

March 23, 1984
MAR 26 11:48UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBefore the Atomic Safety and Licensing Board

In the Matter of)	
)	
CAROLINA POWER & LIGHT COMPANY)	
AND NORTH CAROLINA EASTERN)	Docket Nos. 50-400 OL
MUNICIPAL POWER AGENCY)	50-401 OL
)	
(Shearon Harris Nuclear Power)	
Plant, Units 1 and 2))	

APPLICANTS' INTERROGATORIES AND
REQUEST FOR PRODUCTION OF DOCUMENTS
TO WELLS EDDLEMAN CONCERNING
EDDLEMAN CONTENTIONS 9 and 11 (SECOND SET)

Pursuant to 10 C.F.R. § 2.740b and 2.741, Applicants Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency hereby request that Intervenor Wells Eddleman answer separately and fully in writing, and under oath or affirmation, each of the following interrogatories, and produce and permit inspection and copying of the original or best copy of all documents identified in the responses to the interrogatories below. Under the Commission's Rules of Practice, answers or objections to these interrogatories must be served within 14 days after service of the interrogatories; responses or objections to the request for production of documents must be served within 30 days after service of the request.

These interrogatories are intended to be continuing in nature; and the answers should promptly be supplemented or amended as appropriate, pursuant to 10 C.F.R. § 2.740(e), should Intervenor or any individual acting on his behalf obtain any new or differing information responsive to these interrogatories. The request for production of documents is also continuing in nature; and Intervenor must produce immediately any additional documents he, or any individual acting on his behalf, obtains which are responsive to the request, in accordance with the provisions of 10 C.F.R. § 2.740(e).

Where identification of a document is requested, briefly describe the document (e.g., book, letter, memorandum, transcript, report, handwritten notes, test data) and provide the following information as applicable: document name, title, number, author, date of publication and publisher, addressee, date written or approved, and the name and address of the person or persons having possession of the document. Also state the portion or portions of the document (whether section(s), chapter(s), or page(s) upon which Intervenor relies.

Definitions: As used hereinafter, the following definitions shall apply:

The "FSAR" is the Final Safety Analysis Report for the Shearon Harris Nuclear Power Plant, as amended.

The "SER" is the Safety Evaluation Report related to the operation of Shearon Harris Nuclear Power Plant, Units 1 and 2, NUREG-1038 (Nov. 1983).

"Applicants" is intended to encompass Carolina Power & Light Company, North Carolina Eastern Municipal Power Agency and their contractors for the Harris Plant.

"Document(s)" means all writings and records of every type in the possession, control or custody of Intervenor or any individual acting on his behalf, including, but not limited to, memoranda, correspondence, reports, surveys, tabulations, charts, books, pamphlets, photographs, maps, voice recordings and all other writings or recordings of any kind; "document(s)" shall also mean copies of documents even though the originals thereof are not in the possession, custody or control of Intervenor; a document shall be deemed to be within the "control" of Intervenor or any individual acting on his behalf if Intervenor or the individual acting on his behalf has ownership, possession or custody of the document or copy thereof, from any person or public or private entity having physical possession thereof.

General Interrogatories

1. (a) State the name, present or last known address, and present or last known employer of each person, other than affiant, who provided information upon which Intervenor relied in answering each interrogatory herein.

(b) Identify all such information which was provided by each such person and the specific interrogatory response(s) in which such information is contained.

2. (a) Identify all documents in Intervenor's possession, custody or control, including all relevant page citations, upon which Intervenor relied in answering each interrogatory herein.

(b) Identify the specific interrogatory response(s) to which each such document relates.

3. (a) Identify any other source of information, not previously identified in response to Interrogatory 1 or 2, which was used in answering the interrogatories set forth herein.

(b) Identify the specific interrogatory response(s) to which each such source of information relates.

Interrogatories on Contention 9
(Environmental Qualification of Electrical Equipment)

9-10. (a) In your answer to Interrogatory #9-2 in Wells Eddleman's Response to Applicants' Interrogatories Concerning Contentions 9, 11 and 132(c)(2), dated March 7, 1984, you identify "inadequate treatment of systems interaction" as a deficiency in Applicants' program for environmental qualification of electrical equipment for the Shearon Harris Nuclear Power Plant ("SHNPP"). Describe in detail what you believe to be the relationship between systems interaction and environmental qualification of electrical equipment at SHNPP.

(b) Identify all electrical equipment and components at SHNPP not included in Applicants' equipment qualification program which you believe should be included in the program

under the definitions provided in 10 C.F.R. § 50.49(b). As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

(c) Applicants were unable to find, after a diligent search, the quotation which you attribute to G. J. Boyd, et al., "Systems Interaction Methodology Applications Program" (December 21, 1979) (published as NUREG/CR-1321 in April 1980), at 33. Provide the correct citation for this quotation. In addition, provide a citation for "Recommendation 9," which you also attribute to the above report.

9-11. (a) Describe in detail what you mean, in your answer to Interrogatory #9-3, by "the use of comparison to other systems in the testing."

(b) Identify all systems, electrical equipment and components at SHNPP which you believe are affected by the alleged deficiency referenced in (a) above. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

9-12. (a) Describe in detail what you mean, in your answer to Interrogatory #9-3, by the statement that "the temperature inferences for equipment are in error."

(b) Identify the "past response(s) on another contention" in which you explain the alleged deficiency referenced in (a) above.

