmental impact statement; CLI-18-8, 88 NRC 141 (2018)
initial decisions of the presiding officer on NEPA issues and Commission decisions augment and become
part of the environmental record of decision; CLI-18-8, 88 NRC 141 (2018)

SUBJECT INDEX

LICENSING BOARD JUDGES

although 28 U.S.C. § 455(a) is not specifically aimed at administrative judges, it provides a helpful framework for assessing a motion for disqualification; LBP-18-6, 88 NRC 177 (2018)
cases that involve the same parties or are based on the same or similar claims or present common issues of fact are regularly assigned or transferred to the same judge; LBP-18-6, 88 NRC 177 (2018)
civil actions involving one or more common questions of fact may be transferred to the same judge for coordinated or consolidated pretrial proceedings; LBP-18-6, 88 NRC 177 (2018)
in applying 28 U.S.C. § 455(a) to a disqualification motion, board must determine whether the facts presented might lead a fully informed reasonable person to question the judge's impartiality in the present proceeding; LBP-18-6, 88 NRC 177 (2018)
petitioners have a right to impartial judges, but they do not have a right to the judge of their choice; LBP-18-6, 88 NRC 177 (2018)

LICENSING BOARDS

main role in the adjudicatory process is to carefully review testimony and exhibits to resolve factual disputes; CLI-18-8, 88 NRC 141 (2018)

LICENSING BOARDS, AUTHORITY

board may define timeliness by specifying a deadline for timely filing a new or amended contention following a triggering event that makes the previously unavailable/materially different information available so as to be the basis for the new or amended contention; LBP-18-3, 88 NRC 13 (2018)
in appropriate circumstances, a board may define the scope of a contention in light of the foundational support that leads to its admission; LBP-18-3, 88 NRC 13 (2018)

LICENSING BOARDS, JURISDICTION

board is not necessarily governed by the constitutional Article III constraints that are the basis for petitioner's jurisdictional claim; LBP-18-3, 88 NRC 13 (2018)

MATERIAL INFORMATION

under 40 C.F.R. 1502.22(b), NRC must decide for itself whether information that is not known is relevant to adverse impacts and, if relevant, whether the information is important to the decision and whether the agency wishes to proceed with the action in the absence of needed information; LBP-18-5, 88 NRC 95 (2018)

MATERIALS LICENSE AMENDMENTS

alternate concentration limit can only be obtained for a mining unit at an in situ recovery site via a license amendment request that is subject to NEPA examination and an adjudicatory hearing; LBP-18-3, 88 NRC 13 (2018)

MATERIALS LICENSES

Commission decision to allow license to remain in effect while the proceeding and the NRC Staff's efforts to cure the NEPA-related deficiencies continued before the board was remanded; LBP-18-5, 88 NRC 95 (2018)

MIGRATION TENET

contention may migrate where information in NRC Staff's environmental review document is sufficiently similar to the material in the previously issued licensing document; LBP-18-3, 88 NRC 13 (2018)
environmental challenge may migrate to subsequently issued National Environmental Policy Act-related environmental review documents without the contention's proponent resubmitting the contention; LBP-18-3, 88 NRC 13 (2018)
intervenor is neither required to submit a migration declaration nor to plead the migration standards unless NRC Staff or licensee challenges the contention's migration; LBP-18-3, 88 NRC 13 (2018)
intervenor may not litigate the adequacy of NRC Staff's safety review, and so any safety-related contention must be based on the content of the application; LBP-18-3, 88 NRC 13 (2018)
it is not clear that migration tenet can be applied to already admitted safety contentions; LBP-18-3, 88 NRC 13 (2018)

MITIGATION PLANS

court must be able to review, in advance, how specific measures will bring projects into compliance with environmental standards; CLI-18-8, 88 NRC 141 (2018)
discussion of mitigation steps in environmental impact statement is important to show that the agency has taken a hard look; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

intensity or practical consequences of expected impacts were simply unknown because of an absence of information, and the agency had no evidence that proposed mitigation measures would combat the mostly unknown or inadequately known effects; CLI-18-8, 88 NRC 141 (2018)

