

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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8/11/75

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
Carolina Power and Light Company

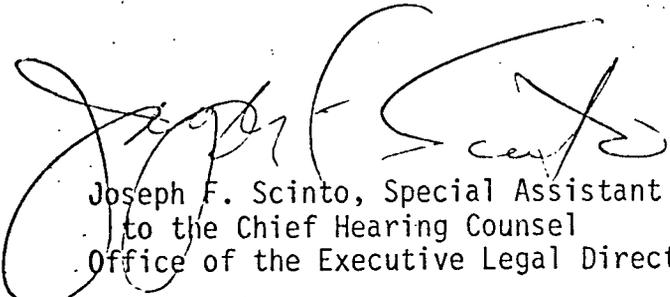
Docket Nos. 50-261

(H. B. Robinson, Unit No. 2)

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with section 2.713(2), 10 CFR Part 2, the following information is provided:

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Court of Appeals
Name of Party - NRC Staff
U.S. Nuclear Regulatory Commission



Joseph F. Scinto, Special Assistant
to the Chief Hearing Counsel
Office of the Executive Legal Director

Dated at Bethesda, Maryland,
this 11th day of August, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CAROLINA POWER AND LIGHT COMPANY

(H. B. Robinson, Unit No. 2)

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Docket No. 50-261

CERTIFICATE OF SERVICE

I hereby certify that copies of "NOTICE OF APPEARANCE", dated August 11, 1975 in the above-captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 12th day of August, 1975:

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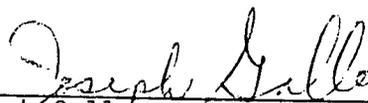
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Re: Carolina Power & Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261, 50-261 (OL Modification)

Gentlemen:

Carolina Power & Light Company is submitting today under separate cover written responses to the Atomic Safety and Licensing Board's oral questions from the November 30, 1973, special prehearing conference and "Questions from the Board Directed to Applicant and Regulatory Staff," dated July 14, 1975.

In a Memorandum and Order of May 6, 1975, the Board advised the parties that if the circumstances require a prehearing conference, it will be held on August 12, 1975, and the hearings will commence immediately following the conclusion of said conference. The "Notice of Hearing," issued by the Board on

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July 22, 1975, included as the first item on the hearing agenda the disposition of preliminary matters raised by the parties or by the Board.

There are at least two matters which the Company wishes to raise at the outset of the hearing, in the context either of a prehearing conference or as the first item on the Board's hearing agenda. One matter concerns the scope of the Board's functions in this proceeding under the Commission's regulations. The second matter addresses the scope of the Nuclear Regulatory Commission's authority in the area of water quality where a National Pollutant Discharge Elimination System ("NPDES") permit has been issued pursuant to Section 402 of the Federal Water Pollution Control Act, as amended. We believe that both of these subjects should be heard prior to the presentation of evidence.

Because these matters involve somewhat complex questions of law, the Company has set forth herein its positions on these two questions so that the Board and the parties might have the opportunity to consider them in advance of the hearing.

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I. THE BOARD'S FUNCTIONS

On May 12, 1975, the Company filed "Licensee's Motion to Establish Issues for Consolidated Hearing," in which we argued that: (a) the issues in the proceeding pursuant to Section B of Appendix D to 10 C.F.R. Part 50 should be confined to the matters in controversy; and, (b) the issues in the proceeding to determine whether the operating license should be amended to increase the steady state power level from 2200 to 2300 MWt should likewise be confined to the matters in controversy except where the Board, pursuant to 10 C.F.R. §2.760a, determines that a serious safety, environmental, or common defense and security matter exists. In a Memorandum and Order of June 27, 1975, the Board ruled that, subject to the restraints discussed by the Commission in Consolidated Edison Company of New York (Indian Point Nuclear Generating Station, Unit 3), CLI-74-28 (July 16, 1974), RAI-74-7 at 7, the Board is not precluded from exploring issues which concern it and which have not been placed in controversy by a party. The Company accepts the Board's ruling that, within the restraints established by the Commission, the Board's authority to inquire into matters not in controversy applies equally to the Appendix D proceeding as to the proceeding on the operating license amendment. The Board has inquired into a variety of

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subjects outside of the matters in controversy and the Company has provided responses to those Board inquiries.

