

February 14, 2002

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of

DUKE ENERGY CORPORATION

DOCKETED  
USNRC

2002 MAR -4 PM 3: 05

OFFICE OF THE SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

McGuire Nuclear Station, Units 1 and 2;

Docket Nos. 50-369 & 50-370

Catawba Nuclear Station, Units 1 and 2

Docket Nos. 50-413 & 50-414

**Blue Ridge Environmental Defense League (BREDL) response to**

NRC STAFF'S BRIEF IN SUPPORT OF APPEAL FROM LBP-02-04

and

**MEMORANDUM OF LAW IN SUPPORT OF APPEAL OF DUKE ENERGY  
CORPORATION FROM ATOMIC SAFETY AND LICENSING BOARD  
MEMORANDUM AND ORDER LBP-02-04  
(RULING ON STANDING AND CONTENTIONS)**

1. In regard to an introduction and background to this proceeding, BREDL hereby references pages 2-6 of the Licensing Board's January 24, 2002 Memorandum and Order LBP 02-04.

2. In LBP-02-04, the Licensing Board admitted two contentions to this proceeding:

*"In conclusion, we admit the following contentions:*

*NIRS Consolidated Contention 1, relating to anticipated Plutonium/MOX fuel use in the Duke plants; and*

*BREDL/NIRS Consolidated Contention 2, relating to Ice Condensers and Station Blackout Risks." (Page 101, LBP-02-04).*

3. On February 4, 2002, the Licensee, Duke Energy, and the NRC Staff, as represented by the

Office of General Counsel, filed appeals of the Board's decision.

**BREDL/NIRS Contention 2:  
Severe Accident Mitigation Alternatives at Ice Condenser Plants**

4. On November 29, 2001 BREDL submitted contentions that included *Contention 4: Aging Management of Ice Condensers*.
5. In regard to *Specific statement of the issue of law or fact to be raised or controverted*, BREDL referenced *Severe Accident Mitigation Alternative (SAMA)* analyses in the *License Renewal Application (LRA)*, writing on page 37:

**"10CFR51.53(c)(3)(ii)(L) requires 'consideration of alternatives to mitigate severe accidents,' which the licensee submitted as part of its Environmental Reports (ER).**

**10CFR51.53(c)(3) requires the ER to 'contain a consideration of alternatives for reducing adverse impacts, as required by §§51.45(c), for all Category 2 license renewal issues in Appendix B to subpart A of this part.'"**

BREDL then provided, on page 38, a *brief explanation of the basis or bases of the contention*, which included:

**"The licensee's SAMA analysis is incomplete because it fails to incorporate new and extensive information regarding ice condenser vulnerabilities. In its 'analysis of potential containment-related SAMAs,' the licensee failed to even identify potentially dominant failure modes for a severe accident."**

With the intent to show a genuine point of dispute, but not trying to prove the case in the contention, BREDL then provided *a statement of all appropriate facts and expert opinion to support contention* on pages 39-44. This section focused on NUREG/CR-6427 (SAND99-2253), *Assessment of the DCH Issue for Plants with Ice Condenser Containments* by citing portions of the document that pertained to issues in the LRA and providing an expert interpretation of the report. In NUREG/CR-6427 is frequently referred to the Sandia Report (and also as the "new

reg" or NUREG) in the hearing transcript, NRC sponsored researchers found significantly higher containment vulnerabilities for ice condenser plants and cited McGuire NPP as being particularly vulnerable. (See BREDL contentions at 39-44).

Nuclear Information Resource Service (NIRS) filed two related but independent contentions, Contentions 1.1.4 and 1.1.5, on Pages 12-16 of its contentions filed November 29, 2001:

**1.1.4 New Information on Risk of (and from) Station Blackout at Catawba and McGuire**

**1.1.5 Alternative Mitigation of Station Blackout Caused Accidents Omitted**

In Contention 1.1.5, at page 15, NIRS wrote that "*An alternative mitigation for Station Blackout (shown in item 1.1.4 to be a highly significant factor for these Duke reactors compared to all other in the United States) would be to provide a dedicated electrical line from the hydroelectric generating dams adjacent to each reactor site (these dams are owned by Duke, on Lake Norman and Lake Wylie).*"

6. The NRC Staff and Duke Energy challenged the validity of these contentions in their responses of December 13, 2002 and during oral arguments at the prehearing in Charlotte, NC on December 19-20, 2001. The latter discussion is found on pages 358 to 390 of the *Official Transcript of Proceedings*.