MONITORING

excursion parameters for monitoring wells are selected to provide the earliest warning of a lixiviant excursion, and not because they are the chemicals of most concern in groundwater protection; CLI-18-8, 88 NRC 141 (2018)

request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)

MOOTNESS

NRC Staff may moot a contention of omission through its later-issued environmental document; LBP-18-4, 88 NRC 55 (2018)

MOTIONS

motion for disqualification denied for, among other things, frivolously challenging the objectivity of the board; LBP-18-6, 88 NRC 177 (2018)

motion for disqualification of the board is denied for failure to cite a valid legal basis for disqualification and is referred to the Commission; LBP-18-6, 88 NRC 177 (2018)

NATIONAL ENVIRONMENTAL POLICY ACT

agency is not permitted to act first and comply later or to condition performance of its obligation on a showing of irreparable harm; CLI-18-8, 88 NRC 141 (2018)

any proposed agency action significantly affecting the quality of the human environment requires a detailed environmental impact statement; LBP-18-5, 88 NRC 95 (2018)

as part of its statutory responsibilities, federal agency must undertake reasonable efforts to acquire missing information; LBP-18-5, 88 NRC 95 (2018)

because NEPA does not require an agency to conduct environmental hearings, the hearings held under the Atomic Energy Act serve to probe and publicly ventilate the details of NRC Staff's review; CLI-18-8, 88 NRC 141 (2018)

environmental analysis must take into account reasonably foreseeable results; LBP-18-5, 88 NRC 95 (2018)

every federal agency is required to prepare an adequate environmental impact statement before taking any major action, which includes issuing a uranium mining license; CLI-18-8, 88 NRC 141 (2018)

goals are realized through a set of action-forcing procedures that require agencies to take a hard look at environmental consequences and disseminate that information to the public; LBP-18-5, 88 NRC 95 (2018)

goals are to protect and promote environmental quality, as well as to preserve important historic, cultural, and natural aspects of our national heritage; LBP-18-5, 88 NRC 95 (2018)

initial decisions of the presiding officer on NEPA issues and Commission decisions augment and become part of the environmental record of decision; CLI-18-8, 88 NRC 141 (2018)

NEPA does not mandate particular results; LBP-18-5, 88 NRC 95 (2018)

NEPA does not require agencies to analyze every conceivable aspect of a proposed project; LBP-18-5, 88 NRC 95 (2018)

requirement that a detailed environmental impact statement be made for a proposed action make clear that agencies must take the required hard look before taking that action; CLI-18-8, 88 NRC 141 (2018)

under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 1 (2018)

NATIVE AMERICANS

board sought to determine which party or specific action led to the impasse preventing an adequate tribal cultural survey instead of determining whether NRC Staff had provided the Tribe a reasonable opportunity for consultation; CLI-18-7, 88 NRC 1 (2018)

claims that consultation was inadequate or consent was not given, which are based on rights provided in the Fort Laramie Treaty, cannot be the basis for an admissible contention; LBP-18-3, 88 NRC 13 (2018)