Subsequent to the Board's ruling of June 27, 1975, which addressed the Board's authority to explore issues, the Board, on July 22, 1975, issued a Notice of Hearing. This Notice contains, for the first time, a statement on the ultimate determinations the Board will reach in this consolidated proceeding. In this Notice the Board stated as follows:

"In addition to deciding upon the matters in controversy among the parties, the Board will, in accordance with Section A.11 of Appendix D to 10 CFR Part 50, -- (a) determine whether the requirements of Section 102(2)(C) and (D) of the National Environmental Policy Act of 1969, and Appendix D to 10 CFR Part 50 of the Commission's Regulations have been complied with in this proceeding; (b) independently consider the final balance among conflicting factors contained in the record of the proceeding with a view toward determining the appropriate action to be taken; and (c) determine, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, whether Operating License No. DPR-23 should be continued, modified, terminated, or appropriately conditioned to protect environmental values."

The Board's limited authority to add new issues to the proceeding clearly carries with it the authority to make findings of fact and conclusions of law on those issues as well as matters in controversy. It does not, however, in the Company's view, for the reasons set forth below, include the authority or responsibility, which remains with the Director of Nuclear Reactor Regula-

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tion, to make findings on the ultimate NEPA issues. The Company therefore requests that the Board reconsider the statement of the Board's functions included in its Notice of July 22, 1975.

The historical development of the Commission's regulations pertaining to the functions of a licensing board is important to an understanding of the regulations presently in effect. Following the decision in Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (D.C. Cir. 1971), the Commission, on September 3, 1971, issued ^{1/} revised Appendix D to 10 C.F.R. Part 50 as its regulations implementing the National Environmental Policy Act ("NEPA"). Section B of Appendix D, which applies to permits and licenses issued in the period January 1, 1970, to September 9, 1971, provided, in Paragraph 3, that for a permit or license other than a construction permit the Director of Regulation would publish a notice of opportunity for hearing and that the provisions of §A.11 would apply if any hearing is held. Section A.11 of Appendix D then provided as follows:

"In a proceeding for the issuance of a construction permit for a production or utilization facility described in paragraph 1, and in a proceeding for the issuance of an operating license in which a hearing is held and matters covered by this appendix are in issue, the Atomic Safety and Licensing Board will (a) determine whether the requirements of section 102(2)(C) and (D) of the National Environmental Policy Act and this appendix have been complied with in the proceeding,

1/ 36 Fed. Reg. 18071 (September 9, 1971).

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(b) decide any matters in controversy among the parties, (c) determine, in uncontested proceedings, whether the NEPA review conducted by the Commission's regulatory staff has been adequate, and (d) independently consider the final balance among conflicting factors contained in the record of the proceeding for the permit or license with a view to determining the appropriate action to be taken." 2/

The Commission's regulations provided, in other words, that in an operating license proceeding where a hearing, pursuant to a request, was held and NEPA matters were at issue, then a licensing board's jurisdiction included determining compliance with NEPA and reaching its own independent final balance among conflicting factors with a view to determining the appropriate action to be taken.

On July 21, 1972, the Commission issued ^{3/} extensive regulatory amendments which restructured its Rules of Practice, 10 C.F.R. Part 2. Among the new regulations adopted was §2.760a, entitled "Initial decisions in contested proceedings on applications for facility operating licenses":

"In any initial decision in a contested proceeding on an application for an operating license for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law only on the matters actually put into controversy by the parties to the proceeding and which have been determined to be the issues

2/ Id. at 18074.

3/ 37 Fed. Reg. 15127 (July 28, 1972).

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in the proceeding by the Commission or the presiding officer. Depending on the resolution of those matters, the Director of Regulation, after making the requisite findings, will issue, deny, or appropriately condition the license."

The Commission discussed §2.760a in the following portion of the statement of considerations which accompanied publication of the restructured rules:

"6. Limitation of issues in operating license hearing. At the operating license stage, where a hearing is required only upon the request of a person whose interest may be affected, the issues in a proceeding will be limited to matters that are actually put in controversy by the parties. Thus, if radiation safety matters were not put in issue, they would not be considered at the hearing. Under this approach, the atomic safety and licensing board or other presiding officer will not make the findings on the traditional, ultimate issues, but will make findings only on the matters in controversy, and, depending on the resolution of those matters, the Director of Regulation, after making the requisite findings, will issue, deny, or appropriately condition the license." 4/

The Commission also noted, in the statement of considerations, 5/ that Appendix D to Part 50 had been amended to reflect the limitation of issues in hearings at the operating license stage. Section A.11 was amended to provide, as it does today, that in a proceeding for the issuance of an operating license in which a hearing is held and matters covered by Appendix D are in

4/ Id. at 15128, 15129.

