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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF THE SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

RESPONSE OF DUKE ENERGY CORPORATION TO  
PROPOSED LATE-FILED CONTENTIONS

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PROPOSED LATE-FILED CONTENTIONS

I. INTRODUCTION

On May 20, 2002, the Blue Ridge Environmental Defense League (“BREDL”) and Nuclear Information and Resource Service (“NIRS”) (collectively, “Intervenors”) filed a series of proposed late-filed contentions purportedly amending the previously admitted Consolidated Contention 2 in this matter.<sup>1</sup> In accordance with the schedule established by the Atomic Safety and Licensing Board (“Licensing Board”) by Order of May 13, 2002, Duke Energy Corporation (“Duke”) herein responds to the newly proposed or “amended” contentions. In proposing these contentions, the Intervenors have either exceeded the scope of Consolidated Contention 2 and failed to meet the late-filing standards of 10 C.F.R. § 2.714(a)(1), or otherwise failed to demonstrate, with basis, the existence of a genuine admissible issue under 10 C.F.R.

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<sup>1</sup> Blue Ridge Environmental Defense League’s and Nuclear Information and Resource Service’s Amended Contention 2 (May 20, 2002) (“Amended Contentions”).

§ 2.714(b). Accordingly, these new issues should not be admitted and Consolidated Contention 2 should be dismissed as moot.

## II. BACKGROUND

BREDL/NIRS Consolidated Contention 2, as reframed and admitted by the Licensing Board, challenges the sufficiency of the Severe Accident Mitigation Alternatives (“SAMA”) analyses contained in the Environmental Reports (“ERs”) included with the McGuire-Catawba license renewal application. Specifically, the reframed contention is that, with regard to two narrow issues, the “SAMA analysis is incomplete” and “insufficient to mitigate severe accidents” in that it:

- fails to include information from NUREG/CR-6427<sup>2</sup>; and
- fails to include an evaluation of 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.”

*Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2, Catawba Nuclear Station, Units 1 and 2), LBP-02-04, \_\_ NRC \_\_, slip op. at 97 (Jan. 24, 2002).<sup>3</sup> The Licensing Board further restricted its holding by stating that it was “limited to admitting only the issues reflected in our reframing of the contention, and not any that do not reasonably fall within it.” *Id.*

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<sup>2</sup> NUREG/CR-6427/SAND99-2253, “Assessment of the DCH Issue for Plants with Ice Condenser Containments” (Apr. 2000) (“NUREG/CR-6427”).

<sup>3</sup> The intent of the aspect of the reframed contention which suggests that the SAMA analysis is “insufficient to mitigate severe accidents” is not at all clear. A SAMA analysis by its nature does not mitigate accidents. A SAMA analysis *considers* the risk of specific accident sequences and assesses whether plant enhancements (“alternatives”) to address those sequences might be cost-justified. Consolidated Contention 2, therefore, can challenge only the sufficiency of portions of the SAMA analysis insofar as: (1) the risk portion of the analysis does not consider data from NUREG/CR-6427 and (2) the list of alternatives considered does not include the proposed transmission line.

Shortly after the Licensing Board admitted this contention, Duke responded on January 31 and February 1, 2002, to NRC Staff Requests for Additional Information (“RAIs”) regarding the McGuire and Catawba SAMA analyses, respectively.<sup>4</sup> In its responses, Duke addressed precisely the two issues described in Consolidated Contention 2. With regard to the McGuire facility, Duke’s RAI responses compared the plant’s containment failure probability to the probability figures provided in NUREG/CR-6427.<sup>5</sup> The RAI responses also specifically used those same NUREG containment performance data to reevaluate the risk and benefit values of mitigation alternatives such as installing back-up power to both the plant’s hydrogen igniters and air-return fans.<sup>6</sup> Moreover, the RAI responses also examined the possibility of installing a

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<sup>4</sup> See Letters to NRC from M.S. Tuckman, Duke Energy Corporation, re: “Response to Requests for Additional Information in Support of the Staff Review of the Application to Renew the Facility Operating Licenses of McGuire Nuclear Station, Units 1 & 2 and Catawba Nuclear Station, Units 1 & 2” (Jan. 31 and Feb. 1, 2002) (“McGuire RAI Response,” “Catawba RAI Response”). These responses were provided to the Licensing Board and all parties to the proceeding by letter dated February 1, 2002. Duke also provided additional information on its SAMA analyses to the Staff in telephone conference calls held on February 7 and 25, 2002. See NRC Note to File from J. H. Wilson, NRR, regarding “Information Provided by Duke Energy Corporation Related to Severe Accident Mitigation Alternatives in its License Renewal Application for the Catawba Nuclear Station, Units 1 and 2,” Attachment 3 (Documentation of Information Provided in Teleconference Held on February 25, 2002) (Mar. 14, 2002) (“Catawba RAI Note to File”). See also NRC Note to File from J. H. Wilson, NRR, regarding “Information Provided by Duke Energy Corporation Related to Severe Accident Mitigation Alternatives in its License Renewal Application for the McGuire Nuclear Station, Units 1 and 2,” Attachment 1 (Documentation of Information Provided in Teleconference Held on February 7, 2002) and Attachment 4 (Documentation of Information Provided in Teleconference Held on February 25, 2002) (Mar. 14, 2002) (“McGuire RAI Note to File”). Duke provided copies of these documents to the Licensing Board and parties by letter dated March 20, 2002.

<sup>5</sup> McGuire RAI Response at 6-7.

<sup>6</sup> For this reevaluation, Duke found that the revised risk and benefit values would change to 21.0 person-rem with an averted risk value of \$462,000. (The original SAMA analysis, based on McGuire PRA results, derived risk and benefit values of 5.5 person-rem with an averted risk value of \$121,000.) However, Duke noted that the revised result “over estimates the benefit to the extent that not all of the early containment failure risk

dedicated electrical line to the facility, concluding that the cost (in excess of \$3 million) far outweighed the benefit produced (roughly \$300,000 even based on the NUREG containment failure data).<sup>7</sup> Duke performed an identical analysis of these issues for its Catawba facility, reaching similar results.<sup>8</sup>

In a telephone conference call with the parties and subsequent order regarding submission of late-filed contentions in this proceeding related to Consolidated Contention 2, the Licensing Board made clear that — in furtherance of narrowing the issues still in dispute under Consolidated Contention 2 and to enhance settlement discussions — it would permit the Intervenor a limited opportunity to clarify any issues remaining under the umbrella of that contention.<sup>9</sup> The Licensing Board emphasized that such clarifications are to be “based on new information based upon Duke’s responses to Staff RAIs,” and that “[a]ny such late-filed

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can be eliminated by providing hydrogen control.” McGuire RAI Response at 6-8. Subsequently, Duke estimated the cost to power a subset of the igniters plus one air-return fan from an ac-independent power source to be approximately \$540,000 per site. Attachment 1 to McGuire RAI Note to File at 2.

<sup>7</sup> *Id.* at 13-15.

<sup>8</sup> Catawba RAI Response at 5-7, 12-14. With regard to reevaluation using NUREG/CR-6427 data, the revised risk and benefit values were 12.0 person-rem with an averted risk value of \$264,000 (from original values of 7.3 person-rem and an averted risk value of \$161,000). Catawba RAI Response at 7. Subsequently, Duke estimated the cost to power a subset of the igniters plus one air-return fan from an ac-independent power source to be approximately \$540,000 per site. Attachment 1 to Catawba RAI Note to File at 2. Duke also found that to install a dedicated electrical line to the facility would cost in excess of \$8 million, with a benefit of approximately \$750,000. Catawba RAI Response at 14.

<sup>9</sup> See “Order (Addressing Matters Discussed at April 29, 2002, Telephone Conference and Scheduling June 18, 2002, Telephone Conference)” (May 13, 2002), at 1 (“May 13, 2002, Order”); Transcript of April 29, 2002, Telephone Conference at 904-05 (“[T]he late-filed contentions that we’re talking about now [] would be based on any new information not previously available that is currently to be found in Duke’s responses to the RAIs relating to contention 2”) (statement of Judge Young).

contentions shall comply with all relevant requirements of NRC rules relating to such late-filing.”<sup>10</sup> Those requirements are set forth in 10 C.F.R. §§ 2.714(a)(1)(i)-(v).<sup>11</sup> Indeed, the Commission has made clear in recent license renewal adjudications that the RAI process itself is not sufficient to serve as the basis for a late-filed contention.<sup>12</sup> Because the prospective Intervenor are expected to review the license renewal application and base their contentions on claimed omissions or errors therein, they cannot simply rely on an RAI and RAI response, and therefore claim “new” information to justify a late contention.<sup>13</sup>

Moreover, under the Commission’s rules of practice, to be deemed admissible any amended contentions must also have an adequate basis pursuant to 10 C.F.R. § 2.714(b)(2), and entitle the Intervenor to relief pursuant to 10 C.F.R. § 2.714(d)(2)(ii). As explained below, none

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<sup>10</sup> May 13, 2002, Order at 1-2.

<sup>11</sup> Those criteria include a showing of good cause for failure to file on time; the availability of other means by which the petitioners’ interest will be protected; and the extent to which: the petitioners’ participation may reasonably be expected to assist in developing a sound record; the petitioners’ interest will be represented by existing parties; and the petitioners’ participation will broaden the issues or delay the proceeding. 10 C.F.R. § 2.714(a)(1).

<sup>12</sup> See *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349-50 (1998) (“Under our longstanding practice, contentions must rest on the *license application*, not on NRC Staff reviews.”) (emphasis in original); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-39 (1999).

<sup>13</sup> In this regard, the Intervenor cannot hide behind a blanket argument that the RAI responses created a brand new day in this proceeding and a new opportunity for proposing contentions. To hold otherwise would fly in the face of the Commission decisions in *Calvert Cliffs* and *Oconee*, cited above. Those decisions state that an RAI is not a basis for a new late-filed contention; because contentions must be based on the application itself. Likewise, it would follow that a contention cannot simply be based on a response to an RAI if the contention could have been drafted based on the application. If it could, an intervenor would ignore the RAI and wait for the RAI response to claim “new information.” As discussed further below, the Intervenor here failed to meet their burden to timely evaluate the application on their own.

of the proposed amended contentions meets the requirements to be properly admitted to this proceeding.

### III. DISCUSSION

In the discussion below, Duke first demonstrates in Section III.A that the proposed amended contentions should not be admitted in their entirety because — to the extent the amended contentions are even within the scope of Consolidated Contention 2 — no further relief can be granted in this proceeding. Furthermore, to the extent they exceed the scope of Consolidated Contention 2 — which many appear to do — they are not based on “new information” and there is no adequate showing that they should be considered under the criteria for late-filed contentions of 10 C.F.R. § 2.714(a)(1).<sup>14</sup> Then, in Section III.B, Duke addresses, on an issue-by-issue basis, each proposed amendment to Consolidated Contention 2. That discussion of each issue addresses specific objections to each amended issue, including specific timeliness objections under 10 C.F.R. § 2.714(a) and specificity and basis objections under 10 C.F.R. § 2.714(b).

#### A. *The Proposed Amendments to Consolidated Contention 2 Should Not Be Admitted For Fundamental Overarching Reasons*

##### 1. The Proposed Amendments Fail to Identify Relief That Can Be Granted in This Proceeding

In Consolidated Contention 2, as admitted by the Licensing Board, the Intervenor argued that Duke’s SAMA evaluations failed to include information from NUREG/CR-6427 and failed to consider the alternative of a dedicated transmission line from a nearby hydroelectric facility, and therefore concluded that the SAMA evaluations were

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<sup>14</sup> The Licensing Board explicitly directed that “[a]ny late-filed contentions based on new information based upon Duke’s responses to Staff RAIs shall . . . comply with all relevant requirements of NRC rules relating to such late-filing.” May 13, 2002, Order at 1-2. Lateness arguments are amplified in the issue-by-issue responses below.

incomplete. The Intervenor's proposed amendments to Consolidated Contention 2 are, according to the amended contentions themselves (at page 3), "not intend[ed] to alter any aspect of the previously admitted contention" and are, conversely, intended *only* "to provide specific information about deficiencies in Duke's discussion of NUREG/CR-6427 and the dedicated line alternative." (As discussed below, the Intervenor has in fact exceeded this self-proclaimed intent in almost every case. Accordingly, these amendments are late-filed without any showing of good cause.) However, even assuming that the proposed amendments are intended to address deficiencies still perceived in the SAMA evaluations *related to the information in NUREG/CR-6427*, they fail to identify any further relief that could be granted based upon Consolidated Contention 2. The amendments would exceed the scope of what can be litigated in a Part 54 plant-specific license renewal context. Therefore, they must be rejected in their entirety.