SUBJECT INDEX

- contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- contention that applicant failed to obtain the consent of the Oglala Sioux tribe as required by treaty and international law is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- NRC Staff must include in an environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes and by other interested persons; LBP-18-5, 88 NRC 95 (2018)
- under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 1 (2018)
- NEED FOR POWER**
- because intervenors will have an opportunity to raise concerns at the combined license stage, including on the issue of need for power and energy alternatives, there is no violation of 10 C.F.R. 51.104(a)(2); LBP-18-4, 88 NRC 55 (2018)
- NRC STAFF REVIEW**
- because NEPA does not require an agency to conduct environmental hearings, the hearings held under the Atomic Energy Act serve to probe and publicly ventilate the details of NRC Staff's review; CLI-18-8, 88 NRC 141 (2018)
- NRC Staff must show that evaluation of cultural resource impacts is based upon theoretical approaches or research methods generally accepted in the scientific community; LBP-18-5, 88 NRC 95 (2018)
- NRC Staff should prepare and consider an adequate NEPA environmental review before making a licensing decision; CLI-18-8, 88 NRC 141 (2018)
- under NEPA's hard look standard, the proper inquiry is not whether NRC Staff obtained complete information on the sites of cultural, historical, and religious significance to a Native American tribe, but whether the Staff made reasonable efforts to do so; CLI-18-7, 88 NRC 1 (2018)
- NUCLEAR REGULATORY COMMISSION, AUTHORITY**
- agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 141 (2018)
- in its discretion, Commission may grant a petition for review, giving due weight to whether a petition raises a substantial question regarding any of the requirements of 10 C.F.R. 2.341(b)(4); CLI-18-8, 88 NRC 141 (2018)
- OATH AND AFFIRMATION**
- request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)
- PLEADINGS**
- intervenor is neither required to submit a migration declaration nor to plead the migration standards unless NRC Staff or licensee challenges the contention's migration; LBP-18-3, 88 NRC 13 (2018)
- PRESIDING OFFICER, AUTHORITY**
- presiding officer has authority to make findings of fact and conclusions of law on matters put into controversy in an adjudicatory proceeding; CLI-18-8, 88 NRC 141 (2018)
- PROBABILISTIC RISK ASSESSMENT**
- acceptable reactor pressure vessel failure probabilities are discussed; DD-18-3, 88 NRC 69 (2018)
- PUBLIC COMMENTS**
- agency has significant discretion in determining when public comment is required on an environmental assessment; CLI-18-8, 88 NRC 141 (2018)
- filing public comments on a draft environmental review document will not excuse or otherwise toll the need to file a contention based on the draft document nor will it make timely a contention submitted in the first instance as a challenge to the final environmental document; LBP-18-3, 88 NRC 13 (2018)
- remand for new environmental impact statement was declined where agency, in response to public comments, already had investigated and addressed issues in publicly accessible opinion; CLI-18-8, 88 NRC 141 (2018)
- submitting comments on a Staff environmental document during the public comment period for that document is a wholly separate process from filing contentions challenging that document as a party to an adjudication; LBP-18-3, 88 NRC 13 (2018)

SUBJECT INDEX

QUALITY ASSURANCE

both licensees and their suppliers must evaluate any condition or defect in a component that could create a substantial safety hazard; DD-18-3, 88 NRC 69 (2018)

licensees must contractually pass down requirements of Appendix B through procurement documentation to suppliers of structures, systems, and components; DD-18-3, 88 NRC 69 (2018)

request that NRC take emergency enforcement actions at nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation is denied; DD-18-3, 88 NRC 69 (2018)

requirements for the design, manufacture, construction, and operation of the structures, systems, and components for nuclear facilities apply to all activities affecting safety-related functions of those SSCs; DD-18-3, 88 NRC 69 (2018)

REACTOR PRESSURE VESSEL

acceptable reactor pressure vessel failure probabilities are discussed; DD-18-3, 88 NRC 69 (2018)

safety significance of carbon macrosegregation in reactor pressure vessels is discussed; DD-18-3, 88 NRC 69 (2018)

structural significance of carbon macrosegregation in reactor pressure vessel components through the end of an 80-year operating interval was assessed using NRC risk safety criterion for pressurized thermal shock events and a conditional probability of failure for normal operating transients; DD-18-3, 88 NRC 69 (2018)

RECORD OF DECISION

adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; CLI-18-8, 88 NRC 141 (2018)

initial decisions of the presiding officer on NEPA issues and Commission decisions augment and become part of the environmental record of decision; CLI-18-8, 88 NRC 141 (2018)

where board augmented environmental record of decision with additional information but the information did not alter board's conclusion, no harmful consequence of the supplementation was identified and there was therefore nothing to be gained by considering the same information again; CLI-18-8, 88 NRC 141 (2018)

RECUSAL

federal judge shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned; LBP-18-6, 88 NRC 177 (2018)

REFERRAL OF RULING

motion for disqualification of the board is denied for failure to cite a valid legal basis for disqualification and is referred to the Commission; LBP-18-6, 88 NRC 177 (2018)