5/ Id. at 15130.

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issue, the licensing board will decide those matters in controversy among the parties.

When the Commission on July 21, 1972, amended its regulations to limit the issues at operating license hearings, it also amended Appendix D to delete from a licensing board's functions at an operating license hearing the consideration of the ultimate issues under NEPA. These amendments cured a previously anomalous situation whereby a licensing board would not even be established in the absence of a request for a hearing, but, where a hearing is held and perhaps only one environmental issue is raised, then the Board must determine whether NEPA had been complied with and independently weigh the final balance among conflicting factors in the record of the proceeding with a view toward determining the appropriate action to be taken. The Commission apparently recognized that the invocation of such independent regulatory responsibilities should not be contingent upon the fortuitous event of a request for hearing and the assertion of an environmental issue as a matter in controversy. Rather than have licensing boards conduct a mandatory independent environmental review in every operating license proceeding, as is the case with construction permits, the Commission decided to continue granting hearings on operating licenses only upon

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request and to limit the presiding licensing boards' determinations to the matters in controversy. Thus, the Commission established in §2.760a a procedure whereby the licensing board would make findings of fact and conclusions of law only on the matters in controversy, and the Director of Regulation would then, after making the requisite findings, issue, deny, or appropriately condition the license.

As the Board noted in its June 27, 1975, Memorandum and Order, the Commission held in Consolidated Edison Company of New York (Indian Point Nuclear Generating Station, Unit 3), CLI-74-28 (July 16, 1974), RAI-74-7 at 7, that a licensing board is not prohibited from exploring an issue which concerns it merely because the parties have not placed the matter in controversy. The Commission held that this power should be exercised sparingly and utilized only in extraordinary circumstances where a board concludes that a serious safety or environmental issue remains. RAI-74-7 at 9. The Commission advised, at the conclusion of its Memorandum and Order, that, for purposes of clarification, its existing regulations would be modified to reflect the construction embodied in its opinion. The Commission subsequently codified its views^{6/} by amending §2.760a to read as follows:

6/ Statement of Considerations, 40 Fed. Reg. 2973 (January 17, 1975).

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"In any initial decision in a contested proceeding on an application for an operating license for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding and on matters which have been determined to be the issues in the proceeding by the Commission or the presiding officer. Matters not put into controversy by the parties will be examined and decided by the presiding officer only in extraordinary circumstances where he determines that a serious safety, environmental, or common defense and security matter exists. This authority is to be used sparingly. Depending on the resolution of those matters, the Director of Regulation, after making the requisite findings, will issue, deny, or appropriately condition the license." 7/

The Commission at the same time revised Appendix A to 10 C.F.R. Part 2 to provide the following under §VIII, Procedures Applicable to Operating License Proceedings:

"(b) In an operating license proceeding, the board will determine the matters in controversy among the parties and, in extraordinary circumstances where the board determines that a serious safety, environmental, or common defense and security matter was not raised by the parties, the board will determine such matter as the issues to be decided. Those issues will be specified in the notice of hearing issued by the Commission, or in a prehearing conference order issued by the board, or in an order issued by the board in the exercise of its discretion during the hearing."

7/ Section 2.760a and Appendix A to Part 2 were amended once more to reflect the organizational transition from the Atomic Energy Commission to the Nuclear Regulatory Commission. The words "Director of Regulation" have been replaced by "Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards, as appropriate." 40 Fed. Reg. 8777 (March 3, 1975).

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"(c) The board, in operating license proceedings, will make findings on the matters in controversy among the parties and any matter not raised by the parties but examined by the board in its discretion in accordance with paragraph (b) of this section and §2.760a. Depending on the resolution of those matters, the Director of Regulation would issue, deny, or appropriately condition the operating license."

