

RAS 6867

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

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Before Administrative Judges:

Ann Marshall Young, Chair
Dr. Charles N. Kelber
Lester S. Rubenstein

In the Matter of

DUKE ENERGY CORPORATION

(McGuire Nuclear Station, Units 1 and 2,
Catawba Nuclear Station, Units 1 and 2)

Docket No's. 50-369-LR, 50-370-LR,
50-413-LR, and 50-414-LR

ASLBP No. 02-794-01-LR

October 2, 2003

MEMORANDUM AND ORDER
(Ruling on Intervenors' Amended Contention 2)

This proceeding concerns the license renewal application (LRA) of Duke Energy Corporation (Duke), seeking approval under 10 C.F.R. Part 54 to renew the operating licenses for its McGuire Nuclear Station, Units 1 and 2, and Catawba Nuclear Station, Units 1 and 2. In this Memorandum and Order, the Licensing Board rules on Amended Contention 2 of Intervenors Nuclear Information and Resource Service (NIRS) and Blue Ridge Environmental Defense League (BREDL). For the reasons set forth below, a majority of the Licensing Board concludes that Amended Contention 2 is not admissible and must be dismissed.

I. BACKGROUND

In its June 13, 2001, application, Duke seeks to renew the operating licenses for (1) its McGuire Nuclear Station, Units 1 and 2, located some 17 miles north-northwest of Charlotte, North Carolina, for additional twenty-year periods commencing in 2021 and 2023, respectively; and (2) its Catawba Nuclear Station, Units 1 and 2, located in South Carolina some 18 miles southwest of Charlotte, North Carolina, for additional twenty-year periods commencing in 2024

and 2026, respectively. On January 24, 2002, the Licensing Board admitted two contentions submitted by the Intervenors, one relating to the anticipated use of plutonium mixed oxide (MOX) fuel in the Duke plants, and the other relating to severe accident mitigation alternatives (SAMAs) and station blackout risks in plants with ice condenser containments (including both McGuire and Catawba). Memorandum and Order (Ruling on Standing and Contentions), LBP-02-04, 55 NRC 49, 88-107, 118-30 (2002).

The admission of the MOX contention was reversed by the Commission in CLI-02-14, 55 NRC 278 (2002).¹ The admission of the SAMA contention was affirmed in part and reversed in part in July 2002, in CLI-02-17, 56 NRC 1, which was subsequently clarified in December 2002, in CLI-02-28, 56 NRC 373.

The Commission in CLI-02-28 also offered guidance to the Board in considering and ruling on the admitted SAMA contention, as well as on a pending amended version of that contention, Amended Contention 2, originally filed on May 20, 2002. As pointed out by the Commission, there has been a certain amount of confusion in this proceeding about the scope of the original SAMA contention, see CLI-02-28, 56 NRC at 378-81, 384, and this has extended to Amended Contention 2 as well. During a telephone conference on July 10, 2002 (Tr. at 923-1063), the parties responded to Board questions about the contention and its first four subparts. Thereafter, on July 23, the Commission issued CLI-02-17, which the Board and parties considered as it related to the amended contention during a telephone conference held July 29, 2002 (Tr. at 1067-1146). During the July 29 conference, based on certain statements of the Board related to CLI-02-17, the Intervenors withdrew the amended contention. Tr. at 1106. In response to a subsequent Duke Motion for Clarification of CLI-02-17 (Aug. 2, 2002), as well as

¹We note that BREDL/NIRS has moved for us to reinstate Contention 1. [BREDL/NIRS] Request for Reinstatement of NIRS Contention 1 Regarding Environmental Impacts of MOX Fuel Use, filed April 11, 2003. We expect to rule on this request in the near future.

a Board Memorandum and Order (Certifying Question to the Commission) (Aug. 28, 2002), the Commission issued CLI-02-28, in which it, among other things, reinstated the amended contention. CLI-02-28, 56 NRC at 385.

The Board subsequently dismissed as moot the original Contention 2, see Order (Ruling on Duke Motion to Dismiss, Setting Briefing Deadlines, and Scheduling Oral Argument on Amended Contention 2) (Feb. 4, 2003). On March 18, 2003, after various delays occasioned by all parties,² the Board heard additional oral argument related to the amended contention (Tr. 1208-1476).

II. ANALYSIS

A. Contention Admissibility Requirements

The standards governing the admissibility of contentions are defined at 10 C.F.R. § 2.714. This rule provides in relevant part as follows:

(a)(1) Any person whose interest may be affected by a proceeding and who desires to participate as a party shall file a written petition for leave to intervene The petition and/or request shall be filed not later than the time specified in the notice of hearing, or as provided by the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on the petition and/or request, or as provided in § 2.102(d)(3). Nontimely filings will not be entertained absent a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on the petition and/or request, that the petition and/or request should be granted based upon a balancing of the following factors in addition to those set out in paragraph (d)(1) of this section:

- (i) Good cause, if any, for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.³

²See Order (Ruling on Motion for Extension and Scheduling Telephone Conference) (Jan. 3, 2003), Order (Granting Request to Postpone and Reschedule Conference) (Jan. 17, 2003), and Order (Rescheduling Oral Argument on Amended Contention 2) (Feb. 20, 2003).

³With respect to each contention or subpart, the Staff asserts a failure to demonstrate good cause for untimeliness (a conclusion as to which we do not uniformly agree) and then, in balancing the factor about whether there are other available means for protection of
(continued...)

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

(iv) The extent to which the petitioner's interest will be represented by existing parties.

(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

...;

(b)(2) Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide the following information with respect to each contention:

(i) A brief explanation of the bases of the contention.

(ii) A concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing, together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.

(iii) Sufficient information (which may include information pursuant to paragraphs (b)(2)(i) and (ii) of this section) to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include references to the specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief. On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner can amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement,

³(...continued)

BREDL/NIRS' interest, comments for most contentions that "BREDL/NIRS may address its concerns regarding the non-renewal alternative [or protect its interest in an accurate and complete SAMA analysis] through comments on the Staff's DEISs." See Staff Response at 9 (entire contention), 12-13 (Contention 1), 15 (Contention 2), 18 (Contention 4), 20 (Contention 5), 22 (Contention 6), 23 (Contention 7), and 25 (Contention 8). Commenting on the Staff's DEIS, although clearly available during the time frame in question, is never an adequate substitute for litigating a contention, inasmuch as it ignores the participational rights enjoyed through such litigation—including the entitlement to present evidence and to engage in cross-examination. Cf. Nuclear Fuel Services (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273, 276 (1975)(rejecting a limited appearance statement as an adequate alternative means to protect an intervenor's interest); Duke Power Co. (Amendment to Materials License SNM-1773—Transportation of Spent Fuel from Oconee Nuclear Station for Storage at McGuire Nuclear Station), ALAB-528, 9 NRC 146, 150 (also rejecting limited appearance statement).

environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's document.