REGULATIONS

Council on Environmental Quality regulations are not binding on NRC when they have a substantive impact on the way in which the Commission performs its regulatory functions; LBP-18-5, 88 NRC 95 (2018)

NRC is not bound by Council on Environmental Quality regulations but they are entitled to considerable deference; LBP-18-5, 88 NRC 95 (2018)

REGULATIONS, INTERPRETATION

"timely" is not defined in 10 C.F.R. 2.309(c)(1)(iii), providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely; LBP-18-3, 88 NRC 13 (2018)

REGULATORY OVERSIGHT PROCESS

NRC confirms licensee and vendor compliance with NRC requirements through submitted reports, routine inspections, and continuous oversight provided by the plant resident inspector; DD-18-3, 88 NRC 69 (2018)

REMAND

Commission decision to allow license to remain in effect while the proceeding and the NRC Staff's efforts to cure the NEPA-related deficiencies continued before the board was remanded; LBP-18-5, 88 NRC 95 (2018)

court declined to remand new environmental impact statement where agency, in response to public comments, already had investigated and addressed issues in publicly accessible opinion; CLI-18-8, 88 NRC 141 (2018)

SUBJECT INDEX

REPORTING REQUIREMENTS

supplier must notify NRC if it becomes aware of information that reasonably indicates that a basic component contains defects that could create a substantial safety hazard; DD-18-3, 88 NRC 69 (2018)

REQUEST FOR ACTION

Director of the NRC office with responsibility for the subject matter shall either institute the requested proceeding or shall advise the person who made the request in writing that no proceeding will be instituted and the reason for the decision; DD-18-3, 88 NRC 69 (2018)

request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)

request that NRC take emergency enforcement actions at nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation is denied; DD-18-3, 88 NRC 69 (2018)

REQUEST FOR ADDITIONAL INFORMATION

information collected through a request for information or a generic letter is not expected to change any defense-in-depth, safety margins, or risk-level determinations that would be provided by continued monitoring and evaluation of new information; DD-18-3, 88 NRC 69 (2018)

REVIEW

See Appellate Review; Environmental Review; NRC Staff Review; Standard of Review

REVIEW, DISCRETIONARY

Commission may grant a petition for review, giving due weight to whether a petition raises a substantial question regarding any of the requirements of 10 C.F.R. 2.341(b)(4); CLI-18-8, 88 NRC 141 (2018)

RISK ANALYSIS

structural significance of carbon macrosegregation in reactor pressure vessel components through the end of an 80-year operating interval was assessed using NRC risk safety criterion for pressurized thermal shock events and a conditional probability of failure for normal operating transients; DD-18-3, 88 NRC 69 (2018)

RISKS

remote and speculative risks or events that have a low probability of occurring are unnecessary to evaluate in an environmental impact statement; LBP-18-5, 88 NRC 95 (2018)

RULES OF PRACTICE

although 10 C.F.R. 2.336 is contained in Subpart C of Part 2, Subpart C is generally applicable to all adjudications pursuant to the Atomic Energy Act, including Subpart L proceedings; LBP-18-5, 88 NRC 95 (2018)

contention admission rule is strict by design; LBP-18-4, 88 NRC 55 (2018)

each party's duty to submit mandatory disclosures is ongoing, and each party must make these mandatory disclosures once a month and without the filing of a discovery request by other parties; LBP-18-5, 88 NRC 95 (2018)

failure to fulfill any one of the contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) renders a contention inadmissible; LBP-18-3, 88 NRC 13 (2018); LBP-18-4, 88 NRC 55 (2018)

good cause must be shown for submitting a new or amended contention; LBP-18-3, 88 NRC 13 (2018) in its discretion, Commission may grant a petition for review, giving due weight to whether a petition raises a substantial question regarding any of the requirements of 10 C.F.R. 2.341(b)(4); CLI-18-8, 88 NRC 141 (2018)

in ruling on motions for summary disposition in Subpart L proceedings, the presiding officer shall apply standards for summary disposition in Subpart G; LBP-18-5, 88 NRC 95 (2018)

interlocutory review is granted only where petitioner can show that it is threatened with immediate and serious irreparable impact or the board's decision affects the basic structure of the proceeding in a pervasive and unusual manner; CLI-18-7, 88 NRC 1 (2018)

new contentions must also satisfy the usual standard for contention admissibility; LBP-18-4, 88 NRC 55 (2018)

new or amended contentions must meet the six admissibility factors in section 2.309(f)(1); LBP-18-3, 88 NRC 13 (2018)

