

'82 DEC -6 A11:12

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
DUKE POWER COMPANY, <u>et al.</u>)	Docket Nos. 50-413 and
)	50-414
(Catawba Nuclear Station,)	
Units 1 and 2))	

APPLICANTS' INTERROGATORIES AND REQUESTS TO PRODUCE TO
CAROLINA ENVIRONMENTAL STUDY GROUP AND PALMETTO ALLIANCE
REGARDING CAROLINA ENVIRONMENTAL STUDY GROUP CONTENTION
18/PALMETTO ALLIANCE CONTENTION 44

Pursuant to 10 C.F.R. §§2.740b and 2.741, Duke Power
Company, et al. ("Applicants") hereby serve Applicants'
Interrogatories and Requests to Produce upon Intervenor
Palmetto Alliance and Carolina Environmental Study Group
("CESG"). These interrogatories involve Palmetto Alliance
Contention 44/CESG Contention 18.

Each interrogatory shall be answered fully in writing,
under oath or affirmation, and include all pertinent infor-
mation known to CESG/Palmetto Alliance, its officers,
directors or members as well as any pertinent information
known to its employees, advisors or counsel. Each request to
produce applies to pertinent documents which are in the
possession, custody or control of CESG/Palmetto Alliance, its
officers, directors or members as well as its employees,
advisors or counsel. In answering each interrogatory and in

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responding to each request, recite the interrogatory or request preceding each answer or response. Also, identify the person providing each answer or response.

These interrogatories and requests shall be continuing in nature. Thus, any time CESG/Palmetto Alliance obtains information which renders any previous response incorrect or indicates that a response was incorrect when made, CESG/Palmetto Alliance should supplement its previous response to the appropriate interrogatory or request to produce. CESG/Palmetto Alliance should also supplement its responses as necessary with respect to identification of each person expected to be called at the hearing as an expert witness, the subject matter of his or her testimony, and the substance of that testimony. Applicants are particularly interested in the names and areas of expertise of CESG/Palmetto Alliance witnesses, if any. Identification of such witnesses is necessary if Applicants are to be afforded adequate time to depose them. The term "documents" shall include any writings, drawings, graphs, charts, photographs, and other data compilations from which information can be obtained. We request that at a date or dates to be agreed upon, CESG/Palmetto Alliance make available for inspection and copying all documents subject to the requests set forth below.

REQUESTS FOR DOCUMENTS

Pursuant to 10 C.F.R. §2.741, Applicants request CESC and Palmetto Alliance by and through their attorney to make available for inspection and copying at a time and location to be designated, any and all documents, of whatsoever description, identified in the responses to the Applicants' interrogatories below, including, but not limited to:

- (1) any written record of any oral communication between or among Intervenors, their advisors, consultants, agents, attorneys, and/or any other persons, including but not limited to the NRC Staff, the Applicants, and their advisors, consultants, agents, attorneys and/or any other persons; and
- (2) any documents, correspondence, letters, memoranda, notes, diagrams, reports, charts, photographs, or any other writing of whatsoever description, including but not limited to work papers, prior drafts, and notes of meetings.

If CESC or Palmetto Alliance maintains some documents should not be made available for inspection, they should specify the documents and explain why such are not being made available. This requirement extends to any such documents, described above, in the possession of CESC or Palmetto Alliance, their advisors, consultants, agents, or attorneys.

GENERAL INTERROGATORIES

Pursuant to 10 C.F.R. §2.740b, the Applicants request CESC and Palmetto Alliance by and through their attorney to answer separately and fully in writing under oath or affirmation, by persons having knowledge of the information requested, the following interrogatories.

A. General Interrogatories

The following interrogatories apply severally to each of the contentions admitted as issues in controversy in this proceeding.

1. State the full name, address, occupation and employer of each person answering the interrogatories and designate the interrogatory or the part thereof he or she answered.
2. Identify each and every person you are considering calling as a witness at the hearing in this matter on this contention, and with respect to each such person:
 - a. State the substance of the facts and opinions to which the witness is expected to testify;
 - b. Give a summary of the grounds for each opinion; and
 - c. Describe the witness's educational and professional background.