The Company respectfully submits that under the Commission's regulations the Board's initial decision in this consolidated proceeding should include only findings of fact and conclusions of law on:

(1) matters put into controversy by the parties to the proceeding; and,

(2) matters not put into controversy by the parties where, in extraordinary circumstances, the Board has determined that a serious safety, environmental, or common defense and security matter exists.

It is then the function of the Director of Nuclear Reactor Regulation, pursuant to the authority granted by the Commission through its regulations, and depending on the Board's resolution of the matters described above, to make all other requisite findings and determine whether the existing full-term operating license should be continued, modified, terminated,

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or appropriately conditioned to protect environmental values, and whether the operating license should be amended to authorize a steady state power level of 2300 MWt.

The Company finds nothing in the Commission's regulations or in the Notices of Hearing in this consolidated proceeding^{8/} which would empower the Board to reach the determinations (other than to decide the matters in controversy) enumerated in its Notice of July 22, 1975. While those determinations were included in a licensing board's NEPA review at the operating license stage (where a hearing was held and an environmental issue was in controversy) before the Commission restructured its Rules of Practice on July 21, 1972, those regulatory amendments represent a distinct departure from the authority granted to licensing boards in operating license proceedings.

In the July 22, 1975, Notice, the Board cites Section A.11 of Appendix D as authority for the three determinations it proposes to make in addition to deciding the matters in controversy. The only portion of Section A.11, however, which provides that a licensing board will make the three determinations enumerated in the Board's Notice explicitly applies to a proceeding

^{8/} Notice of Hearing Pursuant to 10 C.F.R. Part 50, Appendix D, Section B, September 28, 1973, 38 Fed. Reg. 27433 (October 3, 1973); Notice of Hearing on Modification of Facility Operating License, July 22, 1974, 39 Fed. Reg. 27748 (July 31, 1974).

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for the issuance of a construction permit. Clearly this is not a proceeding related to a construction permit.

As the Commission explained^{9/} on the occasion of its revision of Appendix D on September 3, 1971, that Appendix is divided into five sections. Section A deals with the basic procedures for implementing NEPA, including an identification of the information required of applicants, the circulation of environmental reports and detailed statements for comment, and the role of Atomic Safety and Licensing Boards in the environmental review process. Sections B, C, D and E, however, prescribe the procedures to be applied to permits and licenses already issued or which were the subject of hearings pending at that time. Rather than restate the basic procedures as they might apply in whole or in part to each of the special classes of licenses and permits covered by Sections B, C, D and E, the Commission organized the Appendix such that Section A contains the basic procedures and Sections B, C, D and E reference the relevant paragraphs of Section A. The language in Section A, then, reflects the principal events in the Commission's regulatory program, i.e., the issuance of construction permits and operating licenses. The Commission does not, except under the special circumstances caused by the initial implementation of

9/ 36 Fed. Reg. 18071. (September 9, 1971).

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NEPA, periodically hold public hearings on or conduct environmental reviews of existing licenses and permits. Thus, Section A was written to meet the Commission's ongoing regulatory program, while the remaining sections addressed the unique situations of transition and implementation.

The reference in Section B, which applies only to the review of permits and licenses already issued in a distinct period of time, to Section A.11 would have meaning only if the word "issuance" in Section A.11 is not taken literally. The entirety of Section A.11, for the reasons discussed above, is written in terms of proceedings for the issuance of construction permits and operating licenses. If one were to hold that the third paragraph of Section A.11, which applies to a proceeding for the issuance of an operating license, did not apply to a Section B review of an operating license issued in the period January 1, 1970, to September 9, 1971, then, indeed, Section B would be rendered meaningless, for no other paragraph of Section A.11 could be applied. Certainly regulations should be construed so that they are not rendered inoperative. It also appears unreasonable to hold that the scope of a licensing board's environmental review of an existing operating license should be any broader than the Commission clearly prescribes for the issuance of an operating license.

