

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
DUKE POWER COMPANY, et al.)
(Catawba Nuclear Station,)
Units 1 and 2))

Docket Nos. 50-413
50-414

April 19, 1983



PALMETTO ALLIANCE SUPPLEMENTARY RESPONSES TO APPLICANTS'
AND STAFFS' INTERROGATORIES REGARDING
CONTENTIONS 6, 7, 8, 16, 27 AND 44

Intervenor Palmetto Alliance herewith submits its Supplementary Responses to discovery by Applicants and NRC Staff as directed by the Board in its Order of September 22, 1982, and its subsequent Orders of April 1, and April 13, 1983.

These responses are provided to Applicants' Interrogatories of April 9, 1982, regarding Contentions 6 and 7; August 9, 1982, regarding Contentions 16 and 27; August 16, 1982, regarding Contention 8; and December 3, 1982, regarding Contention 44. These responses are also provided to NRC Staff Interrogatories of May 7, 1982, regarding Contentions 6 and 7; August 13, 1982, regarding Contentions 8, 16, and 27; and, December 15, 1982, regarding Contention 44.

Accept as herein amended, modified, or supplemented, Palmetto Alliance hereby reiterates the following previous responses to Applicants and NRC Staff: Palmetto Alliance responses to Applicants of April 28, 1982, regarding Contentions 6 and 7; August 30, 1982, regarding Contentions 8, 16, and 27; Palmetto Alliance Responses to NRC staff of May 26, 1982, regarding Contentions 6 and 7; Palmetto Alliance Supplementary Responses to Applicants and Staff of November 5, 1982, regarding Contentions 8, 16 and 27; and, Carolina Environmental Study Groups March 17, 1983, Response to NRC Staff regarding Contention 44.

CONTENTION 6

As recast by the Board and admitted in its December 1, 1982, Order, at page 5, Palmetto Alliance Contention 6 now reads as follows:

D 803

Because of systematic deficiencies in plant construction and company pressure to approve faulty workmanship, no reasonable assurance exists that the plant can operate without endangering the health and safety of the public.

Applicants served their first set of Interrogatories April 9, 1982, regarding Contention 6, as originally filed. Palmetto Alliance served its Responses to these Interrogatories on April 28, 1982. NRC Staff served its Interrogatories on May 7, 1982, regarding Palmetto Contention 6, as originally filed, to which Palmetto Alliance responded on May 26, 1982. Palmetto Alliance hereby reiterates and supplements these previous responses.

A. GENERAL INTERROGATORIES 1, 2, 3, AND 4

1. Please 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. Please identify each and every person whom you are considering to call as a witness at the hearing in this matter on this contention, and with respect to each such person, please:
 - 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' 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. Who performed each calculation?
 - c. When was each calculation performed?
 - d. Describe each parameter used in such calculation and each value assigned to the parameter, and describe the source of your data.
 - e. What are 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.

Please see April 28, 1982, Response.

B. Specific Interrogatories

1. What do you mean by the term "substandard workmanship"?

Please see April 28, 1982, Response.

2. What standard do you contend has not been met?

Please see April 28, 1982, Response.

3. How do you contend that standard has not been met by the workmanship at the Catawba station?

Palmetto is concerned that deficiencies in Duke Power Company's Quality Assurance program, including company pressure on Quality Assurance Control Inspectors and others to approve faulty workmanship, have allowed substandard workmanship in plant construction to go uncorrected. Palmetto Alliance has not determined and therefore cannot yet contend the specific manner in which resulting workmanship is below standard.

4. What "workmanship" is the subject of this contention?

Please see April 28, 1982, Response.

5. Please specify the activities and areas of plant construction for which you contend the workmanship is substandard?

Please see April 28, 1982, Response to Interrogatory 80 regarding the substandard workmanship observed by Nolan R. Hoopingarner, II, and William R. McAfee. In Applicants' February 28, 1983, Supplemental Responses to Palmetto Alliance Interrogatories on its Contention 6, at pages 41 and 42, Duke Power Company identifies the personnel exit interview and other records of Mr. Hoopingarner which are believed to reflect further details of substandard workmanship he observed. In their March 25, 1983, Responses to Palmetto Alliance follow-up Interrogatories, at page 21, Applicants identify NRC Inspection Report Nos. 50-413/80-8; 50-414/80-8 and 50-413/80-19; 50-414/80-19 as prompted by complaints made to the NRC by Nolan R. Hoopingarner, II, which are believed to reflect further his observations of faulty workmanship. In a letter of April 12, 1983, Applicants by A. V. Carr, Jr., Esquire, identify, at page 2, further documents responsive to Palmetto Alliance Interrogatories 23 and 25 on Contention 6. Attachment 3 to this April 12, 1983, letter identifies, at page 3, a July 12, 1979, Memo to File from one L. R. Davidson regarding exit interview of Ron McAfee, which may further reflect Mr. McAfee's

observation of substandard workmanship at Catawba. Neither Mr. Hoopingarner nor Mr. McAfee have examined these documents or others yet unknown which may refresh their recollection as to other activities and areas of plant construction for which workmanship is substandard. On the basis of information made available in subsequent discovery Responses, Palmetto Alliance further contends that substandard workmanship exists in the welding activities at Catawba.

6. Do you contend that the workmanship does not satisfy applicable NRC requirements?

Yes.

7. If your response to Interrogatory 6 is in the affirmative, please specify all NRC requirements which you contend have not been satisfied.

Please see April 28, 1982 Response.

8. For each of the NRC requirements identified in your response to Interrogatory 7, please relate the particular aspects of "substandard workmanship" to the specific NRC requirements you contend have not been satisfied.

Palmetto Alliance contends that substandard workmanship remains uncorrected at Catawba due to deficiencies in Duke Power's Quality Assurance program. It can only relate this substandard workmanship, the full details and extent of which remain undetected, to Duke's failure to satisfy the NRC requirements of 10CFR Part 50, Appendix B--"Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." To the extent that such substandard workmanship exists in safety-related components or systems such faulty workmanship would likely also fail to satisfy 10CFR Part 50 Appendix A--"General Design Criteria for Nuclear Power Plants."

9. What are your bases for your responses to Interrogatories 1 through 8? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see April 28, 1982, Response. Palmetto Alliance also relies on Applicants and Staff Responses to Discovery and documents produced in connection with those Responses, particularly documents reflecting complaints of harrassment, threats, pressure to approve faulty workmanship and faulty workmanship as identified by a number of Catawba Welding Quality Control Inspectors in 1981 and 1982.

10. What do mean by "poor quality control"?

Please see April 28, 1982, Response.

11. Specifically, what do you contend constitutes "poor" quality control?

Please see April 28, 1982, Response.

12. By "poor," do you contend that applicable NRC requirements regarding quality control are not met?

Yes.

13. If your response to Interrogatory 12 is in the affirmative, please specify those NRC requirements concerning quality control which you contend are not met.

Based on the review of documents to date regarding the complaints by Catawba Welding Quality Control Inspectors, Palmetto Alliance believes that a number of the 10CFR Part 50, Appendix B--"Quality Assurance Criteria"--are not being met by Duke Power Company, including: I. Organization, II. Quality Assurance Program, X. Inspection, XIV. Inspection, Test, and Operating Status, XV. Non-Conforming Materials, Parts, or Components, XVI. Corrective Action, and XVII. Quality Assurance Records.

14. With regard to Interrogatory 13, please specify in what manner you contend those NRC requirements have not been met.

Please see documents reflecting these complaints as identified in response to Interrogatory 9 above.

15. What do you mean by the term "quality control"?

Please see April 28, 1982, Response.

16. Do you contend there is an relationship between "poor quality control" and "substandard workmanship?"

Yes. |

17. If your response to Interrogatory 16 is in the affirmative, please specify what that relationship is.

Please see April 28, 1982, Response. |

18. If your response to Interrogatory 16 is in the negative, please explain the differences between "poor quality control" and "substandard workmanship" which you perceive.

19. What are your bases for your responses to Interrogatories 10 through 18? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please refer to Response to Interrogatory 9, above.

20. What do you mean by "strongly suggest"?

Please see April 28, 1982, Response.

21. Do you mean that NRC requirements have not been satisfied when you say "strongly suggest"?

No.

22. If your response to Interrogatory 21 is in the affirmative, please specify those NRC requirements which you contend have not been met.

23. If your response to Interrogatory 21 is in the negative, please explain what you contend must be litigated with respect to this contention.

Please see April 28, 1982, Response. |

24. What are your bases for your responses to Interrogatories 20 through 23? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see Response to Interrogatory 9, above.

25. What do you mean by "actual plant construction"?

The way the plant is actually built.

26. Does the term "actual" have any significance in terms of your contention?

Yes.

27. If your response to Interrogatory 26 is in the affirmative, please explain what that significance is to your Contention.

It is the plant as "actually" constructed that must operate such that reasonable assurance exists that the public health and safety will not be adversely affected. Faulty workmanship may impune the ability of even a safely designed plant to safely operate as built.

28. What areas of "actual plant construction" are the subject of your Contention?

Please see Response to Interrogatory 5, above.

29. For each of the areas identified in your response to Interrogatory 28, please specify each instance of "substandard workmanship" or "poor quality control" which you contend has occurred.

Please see Response to Interrogatory 5, above.

30. For each instance identified in your response to Interrogatory 29, please specify the location within the plant at which you contend such workmanship took place.

Please see Response to Interrogatory 5, above.

31. For each of the instances identified in your response to Interrogatory 29, please identify the date and time of occurrence at which you contend such workmanship took place.

Please see Response to Interrogatory 5, above.

32. Have you identified any individuals who you contend performed such poor quality control or substandard workmanship?

Yes. /

33. If so, please identify those individuals by name and current address.

The following persons have been identified by Applicants in their April 12, 1983, letter, Attachment 1, pages 1 and 2, complaining of poor quality control or substandard workmanship: Dean Bentley, T. A. Gardner, William H. Burr, Boyce Coffin, C. D. Crisp, B. Deaton, Harold Eubanks, A. S. Gantt, V. C. Godfrey, Larry Jackson, Richard Jones, Kenneth W. Carriker, Ronald Kirkland, John McCoy, John Rockholt, Ransom Sims, Mickey Standridge, Lindsay Hovis, Beau Ross, and J. R. Bryant. Current addresses for these individuals are likely known by Applicants.

34. Identify the particular occurrence which you contend each individual identified in your response to Interrogatory 33 was involved with.