In its license renewal ERs, Duke provided SAMA evaluations for both McGuire and Catawba, as required by 10 C.F.R. § 51.53(c)(3)(ii)(L).<sup>15</sup> These SAMA evaluations were based on Duke's plant-specific, living Probabilistic Risk Assessments ("PRAs") for McGuire and Catawba. The PRAs have evolved from the assessments prepared for the prior NRC-reviewed Individual Plant Examinations ("IPEs") for internal events and Individual Plant Examinations for External Events ("IPEEEs") for McGuire and Catawba. While NUREG/CR-6427 was not explicitly addressed in the ER or SAMA evaluations, Duke maintained that the underlying issues identified in the NUREG (an early containment failure risk dominated by hydrogen combustion events in SBO sequences) were addressed in the SAMA evaluations. Regardless of one's view of this position, however, Consolidated Contention 2 is now moot

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<sup>15</sup> The McGuire SAMA analysis was described in Section 4.21 of the McGuire ER and the analysis was provided in Attachment K to the ER. The Catawba evaluation was

because — in response to specific RAIs from the NRC — Duke supplemented its SAMA analyses to specifically incorporate the NUREG/CR-6427 data on containment failure and to recalculate benefits of proposed mitigation alternatives in light of those data. The RAI responses specifically include an assessment of the relevant SAMAs related to hydrogen combustion events (such as providing backup power to the hydrogen igniters and the dedicated transmission line), utilizing both Duke’s PRA assumptions and NUREG/CR-6427 assumptions regarding containment failure. The RAI responses also include an evaluation of the SAMA of a dedicated transmission line. Duke has now indisputably addressed the two specific issues raised in Consolidated Contention 2.

The Intervenors in this Part 54 license renewal proceeding are not free to litigate the issue of the ultimate resolution of the vulnerability of ice condenser plants with respect to containment failure due to hydrogen combustion events. Both of the narrowly framed issues in Consolidated Contention 2 derive from the technical issue of the susceptibility of ice condenser containment reactors (such as McGuire and Catawba) to containment failure from a loss of power to the hydrogen igniters used in those containments in a Station Blackout (“SBO”) sequence. This technical issue is being addressed by the NRC for all affected plants as part of Generic Safety Issue 189 (“GSI-189”). GSI-189 was established out of an ongoing effort by the NRC to risk-inform its regulation 10 C.F.R. § 50.44, which sets forth standards for combustible gas control systems in light-water-cooled power reactors.<sup>16</sup> The NRC Office of Nuclear

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described in Section 4.21 of the Catawba ER and the analysis was provided in Attachment H to the Catawba ER.

<sup>16</sup> See Memorandum to J. Larkins, Executive Director, ACRS, from F. Eltawila, Director, Division of Systems Analysis and Regulatory Effectiveness, RES, re: “RES Proposed Recommendation for Resolving Generic Safety Issue 189: ‘Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident’” (May 13, 2002), at 1 (“Eltawila Memorandum”); Availability

Regulatory Research (“RES”) recently completed its technical assessment of GSI-189 in May 2002.<sup>17</sup> It briefed the NRC Advisory Committee on Reactor Safeguards on the issue on June 6, 2002, and has stated that it will recommend a resolution of the issue to the NRC Office of Nuclear Reactor Regulation by the end of July 2002, with further regulatory action (by rulemaking, guidance document, or both) to follow.<sup>18</sup> It is clear that the issue of mitigation alternatives, such as backup power to hydrogen igniters, is now being evaluated by the NRC Staff as a present-day issue concerning the affected plants’ current licensing bases.<sup>19</sup> As observed by the NRC Staff in the draft environmental impact statement supplements for both McGuire and Catawba, the SAMA evaluations and the proposed mitigation alternatives related to hydrogen control in SBO sequences (*e.g.*, supplying back-up power to the existing hydrogen igniters from an independent source) *may* be cost-beneficial under certain assumptions.<sup>20</sup> However, the Staff states that the issue of whether these plant modifications should be made is being specifically examined by the NRC in connection with the resolution of GSI-189. This, therefore, is not an issue that can be explored any further in this proceeding. There is ample

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of Draft Rule Wording, “Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors,” 66 Fed. Reg. 57,001 (Nov. 14, 2001).

<sup>17</sup> Eltawila Memorandum at 1.

<sup>18</sup> *Id.* at 1, 4.

<sup>19</sup> *Id.*; *see also* Draft NUREG-1437, Supp. 8, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding McGuire Nuclear Station, Units 1 and 2” (May 2002) (“McGuire draft SEIS”), at 5-29; Draft NUREG-1437, Supp. 9, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Catawba Nuclear Station, Units 1 and 2) (May 2002) (“Catawba draft SEIS”), at 5-28 (“The need for plant design and procedural changes will be resolved as part of GSI-189 and addressed for Catawba and other ice-condenser plants as a current operating license issue.”).

<sup>20</sup> *See* McGuire draft SEIS at 5-30; Catawba draft SEIS at 5-27.

NRC precedent for the proposition that issues being addressed, or about to be addressed, as a generic rulemaking matter are not appropriate for litigation in individual licensing cases.<sup>21</sup> To the extent the Intervenors would amend Consolidated Contention 2 on this issue, they are amending a matter that they can no longer litigate. The original contention, and all that would flow from it, is moot.

Resolution of the technical issue related to hydrogen combustion events is also, quite clearly, a current operating licensing basis issue to be addressed in the normal Part 50 context. It is not an equipment aging or aging management issue within the scope of a Part 54 license renewal proceeding. As has often been cited in this proceeding, and elsewhere, the Commission has specifically limited the scope of license renewal proceedings to matters uniquely relevant to the extended period of operation and to “plant systems, structures, and components (as delineated in 10 C.F.R. § 54.4) that will require an aging management review for the period of extended operation or are subject to an evaluation of time-limited aging analyses.”<sup>22</sup> The ultimate resolution of GSI-189 and the ultimate regulatory decision on the SAMAs evaluated with respect to the containment performance issue addressed in NUREG/CR-6427 (*i.e.*, those involving hydrogen combustion events in a Station Blackout sequence) do not relate to adequately managing the effects of aging during the period of extended operation, and therefore need not be implemented as part of a Part 54 license renewal review. There can be no further analysis of the issue in this proceeding.

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<sup>21</sup> See, *e.g.*, *Oconee*, CLI-99-11, 49 NRC at 345; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179 (1988); *Pacific Gas and Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 29-30 (1993).

<sup>22</sup> *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

The Intervenor attempt to circumvent the limits of a Part 54 proceeding by cloaking their argument and proposed amended contentions in terms of the National Environmental Policy Act (“NEPA”) and the proverbial “hard look” at environmental issues required by NEPA. The Intervenor suggest (at page 18) that NEPA allows them, under Consolidated Contention 2, to question the “adequacy of any information that Duke might submit with respect to the relevance of NUREG-6247 [sic] and the SAMA of a dedicated offsite power line.” However, the NEPA rubric is no more than a distracting mantra. Duke has provided precisely the SAMA evaluation required by the Commission’s regulations and has further provided exactly the evaluation of mitigation alternatives requested in Consolidated Contention 2 (a cost/benefit assessment of alternatives based on NUREG/CR-6427 containment performance assumptions and a cost/benefit assessment of the dedicated transmission line). There is no basis given (nor could there be) to claim that the NRC’s regulations have not been satisfied or to assert that there has not been a “hard look” at SAMAs.<sup>23</sup>

The Intervenor also incorrectly interpret both the scope of actions required by NEPA and how NEPA’s requirements have been incorporated into NRC regulations. In both instances, what is required is only that SAMAs be considered, not that they be subsequently implemented. The United States Supreme Court has unequivocally affirmed NEPA’s emphasis on process rather than results, holding that “NEPA itself does not mandate particular results, but simply prescribes the necessary process” for preventing “uninformed — rather than unwise — agency action.”<sup>24</sup> Moreover, the court went on to explain, “NEPA imposes no substantive

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<sup>23</sup> The lack of basis for the proposed amendments is also further discussed below in the issue-by-issue response.

<sup>24</sup> *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-51 (1989).

requirement that mitigation measures actually be taken.”<sup>25</sup> In fact, the sole relief available under NEPA is further analysis. Under Consolidated Contention 2, the Intervenors cannot argue under NEPA that certain hardware modifications must be made. And, they have failed to demonstrate what further analysis could be made with respect to the two issues raised in Consolidated Contention 2. All of the further issues identified cross into the ultimate resolution of the generic technical issue or exceed the scope of the parent contention.

10 C.F.R. § 51.53(c)(3)(ii)(L) describes the necessary SAMA information to be provided by a license renewal applicant in its post-construction ER. The regulation requires only that “[i]f the staff has not previously considered [SAMAs] for the applicant’s plant in an [EIS] or related supplement or in an environmental assessment, a consideration of [SAMAs] must be provided” (emphasis added).<sup>26</sup> Such a consideration was accordingly provided by Duke in its ERs and its RAI responses. Consistent with NEPA, there is no requirement in the regulation that any SAMA considered by the licensee must be implemented as well.<sup>27</sup> Petitioners have failed to show where, at any point in its consideration of SAMAs, Duke has failed to comply either with

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<sup>25</sup> *Id.* at 353 n.16.

<sup>26</sup> In amending 10 C.F.R. Part 51 to include consideration of SAMAs in the license renewal process, the Commission explained that it “has reclassified severe accidents as a Category 2 issue, requiring only that alternatives to mitigate severe accidents be considered for those plants” where such consideration had not already been done. The Commission went on to describe the scope of its review as merely “determin[ing] whether [the applicant’s SAMA analysis] constitutes a reasonable consideration of [SAMAs].” Final Rule, “Environmental Review for Renewal of Nuclear Power Plant Operating Licenses,” 61 Fed. Reg. 28,467, 28,481-82 (June 5, 1996).

<sup>27</sup> The Commission reaffirmed this position as recently as 2001, when it denied a petition for rulemaking seeking the elimination of SAMA consideration in license renewal. The Commission explained that the “NRC’s obligation to consider mitigation [in an EIS] exists whether or not mitigation is ultimately found to be beneficial and whether or not mitigation ultimately will be implemented by the licensee.” Denial of Petition for Rulemaking, “Nuclear Energy Institute; Denial of Petition for Rulemaking,” 66 Fed. Reg. 10,834, 10,836 (Feb. 20, 2001) (*citing Methow Valley*) (emphasis added).

NEPA or the NRC's environmental analysis requirements. Duke's analysis fully meets the NEPA mandate of a reasonable assessment to allow informed decision-making on license renewal.

In sum, and as further discussed below in connection with each proposed amendment, the Intervenor's have not provided any adequate basis on which to challenge the *reasonableness* of Duke's analysis on the two issues of Consolidated Contention 2, nor have they identified any further analysis that should be performed as relief in this proceeding. With respect to the issue of NUREG/CR-6427, the SAMA evaluations have already been supplemented with new risk and benefit values based on the NUREG containment failure assumptions (which Duke continues to maintain are overly conservative). With respect to the dedicated transmission line, the Intervenor's have offered no amended issue seeking further analysis of that issue. (In fact, the issue is not substantively addressed in the Intervenor's' pleading.) Accordingly, there is no basis offered for any further SAMA *evaluation* that could be granted as relief in this proceeding.

2. Challenges to the PRAs Exceed the Scope of Consolidated Contention 2 and the Scope of this Proceeding

The Intervenor's attempt to create a challenge to the SAMA evaluations by questioning and challenging the underlying McGuire and Catawba PRAs. However, it is simply not enough for the Intervenor's to argue that the McGuire and Catawba PRAs are inadequate or (as the Intervenor's have actually done) that they cannot determine that the PRAs are adequate. The PRAs, taken broadly, are *not* at issue in this proceeding. For one, any issues challenging the PRA or the SAMA methodology are late; the PRAs and the SAMA methodology are not implicated by the RAI responses or altered by the RAI responses. Such untimely challenges (with no good cause shown) exceed the scope of the limited opportunity provided by the Licensing Board to identify what might still be at issue under Consolidated Contention 2. In

addition, the Intervenor's assertions and questions do not establish a basis to conclude that the SAMA evaluations of the two relevant issues are inadequate or that further evaluation is needed to meet the NEPA goal of informed decision-making.