## **The NRC Staff's Appeal is Insufficient and Tries to Force Petitioners to Prove Their Case**

7. In its February 4, 2002 appeal to the Commission, the NRC staff continued to argue that the issue was whether the SAMA analysis in the LRA was correct or incorrect, not whether it was complete and had incorporated new information:

**"neither of the Interveners alleged that the analysis contained in the applicant's submittal was incorrect. Furthermore, the fact that Duke did not specifically reference or address the findings from the Sandia study does not mean that Duke's plant probabilistic risk assessment (PRA), on which its SAMA analysis relies, is deficient in this regard." *NRC Staff Appeal at Page 15.***

The staff appears to miss to the point of the contentions, which is that Duke's SAMA analyses are incomplete and inaccurate, and that an expert analysis found in NRC-sponsored research is so different from the LRA as to call into question the validity of the numbers in the LRA.

A question posed by Judge Young during the prehearing summarizes the difference:

**"I noticed one thing in the Staff's response, you say ice condensing containments are fully licensed by the NRC, but does that automatically exclude a contention that is based on another approach that could be used in the SAMA analysis?" Page 380 Official Transcript.**

In response to this question, the NRC staff chose to misrepresent the contentions and also admitted to a lack of understanding of the regulations:

**"Mr. Fernandez: They are excluded to the extent that contentions can be interpreted as an attack on the current licensing basis for the ice condensers. If one reads the contention as well and several portions I cannot cite right now off of the top of my head, it reads sort of as general attack of using ice condensers as a device in general..." Page 380 Official Transcript.**

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Within the same exchange, the Staff chose to describe citations of pertinent information in the NUREG as "throwing out a bunch of quotes from a report:"

JUDGE YOUNG: I know that's your position, but what I hear you saying -- I'm not sure what you are saying because if the Sandia report is not sufficient support for a contention, what would be?

MR. FERNANDEZ: Just merely stating at the SAMA analysis is insufficient and just throwing out a bunch of quotes from a report, just doing that is not sufficient to meet the contention standard of 2714, there is not a precise argument in his contention, and it's not specifically supported by sufficient basis." Page 383.

BREDL also notes these examples throughout the process as indicating that the Staff appears to be holding petitioners to a higher level than that detailed in NRC Regulation 10CFR2.714(b) for admissibility of contentions. It is not the job of petitioners to prove their case at the contention stage, but to show that a genuine dispute exists for which there is relief.

### **Duke Energy's Appeal fails to argue against a genuine dispute**

8. Duke Energy argued in its appeal that

- "There is Inadequate Basis for the Contention as Admitted"; and
- "the Contention Would Not Entitle Petitioners To Any Relief And Is Effectively Moot"

### **The issue of relief**

9. The latter reason Duke Energy argues for dismissal of this contention is that *the Contention Would Not Entitle Petitioners To Any Relief And Is Effectively Moot.*" (Page 38 of Duke Appeal)

In this regard Duke argues that the contention, "would, in any event, be inadmissible under 10

C.F.R. § 2.714(d)(2)(ii)§§ because it involves a matter which would be of no consequence in the

*proceeding in that it would not entitle the Petitioners to any relief."*(Page 31 of Duke Appeal).

A prevailing argument Duke makes in its appeal is that the SAMA analyses are complete and no

controversy exists because of recent information submitted by Duke to the NRC. Duke cited as

support responses it submitted on January 31 and February 1, 2002 to NRC *Requests for*

*Additional Information* (RFAI) regarding, "*a comparison of the conditional early containment*

*failure probability for McGuire and Catawba to the conditional containment failure*

*probabilities reported in NUREG/CR-6427, and a discussion of the models and assumptions that*

*count for the major differences."* (Page 39 of Duke Appeal)<sup>1</sup>

10. In the Mixed Oxide Fuel Fabrication Facility (MFFF) proceeding, the NRC staff wrote and

argued that "an admissible contention cannot be based solely on RAIs, as these Staff inquiries by

themselves do not indicate the presence of any deficiencies."<sup>2</sup> If the existence of an RAI is insufficient

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<sup>1</sup> Duke also wrote, in footnote 40, "that The NRC has also announced the availability of a draft rule concerning standards for combustible gas control systems. See 66 Fed. Reg. 57,001 (Nov. 14, 2001). The NRC Staff is investigating further requirements related to deliberate ignition systems. This generic rulemaking would apply to the present license term and is beyond the scope of this proceeding." However, the generic rulemaking was not raised during the prehearing and has no relevance on the issue of SAMAs.