SUBJECT INDEX

- new or amended contentions must satisfy the good cause standard in section 2.309(c)(1); LBP-18-4, 88 NRC 55 (2018)
- petitioners seeking disqualification of judges must solicit agreement of other counsel; LBP-18-6, 88 NRC 177 (2018)
- standard for review in 10 C.F.R. 2.341(b) governs petitions for review of final board decisions; CLI-18-7, 88 NRC 1 (2018)
- standards governing summary disposition are set forth in 10 C.F.R. 2.710(a); CLI-18-7, 88 NRC 1 (2018)
- standards governing summary disposition in Subpart L proceedings are set out in 10 C.F.R. 2.1205; LBP-18-5, 88 NRC 95 (2018)
- “timely” is not defined in 10 C.F.R. 2.309(c)(1)(iii), providing the presiding officer with a degree of latitude in determining whether or not a contention should be viewed as timely; LBP-18-3, 88 NRC 13 (2018)
- to show good cause for a new or amended contention, intervenor must demonstrate that information was not previously available and is materially different from information previously available and filing has been submitted in a timely fashion based on availability of the subsequent information; LBP-18-3, 88 NRC 13 (2018)
- SAFETY ANALYSIS**
- structural significance of carbon macrosegregation in reactor pressure vessel components through the end of an 80-year operating interval was assessed using NRC risk safety criterion for pressurized thermal shock events and a conditional probability of failure for normal operating transients; DD-18-3, 88 NRC 69 (2018)
- SAFETY ISSUES**
- intervenor may not litigate the adequacy of NRC Staff’s safety review, and so any safety-related contention must be based on the content of the application; LBP-18-3, 88 NRC 13 (2018)
- it is not clear that migration tenet can be applied to already admitted safety contentions; LBP-18-3, 88 NRC 13 (2018)
- safety significance of carbon macrosegregation in reactor pressure vessels is discussed; DD-18-3, 88 NRC 69 (2018)
- SAFETY-RELATED**
- request that NRC take emergency enforcement actions at nuclear power plants that currently rely on potentially defective safety-related components and potentially falsified quality assurance documentation is denied; DD-18-3, 88 NRC 69 (2018)
- SETTLEMENT JUDGES**
- parties may submit a joint motion to request appointment of a judge to conduct negotiations to assist in the resolution of a dispute; LBP-18-5, 88 NRC 95 (2018)
- SETTLEMENT NEGOTIATIONS**
- parties may submit a joint motion to request appointment of a Settlement Judge to assist in the resolution of a dispute; LBP-18-5, 88 NRC 95 (2018)
- SEVERE ACCIDENT MITIGATION ALTERNATIVES**
- agency must discuss possible mitigation measures in defining the scope of the environmental impact statement; LBP-18-5, 88 NRC 95 (2018)
- SITE CHARACTERIZATION**
- contention that application and draft environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet the requirements is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- SITE HYDROLOGY**
- contention that final environmental assessment fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater and surface water samples were collected in a scientifically defensible manner using proper sample methodologies is inadmissible; LBP-18-3, 88 NRC 13 (2018)
- environmental review must contain a description of the affected environment, including a baseline characterization of groundwater and surface water that may be impacted; LBP-18-3, 88 NRC 13 (2018)

SUBJECT INDEX

SITE RESTORATION

contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that final environmental assessment fails to describe or evaluate impacts from new restoration timeline stated in extension amendment request, including failure to describe expected increases in consumptive use of water in restoration is inadmissible; LBP-18-3, 88 NRC 13 (2018)