. . . ;

(d) . . . [A] ruling body or officer shall, in ruling on--

. . .

(2) The admissibility of a contention, refuse to admit a contention if:

(i) The contention and supporting material fail to satisfy the requirements of paragraph (b)(2) of this section; or

(ii) The contention, if proven, would be of no consequence in the proceeding because it would not entitle petitioner to relief.

As we have previously noted, the failure of a contention to comply with any one of these requirements is grounds for its dismissal. See LBP-02-04, 55 NRC at 64. In addition, contentions must be "germane to the application pending before the Board," and "material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction as set forth in the Commission's notice of opportunity for hearing." Id. at 68.

B. Rulings on Amended Contention 2

The Intervenors' Consolidated Contention 2, which the Board admitted on January 24, 2002, read as follows:

The Duke SAMA analysis is incomplete, and insufficient to mitigate severe accidents, in that it

- (a) fails to include information from NUREG/CR-6427⁴, and
- (b) fails to include a severe accident mitigation alternative relating to Station Blackout-Caused Accidents, namely a dedicated electrical line from the hydroelectric generating dams adjacent to each reactor site.

LBP-02-04, 55 NRC 49, 128 (2002).

⁴NUREG/CR-6427, Sandia National Laboratories, Albuquerque, New Mexico, "Assessment of the DCH [Direct Containment Heating] Issue for Plants with Ice Condenser Containments," SAND99-2253 (Sept. 1999, published April 2000).

According to the Staff, subsequent to the admission of Consolidated Contention 2, Duke responded to Staff requests for additional information (RAIs) by addressing information contained in NUREG/CR-6427. Duke also evaluated the SAMA of installing a dedicated electric line from adjacent hydroelectric plants for the purpose of providing backup power to hydrogen igniters during station-blackout events. See Duke Power Co. Response to Requests for Additional Information [hereinafter RAI] (Jan. 31, 2002 (McGuire); RAI (February 1, 2002) (Catawba). Contention 2, as set forth above, thus became moot, and we dismissed it on that basis.

The Intervenor's Amended Consolidated Contention 2, filed on May 20, 2002, is made up of eight subparts, preceded by the following introductory language:

The Duke SAMA analysis is incomplete, and insufficient to mitigate severe accidents, in that it fails to provide an adequate discussion of information from NUREG/CR-6427 and a dedicated electrical line from the hydroelectric generating dams adjacent to each reactor site. In particular, the SAMA analysis contains the following deficiencies:

As emphasized in CLI-02-28, we must analyze each of these subparts, to determine its admissibility for litigation (in effect, as a separate contention). Additionally, as also stressed in CLI-02-28, it is appropriate for us to address the requisite issue of timeliness under 10 C.F.R. § 2.714(a)(1) as it relates to the entire amended contention. In that regard, when the Intervenor (through their Amended Contention 2) identified the issue as whether NUREG/CR-6427 had been taken into account adequately, they in effect filed new contentions.⁵ In doing so, they defined the issue through its subparts as specifying the ways in which NUREG/CR-6427 had not been taken into account adequately (as distinguished from whether NUREG/CR-

⁵We note that, as the Commission indicated in CLI-02-28, because of the "widespread confusion" over the original contention's scope, and ambiguous statements of the Board, "the Intervenor may have had good cause to believe that filing an amended contention was unnecessary." CLI-02-28, 56 NRC at 384. CLI-02-28 also made it clear, however, that we were to assess the timeliness of the amended contention and each of its subparts. Id. at 385.

6427 had been considered at all by the applicant—the issue quoted above that was considered by the Commission in both CLI-02-17 and CLI-02-28). This was not merely a modification of the original contention, which we in fact dismissed as moot. This new contention with its eight subparts was per force late-filed, inasmuch as it was filed subsequent to the date when contentions initially had to be filed.

Whether there is adequate excuse or “good cause” for the late-filing, however, cannot be answered for the contention as a whole. Differing factors apply with respect to the timeliness of each of the eight subparts, based in part on when information giving rise to the contention became publicly available. In that connection, where information giving rise to the contention stems from RAI Responses (which were released on January 31-February 1, 2002), we regard contentions filed on May 22, 2002, the date established by the Board for the filing of such contentions, as demonstrating good cause for the delay in filing. Nonetheless, whether or not timely, a contention still has to satisfy other criteria (discussed above) to be admissible. To the extent relevant, we will discuss the timeliness of the eight subparts in conjunction with our discussion of whether the intervenors have appropriately raised and supported any valid issues, as required under subsections (b) and (d) of 10 C.F.R. § 2.714. We turn now to the eight subparts of the amended contention, which are set forth separately below, following quotation of the language of each.⁶

⁶In analyzing the Amended Contention 2, we have considered the following filings: (1) Blue Ridge Environmental Defense League’s and Nuclear Information and Resource Service’s [BREDL/NIRS] Amended Contention 2, dated May 20, 2002 (BREDL/NIRS Amended Contention 2); (2) Response of Duke Energy Corporation to Proposed Late-filed Contentions, dated June 10, 2002 (Duke Response); (3) NRC Staff’s Answer to [BREDL/NIRS] Amended Contention 2, dated June 10, 2002 (Staff Answer); (4) [BREDL/NIRS] Reply to Responses to Amended Contention 2 With Respect to the Issue of Timeliness, dated June 14, 2002.

Subpart 1

Failure to evaluate alternative of not renewing licenses

Severe Accident Mitigation Alternatives for McGuire and Catawba should include the alternative of not renewing the McGuire and Catawba reactors.

As support for this contention, Intervenor claim that NRC is required by regulation (not cited) to consider “whether, in light of new information, it would be unreasonable to preserve the option of license renewal,” and that neither Duke’s ER nor its RAI responses address this issue. BREDL/NIRS Amended Contention 2 at 4.

The Applicant points out, however, that the “no action” alternative “has already been addressed generically for license renewal in the generic environmental impact statement.” See Duke Response at 19; U.S. NRC, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437 § 8.2 (1996). More specifically, the Applicant and Staff each note that the ERs previously submitted to NRC for the McGuire-Catawba license renewal application each specifically address the “no action” alternative (see McGuire ER at §§ 7.3-7.5; Catawba ER at §§ 7.3-7.5) and the DEISs for both facilities also consider the “no action” alternative.⁷

For its part, the Staff points out that this contention lacks any legal basis and, indeed, is contrary to the purpose and intent of a SAMA analysis, which “contemplates consideration of plant design and procedural improvements that will mitigate the impact of accidents that may occur during the period of licensed operation.”⁸

As both the Applicant and Staff stress, the ERs were publicly available at the time contentions were initially required to be filed in this proceeding. Submission of this contention

⁷Duke Response at 19; Staff Answer at 12.