As applied in the nuclear industry, a PRA is generally conceptualized as three major pieces:

- An assessment of core damage frequency (Level 1);
- An assessment of containment performance and fission product releases during core damage accidents (Level 2); and
- An assessment of public health consequences (Level 3).

PRAs are periodically updated to reflect plant changes that have been made, as well as to reflect recent plant and industry operating experience. The McGuire and Catawba SAMA evaluations utilize information developed from Level 1, 2, and 3 PRAs. NUREG/CR-6427 itself was primarily a simplified Level 2 analysis focusing on early containment failure probability for those plants with ice condensers. Duke, in its original SAMA evaluation, utilized more realistic and plant-specific information from its own McGuire and Catawba Level 2 PRAs to assess containment performance. Nonetheless, in response to RAI 4, Duke specifically utilized NUREG/CR-6427 containment performance assumptions to recalculate the risk and benefit values of the proposed SAMAs. In addition, Duke evaluated the SAMA of a dedicated transmission line in response to RAI 6. In essence, in the Level 2 analysis for the revised SAMA information, Duke modified entries in the release category matrix to force early containment failure probability to be equivalent to the NUREG/CR-6427 value, and then used these results to recalculate offsite exposure (person-rem) results needed for the cost/benefit calculation in the SAMA evaluation. The RAI responses specifically provide a higher initial value for offsite exposure based on the NUREG containment performance assumptions, such that for

implementation of a SAMA there is a larger reduction in offsite exposure (*i.e.*, a greater benefit). The relief requested and available in this proceeding has, therefore, been provided.

The proposed amended contentions attempt to expand the hearing to issues far beyond Consolidated Contention 2. They seek to broadly challenge all levels of the McGuire and Catawba PRAs, with no nexus drawn to either the SAMAs related to hydrogen combustion or the SAMAs involving the dedicated transmission line. There is no regulatory basis provided for such a broad challenge to the PRAs. A license renewal proceeding, under the guise of a SAMA issue, is not an opportunity to engage in a wide-ranging academic inquiry into a PRA.

In addition, as discussed further below, the Intervenors have also done no more than raise “questions” about the PRAs underlying the McGuire and Catawba SAMA evaluations. In contrast, the NRC Staff has concluded, based on its informed technical review, that the McGuire and Catawba PRAs (as originally developed for the NRC Staff-approved IPEs and IPEEEs, and as subsequently revised) meet the intent of Staff guidance documents and provide a reasonable basis to assess design or operational vulnerabilities and to assess SAMAs.<sup>28</sup> Moreover, the information and analysis expected in a SAMA evaluation is discussed in Section 4.20 of NRC Regulatory Guide 4.2, Supplement 1, at 4.2-S-48 through 4.2-S-50.<sup>29</sup> The expected elements have been provided. With respect to the SAMA evaluation that incorporates NUREG/CR-6427 or with respect to the evaluation of the dedicated transmission line, the Intervenors have not identified, with any basis, any further evaluation that can be or should be

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<sup>28</sup> See generally McGuire draft SEIS at 5-9; Catawba draft SEIS at 5-9.

<sup>29</sup> See Supplement 1 to Regulatory Guide 4.2, “Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses” (Sept. 2000) (“RG 4.2”).

performed. Asking “questions” is simply insufficient to meet the Intervenor’s clear burden under the rules.

In sum, broad-based challenges and questions related to the McGuire and Catawba PRAs are beyond the scope of Consolidated Contention 2 and this license renewal proceeding, and could not result in relief in this proceeding. Consolidated Contention 2 has been resolved to the extent required in this proceeding and is effectively moot. The contention and the proposed “amendments” therefore should be dismissed.

3. Intervenors Have Failed To Make An Adequate Showing With Respect To The Late-filed Factors of 10 C.F.R. § 2.714(a)(1)

Given that the so-called “amended” contentions are late-filed — regardless of whether they modify Consolidated Contention 2 or raise new issues — Intervenor’s are obligated under 10 C.F.R. § 2.714(a)(1) to establish that, based upon a balancing of the factors listed in the regulation, the late contentions should be considered. The Intervenor’s, in essence, attempt to justify lateness by explaining their interpretation and assumptions regarding the scope of the admitted contention, and by the Licensing Board’s decision to allow them time to amend Consolidated Contention 2 based on the RAI responses to identify any matter that might still be in dispute under that contention. The focus of Intervenor’s argument (at page 19) is on the fact that they should be allowed to challenge the SAMA evaluations, as supplemented by the RAI responses, with respect to “the degree to which NUREG/CR-6427 was considered” and with respect to “the cost-benefit analysis for a dedicated [transmission] line.”

The problem with this argument, however, is that the Intervenor’s amended contentions actually over-reach the scope of the lateness justification. The alleged issues identified by the Intervenor’s far exceed the scope of the SAMA evaluations as those evaluations relate to the NUREG/CR-6427 issue or to the cost-benefit assessment of the dedicated

transmission lines. Issues that challenge the PRA itself, issues that challenge the approach to the SAMA evaluation as described in the original ERs (such as issues related to uncertainties, accident consequence analyses, and peer review), issues that raise generic concerns (such as issues related to source term and the radiological consequence analysis), and issues contending that certain scenarios (such as earthquakes and floods) are not addressed in the PRA, all could have been raised by the Intervenors in the initial proposed contentions.<sup>30</sup> For these expansive issues, the Intervenors have failed to provide any justification at all for late filing. The argument regarding Intervenors' interpretation of Consolidated Contention 2 is neither responsive nor convincing with respect to "good cause" to raise these new issues. While "good cause" might be presumed for an issue actually based on an RAI response, it cannot be presumed for issues such as those the Intervenors raise here. With a lack of good cause, the burden of justifying a late contention is particularly heavy.<sup>31</sup> That burden has not been met here.

With respect to the other factors of 10 C.F.R. § 2.714(a)(1), the Intervenors' showing is cursory at best. Most importantly, contrary to Intervenors' assertion, admission of any of these proposed "amended" contentions would clearly broaden this hearing. Section 2.714(a)(1)(v) requires evaluation of the extent to which admission of such contentions "will broaden the issues or delay the proceeding." As demonstrated at length below, the lengthy and disorganized "amended" contentions proposed by the Intervenors bear little if any relation to the limited scope of Consolidated Contention 2 as set forth by the Licensing Board in LBP-02-04

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<sup>30</sup> The fact that Intervenors now have secured counsel to craft issues, and did not previously, does not in any way affect this analysis.

<sup>31</sup> See *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986) ("If the proponent of a contention fails to satisfy [the "good cause" factor], it must make a 'compelling' showing with respect to the other four factors.") (citations omitted).

and its subsequent May 13, 2002, Order. There is only one contention admitted. That contention raises two narrow issues. Those issues have been effectively mooted. A hearing on the wide-ranging issues now proposed would not only create a hearing where none is otherwise required, it would introduce into litigation matters of potentially expansive scope. The Intervenor's assertion with respect to this factor (at page 20) — that the issues involve only “litigation of issues that were raised in the original contention 2” — is plainly disingenuous. The actual issues proposed again far exceed the reach of the Section 2.714(a)(1) lateness argument. Both the Commission and previous licensing boards have ruled that, pursuant to Section 2.714(a)(1)(v), such contentions are not properly admitted to an ongoing proceeding.<sup>32</sup> A balancing of the factors of Section 2.714(a)(1) in the present case reveals no adequate (much less compelling) showing to offset the lack of good cause for late-filing these wide-ranging contentions.

*B. The Proposed Amendments to Consolidated Contention 2 Should Not Be Admitted For Various Issue-Specific Reasons*

1. Alleged Failure of SAMA Analyses to Evaluate the Alternative of Not Renewing the McGuire and Catawba Operating Licenses

The Intervenor's claim in their proposed amended Contention 1 (at page 4) that “Severe Accident Mitigation Alternatives for McGuire and Catawba should include the alternative of not renewing the McGuire and Catawba reactors.” As the supporting basis provided for this late-filed contention, they assert that the NRC is required by regulation<sup>33</sup> to

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<sup>32</sup> See *Braidwood*, CLI-86-8, 23 NRC at 248 (stating that “it should have been clear to the Board that admission of the contention would substantially delay completion of the proceeding”); *Tx. Utils. Generating Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), LBP-83-75A, 18 NRC 1260, 1262-63 (1983) (finding that any attempt to litigate the proposed contention “would be both endless and fruitless”).

<sup>33</sup> Although no regulation is cited by Intervenor's, 10 C.F.R. § 51.95(c)(4) instructs “the NRC Staff, adjudicatory officers, and Commission [to] determine [given the information in NUREG-1437, the plant-specific SEISs and ERs, and any significant new information] whether or not the adverse environmental impacts of license renewal are so great that

consider “whether, in light of new information, it would be unreasonable to preserve the option of license renewal,” and that neither Duke’s ERs nor its RAI responses address this issue. Further, they state (at page 4) that Duke’s discussion of SAMAs “does not include discontinuing operation, which is the most obvious means of mitigating the risks of a containment breach accident that are set forth in NUREG/CR-6427.” Accordingly, Intervenors characterize Duke’s environmental analysis as “seriously deficient.” However, Intervenors are wrong on all counts in this frivolous contention. Moreover, the contention exceeds the scope of Consolidated Contention 2 and is untimely. For each of these reasons, the amended contention should not be admitted.

Contrary to Intervenors’ claims of a failure to consider the “no-action” alternative, that issue has in fact already been addressed generically for license renewal in the generic environmental impact statement.<sup>34</sup> As described by the NRC in NUREG-1437, generic impacts of “no action” include the effects of using alternative power sources and of decommissioning the no-longer-operating facility.<sup>35</sup> Moreover, the Intervenors have apparently failed to read or have chosen to ignore the publicly available ERs previously submitted to the NRC as part of the McGuire-Catawba license renewal application. Both ERs explicitly address the “no-action” alternative at length, including with regard to decommissioning impacts and alternative sources of energy.<sup>36</sup> The ERs were submitted in June 2001 and were certainly publicly available at the

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preserving the option of license renewal for energy planning decisionmakers would be unreasonable.”

<sup>34</sup> See NUREG-1437, Vol. 1, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants” (May 1996) (“NUREG-1437” or “GEIS”), at Section 8.2, “Environmental Impacts of the No-Action Alternative.”

<sup>35</sup> *Id.* at Sections 8.2 — 8.4.

<sup>36</sup> See McGuire ER at Sections 7.3 — 7.5; Catawba ER at Sections 7.3 — 7.5.

time the NRC published a Notice of Opportunity for Hearing on Duke's application in August 2001.<sup>37</sup> Had they chosen to do so, the Intervenor could have filed a timely challenge to the treatment of this issue in the ERs last year. (The NRC has also considered the "no-action" alternative, and the associated effects of ceasing operation, in the draft SEISs it recently issued evaluating the McGuire and Catawba facilities as part of the license renewal process.<sup>38</sup>) Therefore, while Intervenor may be correct that the NRC must consider the "no-action" alternative for plants seeking renewed licenses, they fail to acknowledge that the issue has already been amply addressed. The proposed contention exceeds the scope of Consolidated Contention 2, is untimely, and is, in any event, baseless. Therefore, it is clearly inadmissible.

As an added consideration, the Intervenor's claim of a failure to address the "no-action" alternative in the McGuire-Catawba SAMA analyses also falls outside the scope of Consolidated Contention 2. The Licensing Board's January 24, 2002, Memorandum and Order describes the range of this contention to include only the alleged failure to consider (1) data from NUREG/CR-6427 and (2) the alternative of constructing a dedicated power line to McGuire and Catawba from their respective nearby hydroelectric stations.<sup>39</sup> The Licensing Board was clear as to the limited scope of this contention, stating that it would admit no issues "that do not reasonably fall within [the described contention]."<sup>40</sup> By no stretch of the imagination can one read Intervenor's claim of a failure to consider the "no-action" alternative as coming within the

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<sup>37</sup> See "Duke Energy Corporation, McGuire, Units 1 and 2, and Catawba, Units 1 and 2; Notice of Acceptance for Docketing of the Application and Notice of Opportunity for a Hearing Regarding Renewal of Facility Operating License Nos. NPF-9, NPF-17, NPF-35, and NPF-52 for an Additional 20-Year Period," 66 Fed. Reg. 42,893 (Aug. 15, 2001).