SMALL MODULAR REACTORS

contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of the emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

contention challenging the draft environmental impact statement's inclusion of information about the technical and economic benefits of building and operating the proposed small modular reactor is inadmissible; LBP-18-4, 88 NRC 55 (2018)

environmental impact statement, and therefore a hearing opportunity, is required if a combined license for a small modular reactor does not reference an early site permit; LBP-18-4, 88 NRC 55 (2018)

hearing will be provided if the reactor proposed in the combined license for a small modular reactor does not fit the characteristics or design parameters from the early site permit; LBP-18-4, 88 NRC 55 (2018)

SPENT FUEL POOLS

contention challenging adequacy of draft environmental impact statement's discussion of environmental impacts of spent fuel pool accident risks and size of the emergency planning zone for small modular reactor design is inadmissible; LBP-18-4, 88 NRC 55 (2018)

STANDARD OF REVIEW

Commission reviews questions of law de novo, but generally defers to a board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence; CLI-18-8, 88 NRC 141 (2018)

expansion of issues for resolution and the continuation of litigation that results from admitting a contention does not necessarily have a pervasive and unusual effect on the litigation; CLI-18-7, 88 NRC 1 (2018)

interlocutory review is granted only where petitioner can show that it is threatened with immediate and serious irreparable impact or the board's decision affects the basic structure of the proceeding in a pervasive and unusual manner; CLI-18-7, 88 NRC 1 (2018)

standard in 10 C.F.R. 2.341(b) governs petitions for review of final board decisions; CLI-18-7, 88 NRC 1 (2018)

where a board, aided by its technical judges, has rendered reasonable, record-based factual findings, Commission will typically decline to undertake a de novo review of underlying facts, absent a substantial question of a clearly erroneous material finding; CLI-18-8, 88 NRC 141 (2018)

STRUCTURAL INTEGRITY

request that NRC issue a letter to all U.S. light-water reactor operators requiring licensees to provide the NRC with information under oath and affirming specifically how U.S. operators are reliably monitoring contractors and subcontractors for potential carbon segmentation anomaly is denied; DD-18-3, 88 NRC 69 (2018)

safety significance of carbon macrosegregation in reactor pressure vessels is discussed; DD-18-3, 88 NRC 69 (2018)

structural significance of carbon macrosegregation in reactor pressure vessel components through the end of an 80-year operating interval was assessed using NRC risk safety criterion for pressurized thermal shock events and a conditional probability of failure for normal operating transients; DD-18-3, 88 NRC 69 (2018)

SUBPART G PROCEDURES

in ruling on motions for summary disposition in Subpart L proceedings, the presiding officer shall apply standards for summary disposition in Subpart G; LBP-18-5, 88 NRC 95 (2018)

SUBPART L PROCEEDINGS

although 10 C.F.R. 2.336 is contained in Subpart C of Part 2, Subpart C is generally applicable to all adjudications pursuant to the Atomic Energy Act, including Subpart L proceedings; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