⁸Staff Answer at 12.

over 11 months later is thus untimely. Further, as the Applicant correctly points out, the contention is beyond the permissible scope of contentions open for consideration at this time. Moreover, as the Applicant and Staff also argue, this contention exceeds the proper scope of Consolidated Contention 2; is untimely; and is, in any event, baseless, so as to be inadmissible. Accordingly, we reject the contention.

Subpart 2

Failure to provide adequate support for conclusory results in RAI responses

Duke has not supported its SAMA analysis by publication of its PRA (Probabilistic Risk Assessment).

As support for this contention, Intervenorors rely on federal case law on the requirement of the National Environmental Policy Act (NEPA) for agencies to take a “hard look” at the environmental factors affecting a decision on a major federal action. They argue that “[m]erely to publish the summary results of the PRA [probabilistic risk assessment] ” is insufficient, that “the analysis of impacts and the costs and benefits of mitigative measures depends on a PRA and that “it is not possible to evaluate the adequacy of the analysis without access to the PRA.” BREDL/NIRS Amended Contention 2 at 4-5. Stating that a “PRA relies on a myriad of assumptions which may affect the outcome of the analysis,” the Intervenorors assert that it is “not possible to evaluate the adequacy of the analysis without access to the PRA,” in effect arguing that the evaluation required under the “hard look” doctrine has not been done — and is essentially impossible — without reference to the entire PRA. Id.

The Intervenorors further assert that all levels of the PRA must be disclosed and considered because, among other things, “conditional containment failure frequency is different for high and low pressure core damage sequences;” “NUREG/CR-6427 assume[d] that 90% of the time the hot leg will fail[,] resulting in a low-pressure sequence,” and thus comparison of this with the fraction of sequences in which low pressure results in Duke’s PRA is necessary; and

examination of the PRA's first level is necessary both to evaluate the second two levels and to understand whether the initiating event frequencies are appropriate for each containment failure mode." Id. at 5 n.2. Citing examples of Duke's use of qualitative (as opposed to quantitative) and/or non-specific language and information, the Intervenor argues that Duke's failure to provide the PRA in support of its SAMA analysis prevents any meaningful evaluation of relevant factors.

Examples of such qualitative, non-specific language and information provided by the Intervenor include: (a) Duke stating only that "data changes in Revision 2 improve diesel generator reliability, resulting in reduced core damage frequency ('CDF') caused by loss of offsite power ('LOOP'), tornadoes and earthquakes"; (b) Duke's re-evaluation of failure rates caused by interfacing system loss-of-coolant accidents (ISLOCA) and indicating that these are considered by Duke to be "an important risk contributor"; (c) Duke's use, in its January 31, 2002, response to RAI 1a, of qualitative and relative terms such as "significantly reduced" and "slight increase"; (d) Duke's provision of tables containing only summary estimates of core damage and containment failure frequencies; (e) Duke's qualitative explanation for the anomaly of the ISLOCA containment failure frequency being 27 times higher after Revision 2; (f) Duke's statement in its January 31, 2002, response to RAI 1b that "in general, the review team [that reviewed the IPE and PRA] found that the Duke PRA processes are sufficient to support applications requiring risk significance determination"; (g) Duke's statement that its SAMA analysis was based partially on Revision 3 and partially on Revision 2 of the PRA, with no indication as to which one was used for which parameters or why; (h) Duke's statement in its January 31, 2002, response to RAI 1c that CDF induced by steam generator tube rupture (SGTR) was found after Revision 3 to be 7.8E-10 rather than 7.0E-6 as before; and (i) the absence in Duke's analysis of fully documented assumptions and inputs, without which the

Intervenors argue there can be no meaningful evaluation of Duke's consequence analysis. BREDL/NIRS Amended Contention 2 at 5-6 (emphasis added).

In response, the Applicant characterizes this contention as an argument that the SAMA analysis is not complete because Duke has not published its PRAs.⁹ It claims that there is no requirement that PRAs be published.¹⁰ Further, it asserts that, if the contention is a challenge to the PRAs, it is untimely and, in any event, inadmissible in this proceeding.¹¹ Finally, both the Applicant and the Staff characterize this contention as in the nature of a discovery dispute, adding that discovery is not available until a contention has been admitted.¹²

The Board agrees that this "contention" or subpart of Amended Contention 2 is indeed in the nature of a discovery dispute. Discovery, of course, is not available until a contention has been admitted—which this one has not been. See 10 C.F.R. § 2.740(b)(1); see also Wisconsin Electric Power Co. (Koshkonong Nuclear Plant, Units 1 and 2), CLI-74-45, 8 AEC 928 (1974); Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 467 n.12 (1982) ("discovery on the subject matter of a contention [can] be obtained only after the contention [has] been admitted to the proceeding"); Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 ("[a]lthough in quasi-formal adjudications like license renewal an intervenor may still use the discovery process to develop his case and help prove an admitted contention, contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by 'some alleged fact or facts' demonstrating a genuine material dispute.").

⁹Duke Response at 21.

¹⁰Id. at 21-22.

¹¹Id. at 21.

¹²Id. at 22, 24; Staff Answer at 13 n.13.

Furthermore, NRC regulations do not require Duke to publish its entire PRA, and the Intervenor fail to provide any legal support for that proposition. Moreover, as a factual matter, Duke submitted portions of its PRA in 1991, 1992, and 1994 for Staff review, and these submittals (and the Staff's reviews) are, indeed, publicly available. These publications include data sought by BREDL/NIRS. For example, the increase in Emergency Diesel Generator reliability is supported by the raw data in Table 3.1.5.1-1 of the published summary of revision 2 of the McGuire PRA. In its RAI responses, Duke provided supplementary, quantitative, and qualitative information regarding changes to its PRAs (although it did not attach the full PRAs). The Intervenor have not established there is a genuine dispute as to why this information is inadequate to assure the reliability of Duke's PRAs. For the foregoing reasons, absent any legal requirement for publication of the PRAs, this contention (subpart 2 of Amended Contention 2) is rejected.

Subpart 3

Failure to support conclusions regarding frequency of accident contributors

Duke's RAI answers make unsupported assertions that the frequency of Station Blackout ("SBO") and other events leading to core damage and containment rupture is lower than previously predicted. Duke's failure to support these assertions violates the requirement under NEPA that an environmental analysis must take a "hard look" at environmental consequences of proposed actions and the costs and benefits of alternatives. Foundation on Economic Trends v. Heckler, 756 F.2d 143, 151 (D.C.Cir. 1985).