(c) Identify all electrical equipment and components at SHNPP which you believe are affected by the alleged

deficiency referenced in (a) above. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

(d) Identify the supplier of the RTDs which experienced steam penetration during testing as documented in L. L. Bonzon, et al., "An Overview of Equipment Survivability Studies at Sandia National Laboratories (SNL)."

9-13. (a) Describe in detail what you mean, in your answer to Interrogatory #9-3, by the statement that "estimation methods not applicable to actual or anticipated accident or normal operation conditions are used (see FSAR)."

(b) Provide specific citations to the FSAR and explain in detail why Applicants' estimation methods are not applicable to actual or anticipated accident or normal operating conditions.

(c) Identify all electrical equipment and components at SHNPP which you believe are affected by the alleged deficiency referenced in (a) above. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

9-14. (a) Describe in detail what you mean, in your answer to Interrogatory #9-9(2d), by the statement that "test procedures understate radiation effects." Identify each and every way in which you believe radiation effects are understated.

(b) Identify all electrical equipment and components at SHNPP which you believe are affected by the alleged deficiency referenced in (a) above. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

9-15. (a) Describe in detail what you mean, in your answer to Interrogatory #9-9(2d), by "lack of similarity between equipment tested & that installed."

(b) Identify all electrical equipment and components at SHNPP which you believe lack similarity to equipment tested. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

9-16. (a) Describe in detail what you mean, in your answer to Interrogatory #9-9(2d), by "failure to consider configuration & orientation effects."

(b) Identify all electrical equipment and components at SHNPP which you believe are affected by the alleged deficiency referenced in (a) above. As to each such item, describe in detail the bases for your answer, including the reasons for identifying the item.

9-17. (a) With respect to each and every alleged deficiency, error, omission, inadequacy or other criticism of environmental qualification of electrical equipment contained in your answers to Interrogatories #9-1 through #9-9(2d), including criticisms contained in the documents (other than the SER) which you cite as bases for your answers, state whether

the criticism specifically addresses SHNPP's program for environmental qualification of electrical equipment.

(b) As to each criticism identified in response to (a) above which specifically addresses SHNPP's program for environmental qualification of electrical equipment, state what aspect(s) of the program are being evaluated and identify the documents on which the evaluation is based.

(c) As to each criticism identified in response to (a) above which does not specifically address SHNPP's program for environmental qualification of electrical equipment, state whether the criticism addresses the adequacy of NRC regulatory standards. If your answer is other than affirmative, describe in detail the bases for your answer.

Interrogatories on Contention 11
(Polyethylene Cable Insulation Degradation)

11-13. (a) In your answer to Interrogatory #11-1(d), you state that "[i]f the conductors or parts of sheathing or other things in contact with the insulation are intact, they may increase the [dose-rate] effect by such means as free radicals, chemical reactions, and emissions from induced radioactivity or secondaries from impacts of radiation into them." Describe in detail how free radicals might increase radiation dose-rate effects.

(b) Describe in detail the chemical reactions which you believe might increase radiation dose-rate effects.

(c) Describe in detail what you mean by "emissions from induced radioactivity" and explain how such emissions might increase radiation dose-rate effects.

(d) Describe in detail what you mean by "secondaries from impacts of radiation" and explain how such "secondaries" might increase radiation dose-rate effects.

(e) Identify all documents, including relevant page citations, relied on in answering (a) through (d) above.

11-14. (a) In your answer to Interrogatory #11-1(e), you state that "[a] metal conduit, by creating secondary reradiation, and by induced radioactivity, would spread out radiation dose in time, increasing the [dose-rate] effect. Secondaries from other jacketing could also have this effect to some extent." Describe in detail what you mean by "secondary reradiation" and explain how such "reradiation" would increase radiation dose-rate effects.

(b) Describe in detail what you mean by "induced radioactivity" and explain how such radioactivity would increase radiation dose-rate effects.

(c) Describe in detail what you mean by "[s]econdaries from other jacketing" and explain how such "secondaries" would increase radiation dose-rate effects.

(d) Describe in detail what you mean by "would spread out radiation dose in time." Explain how such spreading would occur and why it would increase radiation dose-rate effects.

(e) Identify all documents, including relevant page citations, relied on in answering (a) through (d) above.

11-15. (a) In your answer to Interrogatory #11-7(a), you state that "[g]amma is not apparently the only radiation causing degradation effects that vary with dose-rate." Identify all documents, including relevant page citations, relied on in making the above statement.

(b) State why you do not believe that dose-rate effects caused by alpha and beta radiation are bounded by dose-rate effects caused by gamma radiation. Describe in detail the bases for your answer.

11-16. (a) Describe in detail the bases for the statement, in your answer to Interrogatory #11-9(a), that "[i]nspection should be very frequent as sudden insulation failures (e.g. cracking) are apt to happen randomly" Identify all documents, including relevant page citations, relied on in making the above statement.

(b) Identify all incidents of which you are aware in which there have been "sudden insulation failures" as a result of radiation dose-rate effects.

Request for Production of Documents

Applicants request that Mr. Eddleman respond in writing to this request for production of documents and produce the original or best copy of each of the documents identified or

described in the answers to each of the above interrogatories
at a place mutually convenient to the parties.

Respectfully submitted,

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Dated: March 23, 1984

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Plant, Units 1 and 2))	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Interrogatories and Request for Production of Documents to Wells Eddleman Concerning Eddleman Contentions 9 and 11 (Second Set)," dated March 23, 1984, were served this 23rd day of March, 1984, by deposit in the U.S. Mail, First Class, postage prepaid, to the parties on the attached Service List.

Michael A. Swiger
Michael A. Swiger

Dated: March 23, 1984

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