Each of these individuals is believed to be a former or present QC/QA Inspector who has complained of quality control and workmanship deficiencies, primarily involving welding, to Duke Power Company management or the NRC Staff.

35. What are your bases for your responses to Interrogatories 25 thru 34? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see Response to Interrogatory 9, above. Palmetto has also based these responses on documents known to Applicants and Staff and produced by them in Response to Palmetto questions in Discovery, particularly those identified in Attachment 1 to Duke Power Company's April 12, 1983, letter to Palmetto, Attachment 1 "Descriptive Index of Documents Produced in Response to Interrogatory 9 (Background for Task Force)" and in documents

April 8, 1983, including a 3/15/82 memo for Carl E. Alderson, Director, Enforcement and Investigation Staff from P. K. VanDoorn, Senior Resident Inspector, Catawba, reflecting allegations to NRC by QC Welding Inspector personnel of harrassment on the job, instructions to falsify records, significant quality assurance program breakdowns, and "concern that DPC would attempt to 'whitewash' their complaints."

36. What do you mean by the term "substantially below"?

Please see April 28, 1982, Response.

37. Do you mean that applicable NRC requirements have not been satisfied?

Yes.

38. If your response to Interrogatory 37 is in the affirmative, please identify those NRC requirements.

Please see April 28, 1982, Response.

39. What are the "NRC standards" which are the subject of this Contention?

Please see April 28, 1982, Response.

40. Identify each instance of plant construction for which you contend a particular standard identified in your response to Interrogatory 39 has not been met.

Please see Response to Interrogatory 5, above.

41. What are the "safety related areas" to which you contend the NRC standards identified in your response to Interrogatory 39 apply?

Please see Response to Interrogatory 5, above. Documents identified by Applicants and NRC Staff, particularly including those regarding complaints by Catawba Welding Inspectors identify safety related systems components and areas for which NRC standards may have been violated.

42. Identify separately each of the safety related areas and the NRC standard which you contend applies to that area.

Please see Response to Interrogatory 41, above.

identified in your responses to Interrogatory 41

relate to the safe operation of the plant?

Palmetto Alliance presumes that the designation of "safety related" implicates the safe operation of the plant.

44. Identify each construction activity which is involved in those safety related areas which are the subject of this Contention.

Please see Response to Interrogatory 5, above.

45. What is the relationship, if any, between each example of substandard workmanship which you contend has occurred in these safety related areas?

The common link contended by Palmetto to exist between instances of substandard workmanship is the failure by Quality Assurance to detect and correct a problem.

46. What is the relationship, if any, between each instance of poor quality control which you contend has occurred in these safety related areas?

The instances of poor quality control which are of concern to Palmetto stem from Duke Power Company Quality Assurance program failures particularly including pressure to approve faulty workmanship.

47. Do you contend that there are instances of substandard workmanship that have not been corrected? If so, please identify.

Yes. Please see Responses to Interrogatories 5 and 41, above.

48. Do you contend that there are instances of poor quality control which Applicants have not corrected? If so, please identify.

Yes. Please see Responses to Interrogatories 5 and 41, above.

tion which do not satisfy NRC standards which the Applicants have not corrected? If so, please identify.

Yes. Please see Responses to Interrogatories 5 and 41, above.

50. If the response to Interrogatory 49 is in the affirmative, please specify those instances of construction.

Please see Response to Interrogatory 5, above.

51. Do you contend that there are instances of plant construction which do not satisfy NRC requirements which Applicants have identified but have not corrected?

Yes.

52. What are your bases for your responses to Interrogatories 36 through 51? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely on in support of your position.

Please see Response to Interrogatory 9, above.

53. In what way do you contend Applicants have "failed to provide" a quality assurance program?

Please see April 28, 1982 Response.

54. Do you contend Applicants have not submitted an appropriate quality assurance program to the NRC?

No.

55. Do you contend Applicants have not developed and implemented an appropriate quality assurance program?

Yes.

56. If your responses to any of Interrogatories 53-55 are in the affirmative, please explain in detail the substance of your contention for each such affirmative response.

Please see April 28, 1982, Response.

53 through 56? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely on in support of your position.

Please see Response to Interrogatory 9, above.

58. What is the "quality assurance program" which you contend is the subject of this Contention?

Please see April 28, 1982, Response.

59. Do you contend that the Applicants' policies for implementing its quality assurance program are inadequate? If so, please explain your concern.

Please see April 28, 1982, Response.

60. Do you contend that the Applicants' procedures for implementing its quality assurance program are inadequate? If so, please explain your concern.

Please see April 28, 1982, Response.

61. Do you contend that the Applicants' instructions for implementing its quality assurance program are inadequate? If so, please explain your concern.

Please see April 28, 1982, Response.

62. What are the specific requirements of 10 C.F.R. Part 50, Appendix B which you contend Applicants' quality assurance program does not satisfy?

Criteria I, II, X, XIV, XV, XVI, XVII.

63. With regard to those requirements of 10 C.F.R. Part 50, Appendix B which you contend Applicants do not satisfy, identify the exact concern which you have and provide the bases for that concern. Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see Response to Interrogatory 5, above.

64. What aspects of operation of the Catawba Station do you contend would be affected by your allegations concerning the quality assurance program for Catawba?

Please see April 28, 1982, Response.

65. What is bases for your responses to Interrogatory 64? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see Response to Interrogatory 9, above for bases.

66. With respect to the NRC "Systematic Assessment of Licensee Performance Review Group" report, do you contend that that assessment demonstrates that Applicants have not satisfied the requirements of 10 C.F.R. Part 50, Appendix B?

No.

67. If your response to Interrogatory 66 is in the affirmative, please specify the particular findings of that report which you contend demonstrate that Applicants have not satisfied the requirements of 10 C.F.R. Part 50, Appendix B.

68. What portions of that report do you intend to rely upon in support of your position on this Contention?

Please see April 28, 1982, Response.

69. Do you contend that the "management" aspects of Applicants' quality assurance program mentioned in NUREG-0834 do not satisfy the requirements of 10 C.F.R. Part 50, Appendix B?

No.

tive, please specify those aspects of Applicants' quality assurance management you contend do not satisfy the requirements of 10 C.F.R. Part 50, Appendix B.

71. For each of the management functions identified in your response to Interrogatory 70, please specify the precise concern which you have in this Contention.
72. Please define what you mean by the term "training"?
Please see April 28, 1982, Response. /
73. Please identify those "areas of quality assurance" concerning training which you contend do not satisfy NRC requirements.
74. For each of the aspects of training identified in your response to Interrogatory 73, please specify the precise concerns which you have with that program.
75. What are your bases for your responses to Interrogatories 65 through 74? Identify all documents, testimony or oral statement by any person and legal requirements on which you rely in support of your position.
Please see Response to Interrogatory 9, above for bases.
76. How many "former Duke Power Company construction workers" or other employees do you intend to rely upon in support of your allegations in this Contention?

Please see April 28, 1982, Response. In response to discovery by Palmetto Alliance Applicants have identified a number of present and former employees who may provide support for the allegations of Palmetto Contention 6. Many of these employees are identified as Catawba Welding Q/C Inspectors who have complained about systematic deficiencies in the Catawba Q/A program. Applicants have also provided in discovery the names and addresses for all present and former Catawba Quality Assurance employees. With the assistance of the Government Accountability Project, Palmetto intends to solicit such information from these employees and others which might support this Contention. However, at present, Palmetto only intends to rely upon Messrs. Hoopingarner and McAfee in support of our claims in this Contention as identified in our April 28, 1982, Responses.

tion worker or other employee on whom you intend to rely in support of your position on this Contention.

Please see April 28, 1982, Response.

78. Provide the term of employment for each construction worker or other employee on whom you intend to rely in support of your position on this Contention.

Please see April 28, 1982, Response.

79. Provide the position, or positions, held by each construction worker or other employee on whom you intend to rely in support of your position on this Contention.

Please see April 28, 1982, Response.

80. Provide the specific allegations by each construction worker or other employee on whom you intend to rely in support of your position on this Contention.

Please see April 28, 1982, Response, and Response to Interrogatory 5, above.

81. What are the bases for your responses to Interrogatories 76 through 80? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely on in support of your position.

Please see Response to Interrogatory 5, above for bases.

82. Besides the statements of these construction workers or other employees, is there any other information on which you intend to rely in support of their allegations? If so, please identify.

Yes. Information produced in discovery.

83. Identify the "certified quality control inspector" on whom you intend to rely in support of this Contention.

William R. McAfee.

84. Please provide the address of that quality control inspector.

Please see April 28, 1982, Response.

85. What was the term of employment of that quality control inspector.

Please see April 28, 1982, Response.

86. What positions did that person hold during his term of employment?

Please see April 28, 1982, Response.

87. What is the substance of the allegations of that quality control Inspector on whom you intend to rely in support of your position on this Contention?

Please see response to Interrogatories 5 and 80, above.

88. Is there any other information concerning the allegations made by the quality control inspector which support your position on this Contention? If so, please identify.

Yes. Corroboration by many other Catawba Quality Control Inspectors as described in response to Interrogatory 5, above.

89. Did the identified construction workers or former employees bring their concerns to the attention of other Duke Power Company employees, Duke Power Company supervisors, Duke Power Company management, NRC personnel, state personnel or personnel of any other local, state or federal agency?

Yes.

90. If the answer to Interrogatory 89 is affirmative, identify the specific individuals to whom concern were expressed and their exact positions.

Please see April 28, 1982, Response.

91. If the answer to Interrogatory 89 is affirmative, when was the concern expressed and what was the specific nature of the concern expressed?

Please see April 28, 1982, Response.

92. If the answer to Interrogatory 89 is affirmative, what was the response of the specific individuals to whom concerns were expressed?

Please see April 28, 1982, Response.

93. If the answer to Interrogatory 89 is affirmative, was there any subsequent action on the part of any of the individuals or organizations referenced that has a bearing on this contention? If so, please identify.

Please see April 28, 1982, Response.

94. With regard to Interrogatories 89 through 93, identify all documents, testimony or oral statements by any person and legal requirements on which you rely on in support of your position.

Please see response to Interrogatory 9, above, for

95. What do you mean by the term "systematic"?

Common meaning. According to a system method or plan.

96. What are the "deficiencies" which you contend the former construction workers and other employees have alleged to occur?

Please see response to Interrogatory 80, above.