The Intervenor explain that "NUREG/CR-6427 asserts that no ice condenser plant is inherently robust to all credible DCH or hydrogen combustion events in station blackout," and that "the frequency of SBO events is an important factor in determining the value of the benefit of SAMAs." BREDL/NIRS Amended Contention 2 at 7. They claim that Duke asserts in its RAI responses "that the frequency of SBO events is lower than previously calculated [but] provides only summary information [concerning] its calculations regarding SBO frequency." Id. Further,

they fault Duke for providing insufficient information to permit a determination of the extent to which accident contributors such as earthquakes and floods were taken into account, or whether “recent studies that have identified recirculation sump clogging in PWRs following a loss-of-coolant accident as a generic safety issue, GSI 191,” were taken into account. Id. The Intervenor asserts that, lacking such information, it is impossible to determine whether Duke has taken the requisite “hard look” required under NEPA.¹³

The Applicant questions the technical adequacy of this contention, asserting that the Intervenor has proffered no adequate “basis for challenging either the SBO frequency used by Duke [in] its RAI responses or the cost/benefit assessments of the relevant SAMAs.” Duke Response at 25. The Applicant claims that the contention is not in fact based on new information in the RAI responses and thus is outside the scope of the Licensing Board’s limited authorization for late-filed contentions based on such information. Id. Duke further indicates that the cited information in the RAI responses is not “new,” inasmuch as it was based on the “Staff’s review of the SAMA analyses in the McGuire and Catawba license renewal ERs.” Id. at 25-26. For the same reason, the Applicant regards the contention as untimely, inasmuch as the information in the ERs was included in docketed correspondence (publicly available) at the time contentions initially were required to be filed.¹⁴

¹³BREDL/NIRS Amended Contention 2 at 7-8.

¹⁴With regard to flooding, for example, Duke claims that its RAI responses for Catawba indicate that it addressed the specific issue of a SAMA to build a flood wall around transformers in the turbine building to address an SBO issue for Catawba. Duke adds that in the draft SEIS for Catawba, this is a particular SAMA for Catawba that the Staff identified as potentially cost-beneficial (citing Catawba draft SEIS at 5-28). Thus, in this regard, BREDL/NIRS have obtained all the relief that could be granted if their contention were admitted and litigated—if already cost-beneficial, the degree to which a SAMA may be cost-beneficial is essentially meaningless, particularly where the relief cannot be mandated in a NEPA proceeding. (Duke explains that, for McGuire, the transformers are not physically located in an area susceptible to floods, so that the issue of a flood wall is not relevant; thus, this SAMA is not addressed in the draft McGuire SEIS.) See Duke Response at 29.

(continued...)

The Staff claims that “BREDL/NIRS does not indicate which specific RAI responses it refers to, nor does [it] identify where the previous predictions it refers to can be found.” Staff Answer at 16. The Staff asserts that these deficiencies alone are grounds for denying the contention, citing Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2), LBP-85-20, 21 NRC 1732, 1741 (1985), rev’d and remanded on other grounds, CLI-86-8, 23 NRC 241 (1986) and 10 C.F.R. § 2.714(b)(2). Id. The Staff further observes that the “hard look” required by NEPA must be taken by NRC, not Duke (as claimed by the Intervenor).¹⁵

The Staff reiterates the Applicant’s claim that the ERs described a number of risk reduction measures and ongoing initiatives to reduce the risk of operation further. Id. Additionally, the Staff claims that, as also explained in Duke’s RAI responses, “improved diesel generator performance at McGuire accounts for the decrease in SBO frequencies calculated using Revision 2 of the McGuire PRA versus Revision 1.” Id. Thus, according to the Staff, the contention fails to generate a genuine dispute of material fact concerning the application. Id. Further, the Staff views the contention as untimely. Id. at 16-17.

The Board notes deficiencies in the contention itself, as pointed to both by the Applicant and the Staff. The contention makes statements that, based upon the record, are not accurate. The circumstance that much of the so-called missing information was in fact included in the ERs significantly undercuts the validity of this contention as well. Further, the inclusion of this information in the ERs indicates that the contention could have been raised earlier. Similarly, the failure of the contention to rely on new information in the RAI responses, rather than pre-existing information in the RAI responses derived from other sources available earlier,

¹⁴(...continued)

¹⁵Staff Answer at 16.

evidences the untimeliness of this contention. For all of these reasons, the contention is rejected.

Subpart 4

Failure to justify departures from NUREG/CR-6427

Duke does not incorporate assumptions used in NUREG/CR-6427, or justify its failure to do so.

The Intervenor point to an RAI response by Duke that acknowledges that it has calculated lower containment failure probabilities than were found in NUREG/CR-6427, and that the primary difference between the two stems from “the assumption used about the amount of hydrogen assumed to be in the containment.”¹⁶ Further differences are assertedly acknowledged by Duke, but not justified. BREDL/NIRS maintain that NUREG/CR-6427 was an “extremely careful and detailed study” and that, before discarding the NUREG/CR-6427 assumptions, “Duke must do more than baldly observe the existence of the difference or an opinion that the Sandia Report was too conservative.”¹⁷

Both the Applicant and Staff assert that these claims are both incorrect and unfounded, Duke claims that its responses to both the McGuire and Catawba RAIs included a comparison of the conditional early containment probability for each plant with the corresponding probability given in NUREG/CR-6427. Duke Response at 32. According to Duke, the RAI Responses are based on each plant’s PRA, which considers both internally and externally initiated events, and that the RAI Responses also included a discussion of the models and assumptions used in each plant’s PRA that account for the major differences.¹⁸ Duke adds that there is no

¹⁶BREDL/NIRS Amended Contention 2 at 8-9.

¹⁷Id. at 9.

¹⁸Duke Response at 32; McGuire RAI Response at 7; Catawba RAI Response at 6.

regulatory basis for requiring a “justification” of these results, nor have the Intervenor provided such a regulatory basis or other source for such a requirement. The Applicant concludes that “this proposed contention, even if prove[d], “would be of no consequence in the proceeding’ because it would not entitle Intervenor to any relief (i.e., any further SAMA evaluation) and thus fails to satisfy Section 2.714(d)(2)(ii).”¹⁹

We agree with the arguments of the Applicant and Staff. In particular, we note that NRC’s regulations do not require an applicant to adopt the assumptions and findings of a study produced by an independent contractor of the Staff. Accordingly, we reject Amended Contention 2, Subpart 4.

Subpart 5

Failure to take adequate account of uncertainties

Duke has failed to take adequate account of uncertainties and their effect on the results of its analysis. To a significant extent, no uncertainty analysis has been performed. To the extent uncertainty analysis has been performed, Duke has not taken uncertainties into account in an adequate manner.