<sup>38</sup> See McGuire draft SEIS at Section 8.0; Catawba draft SEIS at Section 8.0.

<sup>39</sup> See *Duke Energy Corp.*, LBP-02-04, slip op. at 97.

<sup>40</sup> *Id.*

scope of the previously admitted Consolidated Contention 2. The “no-action” alternative is, quite simply, *not* a SAMA. SAMAs are, as their name suggests, possible alternatives to mitigate severe, beyond-design-basis accidents at a power reactor facility. Intervenors point to no NRC regulation that would bring the alternative of not seeking a renewed license within the scope of a SAMA analysis, and indeed no such regulation exists.<sup>41</sup> Intervenors have thus failed to demonstrate the existence of a genuine dispute with Duke “on a material issue of law or fact,” as is required by 10 C.F.R. § 2.714(b)(2)(iii).

2. Alleged Failure To Provide Adequate Support For Conclusory Results in RAI Responses (Publication of PRA)

Proposed amended Contention 2 is, on its surface, a simple argument that the SAMA analysis is not complete because Duke has not published its PRA. However, behind this superficial argument is a broad and unsupported challenge to the substance of the PRA. But there is no basis for a contention that the PRA must be published. And, as is discussed in Section III.A above, a challenge to the PRA is, in any event, untimely as well as inadmissible in this proceeding. Furthermore, the Intervenors’ “questions” purportedly challenging the PRA do not constitute a basis for admission of a substantive issue with respect to the McGuire and Catawba PRAs.

Addressing the disclosure issue first, there is simply no regulatory basis to require “publication” of the PRA as part of a SAMA evaluation. Certainly nothing in 10 C.F.R. § 51.53(c)(3)(ii)(L) would require that step as part of a SAMA evaluation. Similarly, Regulatory Guide 4.2, Supp. 1, which defines the expected elements of a SAMA evaluation, does not require

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<sup>41</sup> Consideration of SAMAs is required, where none has previously been done, by 10 C.F.R. § 51.53(c)(3)(ii)(L). There is no mention in that regulation of the “no-action” alternative.

publishing the PRA. Indeed, the Regulatory Guide clearly contemplates that SAMA evaluations merely *draw upon* prior probabilistic assessments:

The identification of possible SAMAs and evaluation of their merits should use the information and analyses developed for the plant-specific individual plant examination (IPE) for severe accident vulnerabilities (and modifications made subsequent thereto) and, when available, the plant-specific individual plant examination of external events (IPEEE) for severe accident vulnerabilities (*e.g.*, earthquakes, fires, winds). If an IPEEE has not been completed, the applicant may use the results of IPEEEs performed for other plants, adjusted for plant-specific variables.

RG 4.2, at 4.2-S-49. The guidance further specifies that the “*results* of [certain] analytical steps should be presented in the ER.” *Id.* (emphasis added). Consistent with this guidance, there is no basis under NEPA to inflate the requirement for a SAMA evaluation into a requirement to prepare, and publish, a PRA.

Indeed, the Intervenor’s proposed amendment confuses contentions and discovery. In effect, the Intervenor wants to review the PRA in search of an issue. However, under the threshold requirements of 10 C.F.R. § 2.714(b)(2)(i), (ii) and (iii), the burden is on the Intervenor to come forward with a valid basis for a contention *before discovery*. The Commission has held repeatedly over time that “[n]either Section 189a of the [Atomic Energy] Act nor Section 2.714 . . . permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.”<sup>42</sup> A contention is not

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<sup>42</sup> *Duke Energy Corp.*, LBP-02-04, slip op. at 14 (citing *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 468 (1982)); see also *Oconee*, CLI-99-11, 49 NRC at 335 (citing Final Rule, “Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process,” 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989)).

to be admitted simply to afford discovery; the burden is on the Intervenor to come forward with sufficient facts to form the basis of an admissible contention.<sup>43</sup>

In the basis statement for this amended issue, the Intervenor attempts to justify publication of the PRA (including the Level 1 PRA) by arguing “examples” of the alleged need to “verify the reasonableness” of the SAMA analysis. However, these new issues far exceed the scope of Consolidated Contention 2 and seek to challenge the PRA itself. As such, these issues are late without good cause. Duke did not change the PRA to prepare the RAI responses. The Intervenor’s references (at pages 5 and 6) to Duke’s January 31 and February 1, 2002, responses to RAI 1a, 1b, and 1c go to issues far beyond the issues in NUREG/CR-6427 and far beyond any issue related to the dedicated transmission line. (The issues of Consolidated Contention 2 are actually addressed in Duke’s response to RAIs 3 through 6, *not* in the response to RAI 1 referenced in this so-called “amendment.”) There can be no doubt that the Intervenor is in reality raising an untimely challenge to the PRA and the SAMA evaluation beyond the scope of issues now before the Licensing Board in this proceeding.

Furthermore, there is no valid technical or regulatory basis for the “questions” that the Intervenor identifies in their basis for this proposed contention. The Intervenor’s basis statement reflects no more than the Intervenor’s own misunderstandings. The Intervenor is merely questioning — without any countervailing evidence — *Level 1* PRA issues related to core damage frequency (*e.g.*, diesel generator reliability and steam generator tube rupture) unrelated to NUREG/CR-6427 or to the dedicated transmission line SAMA. The Intervenor offers no

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<sup>43</sup> See, *e.g.*, *Oconee*, CLI-99-11, 49 NRC at 334 (“[F]ull adjudicatory hearings are [to be] triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions”); *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998) (“A contention’s proponent, not the

specifics on these issues, much less a basis for a contention. The Intervenor also raise several superficial arguments, such as merely quibbling with the “qualitative” discussion of certain issues in the SAMA evaluation, where there is no requirement that a more quantitative discussion needs to be included in a SAMA evaluation. Therefore, none of these issues should be admitted.

In sum, the Intervenor in this proposed amended contention are in effect seeking discovery in search of an issue. However, it is the Intervenor’s burden under clear Commission rules and precedent to supply a basis for a contention *before it is admitted*. They have not done so. Nor have Intervenor provided any viable basis for their assertion that Duke’s PRAs must be published in order for its SAMA analyses to be complete. Moreover, in the context of the present case, it is the Intervenor’s burden to raise a specific question regarding the information Duke submitted in the RAI responses *germane to Consolidated Contention 2*. The burden is on the Intervenor to demonstrate, with basis, how providing additional technical support might affect the SAMA evaluations results at issue in Consolidated Contention 2. The Intervenor have not met these burdens. This proposed contention is an improper attempt to expand the scope of this proceeding. It is also baseless and late. For each of these reasons, the proposed contention should be rejected.

3. Alleged Failure to Support Conclusions Regarding Frequency of Accident Contributors

Proposed amended Contention 3 asserts (at page 7) that Duke’s RAI responses “make unsupported assertions that the frequency of [SBO] and other events leading to core damage and containment rupture is lower than previously predicted,” and that Duke’s “failure to

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licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement . . . in 10 C.F.R. § 2.714(b)(2).”).

support these assertions” somehow violates NEPA. By way of a supporting basis, the Intervenor acknowledge that Duke has provided “a dollar value for back-up power to igniters and air return fans, based on ‘SBO values from Revision 3 of the [Duke] PRA,” but argue that in its responses to RAI 3, Duke “provides only summary information about its calculations regarding SBO frequency.” Significantly, the Intervenor proffer no substantive basis for challenging either the SBO frequency used by Duke for purposes of its RAI responses or the cost/benefit assessments of the relevant SAMAs. The Intervenor also attack Duke’s treatment of earthquakes and floods as accident contributors that may cause an SBO, but this is merely to assert (at page 7) that “Duke has provided insufficient documentation to permit a determination of the extent to which these accident contributors were taken into account.” In this case, no reference to a specific RAI response is provided. Finally, Intervenor fault Duke’s RAI responses in general because “there is no way to determine whether Duke has taken into account recent studies that have identified recirculation sump clogging in PWRs following a loss-of-coolant accident as a generic safety issue, GSI 191.” Again, Intervenor do not refer to any specific RAI response. As shown below, proposed amended Contention 3 is inadmissible as a late challenge to the PRA itself and for lack of a valid basis.

This proposed contention is inadmissible first because it falls outside of the limited scope articulated by the Licensing Board when it allowed Intervenor to submit late-filed contentions “based on new information based upon Duke’s responses to Staff RAIs.”<sup>44</sup> Amended Contention 3 is not based upon any *new information* found in Duke’s RAI responses — specifically, in RAI response 3. The information in the Duke response to RAI 3 that Intervenor cite in this proposed contention (concerning the frequency of Station Blackout and

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<sup>44</sup> May 13, 2002, Order at 1; *see also* Tr. at 904-05, 914.

other events leading to core damage and containment rupture) is not “new.” Rather, RAI 3, to which Duke responded, was based upon the NRC Staff’s review of the SAMA analyses in the McGuire and Catawba license renewal ERs. Those SAMA analyses in the ERs included specific references to *docketed* correspondence to the NRC on the McGuire and Catawba PRAs (specifically, Reference 3.1 in each of the SAMA evaluations). This *docketed* correspondence contained information that could be used to estimate the SBO frequency. If the Intervenors had concerns based on the original SAMA analyses, or based on the PRA itself, they could have taken the time to access the publicly available information and assess it before the original proposed contentions were filed. Like the NRC Staff, they could have timely raised issues based on the original ERs, the referenced material, and their own independent probabilistic analysis.<sup>45</sup> This contention is, quite simply, untimely and impermissibly broad given the scope of Consolidated Contention 2. For these reasons alone, it should be rejected.

However, even if this contention were viewed as timely based on the RAI response, and somehow germane to the two narrow issues of Consolidated Contention 2, there is still no valid substantive basis provided for any of the issues raised, as is required by 10 C.F.R. § 2.714(b)(2). In particular, Intervenors allege that Duke has provided “only summary information about its calculations regarding SBO frequency” in its responses to RAI 3.<sup>46</sup> This assertion is

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<sup>45</sup> As the Commission has stated in denying a contention based on the issuance of Staff RAIs, “[I]t is the [Petitioner’s] job to review the application and to identify *what* deficiencies exist and to explain *why* the deficiencies raise material safety concerns.” *Oconee*, CLI-99-11, 49 NRC at 337 (emphasis in original).

<sup>46</sup> RAI 3 asked Duke to provide certain information using the “results from the updated McGuire [and Catawba PRAs] and considering both internally- and externally-initiated events.” The information requested was:

- a. the core damage frequency from events involving SBO, including a breakdown into slow SBO and fast SBO;

both misleading and irrelevant. Duke provided the information requested in the RAI, and the Intervenor's burden is to show some specific information or evaluation that must be provided to complete a reasonable assessment of the SAMAs at issue in Consolidated Contention 2. This they have not done.

Regarding SBO frequency, the Intervenor's argue only (at page 7) that the responses to RAI 3 are inadequate because they do not adequately explain why SBO frequency in the latest PRA revision is lower than in previous calculations. However, the original McGuire SAMA analysis indicated that modifications to enhance the reliability of the emergency diesel generator system were implemented as a result of the McGuire IPE, which would obviously have the effect of decreasing SBO frequency.<sup>47</sup> The response to RAI 1a also states that the most significant data changes since the IPE are those related to diesel generator performance as a

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- b. the conditional containment failure probabilities (both "early" and "late") in core damage events involving SBO; and
  - c. a comparison of the conditional early containment failure probability for McGuire [and Catawba] to the conditional early containment failure probabilities in NUREG/CR-6427. Also, the NRC directed Duke to provide a "discussion of the models and assumptions in the McGuire [and Catawba PRAs] that account for the major differences."

*See* Enclosure to Letter from J.H. Wilson, NRR, to M.S. Tuckman, Duke Energy Corporation, transmitting "Office of Nuclear Reactor Regulation Request for Additional Information Regarding Severe Accident Mitigation Alternatives Related to License Renewal for McGuire Nuclear Station, Units 1 and 2 (TAC Nos. MB2021 and MB2022)" (Nov. 19, 2001) at 1 ("McGuire RAI Request"). *See also* Enclosure to Letter from J.H. Wilson, NRR, to M.S. Tuckman, Duke Energy Corporation, transmitting "Office of Nuclear Reactor Regulation Request for Additional Information Regarding Severe Accident Mitigation Alternatives Related to License Renewal for Catawba Nuclear Station, Units 1 and 2 (TAC Nos. MB2031 and MB2032)" (Dec. 10, 2001) at 1 ("Catawba RAI Request").