<sup>2</sup> NRC STAFF'S RESPONSE TO CONTENTIONS SUBMITTED BY DONALD MONIAK, BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE, GEORGIANS AGAINST NUCLEAR ENERGY, AND ENVIRONMENTALISTS, INC. September 12, 2001. Docket No. 070-03098, Page 6. In its entirety, the staff wrote: The Commission has also rejected attempts to base environmental and safety contentions solely on Staff requests for additional information (RAIs) -- rather than on the technical details in the applications themselves -- stating that under 10 C.F.R. § 2.714(b)(2), the fact that the Staff has issued RAIs to the applicant does not establish the presence of a material issue of law or fact. The issuance of RAIs does not suggest that an application is incomplete, and applications may qualify for docketing and be sufficiently complete to start the presence of any deficiencies in the application."

basis for a contention, then the submittal of a response to an RAI is insufficient relief and/or justification to dismiss a contention. The Duke response to the RAI's was submitted just a few days prior to the appeal, and as such has not been subjected to review or careful scrutiny for the simple reason that petitioner has had to respond to the appeal.

The fact that the licensee submitted a response does not in itself constitute a valid response; and the mere filing of a response does not close the dispute, it only serves to create a pathway towards resolving the dispute.

11. As for the lack of an avenue for relief, Duke oversimplifies the issue by describing relief as additional analysis (at Page 38). However, additional analysis would result in a new cost-benefit analysis and could indirectly result in the remedy cited in the Sandia report and quoted by BREDL during the prehearing:

**"On Page 124 of this, in the summary and recommendation portion states that all plants especially McGuire would benefit from a reduction in station blackout frequency or some means of hydrogen control that is effective on SBO's" Page 360 of Official Transcript.**

BREDL believes that real relief will be derived by Duke Energy providing additional reactor safety measures instead of justifying a lack of proactive management with abstractions like SAMAs.

### **Issue of Adequacy of the Basis**

12. In its appeal, Duke Energy misrepresents the content of NUREG/CR-6427. For example, Duke wrote, on Page 34:

"In contrast, NUREG/CR-6427 provides no basis to link the research to the adequacy of Duke's SAMA analyses. As also discussed in Duke's Response to the proposed contention (at 32-33) and during the prehearing conference (Tr. at 365-

80), NUREG/CR-6427 provides no insights or commentary on the plant-specific McGuire and Catawba analyses described in the discussion of the SAMA issue in the license renewal application. As noted in Duke's Response (at 33), the ER description of the SAMA analyses prepared by Duke describes the Probabilistic Risk Assessment and Individual Plant Examination ("IPE") work performed for McGuire and Catawba and used as the basis for the SAMA analyses. NUREG/CR-6427, while specifically citing McGuire and Catawba, does not on its face purport to address the current design, operation, or maintenance of the two plants."

However, In oral arguments, Duke Energy stated that its SAMA analysis, while not citing NUREG/CR-6427 specifically, did incorporate the concerns found in the NUREG:

**MR. REPKA: The statement in the contention, the licensee SAMA analysis is incomplete because it fails to incorporate new and extensive information regarding ice condenser vulnerabilities. Not true. It's in the application. It's in the SAMA analysis where it specifically discusses the early containment failure scenario that is the subject of the new reg. Page 374, Official Transcript.**

13. Since Duke Energy cited its responses to RAI's as evidence of a response and even resolution, this argument should serve to solidify the connection between the Sandia report and the LRA.

14. In its appeal, Duke also mischaracterizes the breadth of NUREG/CR-6427 and presents the issue as resolved by NRC staff:

*"As discussed in Duke's Response (at 28-29) to the proposed contention (NIRS Contention 1.1.4), NUREG/CR-6427 addressed the Direct Containment Heating ("DCH") issue for nuclear plants with ice condenser containments, such as McGuire and Catawba."* (Page 33 of Duke Appeal).

In footnote 40 on Page 34 Duke also wrote that *"Even though the ice condenser plants*



*were determined to have this relatively increased vulnerability to Station Blackout events, the NRC Staff has concluded that the weighted probability of early containment failure for these plants is generally within the goals for containment performance,"* and cited a June 22, 2000 Memorandum to Samuel Collins, Director, Office of Nuclear Reactor Regulation, from Ashok Thadani, Director, Office of Nuclear Regulatory Research, regarding "DCH Issue Resolution for Ice Condenser Plants"

However, even this brief memo shows that NUREG/CR-6427 addressed more than the DCH issue:

"The ice condenser plants were evaluated as a separate class of W designs due to their smaller volume and lower design pressure. Because of their design characteristics, the DCH evaluation for ice condensers involved a more detailed study to address all early failure modes for representative station blackout and non-blackout scenarios"

And in another memo Thadani wrote:

"Ice condenser plants, however, present a more complex picture due to their greater vulnerability to a variety of phenomena. DCH, per se, only represents a moderate threat, resulting in a conditional containment failure probability of approximately 0.1 for one plant, McGuire. All ice condenser plants, though, are vulnerable to failure from hydrogen combustion during station blackout scenarios since their hydrogen control systems (i.e., igniters) would not be operable during those blackout sequences."<sup>3</sup>

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<sup>3</sup> September 29, 2000

MEMORANDUM TO: Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation  
FROM: Ashok C. Thadani, Director */RA/* original signed by M.V. Federline  
Office of Nuclear Regulatory Research  
SUBJECT: RESEARCH INFORMATION LETTER RIL-0005, "COMPLETION OF RESEARCH TO ADDRESS DIRECT CONTAINMENT HEATING ISSUE FOR ALL PRESSURIZED-WATER REACTORS"

15. Duke also misrepresents BREDL's contention by describing the discussion of NUREG/CR-6427 as a "citation" and stating that the contention:

"fails to correlate the data in that study to the risk assessments actually performed for McGuire and Catawba and credited in the SAMA analyses submitted in the application. The contention merely states that the SAMA analysis fails to reference NUREG/CR-6427 and does not specifically address that study's risk data. The contention fails to articulate what risk data must be addressed, and provide a basis therefore". Duke Appeal at 37.

However, during the prehearing BREDL presented the connection more clearly:

"Section 7 of the severe accident mitigation alternatives analysis, of McGuire, Page 31, states that the results of the McGuire specific analysis for severe accidents shows that the total core damage frequency is estimated at  $4.9E$  to the minus five per year and the risk is estimated at 13.5 person risk per year, and on the parallel document for Catawba, the results of the Catawba specific analysis for severe accident shows the total core damage frequency is estimated at  $5.8E$  minus five per year, and the risk is estimated at 31.4 person risks per year." Official Transcript Page 361.

Also, as repeatedly stated by BREDL and the Board, the specifics were cited on Page 40 of BREDL's contention, and the essence of the dispute can be found in the "fact that the is that what is contained in this Sandia NUREG and what is contained in the license application does not appear to match very well." (pages 362-363 of transcript)

Duke Energy argued that the SAMA analysis considered the differing opinion found in NUREG but that the real issue is that plant-specific data was utilized:

*"But again the issue here is the SAMA analysis really utilizes the McGuire plant specific PRA."*

Although Duke and the Staff are correct in arguing that there is no requirement to cite the Sandia report or any other NUREG, there is a requirement to use data that is accurate and complete and to resolve differences of facts between hard research sponsored by the NRC to resolve issues and PRA's conducted by the licensee.

Or, as Judge Kelber stated at the prehearing, "but here comes a technically sound report which challenges that. Is it -- can it be ignored since it wasn't performed by the licensee?" pages 367-368.

In conclusion, BREDL asks that the Commissioners honor the careful deliberations of the Board and deny the appeals by both staff and licensee; and allow the hearing process to proceed on schedule.

Respectfully submitted,



Don Moniak

Blue Ridge Environmental Defense League

dated February 14, 2001 in Aiken, SC

BREDL  
PO BOX 3487  
Aiken, SC 29801

February 14, 2002

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE Commissioners

In the Matter of \_\_\_\_\_ )

DUKE ENERGY CORPORATION )  
) Docket Nos. 50-369, 370, 413 and 414  
)  
(McGuire Nuclear Station, )  
Units 1 and 2, and )  
Catawba Nuclear Station )  
Units 1 and 2) )

CERTIFICATE OF SERVICE

I hereby certify that copies of the following documents

1. **Blue Ridge Environmental Defense League (BREDL) response to NRC STAFF'S BRIEF IN SUPPORT OF APPEAL FROM LBP-02-04 and MEMORANDUM OF LAW IN SUPPORT OF APPEAL OF DUKE ENERGY CORPORATION FROM ATOMIC SAFETY AND LICENSING BOARD MEMORANDUM AND ORDER LBP-02-04 (RULING ON STANDING AND CONTENTIONS)**
2. **Blue Ridge Environmental Defense League (BREDL) response, in regard to NIRS MOX Contention, to NRC STAFF'S BRIEF IN SUPPORT OF APPEAL FROM LBP-02-04 and MEMORANDUM OF LAW IN SUPPORT OF APPEAL OF DUKE ENERGY CORPORATION FROM ATOMIC SAFETY AND LICENSING BOARD MEMORANDUM AND ORDER LBP-02-04 (RULING ON STANDING AND CONTENTIONS)**

In the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, the 15<sup>th</sup> day of February, 2002, as well as by e-mail on the 14<sup>th</sup>.