BREDL/NIRS provides separate bases for the two separate claims in this contention. First, with regard to the asserted failure to take adequate account of uncertainties, the Intervenor cites statements in the RAI responses to the effect that uncertainty analyses have not been developed or that they are beyond the scope of the current PRA program at Duke. BREDL/NIRS Amended Contention 2 at 10. The Intervenor claim that “Duke’s failure to perform a complete uncertainty analysis fatally undermines the credibility of its SAMA results.”²⁰

In support of this claim, Intervenor cite cases cautioning agencies not to use misleading information in their Environmental Impact Statements (EIS), as well as CEQ

¹⁹Duke Response at 33.

²⁰BREDL/NIRS Amended Contention 2 at 10.

regulations requiring an EIS to address “[t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.” Id. at 10-11 (quoting 40 C.F.R. § 1508.27(b)(5)). In addition, BREDL/NIRS cites “NRC regulations requir[ing] that a Draft EIS must, to the fullest extent practicable, quantify the various factors considered.” Id. at 11 (quoting 10 C.F.R. § 51.71(d)). “To the extent that environmental factors may not be quantifiable, they must at least be described qualitatively.” Id.

Further, BREDL/NIRS cites an NRC regulatory guide for the preparation of ERs in license-renewal cases, which instructs licensees to follow the methodology of NUREG/BR-0184, Regulatory Analysis Technical Evaluation Handbook (January, 1997). Id. “Section 5.4 of NUREG/BR-0184 specifically calls for the preparation of uncertainty analysis where practical within the bounds of the state-of-the-art.” BREDL/NIRS Amended Contention 2 at 11. “Draft Regulatory Guide DG-1110, An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis (June 2001), [also assertedly] sets forth the ‘expectation’ that ‘[a]ppropriate consideration of uncertainty is given in analysis and interpretation of findings, including using a program of monitoring, feedback, and corrective action to address significant uncertainties.’” BREDL/NIRS Amended Contention 2 at 11.

The Intervenor goes on to describe that the Regulatory Guide sets forth three types of uncertainties—model uncertainty, parameter uncertainty, and completeness uncertainty—and, for each type, a method for reporting on the nature and significance of the uncertainty. Id. at 12. “Appendix A of DG-1110 sets forth basic requirements for a ‘technically defensible’ PRA,” (id. at 39), and, in a summary table, DG-1110 “calls for ‘identification of sources of uncertainty and their impact on the results’ at each level of the PRA” (id. at 49-51). BREDL/NIRS Amended Contention 2 at 12. Finally, BREDL/NIRS also cites NUREG/BR-0058, Regulatory Analysis

Guidelines of the U.S. Nuclear Regulatory Commission (June 2000) at 12 as indicating the importance of uncertainty analyses. Id.

For its second basis, the Intervenor claim that, “[t]o the extent Duke has performed uncertainty analysis, it has not taken uncertainties into account in an adequate manner,” ‘undermin[ing] the credibility of Duke’s SAMA analyses.” Id. BREDL/NIRS points out a discrepancy between Duke’s use of annual risk to the population and mean value of annual risk to the population, and an inconsistency with the Staff’s assertion in that “a factor of three difference between most costs and benefits of mitigative measures is an insufficient margin to provide assurance that an appropriate cost-benefit analysis is being presented.” Id. at 12-13.

Both the Applicant and Staff claim that this contention lacks an adequate legal basis—that there is no NRC requirement mandating the submission by an applicant of a comprehensive uncertainty analysis in this situation. Duke Response at 36; Staff Answer at 19. Moreover, Duke claims (and the Staff confirms) that it performed a quantitative uncertainty analysis for Level 1 of its PRA, and a qualitative evaluation of uncertainties for Levels 2 and 3 of its PRA.²¹ Both Duke and the Staff claim “[t]his level of . . . analysis is appropriate and consistent with the Staff’s regulatory guidance, which suggests (but does not legally require) the use of uncertainty analyses,” and then “only ‘where practical within the bounds of the state-of-the-art.’” Staff Answer at 19; Duke Response at 37; NUREG/BR-0184, “Regulatory Analysis Technical Evaluation Handbook, § 5.4 (January 1997).²² Furthermore, the Applicant advises

²¹Catawba RAI Responses, Attachment 1 at 4; McGuire RAI Responses, Attachment 1 at 5.

²²Duke comments that “[o]ne source of potential confusion in Intervenor’s presentation is that Duke’s response to RAI 2 for McGuire was not identical to its response to RAI 2 for Catawba, and the Intervenor do not consistently differentiate between the two responses in their discussion.” Duke Response at 35. The Board notes that the so-called discrepancies between the two RAI 2 responses was one of the bases cited by Intervenor as a basis for this contention.

that, although it “did not develop an uncertainty analysis for the Catawba PRA Revision 2b Level 1 (since this was an “interim analysis”), Duke did develop an uncertainty analysis for the McGuire PRA Revision 2 Level 1.”²³ Finally, Duke asserts that the Intervenor fail to mention that part of Duke’s RAI responses (for both reactors) that “‘conclusions of the [SAMA] analysis would have been unlikely to change if a comprehensive uncertainty analysis could have been included,’ given the large margin (a factor of 3) between the estimated costs and benefits as evaluated in both the McGuire and Catawba SAMAs.”²⁴ The Staff adds that Duke’s factor of 3 “ignores the conservatism inherent in Duke’s calculations”—namely, “the costs to implement SAMAs are generally underestimated and the risk reduction associated with each SAMA is overestimated.”²⁵

The Board here finds that there is no NRC requirement for uncertainty analyses in the situation before us. Further, it is apparent that Duke has satisfied applicable NRC guidance with respect to such uncertainty analyses and, indeed, with respect to McGuire, has performed such an analysis. With respect to Catawba, Duke has performed a qualitative analysis. Moreover, with respect to uncertainty analyses, the contention could have been filed earlier—the ERs on which it was based were issued at the time the original contentions were submitted—and

²³Id.

²⁴Id. (quoting McGuire RAI Response at 5; Catawba RAI Response at 4).

²⁵Staff Answer at 20.

no excuse for the late-filing has been proffered.²⁶ In these circumstances, the Board rejects the portion of the contention that challenges the absence or lack of uncertainty analyses.

The second portion of the claim in this contention is that, to the extent that Duke has performed uncertainty analyses, it “has not taken uncertainties into account in an adequate manner.” BREDL/NIRS Amended Contention 2 at 10. BREDL/NIRS asserts that “[t]his failure undermines the credibility of Duke’s SAMA analysis.” Id. at 12. As basis, the Intervenor gives an example:

“[I]n its response to RAI 2, Duke states that the 95th percentile value of the McGuire PRA Rev. 2 core damage frequency is 1.3E-04, or 2.7 times the point estimate of the core damage frequency (4.9E-05) used in the SAMA analysis. Duke goes on to point out that NUREG-1150 analysis implies that the 95th percentile value of the 50-mile population dose is approximately 5 times the mean value, an uncertainty ‘representative of the uncertainties of the McGuire analysis.’ Thus the annual risk to the population within 50 miles derived from the 95th percentile values could be over ten times higher than the value obtained from the mean values. This alone contradicts the NRC staff’s assertion that a factor of three difference between most costs and benefits of mitigative measures ‘provide ample margin to cover uncertainties in the risk and cost estimates (draft NUREG-1437, p. 5-27).’