<sup>47</sup> *See* Attachment K to McGuire ER at 7 (Table 2-1).

result of a reliability program adopted after the IPE.<sup>48</sup> Thus, Duke does adequately explain why SBO frequency in the latest PRA revision is lower than in previous calculations. Intervenor's apparent wish to have discovery concerning Duke's "calculations regarding SBO frequency" does not, in itself, render Duke's RAI responses and its analyses of the NUREG/CR-6427 issues and the transmission line SAMA in any way deficient. The Intervenor has the burden of providing a basis for an assertion of a problem in the Duke analyses, and they have plainly failed to meet that burden.

In addition to providing no viable basis for challenging the SBO frequency that Duke used, this proposed contention is also beyond the scope of Consolidated Contention 2 in that NUREG/CR-6427 (the focus of Consolidated Contention 2) utilizes a core damage frequency obtained from the plant-specific IPE results previously submitted to the NRC. NUREG/CR-6427 only makes observations concerning the relative magnitudes of the SBO frequencies at the nuclear plants under consideration; it does not comment on the correctness of the SBO frequencies. Therefore, the Intervenor cannot identify any relief within the bounds of the parent Consolidated Contention 2 that could be granted. There is no further enhancement to the SAMA analyses to be derived from the NUREG containment performance data.

Intervenor next make an undeveloped assertion (at page 7) that Duke provided "insufficient documentation" to allow a determination of the extent to which earthquakes and floods were considered as accident contributors. However, Intervenor plainly fail to identify what further documentation is needed. Indeed, the consideration of flooding and earthquakes is a matter integral to the PRA and therefore far transcends the scope of the admitted Consolidated Contention 2. The SAMA evaluations and RAI responses also address how specific mitigation

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<sup>48</sup> See McGuire RAI Response at 1.

alternatives were indeed considered for earthquakes.<sup>49</sup> With regard to flooding, the response to RAI 6 for Catawba addresses the specific issue of a SAMA to build a flood wall around transformers in the turbine building to address an SBO issue for Catawba.<sup>50</sup> In the draft SEIS, this is a particular SAMA for Catawba that the NRC has identified as potentially cost-beneficial.<sup>51</sup> (For McGuire, because the transformers are not physically located in an area susceptible to floods, the issue of a flood wall is not relevant and no basis is provided to assert otherwise. The SAMA is not addressed in the draft McGuire SEIS.) However, the Staff confirmed that the SAMA involving a flood wall, like the SAMAs concerning power to the igniters and air return fans, does not relate to adequately managing the effects of aging during the period of extended operation and thus need not be addressed during the license renewal review. This SAMA will be considered as a current operating license basis matter and thus is beyond the reach of this proceeding.<sup>52</sup> At bottom, the Intervenors do not show how this relates to Consolidated Contention 2, nor do they offer any affirmative basis for their insistence that Duke should provide more (unspecified) documentation on these issues. There is no basis on which to conclude that there could be any further SAMA evaluation granted as relief in this proceeding.

In this proposed contention, the Intervenors also toss into the mix a question concerning Duke's possible consideration of studies that "identified recirculation sump clogging

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<sup>49</sup> See Table 2-1 (Risk Reduction Measures) as contained in both the McGuire and Catawba original SAMA analyses, which describes alternatives implemented as a result of the McGuire and Catawba IPEEE Studies; see also McGuire RAI Response at 22; Catawba RAI Response at 21.

<sup>50</sup> See Catawba RAI Response at 14.

<sup>51</sup> See Catawba draft SEIS at 5-28.

<sup>52</sup> *Id.* Moreover, the fact that the Staff has identified the SAMA for further consideration as a technical matter belies any assertion that the NEPA-based SAMA evaluation was inadequate for informed decision-making.

in PWRs following a loss-of-coolant accident as a generic safety issue, GSI 191.” GSI-191 is a new issue and no reference is made by the Intervenor to a particular RAI response.<sup>53</sup> Certainly no correlation is drawn to the issues in Consolidated Contention 2 in this case. With respect to the SBO issues in Consolidated Contention 2, no basis is provided by the Intervenor to suggest that clogging of the sump is a significant contributor to core damage frequency. Indeed, in an SBO core damage sequence there is no power to the recirculation pumps and clogging of the sumps is therefore irrelevant. Furthermore, in sequences where power is restored following the occurrence of a reactor coolant pump seal LOCA, the containment air return fans and hydrogen igniters are also then powered. The Intervenor’s assertion (on page 8) that: “[b]ecause this is relevant to pump-seal LOCA sequences, it will clearly have a bearing on the contribution of SBO events to core damage,” is unsupported, beyond the scope of the parent Consolidated Contention 2, and a subject for GSI-191. Therefore, there is no basis for requiring more information on this issue in a SAMA evaluation as part of this license renewal proceeding.

In sum, this proposed contention exceeds the scope of the RAI responses and is not based on “new information.” The Intervenor is instead improperly attempting to expand this hearing to encompass a wide-ranging inquiry into the PRAs and related issues. In doing so, they are exceeding the scope of Consolidated Contention 2 and far overstating the NEPA

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<sup>53</sup> Indeed, GSI 191 — like GSI 189 — is being pursued by the NRC as a Part 50 generic issue. It is a current operational issue and does not relate to the managing of equipment aging effects during the period of extended operation. In fact, NRC RES recommended that “plant-specific analyses be conducted to determine whether debris accumulation in PWR containments will impede or prevent ECCS operation during recirculation. If it is determined that debris accumulation will impede or prevent ECCS operation, then appropriate corrective actions should be implemented.” Memorandum to S.J. Collins, Director, NRR, from A.C. Thadani, Director, RES, re: “RES Proposed Recommendation for Resolution of GSI-191, ‘Assessment of Debris Accumulation on PWR Sump Performance’”(Sept. 28, 2001), at 3. NRR currently has the lead for resolution of GSI-191.

requirement for a reasonable evaluation of possible SAMAs. Furthermore, merely alleging that an applicant has provided “insufficient information to allow independent verification” of the assumptions underlying calculation factors is woefully inadequate to meet the standards for basis and specificity of contentions. The burden is on the Intervenors to demonstrate, with basis, how Duke’s statements regarding the frequency of accident contributors are deficient, as well as how a change in the frequency of accident contributors might offset the particular SAMA results at issue in Consolidated Contention 2. The Intervenors have failed to provide sufficient substantive information “to show that a genuine dispute exists with the applicant on a material issue of law or fact,” as required under Section 2.714(b)(2)(iii). The proposed “amended” contention therefore should not be admitted.

4. Alleged Failure to Justify Departures From NUREG/CR-6427

In its entirety, proposed amended Contention 4 states (at page 8) that “Duke does not incorporate assumptions used in NUREG/CR-6427, or justify its failure to do so.” In the basis for this cryptic proposed amendment (which on its face is clearly wrong), Intervenors assert that Duke’s responses to RAI 3c acknowledge the difference between the Duke PRAs and the NUREG/CR-6427 containment failure probabilities. Intervenors maintain that the differences are due to the amount of hydrogen assumed in containment, and that Duke has failed to “justify” those differences. Similarly, Intervenors apparently fault Duke’s RAI responses for acknowledging, but not “justifying,” differences between the NUREG’s and Duke’s assumptions regarding the availability of an ignition source and differences regarding the probability that too little hydrogen is generated in vessel for a burn to occur. The Intervenors assert (at page 9), without regulatory basis, that Duke must do more than “observe the existence of the difference or

an opinion that [NUREG/CR-6427] was too conservative.” These issues are baseless and do not involve any relief that could be granted in this proceeding.

In RAI 3, the NRC Staff asked Duke to provide certain information using the “results from the updated McGuire PRA, and considering both internally- and externally-initiated events.” RAI 3c specifically requested “a comparison of the conditional early containment failure probability for McGuire to the conditional early containment failure probabilities” reported in NUREG/CR-6427. The RAI also asked Duke to “provide a discussion of the models and assumptions in the McGuire PRA that account for the major differences”<sup>54</sup> from NUREG/CR-6427. The NRC Staff issued an identical RAI for Catawba.<sup>55</sup> A review of Duke’s responses to RAI 3 for both McGuire and Catawba<sup>56</sup> shows that Duke’s answers were responsive to the RAIs. That is, both RAI responses provided a comparison of the conditional early containment failure probability for each plant with the corresponding probability given in NUREG/CR-6427. The RAI responses are based on each plant’s PRA, and consider both internally and externally-initiated events. Duke’s RAI responses also included a discussion of the models and assumptions used in each plant’s PRA that account for the major differences.<sup>57</sup> No “justification” of Duke’s results is required in this context, and the Intervenors fail to show otherwise. Certainly there is no regulatory basis for such a “justification.”

The point of a SAMA evaluation is to assess whether certain alternatives may be cost-beneficial from a risk perspective. The original SAMA evaluations submitted with the

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<sup>54</sup> See McGuire RAI Request at 1.

<sup>55</sup> See Catawba RAI Request at 1.

<sup>56</sup> See McGuire RAI Response at 6-7; Catawba RAI Response at 5-6.

<sup>57</sup> See McGuire RAI Response at 7; Catawba RAI Response at 6.

application ERs did that, based upon the Duke plant-specific PRAs. The point of the RAI responses was to show, perhaps in a more conservative manner, possible benefits of SAMAs in light of the NUREG/CR-6427 containment failure probabilities. Given that Duke has submitted two evaluations, the SAMAs can now be considered (such as in the resolution of GSI-189, but not in this proceeding) based on either set of assumptions. It is, however, certainly beyond the scope of a SAMA evaluation to consider the academic issue of why the Duke PRAs and the NUREG result in different containment failure probabilities. The NRC Staff, in Duke's responses to the RAI, has ample cost-benefit data for informed decision-making on the alternatives. No other evaluation is required by the regulations or as a technical matter.

In sum, when all of these RAI responses are taken into account, Duke has now completed license renewal-related SAMA evaluations for McGuire and Catawba using both its own PRA numbers and the pertinent information reported in NUREG/CR-6427 on containment failure, indisputably satisfying NRC requirements in 10 C.F.R. § 51.53(c)(3)(ii)(L) and the issues in Consolidated Contention 2. The Intervenor's comments on the RAI responses fail to raise a specific issue of law or fact to be raised or controverted, as required by 10 C.F.R. § 2.714(b)(2). Nor do the concerns articulated demonstrate any substantive deficiencies in Duke's RAI responses. This proposed contention, even if proven, "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). Given all of these deficiencies, proposed amended Contention 4 should be rejected.

5. Alleged Failure to Take Account of Uncertainties

In proposed amended Contention 5 the Intervenor asserts (at pages 9-10) that in its SAMA analyses for McGuire and Catawba, "Duke has failed to take adequate account of

uncertainties and their effect on the results of its analysis.” Intervenors contend that this alleged failure undermines the credibility of Duke’s SAMA analyses (an assertion, again, presumably restricted to the two issues in Consolidated Contention 2). As shown below, this proposed contention must be rejected because it is not based on any “new” information. Further, the proposed contention misrepresents the uncertainty analyses that Duke has in fact performed, as described in documents submitted to the NRC. To the extent that NRC guidance recommends that license renewal applicants perform an uncertainty analysis (there being no regulatory requirement to this effect), Duke has done so. Thus, this proposed contention lacks any valid substantive basis, and must be dismissed.

As a preliminary matter, proposed Contention 5 is inadmissible because it is not “based on *new information* based upon Duke’s responses to Staff RAIs,” as required by the Licensing Board in this proceeding.<sup>58</sup> The focus of this proposed contention is Duke’s allegedly inadequate treatment of uncertainty analyses. Uncertainty (as referenced in Duke’s responses to RAI 2 for McGuire and Catawba) is not a new topic. The references to uncertainty analysis in Duke’s responses to RAI 2 stem from the NRC Staff’s review of Duke’s SAMA analyses included in the license renewal ERs, which contain a general discussion of uncertainty. Intervenors therefore could have reviewed and challenged those SAMA analyses last November. Because proposed Contention 5 exceeds the scope established by the Licensing Board for the late-filed proposed “amendments” to Consolidated Contention 2, it must be treated as a late-filed contention. Intervenors do not provide good cause for their failure to file this proposed contention in a timely manner based on the original SAMA evaluations.