97. For each deficiency identified in your response to Interrogatory 96, specify the exact location within the plant which you contend such deficiency occurred.

Please see response to Interrogatories 5 and 80, above.

Interrogatory 96, please specify the exact time at which you contend such deficient activities occurred. Please see response to Interrogatories 5 and 80, above.

99. For each deficiency identified in your response to Interrogatory 96, please specify the person or persons whom you contend performed deficient work. Please see response to Interrogatories 5 and 80, above.

100. For each deficiency identified in your response to Interrogatory 96, specify the particular NRC requirement which that deficiency fails to satisfy. Please see responses to Interrogatories 5 and 80, above.

101. What are your bases for your responses to Interrogatories 95 through 100? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position. Please see response to Interrogatory 9, above for bases.

102. Are all deficiencies in plant construction which you allege have occurred at Catawba taken place in systems important to safety? No.

103. If your response to Interrogatory 102 is in the affirmative, please specify the particular safety system which you contend is affected by the deficiency.

104. If your response to Interrogatory 102 is in the negative, please specify the particular systems affected by the alleged deficiencies and the impact which you contend such deficiencies would have on plant operation. Please see response to interrogatories 5 and 80, above.

105. Have the deficiencies alleged in answer to Interrogatories 103 and 104 been left uncorrected? If so, what is the basis for your answer?

106. What are your bases for your responses to Interrogatories 127 through 128? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.
Please see response to interrogatory 9, above, for bases.
107. What is the "company pressure" which you contend has occurred?
Please see April 28, 1982, response.
108. Please specify each instance of "company pressure" and by whom such "company pressure" was brought.
Please see April 28, 1982, response; and responses to interrogatories 5 and 80, above.
109. Please identify each individual on whom you contend such pressure was brought to bear.
Please see responses to interrogatories 5 and 80, above.
110. In what manner do you contend such pressure was brought?
Please see responses to interrogatories 5 and 80, above.
111. Do you contend that such alleged "pressure" affected the quality of construction at Catawba? Yes.
112. If your response to Interrogatory 111 is in the affirmative, please specify every instance of inadequate construction which you contend resulted from such alleged "pressure".
Please see responses to interrogatories 5 and 80, above.
113. If your response to Interrogatory 111 is in the negative, please specify the significance, if any, which you perceive such alleged pressure has on construction.
114. What are your bases for your responses to Interrogatories 107 to 113? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see response to interrogatory 9, above for bases.

115. Define what you mean by the term "faulty workmanship"?

Please see April 28, 1982, response.

116. In what manner do you contend approval was to be given for alleged "faulty workmanship"?

Please see April 28, 1982, response.

117. To whom was such approval to be given and how was such approval to be given?

Please see April 28, 1982, response.

118. Do you contend that such approval was ever given?

Yes.

119. If your response to Interrogatory 118 is in the affirmative, please identify the person who gave such approval.

Please see responses to interrogatories 5 and 80, above.

120. If your response to Interrogatory 118 is in the affirmative, please identify what approval was given for particular tasks.

Please see responses to interrogatories 5 and 80, above.

121. What is your bases for your responses to Interrogatories 117 thru 120? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see response to interrogatory 9, above, for bases.

122. Identify each instance of "faulty workmanship" you contend exists at the Catawba facility?

Please see responses to interrogatories 5 and 80, above.

123. For each instance of alleged "faulty workmanship" specify the date and time of occurrence.

Please see responses to interrogatories 5 and 80, above.

124. For each instance of alleged "faulty workmanship" identify the person or persons whom you contend performed such "faulty workmanship."

Please see responses to interrogatories 5 and 80, above.

125. For each individual identified in your response to Interrogatory 124, please specify the address of such individual and whether or not they are currently employed by Duke Power Company.

126. For each instance of alleged "faulty workmanship" identified in your response to Interrogatory 125, please specify the bases on which you rely to demonstrate that such workmanship occurred. In this regard, see Interrogatories 89 through 94 and also answer them as they pertain to Interrogatory 125.

STAFF INTERROGATORIES

NRC Staff served its first set of interrogatories and document production requests on May 26, 1982, with respect to Palmetto Alliance contention 6. Palmetto Alliance responded to this discovery on May 26, 1982 by noting that this same contention was the subject of earlier Applicants discovery and Palmetto responses:

Each interrogatory of the NRC Staff is either identical to one or more already propounded by Applicants, or is substantially the same as those already propounded, and in either event all discoverable information sought now by staff has already been supplied in response to discovery by Applicants.

Palmetto Alliance responses of May 26, 1982 at p. 2.

Palmetto Alliance further objected to providing additional answers to Staff interrogatories beyond those answers already given. Palmetto hereby reiterates this response and supplements its responses to this NRC Staff discovery regarding contention 6 with the responses provided above to Applicants which reiterate, modify and supplement earlier responses.

CONTENTION 7

As originally filed and admitted by the Board in its December 1, 1982, Order, at pages 5-6, contention 7 reads:

No reasonable assurance can be had that the facility can be operated without endangering the public health and safety because of Duke's consistent failure to adhere to required Commission operating and administering procedures provided for in Commission rules and regulations. "The Nuclear Regulatory Commission has the statutory responsibility for prescribing licensing standards to protect public health and safety for inspecting the industry's activities against the standards. The Commission does not thereby certify to the industry that the industry's designs and procedures are adequate to protect its equipment or operations" Federal Tort Claim of General Public Utilities Corp., et al., COI-81-10, 13 NRC 773, 775-776 (1981). At both Oconee and Catawba facilities of Duke Power Company the Systematic Assessment of Licensee Performance Review Group found "weaknesses in personnel adherence to operating and administrative procedures" and "failure to follow procedures." NUREG 0834, Licensee Assessments, August 1981, pp. A-3, B-1. As long ago as 1977 Duke, licensee for the Oconee facility, was assessed civil penalties of \$21,500.00 where "the history of repetitive and chronic noncompliance, when considered in conjunction with failure to institute effective corrective action and management controls, demonstrates that management is apparently not conducting licensed activities with adequate concern for the health, safety or interest of its employees or the general public." Ernest Volgennau, Director, Office of Inspection and Enforcement, US NRC, to Carl Horn, Jr., President, Duke Power Company, March 29, 1977, Docket Nos. 50-269, 50-270, 50-278."

In its April 9, 1982 Discovery Applicants propounded Interrogatories regarding this "track record" Contention No. 7. Palmetto Alliance responded to these interrogatories in its April 28, 1982 answers. Palmetto Alliance herein reiterates, modifies and supplements these previous responses.

A. General Interrogatories

Please see April 28, 1982, response. In their December 31, 1982 responses to Palmetto Alliance discovery regarding Contention 7 Applicants identify and make available for inspection and copying in their Charlotte, N.C. office "2700 documents in response" to a single interrogatory on this contention which documents are asserted to contain answers to specific Palmetto Alliance questions on this contention.

Applicants have otherwise refused to compile information or otherwise respond to specific questions beyond identifying documents. By its April 11, 1983 Motion to Compel Discovery From Applicants, Palmetto Alliance seeks to elicit, over Duke's objection, instances of noncompliance "known to senior management of Duke Power Company" whose attitudes, knowlege of compliance with NRC regulation and practices in this area bear directly on proof of Palmetto Contention 7. This Motion to Compel remains pending.

A. General Interrogatories

Please see April 28, 1982 responses. Copies of documents relating to the 1977 civil penalty for violations regarding radiation releases at Duke's Oconee facility and the October 19, 1982 NRC SALP report were provided to Palmetto Alliance by Applicants in response to discovery.

B. Specific Interrogatories

1. What are the operating procedures which you contend are the subject of Contention 7?

Palmetto contends that the "operating and administrative procedures" identified by the NRC in NUREG 0834, the August 1981 Licensee Assessments are the subject of this contention. Reference to that report or response by NRC Staff would likely particularize the operating procedures which the NRC intended.

2. What activities are these operating procedures intended to govern?

More appropriately directed to NRC Staff, or within the knowlege of Applicants.

3. Who is to have developed these operating procedures?

Palmetto presumes that these operating procedures are developed either by Applicants or NRC Staff. In either event the answer to this interrogatory is within the knowlege of Applicants.

4. Who is to have implemented those operating procedures?

Palmetto presumes that "adherence" means implementation as the term is used by the NRC Staff in the 1981 SALP report; thus such adherence or implementation is a responsibility of Applicants. A more particularized response may be available from NRC Staff.

5. Are these operating procedures already developed and implemented?

Palmetto presumes that the operating procedures referred to in the 1981 SALP report referred to those already developed and implemented, or implemented defectively, with respect to licensed facilities than in "operation".

6. If the response to Interrogatory 5 is in the affirmative, please state where those operating procedures can be found.

Answer is within the knowledge of Applicants and NRC Staff.

8. When where these operating procedures developed and implemented?

Answer is within the knowledge of Applicants and NRC Staff.

9. Are these operating procedures to be used at the Catawba facility?

Palmetto presumes that analagous operating and administrative procedures are to be used at Catawba; however, the particularized response is within the knowlege of Applicants.

10. If the response to Interrogatory 9 is in the negative, what is the applicability of this assertion to this proceeding?

Generally this track record contention reflects Palmetto's concern that past failures by Duke Power Company to adhere to required Commission operating and administrative procedures impunes the assurance that the Catawba facility will be operated safely. Since the Applicants are largely self regulated and are entrusted by the NRC with compliance with these standards, subject to the most modest Commission inspection of Applicants activities, a history of noncompliance which has been characterized as "repetitive and chronic" by the NRC causes Palmetto great concern. Thus the failure to adhere to operating and administrative procedures at one facility is predictive of probable future failure at the Catawba facility.

11. What are your bases for your responses to Interrogatories 1 through 10? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see the response to General Interrogatories, above. The March 29, 1977 letter from Volgenau to Duke asserts that a review of the enforcement history related to the Oconee Nuclear Station demonstrates a history of "repetitive and chronic noncompliance:"

The enforcement history of Oconee Nuclear Station related to radiological controls, enclosed herewith as Appendix C, shows numerous as well as repetitive or similar items of noncompliance. Specifically, Appendix C shows 41 items of noncompliance involving 30 basic requirements over the past 3 years. Of the 30 basic requirements, it was found that in 7 instances the items were repetitive or similar to items found during other inspections. Further, item numbers 1, 5 and 6 in Appendix A to this letter are repetitive or similar in nature to items found during previous inspections.