Id. at 12-13. BREDL/NIRS conclude that, “[b]ecause variations in certain parameters can result in a variation in consequences such as total population dose of an order of magnitude or more, it is clear that even a factor of three differences between costs and benefits of mitigative measures is an insufficient margin to provide assurance that an appropriate cost-benefit analysis is being presented.” Id. at 13.

Duke points out that the above-quoted statement is incorrect, that “[t]he uncertainty in the population risk results of NUREG-1150 includes all uncertainties in the Level 1 and Level 2

²⁶We note that, additionally, BREDL/NIRS offered, during oral argument on March 18, 2003 (Tr. 1385), a so-called Exhibit 5, titled “Technical Assessment Summary for GSI-189: Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident.” This document, prepared by the Staff, contains in Table 2 published uncertainty data from the PRAs in question, including both the McGuire and Catawba PRAs. With this information in hand, we fail to perceive why BREDL/NIRS did not at that time withdraw the portion of Subpart 5 that asserts the lack of any uncertainty analyses.

analyses,” and thus that “it is not correct to multiply together the two uncertainty values, and cite the product, as this results in an overstatement of the uncertainty associated with the population risk results.” Duke Response at 39. Thus, according to Duke, “no valid basis is provided for the Intervenor’s conclusion that the annual risk to populations within 50 miles derived from the 95th percentile values ‘could be over ten times higher than the value obtained from the mean values.’” Id. Duke goes on to demonstrate that the incorrectly-calculated risk calculations provide no basis for contradicting Duke’s and the Staff’s calculations that most of the SAMAs would clearly not be cost beneficial because their costs are substantially higher (typically by a factor of three or more) than the dollar equivalent of the associated benefits.²⁷ Duke adds that the Staff has concluded that a factor of two or more “is considered to provide ample margin to cover uncertainties in the risk and cost estimates.”²⁸

The Board has reviewed the BRDL/NIRS basis for this portion of Contention 5 and concludes that the Intervenor has proffered no valid basis for it. Further, the Board concludes that Intervenor has presented a misleading treatment of Duke’s responses to RAI 2, and that they have failed to demonstrate any “new information” in those RAI responses bearing upon this contention. These deficiencies mandate that this proffered basis for Contention 5 be rejected. Intervenor has also failed to show that a genuine dispute exists on a material issue of law or fact, as required by 10 C.F.R. § 2.714(b)(2)(iii). This portion of Amended Contention 2, subpart 5 is accordingly rejected.

²⁷Duke Response at 39-40.

²⁸Id. at 40.

Subpart 6²⁹

Failure to use reasonably conservative values in calculating accident consequences

Even assuming that Duke's use of point estimates is acceptable, Duke's SAMA analysis understates the consequences of accidents, because it relies on assumptions that are unreasonable and unsupported.

The Intervenor here claim that "Duke [has made] a number of assumptions about the nature of radioactive releases during accidents that are unrealistic and inconsistent with known experience." BREDL/NIRS Amended Contention 2 at 13. They provide examples in three areas: (1) plume spreading factor; (2) source terms; and (3) region for dose calculations. Id. at 13-16.

Specifically with respect to the plume spreading factor, the Intervenor rely on "the effect of using [revised] assumptions regarding spreading of the radioactive plume following a large [prolonged] radioactive release," as set forth in U.S. NRC, Technical Study of Spent Fuel Accident Risk at Decommissioning Nuclear Power Plants, NUREG-1738, app. 4A at A4A1 (2002), which is described as "increas[ing] long-term consequences (i.e., population dose) by up to 60%." Id. at 13. BREDL/NIRS claim that "[n]either Duke's RAI responses nor the GEIS specifies the plume spreading parameters used by Duke in its consequence analyses. Id.

With regard to source terms, the Intervenor reference a Staff determination that "Duke's source terms . . . for . . . major release categories [are] in reasonable agreement with estimates from NUREG-1150³⁰ for the closest corresponding release scenarios." Id. at 14. BREDL/NIRS claim that "Duke has made source-term assumptions that lead to considerably

²⁹This subpart is incorrectly labeled as subpart or contention "7" in BREDL/NIRS Amended Contention 2 at 13. Given the presence of another subpart or contention labeled as "7", which we shall consider below, and given the absence of any contention labeled as # "6," we shall treat this contention as # 6.

³⁰NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants" (Dec. 1990).

smaller population doses than those predicted from NUREG-1150-derived source terms. Id. The Intervenor provides an example: the release category for early containment failure. They claim that “the revised source term leads to a 50-mile population dose factor of approximately 5 greater than the worst-case source term used by Duke. . . .” Id. at 15.

With regard to the region for dose calculations, the Intervenor claims that “[t]he restriction of the region to a 50-mile radius for the purposes of calculating population dose is technically indefensible and can only be regarded as a mechanism for artificially limiting the benefits of mitigative measures.” Id. at 16. They assert that total population dose nearly doubles as the radius expands from 50 to 200 miles. Id.

Duke would dismiss this contention because it is not in any way based on RAI responses (which were to have been the foundation for late-filed contentions) and could have been filed earlier, when proposed contentions were initially filed. Duke Response at 41-42. Duke observes that BREDL/NIRS presented no justification for its late filing. Id. Duke asserts that it “used the MACCS2 computer code, updated meteorological data, and projected site specific population estimates to generate the severe accident person-rem risk results for the SAMA analyses,” and that this information appeared as Attachment K to the McGuire ER at 20 and as Attachment H to the Catawba ER at 19. Id. at 42-43 & n. 74. (Both ERs were available at the time contentions initially were to have been filed.) The Applicant adds that the “Intervenor has not provided any viable basis [that shows] that the accident consequence assumptions in Duke’s SAMA analyses were unrealistic, unreasonable, or unsupported.” Id. at 41.

Specifically, with regard to “plume spreading parameters,” Duke notes the NRC Staff’s stated agreement with the values Duke used for consequence analyses (as reflected in BREDL/NIRS Amended Contention 2, referenced above). Id. at 43. The Applicant regards BREDL/NIRS reliance on NUREG-1738 as misplaced, because spent fuel pool accident risk at

decommissioning nuclear plants, discussed in NUREG-1738, has no apparent bearing upon a license renewal SAMA analysis—indeed, BREDL/NIRS fails, according to Duke, even to attempt “to make a technical connection between the analysis and consequences of a spent fuel pool event and those of a containment event” (analyzed in NUREG/CR-6427). Id. at 43-44.