- general discovery is provided for in Subpart L proceedings; LBP-18-5, 88 NRC 95 (2018)
- in ruling on motions for summary disposition in Subpart L proceedings, the presiding officer shall apply standards for summary disposition in Subpart G; LBP-18-5, 88 NRC 95 (2018)
- standards governing summary disposition are set out in 10 C.F.R. 2.1205; LBP-18-5, 88 NRC 95 (2018)
- SUMMARY DISPOSITION**
- board denial of a motion for summary disposition is an interlocutory decision; CLI-18-7, 88 NRC 1 (2018)
- board must determine if any material facts remain genuinely in dispute and, if no such disputes remain, the board must determine if movant's legal position is correct; LBP-18-5, 88 NRC 95 (2018)
- board's only role is to determine whether any genuine issue of material fact exists; LBP-18-5, 88 NRC 95 (2018)
- denial of motion for summary disposition or dismissal does not constitute serious or irreparable harm; CLI-18-7, 88 NRC 1 (2018)
- evidence of summary disposition opponent is to be believed, and all justifiable inferences are to be drawn in his favor; LBP-18-5, 88 NRC 95 (2018)
- governing standards are based on those that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; CLI-18-7, 88 NRC 1 (2018)
- grant of summary disposition motion, where other contentions are pending in the proceeding, is interlocutory; CLI-18-7, 88 NRC 1 (2018)
- if board is required to make credibility determinations, weigh evidence, or draw legitimate inferences from the facts, summary disposition should not be granted; LBP-18-5, 88 NRC 95 (2018)
- if filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with statements of parties and affidavits, if any, show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law, summary disposition may be granted; LBP-18-5, 88 NRC 95 (2018)
- in ruling on motions in Subpart L proceedings, the presiding officer shall apply standards for summary disposition in Subpart G; LBP-18-5, 88 NRC 95 (2018)
- making credibility determinations, weighing of evidence, or drawing legitimate inferences from the facts in ruling on summary disposition motion would require the board to conduct a trial on the written record by weighing the evidence and endeavoring to determine the truth of the matter; LBP-18-5, 88 NRC 95 (2018)
- movant carries the burden of demonstrating that summary disposition is appropriate and must explain in writing the basis for the motion; LBP-18-5, 88 NRC 95 (2018)
- movant has the initial burden of showing that no genuine issue of material fact remains in the proceeding; CLI-18-7, 88 NRC 1 (2018)
- movant must attach a short and concise statement of the material facts as to which movant contends that there is no genuine issue to be heard; LBP-18-5, 88 NRC 95 (2018)
- opponent cannot rest on the allegations or denials of a pleading but must go beyond the pleadings and designate specific facts showing that there is a genuine issue for trial; CLI-18-7, 88 NRC 1 (2018)
- standards are set forth in 10 C.F.R. 2.710(a); CLI-18-7, 88 NRC 1 (2018)
- standards governing summary disposition are based on those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-18-5, 88 NRC 95 (2018)
- standards governing summary disposition in Subpart L proceedings are set out in 10 C.F.R. 2.1205; LBP-18-5, 88 NRC 95 (2018)
- where there is no remaining material issue of fact, summary disposition is appropriate; CLI-18-7, 88 NRC 1 (2018)
- SUMMARY JUDGMENT**
- standards governing summary disposition are based on those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-18-5, 88 NRC 95 (2018)
- SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT**
- if costs of obtaining the information are exorbitant, the agency must include information described in 40 C.F.R. 1502.22(b) in the final supplemental EIS; LBP-18-5, 88 NRC 95 (2018)

SUBJECT INDEX

supplementation of NEPA review document is required if new information shows the proposed action would affect the environment in a significant manner or to a significant extent not already considered; CLI-18-8, 88 NRC 141 (2018)

SUPPLIERS

NRC must be notified if supplier becomes aware of information that reasonably indicates that a basic component contains defects that could create a substantial safety hazard; DD-18-3, 88 NRC 69 (2018)

SURVEYS

contention that failure to include results of cultural survey approach in discussion in final environmental assessment is inadmissible; LBP-18-3, 88 NRC 13 (2018)

NRC Staff must show that proposed tribal alternatives to its proposed cultural resource surveillance approach would be cost prohibitive; LBP-18-5, 88 NRC 95 (2018)

to show cost-prohibitive factual dispute, NRC Staff must provide information establishing the requirements that set forth a summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts of the project on the human environment; LBP-18-5, 88 NRC 95 (2018)

TESTIMONY

opinion testimony that states a legal standard or draws a legal conclusion by applying law to the facts is generally inadmissible; LBP-18-4, 88 NRC 55 (2018)

well-recognized exception to excluding expert testimony on purely legal issues is for questions of foreign law; LBP-18-4, 88 NRC 55 (2018)

TESTS

contention that final environmental assessment fails to take the required hard look at the pump test data is inadmissible; LBP-18-3, 88 NRC 13 (2018)

TORNADOES

board did not err in augmenting information on tornadoes to cure a deficiency in the environmental assessment; CLI-18-8, 88 NRC 141 (2018)