Ann Marshall Young, Chair  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Mail Stop: T-3F23  
Washington, D.C. 20555  
(E-mail: AMY@nrc.gov)

Charles N. Kelber  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Mail Stop: T-3F23  
Washington, D.C. 20555  
(E-mail: CNK@nrc.gov)

Office of Commission Appellate Adjudication  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16C1  
Washington, D.C. 20555

Paul Gunter  
Nuclear Information and Resource Service  
1424 16<sup>th</sup> St. N.  
Washington, D.C. 20026  
(E-mail: [pgunter@nirs.org](mailto:pgunter@nirs.org))

Lester S. Rubenstein  
Administrative Judge  
Atomic Safety and Licensing Board  
4760 East Country Villa Drive  
Tucson, AZ 85718  
(E-mail: [Lesrrr@msn.com](mailto:Lesrrr@msn.com))

Office of the Secretary (three copies)  
ATTN: Docketing and Service  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16C1  
Washington, D.C. 20555  
(E-mail: [HEARINGDOCKET@nrc.gov](mailto:HEARINGDOCKET@nrc.gov))

Janet Marsh Zeller  
Executive Director  
Blue Ridge Environmental Defense League  
P.O. Box 88  
Glendale Springs, NC 28629  
(E-mail: [BREDL@skybest.com](mailto:BREDL@skybest.com))

Mary Olson  
Nuclear Information and Resource Service  
Southeast Office,  
P.O. Box 7586  
Asheville, NC 28802  
(E-mail: [donmoniak@earthlink.net](mailto:donmoniak@earthlink.net))

David A. Repka, Esq.  
Anne W. Cottingham, Esq.  
Winston & Strawn  
1400 L Street, N.W.  
Washington, D.C. 20005-3502  
(E-mail: [drepka@winston.com](mailto:drepka@winston.com)  
[acotting@winston.com](mailto:acotting@winston.com))

Susan L. Uttal, Esq.  
Antonio Fernandez, Esq.  
Office of the General Counsel  
Mail Stop - O-15 D21  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
(E-mail: [slu@nrc.gov](mailto:slu@nrc.gov); [axf2@nrc.gov](mailto:axf2@nrc.gov))

Lisa F. Vaughn, Esq.  
Legal Dept. (PBO5E)  
Duke Energy Corporation  
422 So. Church St.  
Charlotte, NC 28201-1006  
(E-mail: [lfVaughn@duke-energy.com](mailto:lfVaughn@duke-energy.com))

Edward McGaffigan, Jr., Commissioner  
OCM/EXM  
U.S. Nuclear Regulatory Commission  
One White Flint North, Rm. 18-G1  
Mail Stop 0-16 C1  
11555 Rockville Pike  
Rockville, MD 20852-2738  
(E-mail: [EXM@nrc.gov](mailto:EXM@nrc.gov))

Richard A. Meserve, Chairman  
U.S. Nuclear Regulatory Commission  
One White Flint North, Rm. 17-D1  
Mail Stop 0-16 C1  
11555 Rockville Pike  
Rockville, MD 20852-2738  
(E-mail: [RAM@nrc.gov](mailto:RAM@nrc.gov))

Nils J. Diaz, Commissioner  
OCM/NJD  
U.S. Nuclear Regulatory Commission  
One White Flint North, Rm. 18-E1  
Mail Stop 0-16 C1  
11555 Rockville Pike  
Rockville, MD 20852-2738  
(E-mail: [NJD@nrc.gov](mailto:NJD@nrc.gov))

Greta J. Dicus, Commissioner  
OCM/GJD  
U.S. Nuclear Regulatory Commission  
One White Flint North, Rm. 18-H1  
Mail Stop 0-16 C1  
11555 Rockville Pike

---

Rockville, MD 20852-2738  
(E-mail: [GJD@nrc.gov](mailto:GJD@nrc.gov))

Jeffrey S. Merrifield, Commissioner  
OCM-JSM  
U.S. Nuclear Regulatory Commission  
One White Flint North, Rm. 18-F1  
Mail Stop 0-16 C1  
11555 Rockville Pike  
Rockville, MD 20852-2738  
(E-mail: [JMER@nrc.gov](mailto:JMER@nrc.gov))



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Donald J. Moniak (Don Moniak)  
Blue Ridge Environmental Defense League  
PO Box 3487  
Aiken, SC 29802-3487

This 16<sup>th</sup> Day of ~~November~~, 2001

February