3. Is the contention based on one or more calculations?
If so;
 - a. Describe each calculation and identify any documents setting forth such calculation.
 - b. Indicate who performed each calculation.
 - c. Indicate when each calculation was performed.
 - d. Describe each parameter used in such calculation and each value assigned to the parameter, and describe the source of your data.
 - e. Indicate the results of each calculation.
 - f. Explain in detail how each calculation provides a basis for the issue.
4. Is the contention based upon conversations, consultations, correspondence or any other type of communications with one or more individuals? If so:
 - a. Identify by name and address each such individual.
 - b. State the educational and professional background of each such individual, including occupation and institutional affiliations.
 - c. Describe the nature of each communication with such individual, when it occurred, and identify all other individuals involved.
 - d. Describe the information received from such individuals and explain how it provides a basis for the issue.

- e. Identify each letter, memorandum, tape, note or other record related to each conversation, consultation, correspondence, or other communication with such individual.

Interrogatories Regarding CESG Contention 18/Palmetto Alliance
Contention 44

1. Do you contend that reactor materials did not comply with 10 C.F.R Part 50, Appendix G requirements when tested?
2. If your response to Interrogatory 1 is in the affirmative, please specify each provision of 10 C.F.R. Part 50, Appendix G which you contend is not satisfied.
3. For each provision identified in your response to Interrogatory 2, please specify the nature of each noncompliance which you contend exists. Your specification should include, but should not be limited to, test methodology, materials composition, and specific reactor vessel components.
4. What are your bases for your responses for Interrogatories 1 through 3? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.
5. Specify each regulatory requirement which you contend is not satisfied by the Catawba reactor vessels with regard to fracture toughness.

6. For each regulatory requirement identified in your response to Interrogatory 5, specify the manner in which you contend the requirement is not satisfied.
7. Specify each regulatory guidance provision which you contend should be but has not been followed for the Catawba reactor vessels with regard to fracture toughness.
8. With respect to each guidance provision identified in your response to Interrogatory 7, specify the manner in which you contend the reactor vessel does not satisfy that guidance.
9. What are your bases for your responses to Interrogatories 5 through 8? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.
10. What do you mean by "unanticipated" when you state that an "unanticipated" rapid increase in reference temperature could occur?
11. Do you contend that Applicants will be unable to monitor adequately the fracture toughness of the reactor vessels during their operating life?
12. If your response to Interrogatory 11 is in the affirmative, please specify the measures which you contend must be taken to assure that changes in fracture toughness are identified.

13. Do you contend that data obtained from surveillance for reactor vessel fracture toughness cannot be utilized to determine the conditions under which the vessel can be operated safely?
14. If your response to Interrogatory 13 is in the affirmative, please specify the information you contend must be obtained and how that information must be utilized to determine the conditions under which the reactor vessel can be safely operated.
15. By what mechanism(s) do you contend the "reference temperature" would rapidly increase in the Catawba reactor vessel?
16. For each mechanism identified in your response to Interrogatory 15, please specify the changes in material properties, including changes in molecular and granular properties, which you contend occur by that mechanism.
17. For each change in material property identified in your response to Interrogatory 16, specify the consequences of that change under normal operation and anticipated operational occurrences.
18. For each material property change identified in your response to Interrogatory 16, specify the consequences of that change under transient conditions.
19. Specify the transient conditions under which you contend the consequences described in your response to Interrogatory 18 could occur.

20. What are your bases for your responses to Interrogatories 10 through 19? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your positions.
21. Define the "reference temperature" to which you refer in stating a concern with the unanticipated rapid increase of that temperature. Include in the definition a statement of how you contend that reference temperature should be determined for the particular ferritic materials used in the Catawba reactor vessel.
22. What provisions of the ASME Code do you contend are applicable to the Catawba reactor vessels? Specify the edition and addenda for each code provision.
23. What provisions of the ASME Code do you contend the Catawba reactor vessels will not comply with?
24. For each provision of the ASME Code identified in your response to Interrogatory 23, specify the measures which you contend must be taken to assure compliance with those provisions.
25. What are your bases for your responses to Interrogatories 21 through 24? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your positions.
26. Do you disagree with any of the information, data or analyses presented in the Catawba FSAR regarding fracture toughness?