TREATIES

contention based on treaty rights is inadmissible; LBP-18-3, 88 NRC 13 (2018)

contention that applicant failed to obtain the consent of the Oglala Sioux tribe as required by treaty and international law is inadmissible; LBP-18-3, 88 NRC 13 (2018)

URANIUM MINING AND MILLING

every federal agency is required to prepare an adequate EIS before taking any major action, which includes issuing a uranium mining license; CLI-18-8, 88 NRC 141 (2018)

WATER QUALITY

contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)

WATER SUPPLY

contention that final environmental assessment fails to adequately analyze groundwater quantity and quality impacts due to extended restoration timetable and known need for alternate concentration limits is inadmissible; LBP-18-3, 88 NRC 13 (2018)

WATER USE

contention that final environmental assessment fails to describe or evaluate impacts from new restoration timeline stated in extension amendment request, including failure to describe expected increases in consumptive use of water in restoration is inadmissible; LBP-18-3, 88 NRC 13 (2018)

WITNESSES, EXPERT

Commission reviews questions of law de novo, but generally defers to a board's plausible factual findings when they rest on a detailed weighing of extensive expert testimony and evidence; CLI-18-8, 88 NRC 141 (2018)

contention's sponsor must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention; LBP-18-3, 88 NRC 13 (2018)

well-recognized exception to excluding expert testimony on purely legal issues is for questions of foreign law; LBP-18-4, 88 NRC 55 (2018)

FACILITY INDEX

ARKANSAS NUCLEAR ONE, Unit 2; Docket No. 50-368
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

BEAVER VALLEY POWER STATION, Unit 1; Docket No. 50-334, 50-339
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

COMANCHE PEAK NUCLEAR POWER PLANT, Unit 1; Docket No. 50-445
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT; Docket No. 50-302
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

DEWEY-BURDOCK IN SITU URANIUM RECOVERY FACILITY; Docket No. 40-9075-MLA
MATERIALS LICENSE; July 24, 2018; MEMORANDUM AND ORDER; CLI-18-7, 88 NRC 1 (2018)
MATERIALS LICENSE; October 30, 2018; MEMORANDUM AND ORDER (Denying Motions for
Summary Disposition as to Contention 1A); LBP-18-5, 88 NRC 95 (2018)

IN SITU LEACH FACILITY, Crawford, Nebraska; Docket No. 40-8943-OLA
MATERIALS LICENSE AMENDMENT; November 29, 2018; MEMORANDUM AND ORDER;
CLI-18-8, 88 NRC 141 (2018)

JOSEPH M. FARLEY NUCLEAR PLANT, Units 1 and 2; Docket Nos. 50-348, 50-364
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

MILLSTONE NUCLEAR POWER STATION, Unit 2; Docket No. 50-336
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

NORTH ANNA POWER STATION, Units 1 and 2; Docket Nos. 50-338, 50-339
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, Units 1 and 2; Docket Nos. 50-282, 50-306
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

SEQUOYAH NUCLEAR PLANT, Unit 1; Docket No. 50-327
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

SOUTH TEXAS PROJECT, Units 1 and 2; Docket Nos. 50-498, 50-499
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

ST. LUCIE NUCLEAR POWER PLANT, Unit 1; Docket No. 50-335
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

SURRY POWER STATION, Unit 1; Docket No. 50-280
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

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VIRGIL C. SUMMER NUCLEAR STATION, Unit 1; Docket No. 50-395
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

WATTS BAR NUCLEAR PLANT, Unit 1; Docket No. 50-390
REQUEST FOR ACTION; August 2, 2018; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206;
DD-18-3, 88 NRC 69 (2018)

WCS CONSOLIDATED INTERIM STORAGE FACILITY; Docket No. 72-1050-ISFSI
INDEPENDENT SPENT FUEL STORAGE INSTALLATION; December 13, 2018; MEMORANDUM
AND ORDER (Denying and Referring Motion to Disqualify Board); LBP-18-6, 88 NRC 177 (2018)