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Additionally, there is experience which supports the Company's interpretation of Sections B and A.11. In the case of construction permits covered by Section B, the Commission consistently has issued notices of hearing which define the licensing board's role as that set forth in the first and second paragraphs of Section A.11, in spite of the fact that those paragraphs refer, literally, to proceedings for the issuance of construction permits.^{10/}

The Company submits that, contrary to the Board's Notice of July 22, 1975, only the third paragraph of Section A.11 applies to this proceeding, and that the Board is not authorized to reach the determinations specified in the first and second paragraphs of Section A.11. The Company notes that the NRC Staff has agreed that the third paragraph of Section A.11 applies to this proceeding.^{11/}

^{10/} See, e.g., notices of hearing pursuant to Section B of Appendix D on construction permits in the following proceedings: Carolina Power & Light Company (Brunswick Steam Electric Plant, Units 1 and 2), Docket No. 50-324, 325, 37 Fed. Reg. 23468 (November 3, 1972); Tennessee Valley Authority (Sequoyah Plant, Units 1 and 2), Docket Nos. 50-327, 328, 39 Fed. Reg. 11131 (March 25, 1974); Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Unit 2), Docket No. 50-323, 37 Fed. Reg. 23542 (December 19, 1972); Florida Power & Light Company (St. Lucie Nuclear Power Plant, Unit 1), Docket No. 50-335, 38 Fed. Reg. 1139 (January 9, 1973); Portland General Electric Company (Trojan Nuclear Plant), Docket No. 50-344, 37 Fed. Reg. 28770 (December 29, 1972).

^{11/} NRC Staff's Response to Licensee's Motion to Establish Issues for Consolidated Hearing," June 2, 1975, at 3.

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Finally, it is observed that both of these proceedings were initiated by notices of opportunity for hearing.^{12/} This Board was established and this hearing is being held solely because an interested person petitioned for leave to intervene, requested a hearing, and raised environmental issues as matters in controversy. If the Commission had intended that a mandatory public hearing be held and an independent environmental assessment be conducted by a licensing board, it would have so indicated at the outset by issuing a notice of hearing, establishing a licensing board, and, as in the case of construction permit proceedings, directing that board to conduct an independent review.

In conclusion, the Company requests that the Board reconsider its July 22, 1975, Notice of Hearing and rule that it will make findings of fact and conclusions of law on:

(1) matters put into controversy by the parties to the proceeding; and,

(2) matters not put into controversy by the parties where, in extraordinary circumstances, the Board has determined that a serious safety, environmental, or common defense and security matter exists.

^{12/} Notice of Opportunity for Hearing Pursuant to 10 C.F.R. Part 50, Appendix D, Section B, July 6, 1973, 38 Fed. Reg. 19148 (July 18, 1973); Proposed Issuance of Amendment to Facility License, April 24, 1974, 39 Fed. Reg. 15061 (April 30, 1974).

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II. NRC AUTHORITY OVER WATER QUALITY

The Board's questions concerning the plant's impact on water quality, and in particular its inquiry into the cost of installing a spray cooling system in the existing discharge canal, have prompted the Company to express at this time its position on the NRC's authority to review the environmental impact of the plant's non-radiological liquid effluents.

The Commission's regulations implementing NEPA, Appendix D to 10 C.F.R. Part 50, once contemplated^{13/} that the Commission was neither permitted nor required to review independently standards or requirements validly imposed pursuant to federal and state law, including those pertaining to water quality. Certification by the appropriate agency of compliance with applicable water quality standards and similar requirements was considered dispositive by the Commission and no further consideration was given to further measures which might reduce adverse environmental impacts. This approach was rejected, however, in Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (D.C. Cir. 1971), which held that water quality standards were only minimum standards for NEPA purposes, and that the Commission must independently review water quality impacts and

13/ 35 Fed. Reg. 18472 (December 4, 1970).

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impose, where the facts so warranted, conditions more stringent than required to comply with state and federal standards. The Commission amended its regulations accordingly.^{14/}

The next year Congress passed the Federal Water Pollution Control Act Amendments of 1972^{15/} ("FWPCA"), which set forth a comprehensive water pollution control program to be administered by the U.S. Environmental Protection Agency ("EPA") and the states. Section 511(c)(2) of the FWPCA provides as follows:

"Nothing in the National Environmental Policy Act of 1969 (83 Stat. 852) shall be deemed to --

- (A) Authorize any Federal agency authorized to license or permit the conduct of any activity which may result in the discharge of a pollutant into the navigable waters to review any effluent limitation or other requirement established pursuant to this Act or the adequacy of any certification under section 401 of this Act; or
- (B) Authorize any such agency to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this Act."

^{14/} 36 Fed. Reg. 18071 (September 9, 1971).

^{15/} Pub. L. 92-500, 86 Stat. 816.