With regard to the assertedly non-conservative “source term assumptions,” and the Staff’s conclusion that the source-term estimates for major release categories were in “reasonable agreement” with estimates from NUREG-1150, Duke asserts that it “used plant-specific source terms rather than generic values from NUREG-1150,” and it adds that the Intervenor’s have not demonstrated that Duke’s source terms were “in any way incorrect or inappropriate for the purpose for which [they were used by Duke, or] in any way inconsistent with applicable regulatory guidance. Id. at 44-45. Indeed, Duke cites regulatory guidance to the effect that, instead of NUREG-1150 generic guidance on source terms, in certain instances the source-term offsite risk information used (whatever it may be) must be supplemented by site-specific analyses, which Duke has in fact employed here. Id. at 45 & n.81.

Also with respect to source-term assumptions, Duke points to the Intervenor’s claim that “NUREG/CR-6295³¹ contains simplified source terms based on the results of NUREG-1150 that are ideal for consequence calculations.” Id. at 46 (quoting BREDL/NIRS Amended Contention 2 at 14). Duke asserts that the Intervenor’s have failed to explain, however, the alleged relevance or superiority of NUREG/CR-6295, which appears to focus upon factors affecting nuclear power plant siting, to the source terms used in a license-renewal SAMA analysis, where siting is not an appropriate issue.³² Duke Response at 46. Further, as Duke also observes,

³¹NUREG/CR-6295/BNL-NUREG-52442, “Reassessment of Selected Factors Affecting Siting of Nuclear Power Plants” (Feb. 1997).

³²Siting, of course, was considered when construction permits and/or operating licenses for the reactors were evaluated. It generally need not and would not be considered in a
(continued...)

BREDL/NIRS has not explained why the different source term that they are using (and the application of which has apparently not been sanctioned by NRC, at least insofar as we are aware), is more appropriate than those values currently used by renewal applicants, particularly Duke.” Id. at 46-47.

As for the “region for dose calculations” also challenged by the Intervenor, Duke claims that the 50-mile radius it used has been recommended in generic regulatory guidance. Id. at 48 n.87; NUREG/BR-0184, at § 5.5.1 (Public Health (Accident)) (“ . . . For nuclear power plants, expected changes in radiation exposure should be measured over a 50-mile radius from the plant site.”). Duke claims that the Intervenor’s proposed 200-mile calculations are unsupported and that the claim is an attempt to challenge generic guidance. Duke Response at 48.

The Board views this proposed contention or subpart as an attempt to challenge the use by Duke of various models used in its calculation of accident consequences. But the Intervenor has made no showing either that the models used by Duke are defective or incorrect for the purpose used or that those models were used incorrectly by Duke. Nor have the Intervenor demonstrated that the models they are recommending are superior in any way to those employed by Duke. The Intervenor merely point out that, by using their models in the manner they are recommending, a different result would be achieved. That is an insufficient basis to formulate a valid contention.

In this connection, we note that 10 C.F.R. § 2.758 precludes a challenge to ‘any rule or regulation of the Commission, or any provision thereof,’ in an adjudicatory hearing involving “initial or renewal licensing.” Certain exceptions (not here applicable) are set forth. Resolution of questions raised under this Section is required for renewal licensing. 10 C.F.R. § 54.29(c). The Applicant, however, has inferentially characterized standards set forth in regulatory guides

³²(...continued)
renewal proceeding.

as also not subject to challenge. If that be the intent of Duke's comments, they are not accurate. Standards such as the 50-mile radius used by Duke for calculating expected changes in radiation exposure for dose calculations stem from a regulatory guide (NUREG/BR-0184) and are not "rules or regulations" subject to the prohibitions of 10 C.F.R. § 2.758. They do not have the force of regulations. Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-74-40, 8 AEC 809, 811 (1974). When challenged, they are to be regarded as the views of only one party—the Staff—although they are entitled to considerable prima facie weight. Consumers Power Co. (Big Rock Point Nuclear Plant), ALAB-725, 17 NRC 562, 568 & n.10 (1983). Thus, standards set forth in regulatory guidance documents may be challenged. In this instance, however, the basis relied on by BREDL/NIRS is not adequate to do so.

For all of these reasons, subpart 6 of Amended Contention 2 is rejected in its entirety.

Subpart 7

Failure to submit PRA for peer review

Duke has not obtained peer review for all of the revisions to the PRA and IPE on which it relies for its SAMA analysis. Therefore, there is not an adequate basis for reliance on its SAMA analysis.

As the basis for this contention, the Intervenor cite DG-1110 for the proposition that "[a] peer-review process can be used to identify weaknesses in [a] PRA" as well as "the importance of weaknesses to . . . confidence in the PRA results." BREDL/NIRS Amended Contention 2 at 16 (quoting DG-1110 at 51). DG-1110 defines what is meant by an acceptable peer review: "performed by qualified personnel . . . according to an established process that compares the PRA against [desired] characteristics and attributes," with documented results and identification of both strengths and weaknesses of the PRA. Id. (quoting DG-1110 at 51). According to BREDL/NIRS, DG-1110 also provides "a table with a summary of desired characteristics and

attributes of a peer review.” Id. (internal quotation marks omitted). The Intervenor go on to claim that “[a] peer review is essential in this case. . . .” Id. at 16-17. They cite RAI responses to the effect “that Revision 3 of the PRA was peer reviewed while it was being developed”—inadequate, in BREDL/NIRS view—and that the Catawba PRA “will be reviewed” in the spring of 2002—from which they conclude that “[i]t is not clear that the review has been done.” Id. at 17.

In its response, Duke sets forth a number of reasons why this contention should not be accepted. Most important, it states that an external peer review of the McGuire PRA by the EPRI Nuclear Safety Analysis Center was conducted, that an “internal review” occurred during the conduct of the PRA, and that the RAI response further stated that, “as part of the WOG PRA certification program, [t]he McGuire PRA was reviewed in the fall of 2000.”³³ As for Catawba, the applicant states that the Spring 2002 peer review referenced by the Intervenor as questionable had in fact already been completed.³⁴ The Staff for its part also points out that internal and external peer reviews of PRAs for both plants had been performed, and that the Staff had reviewed certain of these PRAs, adding that “BREDL/NIRS fail to show why this level of peer and Staff review has been insufficient, how further peer review would actually improve existing PRAs, or how further peer review would relate in any specific way to Duke’s SAMA analysis.”³⁵

Furthermore, both Duke and the Staff stress that there is no NRC requirement for peer reviews of PRAs to be performed—at best, a draft regulatory guide cited by BREDL/NIRS suggests that peer reviews of PRAs are desirable. Duke Response at 50; Staff Answer at 22-

³³Duke Response at 51 (citing McGuire RAI Response at 3).

³⁴Id. at 51-52.

³⁵Staff Response at 23.