March 29, 1977, letter at page 2. The items of noncompliance identified in Appendix C to this letter from the period January 1974 to January 1977 support Palmetto Contention 7.

The 1981 SALP Report, previously referred to in answer to specific interrogatories found "weaknesses in personnel adherence to operating and administrative procedures" and failure to follow procedures", at pages A-3 and B-1. The most recent October 19, 1982 SALP Report 141 violations during the 1980's or 1982 study period including a June 25, 1982 proposed \$44,000.00 civil penalty for failure to follow a surveillance procedure resulting in a violation of containment integrity. In its summary of results the SALP Review Board observed:

a significant weakness observed at all three facilities was a lack of thorough evaluation or effective corrective action for personnel related errors. This problem is evident in reviews of Licensee Event Reports. Examples at Oconee include failures to follow procedures inadequate surveillance procedures, and poor communications between different site units.

Prior to startup of McQuire 1 numerous errors related to poor communications and failure to follow procedures were identified. A review of Catawba noncompliance items revealed problems associated with breakdowns in communications between utility divisions, and management approval of inadequate evaluation.

Id., at page 2.

At Catawba itself the SALP review reflects, "the total number of violations concerning welding program implementation, storage, and general piping installation activities is high." The report notes that "many concerns were expressed to licensee management by Catawba QC welding inspectors in the Fall of 1981." Id., at page 47. Mistakenly, Palmetto believes, the SALP Board credits Duke with "responsiveness to safety issues" in its internal task force review of these QC Welding Inspector complaints. On the contrary, as more particularly reflected in response to interrogatories on Contention 6, above, Palmetto believes that these QC Welding Inspector allegations of harrassment and pressure to approve faulty workmanship demonstrates ongoing serious failures by Duke Power Company to follow Quality Assurance procedures impuning the assurance that the plant can be operated safely.

12. What are the administrative procedures which are the subject of this Contention?

The administrative procedures referred to by the NRC Staff in its 1981 SALP Report, NUREG 0834 are those which are the subject of this contention. A more particularized description if these procedures may be available from the NRC Staff.

13. Have these administrative procedures already been developed and implemented?

Palmetto presumes that the administrative procedures referred to in the 1981 report had already been developed and implemented, with deficiencies at that time.

14. What activities do these administrative procedures govern?

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

15. Who developed these administrative procedures?

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

16. Who implemented these administrative procedures?

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

18. If the response to Interrogatory 13 is in the negative, please explain the substance of your objection.

As in the case of the answer to interrogatory 10, above, a "track record" of noncompliance with administrative procedures at other facilities or in other licensed activities impunes the assurance that Applicants will comply with administrative procedures required for the safe operation of the Catawba facility.

19. When where these administrative procedures developed and implemented?

Palmetto presumes these administrative procedures referred to by the NRC Staff in 1981 have been developed and implemented, defectively by Applicants at that time period.

20. Have these administrative procedures been employed at Catawba?

Palmetto presumes that analogous administrative procedures either have been or will be employed at Catawba.

22. What are your bases to your responses to Interrogatories 12 through 21? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please refer to the response to interrogatory 7, above, for bases.

23. What do you mean by the Applicants' "consistent failure"?

Repetitive and chronic noncompliance, as stated in April 28, 1982 response.

24. By "consistent failure" do you mean that Applicants have not complied with applicable NRC regulations?

Yes.

25. If your response to Interrogatory 24 is in the affirmative, please specify the NRC regulations which you contend are not met, the activities which you contend do not meet those requirements and the time of such noncompliance.

Palmetto contends that such "consistent failure" by Applicants represents noncompliance with NRC regulations, most critically 10 CFR 50.57(a)(3). The additional NRC regulations not complied with in the activities representing such noncompliance are identified, in part, by the NRC Staff in the reports and documents set forth above in response to interrogatory 11.

26. Do you maintain that Applicants remain in noncompliance with applicable regulations?

Yes.

27. If your response to Interrogatory 26 is in the affirmative, please specify those failures which cause Applicants to remain in noncompliance with NRC requirements.

It is Applicants "track record" of noncompliance which represents a violation of 10 CFR 50.57(a)(3)

29. Do you contend that such "consistent failure" occurred at facilities other than Catawba? If so, identify those other facilities.

Yes, Oconee and McQuire.

30. If your response to Interrogatory 29 is in the affirmative, do you contend such "consistent failure" at other facilities have application to the Catawba facility? If so, please explain the specific relationship.

Please see response of April 28, 1982.

31. What are your bases for your responses to Interrogatories 23 through 30? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see response to interrogatory 11, above, for bases.

32. In what way do you contend Applicants did not "adhere" to operating and administrative procedures?

Please see April 28, 1982 response.

33. Specify each instance which you contend Applicants have not adhered to operating and administering procedures.

Please see instances identified in response to interrogatory 11, above.

34. What are your bases to your responses to Interrogatories 23 through 33? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

See response to interrogatory 11, above, for bases.

35. What are the Commission rules and regulations which you contend provide for operating and administrative procedures to which you contend Applicants do not adhere?

The answer to this interrogatory is within the knowledge of Applicants and NRC Staff. The rules and regulations and operating and administrative procedures are presumably identified by NRC Staff when noncompliance is found.

36. For each of the operating procedures identified in your responses to Interrogatories 1 through 10, specify the particular regulations to which Applicants have not adhered.

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

37. For each of the administrative procedures identified in your responses to Interrogatories 12 through 21, specify the particular NRC regulations which apply to those procedures.

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

38. For each of the NRC regulations identified in your responses to Interrogatories 33 through 37, specify each instance of failure to adhere to procedural requirements for each regulation.

Answer to this interrogatory is within the knowledge of Applicants and NRC Staff.

39. Do you contend that the allegations raised in the March 29, 1977 letter cited in your Contention applied to the Catawba facility?

No.

41. Do you contend that the allegations made in the March 29, 1977 letter cited in your contention have not been corrected to the extent they apply to Catawba?

No.

43. What are your bases to your responses to Interrogatories 39 through 42? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see response to interrogatory 11, above, for bases.

44. What do you contend is meant by the phrase "weaknesses in personnel adherence to operating and administrative procedures"?

Please refer to response of April 28, 1982.

45. What are the particular "weaknesses" which you allege are present at Catawba with respect to this Contention?

Please refer to April 28, 1982 response.

46. What are the "operating and administrative procedures" referenced in NUREG-0834 on which you intend to rely in support of this Contention?

All those operating and administrative procedures intended by NRC Staff as that term is employed in NUREG 0834.

47. What are your specific concerns in regard to those "operating and administrative procedures"?

Please see response of April 28, 1982.

48. What group of "personnel" do you contend have not adhered to "operating and administrative procedures"?

The term "personnel" was employed by NRC Staff. Palmetto employs the term as intended by NRC Staff.

49. What do you contend is meant by the term "failure to follow procedures"?

Palmetto contends the term "failure to follow procedures" has the same meaning as intended by NRC Staff who first employed it.

50. What "procedures" are referred to?

"Procedures" are those intended by NRC Staff.

52. What are the particular "failures" you rely upon?

Palmetto intends to rely on the particular "failures" identified by NRC Staff as they have used the term.

53. What are your specific concerns in regard to those "failure to follow procedures"?

See response of April 28, 1982.

55. What are your bases for your responses to Interrogatories 44 through 54? Identify all documents, testimony or oral statements by any person and legal requirements on which you rely in support of your position.

Please see answer to Interrogatory 11, above, for bases.

STAFF INTERROGATORIES

NRC Staff served its first set of Interrogatories and document production requests on May 26, 1982, with respect to Palmetto Alliance contention 7. Palmetto Alliance responded to this discovery on May 26, 1982 by noting that the same contention was the subject of earlier applicants discovery and Palmetto responses:

"each Interrogatory of the NRC Staff is either identical to one or more already propounded by Applicants, or is substantially the same as those already propounded, and in either event all discoverable information sought now by the staff has already been supplied in response to discovery by Applicants"

Palmetto Alliance Responses of May 26, 1982 at page 2.

Palmetto Alliance further objected to providing additional answers to Staff Interrogatories beyond those answers already given. Palmetto hereby reiterates this response and supplements responses given to this NRC Staff discovery regarding Contention 7 with the responses provided above to Applicants which reiterate, modify, and supplement earlier responses.

CONTENTION 8

Palmetto contention 8 reads:

no reasonable assurance can be had that the facility can be operated without endangering the public health and safety because the Applicants Reactor Operators and shift supervisors lack sufficient hands-on experience with large pressurized water reactors. Resumes of Catawba Plant Supervisors show that only a very few of these individuals who will have primary management responsibility for safe operation of the plant, FSAR, Table 1.9-1, page 2, have experience at large PWRs like Catawba. NUREG-0737, a clarification of TMI Action Plan Requirements, I.C.3. Resumes of Senior Reactor Operators and Reactor Operators show similar lack of experience.

On August 19, 1982, Applicants served interrogatories on Palmetto Alliance regarding contention 8. Palmetto Alliance responded to these interrogatories on August 30, 1982.

by Applicants Virtually no substantive answers to Palmetto discovery on Contention 8 provided until their February 28, 1983, Supplemental Responses were filed pursuant to the Board's February 9, 1983 grant of Palmetto's Motion to Compel. Applicants provided responses to Palmetto Alliance Follow-Up Interrogatories on Contention 8 on March 28, 1983. By letter of April 12, 1983, at page 2 and 3, Applicants first agree to provide complete tests and coded test results for Catawba operators. A Request for access to tests and quizzes administered during Operator Candidate Instruction remains pending. Id. at page 3.

On November 5, 1982, Palmetto Alliance provided supplementary responses to Applicants Interrogatories regarding Contention 8. By the following responses Palmetto reiterates, modifies, and supplements further previous responses to discovery on this contention.

A. General Interrogatories

Please see August 30, 1982 response. In response to discovery requests Palmetto Alliance has obtained the following additional documents which serve as a basis for Palmetto's position on this contention: INPO Guidelines 82-008, September 1982 "Control Room Operator, Senior Control Room Operator, and Shift Supervisor Qualification"; ANSI/ANS-3.1-1981, "American National Standard for Selection, Qualification and Training of Personnel for Nuclear Power Plants;" Standard Review Plan, NUREG-0800 Section 13.2 "Training" NRC Staff October 1, 1982, "Summary of Meeting on Cold License Examination Schedule of Catawba Operators." Palmetto has also obtained a copy of Applicants FSAR Table 13.1.3-1 "Qualifications of Key Plant Personnel".