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<sup>58</sup> See May 13, 2002, Order, at 1 (emphasis added); see also Tr. at 904-05, 914.

Moreover, as it might pertain to Consolidated Contention 2, this proposed contention lacks basis and is inadmissible. Basis “a” (at pages 10-12) is intended to support the argument that Duke’s alleged failure to perform a complete uncertainty analysis “fatally undermines the credibility of its SAMA results.” This basis cites selective snippets from Duke’s responses to RAI 2, in which the NRC Staff asked Duke to “provide an estimate of the uncertainties associated with the calculated core damage frequency and risk for internal and external events” for McGuire and Catawba, and “the rationale for not explicitly considering these uncertainties in the SAMA analyses.”<sup>59</sup> One source of potential confusion in Intervenors’ presentation is that Duke’s response to RAI 2 for McGuire was not identical to its response to RAI 2 for Catawba, and the Intervenors do not consistently differentiate between the two responses in their discussion.<sup>60</sup> Nor do Intervenors acknowledge that, while Duke 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.<sup>61</sup> (One effect of these omissions is to make many of Intervenors’ statements incorrect as applied to McGuire.)

In addition to their failure to recognize the uncertainty analysis performed for McGuire, Intervenors also neglect to mention that part of Duke’s RAI 2 response in which it determines that the “*conclusions of the [SAMA] analysis would have been unlikely to change if a comprehensive uncertainty analysis could have been included,*” given the large margin between

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<sup>59</sup> McGuire RAI Response at 5; Catawba RAI Response at 4.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

the estimated costs and benefits as evaluated in the McGuire and Catawba SAMAs.<sup>62</sup> (Significantly, this conclusion applies to both McGuire and Catawba.) Nor is there any acknowledgement of the previous discussions of uncertainty in Duke's original SAMA analyses.<sup>63</sup> Although some of these discussions address uncertainty in a qualitative manner, their existence clearly undercuts Intervenors' suggestion that "Duke has failed to take adequate account of uncertainties and their effect on the results of its [SAMA] analysis," as well as any assertion that this amended contention is validly based on new information. The burden is on the Intervenors to demonstrate, with basis, how uncertainties might affect the particular SAMA results at issue in Consolidated Contention 2. This they have not done, opting again for the ploy of raising *questions* rather than supplying technical *bases* to establish genuine issues.

The Intervenors also have not provided any regulatory basis to support this proposed amended contention. No NRC regulation is cited (and none exists) requiring that an applicant develop an uncertainty analysis in connection with a license renewal SAMA analysis. Moreover, Intervenors' statement (at page 12) that "Duke has not complied with [regulatory] guidance or with commonly accepted standards for the use of probabilistic risk assessment" is conclusory and simply wrong. Although not required to do so, Duke has affirmatively complied

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<sup>62</sup> *Id.* (emphasis added).

<sup>63</sup> For example, Section 7.0 of the McGuire and Catawba SAMA analyses states in part:

It is recognized that risk assessment studies are subject to varying degrees of uncertainty in the estimated core damage frequency, person-rem risk, and cost to implement alternatives. The results of this analysis show that the cost of implementing any of the alternatives is as much as several orders of magnitude higher than the estimated averted risk values. Therefore, no additional severe accident mitigation alternatives are cost-beneficial even when the uncertainties in the risk assessment process are considered.

Attachment K to McGuire ER at 31; *see also* Attachment H to Catawba ER at 30.

with applicable guidance in NRC Regulatory Guide 4.2, Supplement 1.<sup>64</sup> Similarly, the recommended methodology in NUREG/BR-0184<sup>65</sup> calls for the preparation of an uncertainty analysis only “where practical within the bounds of the state-of-the-art.” This does not support a conclusion that further quantitative uncertainty analysis is required where, as here, the margins between benefits and costs are so great.<sup>66</sup> The Intervenor’s references (at page 11) to Draft Regulatory Guide DG-1110<sup>67</sup> also fail to support their argument that Duke has not met relevant Commission guidance in the preparation of its SAMA analysis. DG-1110 represents draft Revision 1 to Regulatory Guide 1.174.<sup>68</sup> SECY-02-0070 (issued April 24, 2002) informed the Commission of the Staff’s intention to publish Revision 1 of Regulatory Guide 1.174. This regulatory guide provides guidance on the use of PRA findings and risk insights in support of

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<sup>64</sup> See RG 4.2 at 4.2-S-50. In relevant part, this guidance document recommends that a license renewal SAMA analysis include the following:

5. Estimate the approximate cost of each modification and procedural and administrative change found to reduce the dose consequence risk of severe accidents. Potential SAMAs that are not expected to be cost beneficial, even when uncertainties in the analysis (e.g., a factor of 10) are taken into consideration, may be screened out based on a bounding analysis.

<sup>65</sup> NUREG/BR-0184, “Regulatory Analysis Technical Evaluation Handbook,” Section 5.4 (Jan. 1997).

<sup>66</sup> Additionally, Duke has complied with NUREG/BR-0058, “Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission” (June 2000), which Intervenor’s reference on page 12 of the Amended Contentions.

<sup>67</sup> 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) (“DG-1110”). This guidance document was issued for comment as a proposed Revision 1 to Regulatory Guide 1.174 (July 1998) (“RG 1.174”).

<sup>68</sup> Duke notes that a recent informational NRC Staff paper to the Commission, SECY-02-0070, “Publication of Revisions 1 to Regulatory Guide 1.174 and SRP Chapter 19 and Notice of a Staff Plan for Endorsing Consensus Probabilistic Risk Assessment Standards and Industry Peer Review Programs” (Apr. 24, 2002), attaches a planned final Revision 1 to RG 1.174 deleting the entire Appendix A to DG-1110.

licensee requests for changes to a plant's licensing basis, as in requests for license amendments and technical specification changes under Sections 50.90-50.92 of 10 C.F.R. Part 50. Regulatory Guide 1.174 does not apply to the SAMA review because no change to the licensing basis is involved in a SAMA review.

In sum, with respect to basis "a," Duke has addressed uncertainty in the licensing documents consistent with the intent of all regulatory guidance that is relevant and applicable to license renewal applications. Intervenors have not challenged those conclusions in any substantive way. Regarding their recurring assertion (*e.g.*, at page 11) that NEPA requires some discussion of uncertainty, this requirement has clearly been met. There is no basis in law or fact for the proposition that NEPA requires a quantitative uncertainty analysis in connection with a probabilistic analysis of SAMAs, as opposed to a reasonable qualitative assessment. In addition, the Intervenors in basis "a" have not made a substantive showing of a genuine issue for which there could be meaningful relief in this proceeding.

Basis "b" (at pages 12-13) is intended to support Intervenors' slightly different position that, to the extent Duke has performed an uncertainty analysis (as it did for McGuire and as it did qualitatively for both McGuire and Catawba, as discussed above), "it has not taken uncertainties into account in an adequate manner." To the extent Intervenors would argue that further or different uncertainty analysis is necessary for evaluating the SAMAs related to hydrogen combustion events (given the Staff's conclusions that one or more related SAMAs *may be* cost-beneficial), the Intervenors are in effect seeking to raise an issue for which no further relief is necessary or even available in this proceeding. The argument does not identify any new SAMAs to be considered. And, with respect to the SAMAs already identified, the argument

goes directly to the resolution of GSI-189 and is not appropriate for adjudication for the reasons discussed in Section III.A above.

This section of the proposed amended contention is also replete with errors that distort Duke's RAI responses. In addition, it contains errors that convey inaccurately the overall uncertainty associated with the population dose estimates. For example, Intervenor state (at pages 12-13):

Duke goes on to point out that NUREG-1150 analysis implies that the 95<sup>th</sup> percentile value of the 50-mile population dose is approximately 5 times the mean value, an uncertainty 'representative of the uncertainties in the McGuire analysis.' Thus the annual risk to the population within 50 miles derived from the 95<sup>th</sup> percentile values could be over ten times higher than the value obtained from the mean values.

This statement is incorrect. The uncertainty in the population risk results of NUREG-1150 includes all uncertainties in the Level 1 and Level 2 analyses. Thus, 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. Therefore, no valid basis is provided for the Intervenor's conclusion that the annual risk to the population within 50 miles derived from the 95<sup>th</sup> percentile values "could be over ten times higher than the value obtained from the mean values."

The Intervenor also assert that their risk calculations (which, as shown above, are calculated incorrectly) provide a basis to contradict Duke's assessment of uncertainties as well as those of the NRC Staff in the draft SEISs for McGuire and Catawba. The Staff concludes in the McGuire SEIS that:

For most of the candidate SAMAs, the staff agrees with Duke that the SAMAs would clearly not be cost-beneficial because they have costs that are substantially (typically a factor of three or more) higher than the dollar equivalent of the associated benefits. This difference is considered to provide ample margin to cover uncertainties in the risk and cost estimates

because estimates for these factors were generally evaluated in a conservative manner.<sup>69</sup>

The Catawba draft SEIS similarly states:

[T]he two SAMAs that are potentially cost-beneficial . . . are discussed below. . . . [Three other] containment-related SAMAs (Table 5-6) have total benefits that are only slightly less than the estimated cost to implement the enhancement . . . [T]he estimated risk reduction in Table 5-6 is based on the bounding assumption that all early and late containment failures would be completely eliminated. Realistically, only a small fraction of the total risk would be eliminated by any one SAMA. Also, the cost to implement any of these three SAMAs would be substantially (i.e., a factor of 5) greater than \$1 million, as each SAMA would involve a major hardware modification. Thus, these three SAMAs would not be cost-beneficial. All of the remaining SAMAs have costs that are at least a factor of two higher than the dollar equivalent of the associated benefits. This difference is considered to provide ample margin to cover uncertainties in the risk and cost estimates since estimates for these factors were generally evaluated in a conservative manner.<sup>70</sup>

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.” Intervenors have failed to provide any support for assertions to the contrary. It is their burden to demonstrate, with basis, how any unaccounted-for uncertainties might affect the particular SAMA results at issue in Consolidated Contention 2 and that would not be addressed in resolving GSI-189.

In conclusion, this proposed contention exceeds the scope of “new information” in the RAI responses. Moreover, the unsupported and incorrect assertions that Duke has not addressed uncertainty and that Duke’s SAMA analyses do not meet applicable requirements and guidance, the misleading treatment of Duke’s responses to RAI 2, and the failure to show a single substantiated deficiency in any “new information” in those RAI responses (particularly as those responses relate to the narrow issues of Consolidated Contention 2), require that this

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<sup>69</sup> McGuire draft SEIS at 5-27.

<sup>70</sup> Catawba draft SEIS at 5-24 — 5-25.

proffered basis be rejected. Intervenors fail to show that a genuine dispute exists on a material issue of law or fact, as required under Section 2.714(b)(2)(iii). For each of these reasons, proposed Contention 5 should be rejected.

6. Alleged Failure to Use Reasonably Conservative Values in Calculating Accident Consequences

Proposed amended Contention 6<sup>71</sup> asserts (at page 13): “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.”<sup>72</sup> The supporting basis for this proposed contention alleges (at pages 13-16) that Duke’s SAMA analyses rely upon “unrealistic” assumptions about radioactive releases during accidents, in terms of the plume spreading factor, source terms, and region for dose calculations. As demonstrated below, this proposed contention merits dismissal because it is not based upon any new information in Duke’s RAI responses relating to Consolidated Contention 2, and because it does not satisfy Commission standards for late-filed contentions. Moreover, Intervenors have not provided any viable basis to support amended Contention 6 by showing that the accident consequence assumptions in Duke’s SAMA analyses were unrealistic, unreasonable, or unsupported.

The Licensing Board explicitly limited the Intervenors’ opportunity to clarify remaining issues on Consolidated Contention 2 to those matters “based on new information

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<sup>71</sup> This proposed contention is incorrectly numbered as #7 on p. 13 of the proposed contentions. Herein, we will refer to this contention as proposed Contention 6, to differentiate it from the subsequent proposed contention (also styled as Contention 7) set forth on pages 16-17 of the Intervenors’ submittal.