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This section of the FWPCA reversed the Calvert Cliffs' holding regarding an agency's NEPA responsibilities in the area of water quality. Philadelphia Electric Company, et al. (Peach Bottom Atomic Power Station), ALAB-216 (July 5, 1974), RAI-74-7, 13 at 38. Section 511(c)(2) of the FWPCA prohibits a federal agency from imposing, under NEPA, any license or permit condition which would require a limitation on non-radiological liquid effluents more stringent than the limitations or other requirements established pursuant to the FWPCA.

Section 511(c)(2) was intended to avoid the duplication of effort involved when several federal agencies review the same effluent and attempt to impose upon a single discharger their own possibly inconsistent limitations and requirements. Congress wanted to avoid the need for duplicate water quality staffs in the various federal agencies and to permit the development of a uniform federal policy with respect to water quality. Thus Section 101(f) of the FWPCA provides:

"It is the national policy that to the maximum extent possible the procedures utilized for implementing this Act shall encourage the drastic minimization of paper work and interagency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government."

That Section 511(c)(2) reversed the Calvert Cliffs' holding regarding an agency's NEPA responsibilities in the area

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of water quality and that it was intended to avoid duplication within the Federal Government is clear from the unambiguous legislative history as well. Senator Muskie, the chief sponsor in the Senate of the 1972 Amendments, made the following observations in his formal analysis of the bill:

"Section 511(c)(2) addresses itself to the authority of Federal licensing and permitting agencies, other than EPA, as relates to effluent limitations and other requirements established pursuant to the FWPCA. EPA is the sole Federal agency specifically charged with comprehensive responsibility to regulate the discharge of pollutants into the waters of the United States, and section 511(c)(2) will ensure that no source of discharge which is in lawful compliance with an effluent limitation established pursuant to the FWPCA will be required to meet a different standard as a condition of a license or permit granted by another Federal agency, such as the Atomic Energy Commission. Such agencies shall accept as dispositive the determinations of EPA and the States (under section 401 and its predecessor, section 21b of the FWPCA prior to the 1972 amendments)." 16/

A similar view was expressed by Senator Baker, who originally introduced Section 511(c)(2), in his remarks on the Calvert Cliffs' opinion:

"It seems to me most desirable, however, that each Federal permitting and licensing agency not be required by the operation of NEPA to develop special expertise vested by the Congress in other agencies

16/ Environmental Policy Division of the Congressional Research Service of the Library of Congress, A Legislative History of the Water Pollution Control Act Amendments of 1972, for the Senate Comm. on Public Works, 93d Cong., 1st Sess. 183 (Comm. Print 1973).

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. . . [M]y amendment would relieve any such permitting or licensing agency of the responsibility for determining on its own the standard of performance or effluent limitation that must be applied to the activity under consideration for a license or a permit. That determination would be made by a State or by EPA pursuant to sections 401 and 402 of the pending bill. Certification pursuant to section 402 would discharge a licensing or permitting agency from any further consideration as to what specific degree of effluent control was required with respect to water quality considerations for the activity under consideration.

. . . I believe this is a matter that it is felt has its proper place in clarifying the decision in the Calvert Cliffs case. I believe it does no violence to the laudable purpose of the Calvert Cliffs case. I believe it is necessary if we are to avoid duplication which would inevitably occur . . ." 17/

Section 402 of the FWPCA is the principal tool in achieving the objective of a uniform and efficiently administered federal policy with respect to water quality. The substantive standards established by EPA pursuant to the FWPCA are applied to individual facilities through the NPDES permit process under Section 402. Through that permit EPA (or those states which have been so authorized) determines the effluents which may be discharged from the particular facility. Once the permit has been issued and effluent limitations established therein, Section 511 (c) (2) prohibits any other federal agency from establishing more stringent limitations.

17/ Id. at 1394, 1395.

John F. Wolf, Esquire
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During the period between enactment of the Federal Water Pollution Control Act Amendments of 1972 and the issuance of a NPDES permit under Section 402, the NRC Staff was no doubt justified, under the terms of the Commission's Interim Policy Statement,^{18/} in continuing to consider effluent limitations and alternative pollutant discharge systems pursuant to NEPA. The extensive consideration given to such limitations and alternative systems is reflected in the Staff's Draft and Final Environmental Statements on the H. B. Robinson Plant, Unit 2.