B. Specific Interrogatories

1. What do you mean by "hands-on operating experience?"

See November 5, 1982 Supplementary Response.

2. Specify each activity which you contend constitutes any or all aspects of the term "hands-on operating experience" as you define it.

10 CFR Section 55.4, "definitions" defines "operator" as an individual who manipulates a control of a facility. "Controls" are defined to mean "apparatus and mechanisms the manipulation of which directly affect the reactivity or power level of the reactor. Palmetto believes it is the manipulation of controls as so defined which establishes the "hands-on operating experience" crucial to qualification of safe operation. The ANSI 1981 standard lists the following control manipulations and plant evolutions as efficient for meeting on-the-job training requirements for retraining of licensed personnel: 1. Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticable and heatup rate is established. 2. Plant shutdown. 3. Manual Control of Steam Generators or Feedwater, or both, during startup and shutdown. 4. Boration or dilution, or both, during power operation. 5. Any significant (10%) power changes due to manual changes in control rod position or recirculation flow period. 7. Loss of coolant including: A. Significant PWR Steam Generator tube leaks. B. Inside and Outside Primary Containment. C. Large and small, including leak rate determination. D. Saturated reactor coolant response. 8. Loss of instrument air (if simulated plant specific) 9. Loss of electrical power (or degraded power sources, or both) 10. Loss of core coolant flow/natural circulation. 11. Loss of condensor vacuum. 12. Loss of service water is required for safety. 13. Loss of shutdown cooling. 14. Loss of component cooling system or cooling to an individual component. 15. Loss of normal feedwater or normal feedwater system failure. 16. Loss of all feedwater (normal and emergency) 17. Loss of protective system channel. 18. Mispositioned control rod or rods (or rod drops) 19. Inability to drive control rods. 20. Conditions requiring use of emergency boration or standby liquid control system. 21. Fuel cladding failure or high activity reactor coolant or off gas. 22. Turban or generator trip . 23. Malfunction of automatic control systems which affect reactivity. 24. Malfunction of reactor coolant pressure/volume control system. 25. Reactor trip. 26. Main steam line break (inside or outside containment). 27. Nuclear instrumentation failures. Palmetto believes actual performance of these activities represents "hands-on operating experience".

3. Do you contend that "hands-on operating experience" is necessary to satisfy applicable NRC requirements?

Yes.

4. If your answer to Interrogatory 3 is affirmative, identify those NRC requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

10CFR 50.57(a)(3).

6. What are the bases for your responses to Interrogatories 1 thru 5? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please see responses to General Interrogatories, above, and interrogatory 2, above for bases.

7. What do you mean by "sufficient"?

Please see November 5, 1982, Supplementary Response.

8. Specifically, what do you contend constitutes "sufficient" hands-on operating experience?

Palmetto is not prepared to establish at this time a level of "sufficient" hands-on operating experience needed to assure safe operation of the facility; but contends that the experience level asserted for Applicants' personnel is clearly inadequate.

9. Do you contend that NRC requirements have not been met when you say "sufficient"?

Yes.

10. If your answer to Interrogatory 9 is affirmative, identify those NRC requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

The overriding Commission requirement that Applicants demonstrate reasonable assurance that plant operation can be conducted without endangering the health and safety of the public. 10CFR 50.57(a)(3).

11. With regard to Interrogatory 10, specify in what manner you contend each of those NRC requirements have not been met.

Lack of actual experience impunes the assurance that the plant can and will be operated safely.

13. What are the bases for your responses to Interrogatories 7 thru 12? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please refer to response to interrogatory 6, above for bases.

14. What do you mean by "lacks"?

Please see November 5, 1982, Supplementary Response.

15. Do you contend that such a "lack" constitutes a violation of NRC regulatory requirements?

Yes.

16. If the answer to Interrogatory 15 is affirmative, identify those NRC requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

10CFR 50.57(a)(3).

17. With regard to Interrogatory 16, do you contend that Applicants have not met such NRC requirements? If so, identify each such specific NRC requirement which you contend Applicants have not met and, with regard to each, explain why you contend Applicants fail to meet that requirement.

Yes. Lack of sufficient actual experience impunes the reasonable assurance of safe operation.

19. What are the bases for your responses to Interrogatories 14 through 18? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please refer to the response to interrogatory 6, above, for bases.

20. What do you mean by "large pressurized water reactor"?

Please see November 5, 1982, Supplementary Response.

21. Specifically, do you contend that Catawba Units 1 and 2 are "large" pressurized water reactors?

Yes.

22. What do you mean by "reactor operators"?

Please see November 5, 1982, Supplementary Response.

23. Do you contend that "reactor operators" is defined by certain NRC regulatory requirements? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

10CFR Section 55.4 defines "operator" as "any individual who manipulates a control of a facility. An individual is deemed

to manipulate a control if he directs another to manipulate a control." Further, operators of "nuclear reactors" are distinguished from operators of other "facilities" at 10CFR Section 55.4(f).

24. What do you mean by "shift supervisors"?

Same meaning as employed by Applicants. Applicants FSAR, Section 13.1-4 describes "shift supervisor" as:

"A shift supervisor is responsible for the actual operation of the station on his assigned shift. He directs the activity of the operators on his shift and is cognizant of all maintenance activity being performed while he is on duty. The shift supervisor on duty has both the authority and the obligation to shut down a unit if, in his opinion, conditions warrant this action."

25. Do you contend that "shift supervisors" is defined by certain NRC regulatory requirements? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

No.

26. With regard to Interrogatories 23 and 25, do you contend that Applicants' "reactor operators and shift supervisors" fail to comply with those NRC regulatory requirements? If so, identify each such requirement and, with regard to each, explain why you contend Applicants fail so to comply.

By implication, yes. A "senior operator" defined at 10CFR Section 55.4(e) as "any individual designated by a facility licensee under Part 50 of this chapter to direct the licensed activities of licensed operators." Since Applicants' definition of the term "shift supervisors", as referred to in response to interrogatory 24, above, falls within this definition of "senior operator", such shift supervisors must be licensed as "senior operators" under Part 55.

27. What do you mean by the term "can be operated"?

Please see November 5, 1982, Supplementary Response.

28. Specify each activity which you contend constitutes any or all aspects of the term "can be operated" as you define it.

Palmetto Alliance use of the term "can be operated" is intended to focus on those activities to be authorized by the operating license which involve Catawba Nuclear Reactor Operation.

29. Do you contend that the term "can be operated" is defined by certain NRC regulatory requirements? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

No.

30. What are the bases for your responses to Interrogatories 20 through 29? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please refer to response to interrogatory 6, above, for bases.

31. Do you contend that "sufficient hands-on operating experience" with "large pressurized water reactors" is necessary to assure the public health and safety?

Yes.

32. If your answer to Interrogatory 31 is affirmative, do you contend that NRC requirements mandate that "reactor operators and shift supervisors" have "sufficient hands-on operating experience" with "large pressurized water reactors" to assure the public health and safety? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

Palmetto contends that the general requirement for "reasonable assurance" should be applied to so mandate. 10CFR 50.57(a)(3).

33. If your answer to Interrogatory 32 is affirmative, do you contend that Applicants have not met such NRC requirements? If so, identify each such NRC requirement which you contend Applicants have not met, and, with respect to each, explain why you contend Applicants have not met such requirements.

Yes. 10CFR Section 50.57(a)(3).

38. What are the bases for your responses to Interrogatories 31 thru 37? Identify all documents, testimony or oral statements by any person on which you rely in support of your position.

Please refer to response to interrogatory 6, above, for bases.

39. What do you mean by "Catawba Plant Supervisor"?

Shift supervisors and assistant shift supervisors at the Catawba Plant as those terms as used by Applicants.

40. Identify each resume of "Catawba Plant Supervisors" which you examined in preparation of this contention. Provide the name of each such "Catawba Plant Supervisor."

Please see Palmetto's November 5, 1982, Supplementary Response. Palmetto's present copy of the FSAR Chapter 13 reflects the same personnel identities.

41. Is each of these resumes contained in the Catawba Final Safety Analysis Report (FSAR)? If so, list the section where each is contained.

FSAR Table 13.1.3-1, pages 27-40.

43. Identify each individual you consider to be a "Catawba Plant Supervisor," within the scope of your contention.

Please see response to interrogatory 40, above.

44. Do you contend that "Plant Supervisor" is defined by NRC regulations? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

Please see response to interrogatory 25, above.

46. What are the bases for your responses to Interrogatories 39-45? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please see response to interrogatory 6, above, for bases.

47. What do you mean by "primary management responsibility"?

Palmetto intends the term "primary management responsibility" to mean the same as employed in NUREG 0737, Clarification of TMI Action Plan Requirements, I.C.3. Such term is apparently understood and employed by Applicants in establishing the command duties of the shift supervisor.

48. Specify each activity which constitutes any or all aspects of "primary management responsibility" as you define it.

Palmetto Alliance understands the core responsibility of the shift supervisor to include "both the authority and obligation to shut down a unit if, in his opinion, conditions warrant this action." FSAR, Section 13.1-4.

49. Do you contend that "primary management responsibility" is defined by certain NRC regulatory requirements? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

No.

51. With regard to Interrogatories 49 and 50, do you contend that Applicants do not comply with those regulatory requirements or otherwise fail to provide "primary management responsibility"? If so, explain why with respect to each such instance.

Yes. NUREG 0737 establishes such requirements.

52. What are the bases for your responses to Interrogatories 47-51? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please refer to response to interrogatory 6, above, for bases.

53. What do you mean by "safe operation of the plant"?

Please see Palmetto's November 5, 1982, Supplementary Response.

54. Specify each activity which constitutes any or all aspects of "safe operation of the plant" as you define it with respect to Contention 8.

The activities involved in safe operation which are the focus of this contention are referred to in regulations defining operators and in the ANSI standard description of on-the-job training activities as described above, in response to interrogatory 2.

55. Do you contend that "safe operation of the plant" is defined by NRC regulations? If so, provide specific reference to all provisions of statutes, regulations, regulatory guides or any other NRC regulatory requirement on which you rely.

No, not explicitly.

56. With regard to Interrogatory 55, do you contend that Applicants will not meet those NRC requirements? If so, specify in what manner you contend each of these NRC requirements will not be met.