<sup>72</sup> To the extent that the Intervenors are challenging the conservatism of Duke’s accident consequence calculations (see the caption for this proposed contention, for example), Duke notes that PRAs use realistic values, not “conservative values.”

based upon Duke's responses to Staff RAIs."<sup>73</sup> Likewise, as discussed in Section III.A above, on page 3 of their pleading the Intervenor state that their "amended" contentions are limited in scope to the issues of Consolidated Contention 2. These limitations have not been observed in proposed Contention 6. To the contrary, the language of the proposed contention states that it is based on "Duke's SAMA analysis," not on the RAI responses. To be admissible, proposed Contention 6 must meet the Commission's standards for late-filed contentions found in 10 C.F.R. § 2.714(a). No showing of "[g]ood cause, if any, for failure to file on time" under Section 2.714(a)(1)(i) has been made that would warrant further consideration for its admission.

Further, proposed Contention 6 should also be dismissed for lack of basis. Intervenor contend (at page 13) that the assumptions that Duke relied upon in its SAMA analyses concerning "the nature of radioactive releases during accidents" are "unrealistic" and "inconsistent with known experience," and that the SAMA analyses thus understate the consequences of accidents. These assertions, which are completely unfounded, fail totally to show that the accident consequences in the SAMA analyses are understated. As indicated in its Environmental Reports, Duke 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.<sup>74</sup> Significantly, the NRC Staff has recognized that this computer

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<sup>73</sup> May 13, 2002, Order, at 1-2.

<sup>74</sup> See Attachment K to McGuire ER, at 20, which states in part:

The McGuire PRA Level 3 results are updated for this analysis using a different consequence analysis computer code, more recent meteorological data, and projected population estimates as described below. For this analysis, the McGuire severe accident person-rem risk results were generated with the MACCS2 (MELCOR Accident Consequence Code System—Reference 5.1) computer code. The plant-specific input to the MACCS2 code includes McGuire core radionuclide inventory, emergency response evacuation modeling based on the McGuire evacuation time estimates studies, release category source terms from

code is well-accepted, noting that: “[t]he MACCS2 code is the current standard for assessing consequences of accidents at nuclear power plants.”<sup>75</sup> Mere rote assertions to the contrary are not a valid basis for a contention.

The arguments that Intervenors raise in an effort to support this proposed contention are as irrelevant as they are confusing. Intervenors first attack the treatment of the “plume spreading factor” in the SAMA analysis, asserting (at page 13) that “[n]either Duke’s RAI responses nor the GEIS specifies the plume spreading parameters used by Duke in its consequence analyses,”<sup>76</sup> and implying that the SAMA analyses and RAI responses are therefore deficient. But this is not the case. None of the RAIs asked Duke to provide specific “plume spreading parameters” and the NRC Staff has not indicated that the RAI responses were deficient for not including these parameters. In fact, the NRC determined that “Duke used appropriate values for the consequence analysis.”<sup>77</sup> In contrast, Intervenors do not offer any specific basis for questioning the plume spreading factor that Duke indeed used in its SAMA analyses, or for characterizing this assumption as either “unrealistic” or “inconsistent with known experience.” In this regard, their reference to NUREG-1738, a study of spent fuel pool accident risk at decommissioning nuclear plants, certainly has no bearing on license renewal SAMA analyses

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the McGuire PRA Rev. 2 analysis, site meteorological data (1999 met data), and projected population distribution (within 50-mile radius) for the year 2040.

*See also* Attachment H to Catawba ER, at 19, which contains virtually identical language.

<sup>75</sup> McGuire draft SEIS at 5-12.

<sup>76</sup> We assume that the Intervenors’ reference to the “GEIS” both here and on page 14 is a typographical error, and that the Intervenors may have intended to refer to the license renewal SEISs for McGuire or Catawba. There would be no reason for the GEIS to specify the plume spreading parameters used by Duke in its consequence analysis.

<sup>77</sup> *See* McGuire draft SEIS at 5-12; Catawba draft SEIS at 5-11.

(particularly as those SAMA analyses relate to hydrogen combustion events such as analyzed in NUREG/CR-6427).<sup>78</sup> Curiously, Intervenors have not even attempted to make a technical connection between the analysis and consequences of a spent fuel pool event and those of a containment event.

Next, the Intervenors fault the source term assumptions that Duke used in its SAMA analyses as allegedly “non-conservative” (page 14), and quibble with the Staff’s conclusion in the SEIS (which Intervenors mislabel as the “GEIS”) that Duke’s source term estimates for major release categories were in “reasonable agreement” with estimates from NUREG-1150 for the closest corresponding release scenarios. Duke used plant-specific source terms rather than generic values from NUREG-1150.<sup>79</sup> Intervenors fail to show that the source

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<sup>78</sup> As suggested above, to the extent that Intervenors’ discussion of the plume spreading factor, source term values, and the region for dose calculations are actually a criticism of the SAMA analysis itself, rather than Duke’s RAI responses and/or the McGuire or Catawba draft SEISs, the proffered basis for proposed Contention 6 should be discounted as beyond the allowed scope of these proposed amendments.

<sup>79</sup> In the McGuire draft SEIS, Section 5.2.2.2 (at 5-11—5-12), the NRC Staff states: “The staff reviewed the process used by Duke to extend the containment performance (Level 2) portion of the IPE to the offsite consequence (Level 3) assessment. This included consideration of the source terms used to characterize fission product releases for each containment release category and the major input assumptions used in the offsite consequence analyses. This information is provided in Section 6 of Duke’s IPE submittal. Duke used the MAAP code to analyze postulated accidents and develop radiological source terms for each of 31 containment release categories used to represent the containment end-states. These source terms were incorporated as input to the MACCS2 analysis. The MACCS2 code is the current standard for assessing consequences of accidents at nuclear power plants. *The Staff reviewed Duke’s source term estimates for the major release categories and found these predictions to be in reasonable agreement with estimates from NUREG-1150 (NRC 1990a) for the closest corresponding release scenarios. The Staff concludes that the assignment of source terms is acceptable.*”

The plant-specific input to the MACCS2 code includes the McGuire reactor core radionuclide inventory, emergency response evacuation modeling based on McGuire evacuation time estimate studies, release category source terms from the McGuire PRA Revision 2 analysis (same as the source terms used in the IPE), site-specific

term assumptions in question were in any way incorrect or inappropriate for the purpose for which Duke applied them, or were in any way inconsistent with applicable regulatory guidance.

Intervenors' convoluted argument at pages 14-15, which is apparently intended to demonstrate that their own (different) source term values should have been used instead of the ones selected for the SAMA analyses, is unsubstantiated and based upon incorrect assumptions, and must be discounted. In this regard, Intervenors first argue (page 14) that "Duke has made source term assumptions that lead to consistently smaller population doses than those predicted from NUREG-1150 derived source terms."<sup>80</sup> To the extent Intervenors intend their generalized reference to NUREG-1150 to discredit Duke's source term values in its SAMA analyses, their allegation is totally unsubstantiated. Commission requirements and guidance applicable to license renewal SAMA analyses do not contemplate reliance on generic "NUREG-1150-derived source terms" for this purpose rather than plant-specific source terms.<sup>81</sup>

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meteorological data, and projected population distribution within a 80 km (50 mile) radius for the year 2040" (emphasis added).

Note that the NRC Staff's conclusion on this point in the Catawba draft SEIS, Section 5.2.2.2. (at 5-10), is essentially identical.

<sup>80</sup> NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants" (Dec. 1990).

<sup>81</sup> See RG 4.2, Supp. 1, Section 4.20. The discussion on SAMA Information and Analysis Content states generally (at 4.2-S-49, 4.2-S-50) that the SAMA analysis should "identify and characterize the leading contributors to . . . offsite risk (*i.e.*, population dose)." It adds that: "Development of offsite risk information may require additional site-specific analyses if the existing risk study does not include an assessment of offsite consequences." The Regulatory Guide does not suggest that applicants rely upon generic source term data from NUREG-1150.

Next, Intervenor contend (page 14) that NUREG/CR-6295<sup>82</sup> “contains simplified source terms based on the results of NUREG-1150 that are ideal for consequence calculations.” They invite us to compare the “release category for early containment failure” in the McGuire IPE to “consequences for early containment failure at ice condenser plants obtained from NUREG-1150 assumptions,” by which they apparently mean those in NUREG/CR-6295.<sup>83</sup> Significantly, the alleged relevance or superiority of NUREG/CR-6295, which appears to focus on factors affecting nuclear power plant siting, to the source term assumptions currently used in license renewal SAMA analyses, is not explained. In fact, there appears to be no regulatory basis whatsoever supporting the application of Intervenor’s proposed NUREG/CR-6295-derived source term values for this purpose, and Intervenor do not show otherwise.

Then, having purportedly made this (unfounded) comparison, Intervenor state (at page 15) that they have used the resulting different source term “to calculate the long-term consequences of this accident at an ice-condenser plant with a power rating similar to McGuire,” using certain population density and meteorological assumptions. They contend that this “revised” source term “leads to a 50-mile population dose a factor of approximately 5 greater than the worst-case source term used by Duke for the McGuire SAMA analysis.” Again, however, the Intervenor do not explain why this different source term that they have apparently developed (and whose application has apparently not been approved by the NRC), is arguably more appropriate for use in the SAMA analyses than those values currently used by renewal

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<sup>82</sup> NUREG/CR-6295/BNL-NUREG-52442, “Reassessment of Selected Factors Affecting Siting of Nuclear Power Plants” (Feb. 1997).

<sup>83</sup> To the extent that the Intervenor are challenging the “release category for early containment failure” in the *McGuire IPE*, that challenge is beyond the permissible scope of this proposed contention because it is not “new information” and it broadly challenges the PRAs. The Board should reject this aspect of the proposed contention’s basis.

applicants for that purpose.<sup>84</sup> Apparently, they consider it sufficient to point out that “more severe source terms can be envisioned” (see page 15) than were used in Duke’s SAMA analyses, without justifying the appropriateness of such alternative values in the analyses. No regulatory basis is offered for the Intervenors’ assertion (page 15) that their re-calculation of accident consequences at a hypothetical plant with a power rating “similar to McGuire” would be more viable than the data that Duke used. (In fact, Duke’s assumptions were consistent with applicable Commission requirements and guidance for license renewal SAMAs.<sup>85</sup>) In fact, the use of such revised source terms would be both untested and contrary to applicable NRC requirements and guidance. This unsupported and conclusory discussion is an insufficient basis for a contention that the source term values that Duke used were in fact erroneous, “non-conservative,” or otherwise inappropriate—or that the Intervenors’ substitute source term assumptions are preferable.<sup>86</sup>

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<sup>84</sup> Nor is it a sufficient basis for challenging Duke’s assumptions merely to tout a revised source term as more “realistic” because it leads “to a 50-mile population dose a factor of approximately 5 [sic] greater than the worst case source term used by Duke for the McGuire SAMA analysis.”

<sup>85</sup> Specifically, Duke’s SAMA analysis was consistent with the methodology recommended in Regulatory Guide 4.2, Section 4.20, which is that presented in NUREG/BR-0184, “Regulatory Analysis Technical Evaluation Handbook.” This section of RG 4.2 further directs applicants to “[e]stimate the value of the reduction in risk,” noting that: “Value is usually calculated for public health, occupational health, offsite property, and onsite property,” and referring the applicant to the detailed discussion of calculating values in NUREG/BR-0184, Chapter 5.