- a. If your response is in the affirmative, please specify the sections with which you disagree.
 - b. For each section identified in your response to a., specify the nature of the disagreement.
 - c. For each item of disagreement mentioned in your response to b., describe what measures you contend need be taken to satisfy your concern.
 - d. What are your bases for your responses to a.-c., above? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your position.
27. Please list each source of "stress" which you contend might result in brittle fracture of the Catawba reactor vessels.
28. For each stress source identified in your response to Interrogatory 27, please specify the precise characteristics of that source that could lead to brittle fracture. Include the range of temperature, pressure and operational conditions within which you contend that source of stress should be of concern.
29. Precisely describe the "brittle fracture" which you contend could occur. Include a description of the failure mechanism, and method and extent of propagation (if any).
30. What are the specific reactor materials which you contend could be subject to "brittle fracture"?

31. For each of the reactor materials identified in your response to Interrogatory 30, describe their relative fracture toughness.
32. What are your basis for your responses to Interrogatories 27 through 31? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your positions.
33. What is the "rapid increase" of reference temperature which you contend occurs? Describe the period of time over which you contend such increase occurs.
34. Do you contend that measures cannot be taken to eliminate or sufficiently reduce the hazard from any decrease in fracture toughness of the reactor vessels which may occur?
35. If your response to Interrogatory 34 is in the negative, describe the measures that you contend should be taken to alleviate decreases in fracture toughness.
36. For each of the measures described in your response to Interrogatory 35, set forth how those measures should be carried out, and when they should be taken.
37. What do you mean by "premature" in stating that premature reactor embrittlement is a hazard?
38. What is the minimum water temperature to which you contend the Catawba reactor vessels should be subjected upon ECCS initiation?

39. Describe in detail the accident scenario which leads to the minimum temperature specified in your response to Interrogatory 38.
40. What are your bases for your responses to Interrogatories 33 through 39? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your positions.
41. What is the maximum reference temperature which you contend the Catawba reactor vessels could reach?
42. Describe in detail the factors which could cause the reference temperature to reach the maximum specified in your response to Interrogatory 41.
43. Do you contend that Applicants' initial testing for fracture toughness of ferritic materials in the Catawba reactor vessels is inadequate?
44. If the response to Interrogatory 43 is in the affirmative, please specify the inadequacies which you contend exist.
45. For each of the inadequacies specified in your response to Interrogatory 44, please specify what you contend must be done to adequately determine fracture toughness.
46. What are your bases for your responses to Interrogatories 41 through 45? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your positions.

47. Do you contend Applicants should employ dummy rods instead of fuel in the outer core?
48. If your response to Interrogatory 47 is in the affirmative, describe the purpose and composition of those rods and the manner in which you contend they should be employed.
49. What change in reference temperature for the Catawba reactor vessels do you contend will occur over the life of the facility? Specify the anticipated reference temperatures at 5 year intervals.
50. Do you contend measures should be taken to permit annealing treatment of the Catawba reactor vessels during their operating life?
51. If your response to Interrogatory 50 is in the affirmative, specify the measures which you contend should be taken.
52. What are your bases for your responses to Interrogatories 47 through 51? Identify all documents, testimony or oral statements by any person and all legal requirements on which you rely in support of your position.

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BRANCH

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DUKE POWER COMPANY, <u>et al.</u>)	Docket Nos. 50-413
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(Catawba Nuclear Station,)	
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Interrogatories and Requests to Produce to Carolina Environmental Study Group and Palmetto Alliance Regarding Carolina Environmental Study Group Contention 18/Palmetto Alliance Contention 44" in the above captioned matter have been served upon the following by deposit in the United States mail this 3rd day of December, 1982.

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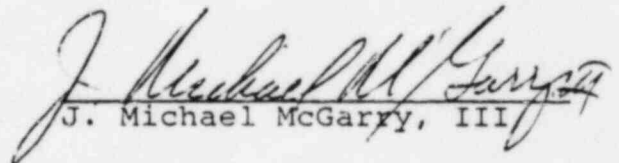
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