No, since Palmetto Alliance is unaware of an explicit regulatory definition; but, concern expressed in the contention remains for public health and safety.

57. If your answer to Interrogatory 55 is negative, what do you contend constitutes "safe operation of the plant" as you define it?

Please see response to interrogatory 53, above.

58. Do you contend that Applicants will not meet the standards which you set out in response to Interrogatory 57? If so, explain specifically why you believe that Applicants will not meet each such standard.

No standards are set out in response to interrogatory

57.

59. What are the bases for your responses to Interrogatories 53 through 58? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please refer to interrogatory 6, above, for bases.

60. Do you intend the term "have experience" as you use it with respect to "Catawba Plant Supervisors" to be synonymous with the term "sufficient hands-on operating experience" as you use it with respect to "reactor operators and shift supervisors"? If not, answer Interrogatories 61 through 64.

Not necessarily.

61. What do you mean by "have experience"?

Participation and operation.

62. Specify each activity which you contend constitutes any or all aspects of the term "have experience" as you define it.

See response to interrogatory 2, above.

63. Do you contend that the term "have experience" is defined by or encompassed within NRC regulations? If so, provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

No.

64. With regard to Interrogatory 63, do you contend that Applicants do not meet those NRC requirements? If so, specify in what manner you contend each of those NRC requirements will not be met.

No.

65. What are the bases for your responses to Interrogatories 60 through 64? Identify and submit copies of all documents, testimony, or oral statements on which you rely in support of your position.

Please refer to response to interrogatory 6, above, for bases.

66. Do you contend that "Catawba Plant Supervisors" must have "sufficient hands-on operating experience with large pressurized water reactors" to assure the public health and safety?

Yes.

67. If the answer to Interrogatory 66 is affirmative, do you contend that NRC regulatory requirements mandate that "Catawba Plant Supervisors" must have "sufficient hands-on operating experience with large pressurized water reactors" to assure the public health and safety? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

Yes. 10CFR 50.57(a)(3).

68. Do you contend that "Catawba Plant Supervisors" do not meet those requirements? If so, explain why, with respect to each such individual and each such requirement, you contend those requirements are not met.

Yes. William H. Miller, no hands-on operating experience. James F. Beattie, no hands-on operating experience. Gail B. Ice, 2 years experience-- McQuire B. A. Sigmon, 10 months at MNS(?) as U.O.(?). John M. Hill, 2 years operating experience-- McQuire Nuclear Station. Reginard E. Kimray, 3 years operating experience-- McQuire Nuclear Station. Michael J. Brady, 3 years operating experience-- McQuire Nuclear Station. Phillip J. Loss, 3 1/2 years experience--Oconee Nuclear Station. Thomas Baumgardner, 4 weeks--Oconee Nuclear Station, 1 year "CO" (?)-- McQuire Nuclear Station, 2 weeks--Three Mile Island Nuclear Station. Robert W. Smith, 2 years Oconee Nuclear Station. Stacy S. Cooper, 3 years operating experience (?) -- McQuire Nuclear Station. Charlie Skinner, no operating experience. Palmetto contends that these levels of actual hands-on operating experience at large PWRs are insufficient.

71. What are the bases for your responses to Interrogatories 66 through 70? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please refer to the response to interrogatory 6, above, for bases.

72. Identify each resume of "Senior Reactor Operators and Reactor Operators" which you examined in preparation of this contention. Provide the name of each such "Senior Reactor Operator" and "Reactor Operator."

Please see Palmetto Alliance's November 5, 1982, Supplementary Response.

73. Is each of these resumes contained in the Catawba FSAR? If so, list the section where each is contained.

No.

74. If any or all of the response to Interrogatory 73 is negative, identify each such resume which you obtained from a source other than the Catawba FSAR, identify the individual, and identify the source of the resume.

Please see response to interrogatory 72, above.

75. Do you mean by "similar lack of experience" that "Senior Reactor Operators and Reactor Operators" lack the "sufficient hands-on operating experience with large pressurized water reactors" which you contend Applicants' "reactor operators and shift supervisors" lack?

No.

77. If the answer to Interrogatory 75 is negative, answer Interrogatories 78 through 83.

78. What do you mean by "similar lack of experience"?

See November 5, 1982 Supplementary Response.

79. Do you contend that NRC regulatory requirements specify a level of "experience" which must be met by "Senior Reactor Operators" and "Reactor Operators"?

No, not explicitly. However, Palmetto Alliance contend that the general safety requirement of 10CFR Section 50-57(a)(3) mandates sufficient experience.

81. Do you contend that Applicants' "Senior Reactor Operators" and "Reactor Operators" do not meet those NRC requirements? If so, state why, with respect to each such individual and each such requirement, you contend those requirements are not met.

As the provisions of Applicants' FSAR referenced in earlier response to interrogatory 72 makes clear, Applicants plan to license operators with "no nuclear experience", see license variances, FSAR Section 13.2.4, and senior reactor operators with only two years unspecified nuclear power plant experience of

which no more than 6 months would be at Catawba facility. See FSAR 13.2.3.2. Palmetto Alliance contends that these levels of actual operating experience are inadequate to assure public health and safety.

82. If your answer to Interrogatory 79 is negative, state what requirements you believe should be met to provide what you contend to be the requisite level of "experience."

Please refer to the response to interrogatory 8, above.

83. Do you contend that Applicants' "Senior Reactor Operators" and "Reactor Operators" do not meet those requirements? If so, state why, with respect to each such individual and each such requirement, you contend those requirements are not met.

Yes. Please see response to interrogatory 81, above.

84. What are the bases for your responses to Interrogatories 72 through 84? Identify and submit copies of all documents, testimony, or oral statements on which you rely in support of your position.

Please refer to response to interrogatory 6, above, for bases.

STAFF INTERROGATORIES

On August 13, 1982, NRC Staff served interrogatories regarding Palmetto Contention No. 8. Palmetto Alliance responded to these interrogatories by its filing of August 30, 1982 and its Supplementary Response of November 5, 1982. Palmetto Alliance hereby reiterates its observation made in both initial and supplementary responses that "answers to interrogatories of the NRC Staff are fully provided in the following answers to Applicants' Interrogatories," November 5, 1982, Supplementary Response at page 4. As acknowledged there, Staff had identified in its Motion to Compel, dated September 15, 1982 at page 3, that two interrogatories regarding Palmetto Contention 8 "are clearly not included in Applicants' Interrogatories." Id. Palmetto Alliance hereby supplements further the responses provided thereto to these two interrogatories of the NRC Staff.

6. Do you challenge the sufficiency of any requirement or acceptance criteria with regard to operator or senior operator experience set out in NUREG-0737, Item I.A.2.1?

Palmetto Alliance understands NUREG 0737, Item I.A.2.1 of the Commission's Post TMI requirements, embodied later in a proposed rule change, to require for the first time as a matter of regulation actual experience as an operator prior to licensing of senior reactor operator by NRC. Palmetto does not challenge this requirement nor does it contend that Applicants do not plan

to meet such a limited and imprecise experience requirement. Further, Palmetto does not understand its contention to represent a challenge to the sufficiency of this requirement per se. However, it should be clear that Palmetto contends that Applicants personnel including ROs and SROs, as well as Shift Supervisors, lack sufficient actual operating experience as defined above to assure safe operation of the facility.

- 10 Do you contend that any plant employee not required by NRC regulations to have an operator or senior operator license is required to have the "hands-on" experience referred to in Palmetto Contention 8? Please explain the nature of that "hands-on" experience.

No.

CONTENTION 16

As amended by the Board in its Order of July 8, 1982, Palmetto Contention 16 now reads:

"Applicants have not demonstrated their ability safely to store irradiated fuel assemblies from other Duke nuclear facilities so as to provide reasonable assurance that those activities do not endanger the health and safety of the public."

In its application, Applicants seek authority to transship and store non-Catawba spent fuel assemblies in a "cascade" from spent fuel pools at its Oconee and McGuire facilities. The licensing board has refused to consider Palmetto Alliance and Carolina Environmental Study Group contentions regarding the safety and environmental analysis of Duke's transshipment plan; and has recast Palmetto Alliance Contention 16 as above.

On August 8, 1982, Applicants served Interrogatories on Palmetto Alliance with regard to Palmetto's Contention 16. Palmetto Alliance responded to Applicant's interrogatories on August 30, 1982, and with Supplementary Responses of November 5, 1982. Applicants' Responses to Palmetto Discovery on Contention 16, served October 19, 1982, were narrowly limited to focussing only on the physical differences in the non-Catawba fuels proposed for Catawba storage. See page 5 of Applicants' Responses. Applicants responded to several follow-up interrogatories regarding this contention by filing dated March 25, 1983.

Palmetto Alliance hereby reiterates, modifies, and supplements its previous responses to Applicants' Discovery regarding this contention.

A. GENERAL INTERROGATORIES.

Pursuant to 10 CFR §2.740b, the Applicants request Palmetto Alliance, by and through its 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 to call 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' 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. Who performed each calculation?
 - c. When was each calculation performed?
 - d. Describe each parameter used in such calculation and each value assigned to the parameter, and describe the source of your data.
 - e. What are 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.

See response of August 30, 1982.

In addition Palmetto Alliance has obtained the NRC's safety evaluation report related to the Catawba Station operation, NUREG 0954 which includes an evaluation of the fuel storage facility; Applicants April 2, 1982, letter from W. L. Parker to Elinor Adensam of the NRC Staff transmitting additional information relating to the storage of non-Catawba fuel at Catawba; September 1976 Duke analysis of the "expanded Catawba heat load on the spent fuel pool"; and FSAR Part 9.1.2 "Spent Fuel Storage," which in part form the bases for Palmetto's position on this contention.

B. SPECIFIC INTERROGATORIES.

1. What do you mean by "have not demonstrated?"

Please see Palmetto's November 5, 1982, Supplementary Response. Palmetto is particularly concerned that the safety

of the greatly expanded Catawba spent fuel pools has not been demonstrated in adjudicatory proceeding. The modified design for Catawba spent fuel pools involving the addition of approximately 51 feet length to each pool expands its capacity from some 662 assemblies to present design capacity of 1418 assemblies to accommodate Duke Power Company's cascade plan. All was accomplished after issuance of the original construction permit for the smaller pools and without an opportunity for public participation in the licensing process.

2. Do you contend by "have not demonstrated" that NRC regulatory requirements have not been adequately complied with?

No.