<sup>86</sup> Since the Intervenors have asserted the superiority of their own alternative source term value, we would point out the flaws in their argument. The source term is very specific to each nuclear plant and to the assumptions used regarding core damage sequence. Consistent with this principle, the source term values that Duke used in its SAMA analyses were generated for the specific sequence that dominates a particular release category. But NUREG/CR-6295 develops only 5 release categories, for its Sequoyah analysis, into which all core damage sequences must be grouped. By contrast, Duke developed approximately 40 release categories as part of the PRA, which allowed for a more specific, more accurate, and less conservative treatment of the releases. This

Finally, the Intervenor challenge the “region for dose calculations” assumed in Duke’s SAMA analyses by asserting (at page 16) that Duke’s “point-value consequence calculations” are insufficient to support the NRC Staff’s conclusion that “nearly all SAMAs evaluated are clearly not cost-beneficial.” They reject (at page 15) the “restriction of the region to a 50-mile radius for the purposes of calculating population dose” as “technically indefensible,” and “a mechanism for artificially limiting the benefits of mitigative measures.” At bottom, this discussion is an attempt to challenge, without regulatory or technical basis, the existing generic regulatory guidance.<sup>87</sup> The Intervenor provide no substantive evidence to show that Duke’s dose calculation region is otherwise improper, or that it does not support the SEIS conclusions.<sup>88</sup>

In sum, “amended” Contention 6 is an untimely challenge to the Duke SAMA evaluations. The challenge far exceeds the scope of Consolidated Contention 2 in this proceeding, indeed to the point of raising generic issues (such as source term) that are not valid

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undercuts Intervenor’s arguments about the validity of those NUREG values. In addition, the specific release category from NUREG/CR-6295 that Intervenor reference in their discussion, “RSEQ1,” is not the most appropriate release category for comparison. Release category RSEQ2 -- which is based on a containment failure that occurs at vessel breach -- is the most appropriate release category for comparison to Duke’s release category 501. (This release category is referenced in Duke’s response to RAI 5 for McGuire, at 9-10, and Duke’s response to RAI 5 for Catawba, at 8-9.) In fact, the fission product release fractions for Iodine and Cesium used by Duke in the SAMA analysis compare favorably with those reported in NUREG/CR-6295 for RSEQ2.

<sup>87</sup> NUREG/BR-0184 contains the following guidance in Section 5.5.1 (Public Health (Accident)): “This attribute is a value which measures expected changes in radiation exposures to the public due to changes in accident frequencies or accident consequences associated with the proposed action. *For nuclear power plants, expected changes in radiation exposure should be measured over a 50-mile radius from the plant site*” (emphasis added).

<sup>88</sup> The McGuire draft SEIS concludes (at 5-30) that “none of the candidate SAMAs are cost-beneficial with the possible exception of one SAMA related to hydrogen control in SBO events.” The Catawba draft SEIS concludes (at 5-28) that two of the SAMAs are cost-beneficial.

for litigation in an individual license renewal proceeding. Furthermore, to allege that Duke's SAMA analyses improperly understate the consequences of accidents by relying on "unreasonable" and "unsupported" assumptions, without a basis for concluding that those assumptions are either unreasonable or unsupported, is inadequate to meet NRC standards for basis and specificity of contentions in Section 2.714(b)(2)(i)-(iii). Proposed Contention 6 must therefore be rejected.

7. Alleged Failure to Submit PRA for Peer Review

In proposed amended Contention 7, Intervenors claim (at page 16) that because "Duke has not obtained peer review for all of the revisions to the PRA and IPE on which it relies for its SAMA analysis," "there is not an adequate basis for reliance on its SAMA analysis." As their purported basis for this proposed contention, Intervenors refer to *draft* NRC Regulatory Guide DG-1110 that concerns use of a plant's PRA in making risk-informed changes to its licensing basis. The draft guidance document states that a peer review of the PRA can be useful.<sup>89</sup> Using this as a basis, Intervenors therefore leap to the conclusion that "[a] peer review is essential in this case, in order to provide independent verification of the reasonableness of Duke's SAMA analysis." Intervenors also cite Duke's January 31, 2002, response to RAI 1b for McGuire, where Duke stated that Revision 3 of its PRA was peer reviewed while in development. Intervenors claim without elaboration that "[t]his does not constitute an adequate peer review." Finally, Intervenors (at page 17) merely question whether the Catawba PRA was peer reviewed in 2002, as Duke indicated it would be in its February 1, 2002, RAI response 1b for that facility. This contention is late without good cause, outside the scope of this proceeding, and in any event lacking in basis. It should therefore be denied admission to this proceeding.

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<sup>89</sup> Appendix A, "PRA Characteristics and Attributes," to DG-1110, at 50. (Intervenors cite to page 51 of Appendix A; they apparently are using an unofficial copy of the document.)

First, proposed amended Contention 7 is not a clarification of the issues in Consolidated Contention 2 at all. As noted earlier, the contention as admitted is limited to issues concerning Duke's consideration in its SAMA analyses of (1) data from NUREG/CR-6427 and (2) the alternative of installing dedicated electrical lines between McGuire and Catawba and their respective nearby hydroelectric power stations. The question of peer review of the PRAs — which has been done, although not required by NRC regulation — falls outside the umbrella of issues acceptable for admission as defined by the Licensing Board in its reframing of Consolidated Contention 2 or its subsequent May 13, 2002, Order.<sup>90</sup> It is an issue that could have been raised, if at all, based upon the original SAMA evaluations.

Second, the proposed amended contention is patently baseless. While Intervenors assert that a peer review “needs to be performed,” they cite no regulatory requirement that one be done. Instead, Intervenors base the contention upon a superceded draft of an NRC guidance document encouraging use of peer reviews for PRAs.<sup>91</sup> While no doubt worthy advice, by virtue of inclusion in a draft Regulatory Guide this advice does not rise to the level of a regulatory requirement and is not applicable in the present context.<sup>92</sup> DG-1110 was issued to aid Part 50

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<sup>90</sup> See discussion above in Section II, “Background.”

<sup>91</sup> As noted above, SECY-02-0070 (Apr. 24, 2002) attaches a planned final Revision 1 to RG 1.174. That Revision will delete the entire Appendix A to DG-1110, including the language on peer review cited by Intervenors as their sole support for this contention.

<sup>92</sup> On the cover page of DG-1110, the Staff emphasizes that the document “has not received complete staff review or approval and does not represent an official NRC staff position.” DG-1110 at 1. See also *Int'l Uranium (USA) Corp.* (Request for Materials License Amendment), CLI-00-1, 51 NRC 9, 19 (2000) (“Like NRC NUREGs and Regulatory Guides, NRC Guidance documents are routine agency policy pronouncements that do not carry the binding effect of regulations.”); *Curators of the Univ. of Mo.*, CLI-95-1, 41 NRC 71, 150 (1995) (“NUREGs and Regulatory Guides serve merely as guidance and do not prescribe requirements on licensees; they simply are not binding in a legal sense”) (footnote omitted).

reactor licensees in risk-informing changes to their facilities' licensing bases. It has no direct nexus to SAMA analyses as part of the license renewal process. Intervenors' contention therefore fails to contain "[s]ufficient information . . . to show that a genuine dispute exists with [Duke] on a material issue of law or fact" and is inadmissible. 10 C.F.R. § 2.714(b)(2)(iii).

Moreover, this proposed contention is also unfounded because it misreads the information actually included in the RAI responses. RAI 1b for both McGuire and Catawba requested "a description of the internal and external peer review process used for the updated PRA/IPE."<sup>93</sup> In the January 31, 2002, response for McGuire, Duke explained that an external peer review "was conducted on the original McGuire PRA by the EPRI Nuclear Safety Analysis Center." The Intervenors omit this information. The RAI response further stated that an "internal review occur[ed] during the conduct of the PRA," and that as part of the WOG PRA certification program, "[t]he McGuire PRA was reviewed in the fall of 2000."<sup>94</sup> The RAI response states that the latter review focused on Revision 3 of the McGuire PRA which was being developed at that time.<sup>95</sup> In their proposed contention (page 16), Intervenors focus only on this review, claiming without basis that "[t]his does not constitute an adequate peer review." Indeed, this peer review does constitute an adequate peer review because it was conducted in a manner consistent with the accepted industry practices for a peer review.

With regard to Catawba, Intervenors' complaint (at page 17) is merely that Duke does not state definitively in its February 1, 2002, response to RAI 1b that the Catawba PRA has been peer reviewed. In fact, the Catawba response states that such a review would be conducted

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<sup>93</sup> McGuire RAI Response at 1; Catawba RAI Response at 1. The RAI provides that the McGuire PRA was updated in 1997, and the Catawba PRA in 2000. *Id.*

<sup>94</sup> McGuire RAI Response at 3.

<sup>95</sup> *Id.*

in spring 2002 as part of the WOG PRA certification program.<sup>96</sup> As above, there is no reference made to any regulatory requirement that such a peer review must be done. Nonetheless, the PRA peer review anticipated in the RAI response has now been completed. And, as with the McGuire PRA, Duke notes that the original Catawba PRA received both an external peer review from the EPRI Nuclear Safety Analysis Center and an internal review performed during the conduct of the PRA.<sup>97</sup>

In sum, this proposed contention is beyond the scope of Consolidated Contention 2 in that it attacks the McGuire (and to a lesser extent, the Catawba) PRA in ways not directly related to the SAMA analyses relevant to Consolidated Contention 2. Moreover, the contention is also entirely without basis and fails to demonstrate any genuine dispute “on a material issue of law or fact.” 10 C.F.R. § 2.714(b)(2)(iii). Also, there is no relief available to Intervenors that could be derived from this contention, particularly in connection with a SAMA evaluation of the two narrow issues under the admitted contention. 10 C.F.R. § 2.714(d)(2)(ii). Finally, given that peer reviews have been performed the contention is, in any event, moot. Therefore, this proposed contention should be rejected.

8. Alleged Failure to Justify Conclusion That Return Fans Are Essential

In proposed amended Contention 8 (at page 17), the Intervenors argue with Duke’s assumption in response to RAI 6 “that return fans are essential in order to ensure the effectiveness of hydrogen igniters” to address hydrogen combustion scenarios. The Intervenors, without any technical basis to suggest that air-return fans are not needed, conclude that the SAMA evaluation results in “inflating the cost of the mitigative measure of hydrogen ignition.”

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<sup>96</sup> Catawba RAI Response at 3.

<sup>97</sup> *Id.*

This argument, however, clearly exceeds what can be addressed in this Part 54 licensing proceeding and should not be admitted.

As discussed in Section III.A above, NEPA and Part 54 require an *evaluation* of SAMAs. Duke 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.<sup>98</sup> Duke has provided the information needed for informed decisionmaking. Beyond that, the statute and the regulations are not action-forcing. The issue of what alternatives should be installed, if any, will be resolved outside NEPA and outside Part 54. That issue is not an equipment aging issue and will be specifically resolved in the context of resolution of GSI-189. The Intervenor in any event offer no basis to argue that backup power to the hydrogen igniters without power to the air-return fans would be beneficial or prudent from a safety perspective. Contrary to this proposed amended contention, Duke is not obligated to “justify” in the present Part 54 SAMA context any particular position on installation of specific SAMAs evaluated.<sup>99</sup> This proposed amended contention must be rejected as beyond the scope of this Part 54 proceeding.

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<sup>98</sup> The air-return fans are part of the Air Return System that is required to be operable during plant operation by each plant’s Technical Specifications. The Air Return System is an Engineered Safety Feature and one of its functions is to promote hydrogen dilution by mixing the hydrogen with containment atmosphere and distributing hydrogen throughout containment during design basis accidents.

<sup>99</sup> Duke believes as a technical matter that power to the fans is required, as well as to the igniters, for effective hydrogen control. Duke believes that, based on analyses performed to date, a safety concern exists when powering hydrogen igniters without the air-return fans also being powered. Duke believes that containment integrity could be challenged and perhaps even breached if the air-return fans are not powered along with the hydrogen igniters. Duke believes that more engineering analyses are required to resolve this safety concern. The Intervenor quote an excerpt from the McGuire draft SEIS (at 5-30). However, this quote states only that the combined alternative of the back-up power to the hydrogen igniters and the air-return fans may be cost-beneficial. The NRC Staff in the draft SEIS does not take any position on the technical issue of whether the power to the

IV. CONCLUSION

For the reasons discussed above, the proposed amended contentions should be rejected. Previously admitted Consolidated Contention 2 should be dismissed as moot.

Respectfully submitted,



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ATTORNEYS FOR DUKE ENERGY  
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Dated in Washington, D.C.  
this 10th day of June, 2002

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igniters should be implemented alone (as the Intervenor propose) or in combination with the air-return fans.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "RESPONSE OF DUKE ENERGY CORPORATION TO PROPOSED LATE-FILED CONTENTIONS" in the captioned proceeding have been served on the following by deposit in the United States mail, first class, this 10th day of June, 2002. Additional e-mail service, designated by \*\*, has been made this same day, as shown below.

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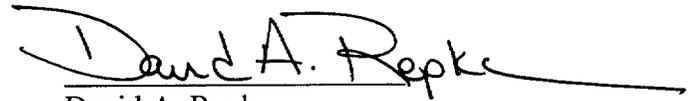
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