23. Moreover, they acknowledge (as noted above) that Regulatory Guides are not the equivalent of NRC regulations, but are “routine agency policy pronouncements that do not carry the binding effect of regulations.” See Int’l Uranium (USA) Corp., CLI-00-1, 51 NRC 9, 19 (2000); Curators of the Univ. of Missouri, CLI-95-1, 41 NRC 71, 150 (1995).

In the Board’s view, contention 7 is inadmissible. Putting aside the fact that an adequate peer review appears to have been performed, there is no NRC requirement that there be peer review of PRAs, although peer review in effect may render the PRAs more reliable. For this reason, subpart 7 of Amended Contention 2 is hereby rejected.

Subpart 8

Failure to justify conclusion that return fans are essential

In response to RAI 6, Duke assumes that return fans are essential in order to ensure the effectiveness of hydrogen igniters. This has the effect of inflating the cost of the mitigative measure of hydrogen ignition. However, the assumption is not justified.

As the basis for this contention, BREDL/NIRS state that they agree with NRC “that, based on available technical information, it is ‘not clear that operation of an air-return fan is necessary to provide effective hydrogen control.’” BREDL/NIRS Amended Contention 2 at 17 (citing Supp. 8 to NUREG-1437 at 5-30). They go on to conclude that the necessity of air-return fans for hydrogen control is not supported by NUREG/CR-6427, and “should be rejected unless supported by a detailed analysis, because it results in the artificial inflation of the cost of the mitigative measure of hydrogen ignition.” BREDL/NIRS Amended Contention 2 at 17.

Duke points out that the Intervenors fail to provide any technical basis for their conclusion that air-return fans are not necessary for effective hydrogen control or that only the igniters need be powered during SBO, and, “in any event, offer no basis for the assertion that backup power to the hydrogen igniters without power to the air return fans would be beneficial

or prudent from a safety perspective.” Duke Response at 52-53. The Applicant goes on to state its view that, “as a technical matter, power to the fans is required, as well as the igniters, for effective hydrogen control;” and that, “based on analyses performed to date, a safety concern exists when powering hydrogen igniters without the air return fans also being powered.” Id. at 53 n. 99. Duke states its belief that “containment integrity could be challenged and perhaps even breached if the air-return fans are not powered along with the hydrogen igniters.” Id. It goes on to acknowledge “that more engineering analyses are required to resolve this safety concern.” Id.

With respect to the contention itself, both Duke and the Staff claim that Intervenors’ argument clearly exceeds what can be addressed in a Part 54 licensing proceeding, inasmuch as the issue is not an equipment-aging issue and NEPA and Part 51 require an evaluation of SAMAs. Id. at 53; Staff Answer at 24-25. The Applicant states that it “has provided the required SAMA evaluations and has provided information on the costs and benefits of the alternatives of the backup power to the hydrogen igniters and the air-return fans.” Duke Response at 53 (emphasis omitted). Duke adds that it “is not obligated to justify in the present Part 54 SAMA context any particular position on the installation of specific SAMAs that have been evaluated.” Id. at 53. The Applicant and Staff each conclude that the contention should be rejected as beyond the scope of this Part 54 proceeding. Id. at 53; Staff Answer at 24.

Duke also claims that NEPA and the regulations are not action-forcing, and “[t]he issue of what alternatives should be installed, if any, will be resolved outside NEPA and outside Part 54,” namely in the context of the resolution of GSI-189. Duke Response at 53.

According to the Staff, this contention, even if proven, would not entitle the Intervenors to any relief. Staff Answer at 24. Specifically, “BREDL/NIRS would not be entitled to an implementation of the related mitigative measure (installation of backup power to hydrogen igniters) since this measure is not related to . . . managing the effects of aging.” Id. The Staff

adds that BREDL/NIRS have provided (1) no independent factual basis for its assertion that Duke's assumptions are unjustified, instead relying on the DEISs³⁶ without adequately explaining how the Staff's position (that the need for air return fans is unclear) supports BREDL/NIRS' claim that Duke's assumption should be rejected; and (2) no adequate explanation of the relevance in this context of NUREG/CR-6427. Id.

After review of both parties' positions, the Board views this contention as beyond the scope of matters properly at issue in this proceeding. It has no relationship, insofar as we can tell, to equipment-aging issues. Furthermore, the relief that BREDL/NIRS is apparently seeking—elimination of the option of using air-return fans—is likewise not available in this proceeding. Discussion of that option by Duke has already been pursued by Duke. Indeed, BREDL/NIRS has already obtained all the relief that it could achieve in this NEPA-based proceeding—i.e., the Staff's acknowledgment in its cost-benefit analysis that use of an air-return fan may not be advantageous. In the last analysis, the need to use an air-return fan is a safety issue having nothing to do with equipment aging. The Staff is properly considering this issue through its Part 50 procedures. Thus, subpart 8 of the contention is moot, exceeds the permissible scope of the proceeding, and fails to set forth any relief that the Board could grant. Accordingly, the contention must be rejected.

³⁶In so noting, the Board points out that the Staff's conclusion is based on a dubious use of the MELCOR and CONTAIN codes. See Tr. ACRS 501st Meeting 44-46, available at Adams Accession No. ML031180572; Letter from K.D. Bergeron to ACRS (June 3, 2002) at Tr. 493rd ACRS Meeting Pt. 2 151-56, available at Adams Accession No. ML021700307.

III. CONCLUSION and ORDER

Based on the foregoing, Amended Contention 2 as a whole, and each of its eight subparts, is not acceptable as a contention and, accordingly, must be dismissed.

It is so ORDERED.

The Atomic Safety and Licensing Board*

/RA/

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

/RA/

Lester S. Rubenstein
ADMINISTRATIVE JUDGE

October 2, 2003

*Copies of this Memorandum and Order, together with the following Statement of Administrative Judge Young, have been transmitted this date by e-mail to counsel for each of the parties.

Statement of Administrative Judge Ann Marshall Young:

Having on this date received the final majority decision ruling on Amended Contention 2, with parts of which I concur in results and with parts of which I dissent, and wishing to facilitate the earliest possible issuance of this ruling in accordance with the Commission's recent statement of concern, I will issue my separate opinion, concurring in part and dissenting in part, as an addendum to this date's issuance, on or before October 8, 2003.

/RA/

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
DUKE ENERGY CORPORATION) Docket Nos. 50-369/370/413/414-LR
)
(McGuire Nuclear Station, Units 1 and 2;)
Catawba Nuclear Station, Units 1 and 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULING ON INTERVENORS' AMENDED CONTENTION 2) (LBP-03-17) have been served upon the following persons by deposit in the U.S. mail, first class, or through NRC internal distribution.

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Docket Nos. 50-369/370/413/414-LR
LB MEMORANDUM AND ORDER (RULING ON
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Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 2nd day of October 2003