5. If your answer to Interrogatory 2 is negative, state what you believe to be the requisite elements for Applicants to "demonstrate" their ability to store spent fuel safely.

Palmetto Alliance believes that it is incumbent upon Applicants to shoulder the burden of proof that the present design and construction of the Catawba pools and the manner of their operation including the storage of non-Catawba spent fuel under Duke's cascade plan meets their overriding safety obligation provided for by 10CFR Section 50.57(a)(3) such that Applicants demonstrate that reasonable assurance exists that such spent fuel storage activities will be conducted without endangering the health and safety of the public.

6. With regard to Interrogatory 5, specify in what manner you contend Applicants have not met each of those elements.

Palmetto Alliance contends that the design of the enlarged pools has not adequately accommodated the expanded Catawba heat load being experienced from the more than doubling in the number of assemblies to be stored including the Oconee and McGuire spent fuels such that the 150 degree F. heat limit on the design pool liner plate and the potential for fuel pool water boil-off with resulting potential fuel element degradation, hydrogen gas generation and potential radiation release remains a threat. A single train of the spent fuel pool cooling system could likely not maintain water temperature below 150 degrees F. Under the assumptions of Duke's September 76 heat load study, pool water boiling could occur in as little as 6.9 hours after loss of both cooling

trains. Palmetto is concerned that loss of on-sight/off-sight power could quickly threaten pool water boil-off. Palmetto Alliance is also concerned about the potential for spent fuel cask drop accidents both outside and into the spent fuel pool where the cask could crush spent fuel assemblies and threaten criticality in the crushed arrays. Accidents involving mishandling of spent fuel casks including inadvertent unshielded removal of cask lids and cask drop accidents involving the cask handling crane are made much more likely by the massively increased volume of cask handling incidents required under Duke Power Company cascade plan. Palmetto is also concerned about the potential for such external threats to the facility as aircraft crashes from the nearby Douglas Airport to threaten public safety and health in the design construction and use of the Catawba pool to store cascaded spent fuel.

7. What are the bases for your responses to Interrogatories 1 through 6?

Please see response to General Interrogatories, above, for bases.

8. With regard to Interrogatory 7, identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Palmetto has not identified any such person.

9. What do you mean by the term "ability"?

Palmetto Alliance contends the term ability to be synonymous with the predictive use of the word "can" as employed by the Commission in 10CFR 50.57(a)(3). By its expression of concerns in response to interrogatory 4, above, Palmetto represents the aspects in which it questions Applicants' "ability" to safely operate the expanded Catawba spent fuel pools as planned.

11. Do you contend that "ability" is defined by certain NRC regulatory requirements? If so, identify those requirements. Provide specific reference to all provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement upon which you rely.

Palmetto has in mind the general safety requirement of 10CFR 50.57(a)(3) as well as the internal design criteria GDC applicable to those aspects of the spent fuel pool design construction and operation relevant to the concerns it has expressed including, GDC 2, 4, 44, 60-64.

12. If your answer to Interrogatory 11 is affirmative, what level of "ability" do you contend is necessary to satisfy applicable NRC regulatory requirements?

Such level of "ability" as to represent "reasonable assurance".

13. With regard to Interrogatory 12, state why you contend each of those NRC requirements has not been met.

See response to interrogatory 4, above.

16. What are the bases for your responses to Interrogatories 9 through 15? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please see response to General Interrogatories, above, for bases.

17. What do you mean by "safely"?

By "safely" Palmetto means in such manner as to provide reasonable assurance that the health and safety of the public will not be endangered.

18. Specify each activity which you contend constitutes any or all aspects of the term "safely."

See response to interrogatory 4, above.

19. Do you contend that NRC requirements have not been met when you say "safely"?

No.

22. If your answer to Interrogatory 19 is negative, state what you believe is necessary for Applicants to store "safely" irradiated fuel assemblies. Identify specifically each element of the storage of such assemblies you contend is necessary to store them "safely".

Palmetto Alliance contends that Applicants cannot safely store irradiated fuel assemblies transshipped from its other facilities in its proposed cascade plan.

23. With regard to Interrogatory 22, specify in what manner you contend Applicants will not store irradiated fuel assemblies "safely".

See response to interrogatory 4, above.

24. What are the bases for your responses to Interrogatories 17 through 23? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please see response to General Interrogatories, above, for bases.

25. What do you mean by the term "store"?

See Palmetto's August 30, 1982, Response.

26. Identify specifically each activity which you contend constitutes any or all of the term "store," as you define it.

Please see Palmetto's August 30, 1982, Response.

27. With regard to Interrogatory 26, identify all those NRC regulatory requirements which you contend relate to any or all elements of the term "store" as you use it. Provide specific reference to all provisions of statutes, regulations, regulatory guides or any other NRC regulatory requirement on which you rely.

10CFR 50.57(a)(3) and the general design criteria of 10CFR, Part 50, Appendix A identified in response to interrogatory 11, above.

28. What are the bases for your responses to Interrogatories 25 through 27? Identify and submit copies of all documents, testimony, or oral statements by any person on which you rely in support of your position.

Please see responses to General Interrogatories, above, for bases.

29. What do you mean by the phrase "irradiated fuel assemblies"?

Palmetto intends the meaning reflecting Applicants' plans and application and understands the term to be synonymous "spent fuel."

30. Specifically, do you contend that "irradiated fuel assemblies" are defined within applicable NRC regulatory requirements?

No.

37. What are the bases for your responses to Interrogatories 29 through 36? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please see response to General Interrogatories, above,
for bases.

38. What do you mean by the phrase "other Duke nuclear facilities"?

38. Palmetto intends the meaning of the term "reflecting Applicants' plans and application" and understands the phrase, therefore to refer to the Oconee and McGuire facilities.

39. With regard to Interrogatory 38, identify each of those "other Duke nuclear facilities" which is the subject of this contention.

39. See response to interrogatory 38, above.

40. For each of the facilities identified in your response to Interrogatory 39, explain why you contend that their "irradiated fuel assemblies" might not be "safely stored" at the Catawba facility.

See response to interrogatory 4, above.

41. With regard to Interrogatory 40, do you contend that "irradiated fuel assemblies" cannot be safely stored at Catawba because the Catawba spent fuel pool facility is somehow defective or inadequate?

Yes. See response to interrogatory 4, above.

42. If your answer to Interrogatory 41 is affirmative, do you contend that the Catawba spent fuel pool is somehow defective or inadequate because it does not meet NRC regulatory requirements applicable to the storage of spent fuel?

Yes./

43. If the answer to Interrogatory 42 is affirmative, identify each of those NRC regulatory requirements. Provide specific reference to provisions of statutes, regulations, regulatory guides, or any other NRC regulatory requirement on which you rely.

See response to interrogatory 11, above.

44. With regard to Interrogatory 43, explain why you contend that the Catawba spent fuel pool fails to meet each of those NRC regulatory requirements.

44. See response to interrogatories 4 and 11, above.

46. With regard to Interrogatory 45, identify specifically those circumstances which you contend demonstrate Applicants lack of ability to safely store "irradiated fuel assemblies" from "other Duke nuclear facilities" at the Catawba spent fuel storage pool. For each such circumstance, explain why you contend it demonstrates Applicants lack the ability to safely store "irradiated fuel assemblies" from "other Duke nuclear facilities" at the Catawba spent fuel storage pool.

46. See responses to interrogatories 4 and 11, above. Palmetto Alliance doubts that the improvements in the Catawba spent fuel pool would provide reasonable assurance that public health and safety would not be endangered.

48. What are the bases for your responses to Interrogatories 38 through 47? Identify and submit copies of all documents, testimony or oral statements by any person on which you rely in support of your position.

Please see response to General Interrogatories, above, for bases.

STAFF INTERROGATORIES

NRC Staff served Interrogatories on August 13, 1982, with regard to Palmetto Contention 16. By its August 30, 1982, Responses and November 5, 1982, Supplementary Responses, Palmetto Alliance provided answers to the Staff Discovery. Palmetto generally asserted that Answers to Interrogatories of the NRC Staff are fully provided in the Answers to Applicants Interrogatories. See August 30, 1982, Responses at page 3. In its subsequent Motion to Compel the NRC Staff identified one interrogatory regarding Palmetto Contention 16 which is characterized as "clearly not included in Applicants Interrogatories." Id. at page 3. Palmetto Alliance hereby supplements its response with respect to that interrogatory:

14. In light of Applicants' representation in their April 2, 1982 Response 3(b) to Elinor G. Adensam's letter of 3/8/82, do you still contend that storage of spent fuel from Oconee or McGuire poses "increased likelihood of harm, of risk" because of the source term of such spent fuel? (Ref: Tr. pp. 165-166.)

Yes.

15. If the answer to the previous interrogatory is affirmative, please explain the reasons for your answer.

Palmetto Alliance still contends that the added source term, from the additional irradiated spent fuel transshipped in the cascade from Oconee and McGuire represent an additional risk of harm beyond that associated with storing at the Catawba facility only Catawba generated spent fuel. Nothing in Applicants Response to the NRC Staff describing their cascade plans alters this inescapable conclusion of additive radiation inventory at Catawba.

CONTENTION 27

Palmetto Alliance Contention 27 reads as follows:

"The Applicants should be required to place real time monitors capable of reading gamma radiation levels around the site in order to provide emergency operations personnel with information required to make decisions necessary to reasonably assure the health and safety of the public under conditions of radiological release to the environment. Thermoluminescent dosimeters are only accurate within about plus or minus thirty percent and only provide a post hoc assessment of conditions."

Applicants served Interrogatories dated August 9, 1982, upon Palmetto Alliance regarding Palmetto Contention 27. Applicants Interrogatories were answered by Palmetto Alliance response of August 30, 1982 and Supplementary Response of November 5, 1982.

A. General Interrogatories.

Please see response of August 30, 1982. Palmetto has obtained in discovery the following additional information which provides a bases for its position on this Contention: FEMA--REP-2 September, 1980, Guidance on Off Site Emergency Radiation measurements Systems; Branch Technical Position "An acceptable radiological environmental monitoring program, revision 1, November 1977; Duke Power Company Crisis Management Plan Implementing Procedure, Environmental Monitoring for Emergency Conditions within a Ten Mile Radius of McGuire Nuclear Station; McGuire Nuclear Station FSAR 12.3.2.4; Duke Power Company Crisis Management Plan Implementing Procedure, Oconee Nuclear Station Procedure for Environmental Surveillance following a Large Unplanned Release of Gaseous Radioactivity; McGuire Nuclear Station Health Physical Manual, Section 18.2, Environmental Monitoring for Emergency Conditions.

B. SPECIFIC INTERROGATORIES

1. Palmetto Alliance intends the common meaning of "should be required" in the context of this proceeding to mean to be required as a license condition for otherwise by the Nuclear Regulatory Commission in order to operate the facility.

2. Yes.

3. 10CFR Section 50.57(a)(3); 10CFR 50.47(b).4. Palmetto Alliance contends that without the requirement of a fixed real time monitoring system around the Catawba site Applicants cannot meet the reasonable assurance standard of NRC regulations; nor can they comply with the regulatory requirements for adequate emergency planning. Particularly standards 4 and 9 require such a system to permit reliable and timely means for assessing and monitoring off-site releases during a radiological emergency.

7. Please see response to General Interrogatories, above, for bases.

8. Instruments for continuous measuring and recording of radiation dose rates.

9. Continuous measuring and recording of radiation dose rates.

10. Yes.

11. See response to interrogatory 3, above.

13. Not explicitly. However, under the circumstances, Palmetto contends that regulatory requirements mandate use of such real time monitors as described in Palmetto Contention 8 for the Catawba facility.

14. See response to interrogatory 3, above.

18. Information sufficient to: 1) determine the direction of movement of radioactive clouds and the spacial characteristics of the cloud, 2) determine ground level dose rates in the cloud and adjacent areas and anticipate the pathway and ground level dose rates at points more distant from the site. 3) If the above information determines whether the release warrants action to protect the health and property of the public. 4) Provide information from which subsequent remedial measures may be based.

19. Yes. This information for example will be provided by the system proposed by Applicants. However, this system will be less effective than that proposed by Palmetto.

23. See response to interrogatory 19, above.

24. The principle advantage of using real time monitors to measure off-site dose rate at Catawba during emergency conditions is to provide immediate information.

25. Please see response to General Interrogatories, above, for bases.

26. See Palmetto's August 30, 1982, Response.

27. Palmetto does not have a mind an accuracy level in its use of the term capability.

28. Again, Palmetto intends no specific level of accuracy by its use of the term capability. However, for example, the NRC branch technical position at page 9 footnote f references performance criteria for TLDs for use in environmental monitoring in Reg Guide 4.13. The Branch Technical position suggests that real time instruments can be used in place of or addition to integrated docimeters.

29. See response to interrogatory 28, above.

31. Perhaps, but accuracy without the real time benefit which Palmetto believes to be critical.

32. TLDs for example.

33. Please see response to General Interrogatories, above, for bases.

35. See response to interrogatories 26 and 27, above.

36. See response to interrogatory 28, above.

37. See response to interrogatory 29, above.

39. See response to interrogatory 32, above.

40. See response to interrogatory 32, above.

41. See response to General Interrogatories, above, for bases.

42. Gamma omitting radionuclides that may be attributable to affluence from the facility.

43. Yes.

44. See response to interrogatory 3, above.

46. See response to General Interrogatories, above, as bases.

47. Palmetto Alliance intends by "place around the site" the common meaning of the phrase, i.e. to install at various points surrounding the Catawba facility dependent on empirical data reflecting local conditions which would bear on emergency planning.

48. Palmetto does not contend that a specific number of real time monitors are necessary. However, for example, the NRC Staff Branch Technical Position employs the recommendation for 40 TLD stations for off-site monitoring purposes and

NUREG/CR 2644 suggests that as many as 50 detector stations may be required for sufficient accuracy in plume detection.

49. See response to interrogatory 48, above.

50. Palmetto does not rely upon specific regulatory requirements for this answer.

51. Palmetto Alliance is not prepared to specify a particular configuration of monitors for the Catawba site at this time.

52. See response to interrogatory 51, above.

53. See response to interrogatory 51, above.

54. Palmetto Alliance does not rely on specific regulatory requirement for answers to these interrogatories.

55. Location of the Catawba Nuclear facility.

56. That property owned and controlled by Duke Power Company upon which the Catawba Nuclear Facility is located.

57. Palmetto Alliance does not rely on specific regulatory authority for response to this interrogatory.

58. See response to General Interrogatories, above, for bases.

59. Palmetto has in mind the Applicants, state and local personnel responsible for evaluation of monitoring data and decisions as to appropriate emergency protective action.

60. Palmetto believes that in order for effective protective action to be taken to minimize health and safety effects to the surrounding population reliable and timely information as to the magnitude and dispersion of an atmospheric release of radiation in the event of an accident must be available to these personnel. Palmetto believes that Applicants proposed emergency monitoring system is inadequate to provide such information.

61. Please see response to General Interrogatories, above, for bases.

62. See response to interrogatory 60, above.

63. See response to interrogatory 3, above.

65. As explained elsewhere, Palmetto believes that Applicants proposed system is inadequate to meet these requirements.

67. No.

69. As explained already, real time monitors provide the information in a timely manner.

70. Please see response to General Interrogatories, above, for bases.

71. Decisions to implement necessary protective actions for affected populations.

72. In the most critical case, a decision to call for an immediate evacuation of the endangered down-wind population.

73. Not effectively.

75. In the absence of a real time monitor system as urged by Palmetto, affected down-wind population may have already received the life-threatening or health damaging dose before TLDs can be retrieved and read.

76. As already explained, the planned system cannot provide sufficient information in time.

78. The term is employed in the same fashion as it is used in NRC regulations.

79. Please see response to interrogatory 3, above.

80. Please see response to interrogatory 3, above.

81. Please see response to interrogatory 76, above.

82. No.

84. See response to interrogatory 76, above.

85. No. Palmetto Alliance contemplates conditions where unplanned radiological releases from the Catawba facility are of such severity as to cause measurable health effects for persons exposed to atmospheric radiation from the release.

86. Please see response to General Interrogatories, above, for bases.

87. Palmetto Alliance is informed that the accuracy of real time monitoring is superior to that of the TLD that the specific value for error band is unknown.

88. Yes.

89. Palmetto can only assert on the basis of its information and believe.

90. TLDs require significant time after exposure for retrieval and processing plus producing only an historic record of exposure after the fact.

91. It is inconsistent with the need to take effective and timely protective action in the event of an emergency.

92. See answer to interrogatory 3, above.

93. Palmetto contends that a timely assessment of conditions is required.

94. Palmetto contends that real time monitors can provide a timely assessment of conditions.

100. Please see response to General Interrogatories, above, for bases.

STAFF INTERROGATORIES

NRC Staff submitted Interrogatories to Palmetto on August 13, 1982, regarding Palmetto Contention 27. Palmetto responded by responses of August 30, 1982, and Supplementary Responses of November 5, 1982, to these Staff questions. Palmetto has asserted and reiterates here that "Answers to Interrogatories of the NRC Staff are fully provided in the following answers to Applicants Interrogatories." See, Palmetto August 30, 1982, Responses. Palmetto supplements its answers to NRC Staff interrogatories on Contention 27 with the supplementary answers provided above to Interrogatories by Applicant.

CONTENTION 44

On July 8, 1982, the Board admitted Palmetto Alliance Contention 44 (identical to CSG Contention 18) which reads:

The license should not be issued because reactor degradation in the form of much more rapid increase in reference temperature than had been anticipated has occurred in a number of PWRs including Applicants Oconee unit 1. Until and unless the NRC and the industry can avoid reactor inbrittlemment, Catawba should not be permitted to operate.

Applicants submitted interrogatories to Palmetto Alliance on December 3, 1982, covering Palmetto Contention 44 (CSG contention 18). The NRC Staff submitted interrogatories to Palmetto Alliance on December 15, 1982, regarding the same Contention.

On March 21, 1983, Carolina Environmental Study Group responded to Interrogatories from the NRC Staff identical to those served on Palmetto Alliance. Palmetto Alliance Contention 44 is identical to Carolina Environmental Study Group Contention 18 and on the basis of consultation with CESG authorized representative Jesse Riley and examination of the CESG responses, Palmetto Alliance hereby adopts as its own the responses made by CESG to the Staff questions as if such responses were made at this time by Palmetto Alliance.

With respect to Interrogatories on Carolina Environmental Study Group Contention 18-Palmetto Alliance Contention 44 of December 3, 1982, by Applicants, Answers to such Interrogatories are fully provided in the answers to NRC Staff interrogatories provided by CESG. Palmetto Alliance hereby reiterates the answers given by CESG to the Staff Interrogatories, which it has adopted as its own, response to the December 3, 1982, interrogatories of Applicants on this Contention.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
DUKE POWER COMPANY, et al.)
(Catawba Nuclear Station,)
Units 1 and 2)

Docket Nos. 50-413
50-414

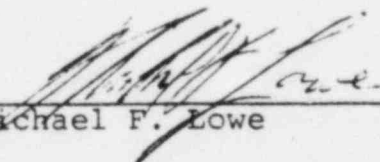
April 19, 1983

AFFIDAVIT OF MICHAEL F. LOWE

I, Michael F. Lowe, do affirm as follows:

1. I am employed as Director of Palmetto Alliance, Inc., at 2135½ Devine Street, Columbia, South Carolina, 29205.

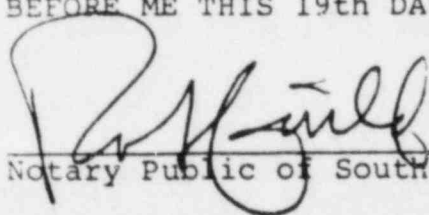
2. I am duly authorized to participate in answering interrogatories and requests for production regarding Palmetto Alliance contentions 6, 7, 8, 16, 27, and 44, and I affirm that the responses given are true and complete to the best of my knowledge.



Michael F. Lowe

AFFIRMED AND SUBSCRIBED

BEFORE ME THIS 19th DAY of APRIL, 1983.



Notary Public of South Carolina

My Commission Expires:

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of Palmetto Alliance
Supplementary Responses have been served by Express Mail upon the
parties denoted by *, and
in the above captioned matter, have been served upon the follow-
ing by depositing same in the United States mail, postage prepaid,
on this 20th day of April, 1983.

James L. Kelley, Chairman
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Union Carbide Corporation
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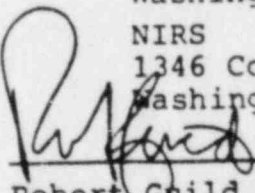
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