On December 31, 1974, however, the EPA issued a NPDES permit, pursuant to Section 402 of the FWPCA, to the Company for the H. B. Robinson Plant, Unit 2. That permit, a copy of which is attached to the Testimony of James M. Sell for Carolina Power & Light Company, July 22, 1975, expressly authorizes the Company to discharge once-through cooling water during the period from the effective date of the permit to the period approved by the EPA Regional Administrator after his final determination under Section 316(a).^{19/} This permit was preceded by the issuance on

^{18/} On January 12, 1973, the Commission issued an Interim Policy Statement on Implementation of the Federal Water Pollution Control Act Amendments of 1972, which addressed the effect of Section 511 upon the Commission's regulatory responsibility and authority under NEPA, and which, to the extent that there is a conflict, expressly modified Appendix D to 10 C.F.R. Part 50. 38 Fed. Reg. 2679 (January 29, 1973).

^{19/} Permit No. SC0002925, Page 3 of 18.

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December 20, 1974, by the State of South Carolina of a certification, pursuant to Section 401 of the FWPCA, that the discharges authorized by the NPDES permit would satisfy the applicable state and federal requirements.

The Commission's Interim Policy Statement provides as follows with respect to the Commission's regulatory responsibility and authority under NEPA where a Section 401 certificate and a Section 402 permit have been issued:

"3. Authority to impose requirements or limitations pursuant to National Environmental Policy Act of 1969 (NEPA). If and to the extent that there are applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA, different limitations or requirements will not be imposed by the Commission pursuant to NEPA as a condition to any permit or license

.

"5. Cost-benefit balances. a. Except as provided in paragraphs b. and c., if and to the extent that there are applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA, in considering the costs and benefits of a proposed action pursuant to NEPA, the Commission will determine whether the facility or activity that is the subject of the licensing action will comply with such limitations or other requirements.

.

"(2) If it is determined that the facility or activity will comply with such limitations or other requirements, then the Commission will evaluate environmental impact on the basis of discharges or other activities associated with the facility or activity to be licensed which are at the level of such limitations or other requirements.

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John F. Wolf, Esquire
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Dr. A. Dixon Callihan
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Page Twenty-Four

"c. (1) The Commission will not determine whether applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA will be complied with if and to the extent that such a determination has been made (i) under sections 208(b)(2)(C)(ii) and 303(e)(3)(B), or (ii) sections 301(c), 302, 318, 401, or 402, or (iii) section 404 of the FWPCA. In such cases, the Commission will accept the determination made under these provisions . . ." 20/

Pursuant to Section 511(c)(2) of the FWPCA and the Commission's Interim Policy Statement, the Section 401 certificate and the Section 402 permit lift from the NRC any authority to review the effluent limitations established or to impose, as a condition on the operating license, any effluent limitation other than the limitations established pursuant to the FWPCA.

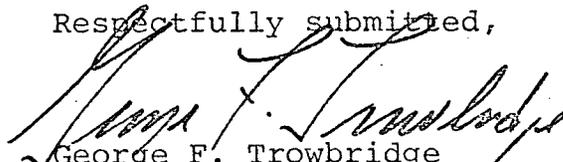
The Commission (in this proceeding the Director of Nuclear Reactor Regulation), in reaching its cost-benefit analysis on the continuation of and amendment to the operating license, does, of course, have authority to consider the overall environmental impact of plant operation, given compliance with the Section 401 certificate and the Section 402 permit. Thus the Commission may compare the benefits derived from the plant, in the form of the electricity produced under the existing operating license and the proposed amendment to the license, with the costs of the plant, including any adverse environmental impact.

20/ 38 Fed. Reg. 2680 (January 29, 1973).

John F. Wolf, Esquire
Dr. Richard F. Cole
Dr. A. Dixon Callihan
August 5, 1975
Page Twenty-Five

associated with the discharge of non-radiological liquid effluents in compliance with the FWPCA, and then decide whether the license should be continued and the amendment granted. The Commission also has authority to modify or condition the license as necessary to minimize environmental impacts which are not associated with the discharge of non-radiological liquid effluents. The Commission does not, however, have the authority to condition the license with respect to the environmental impact of non-radiological liquid effluents. Thus, while consideration by the Commission of effluent limitations and alternative circulating water systems at the plant was once appropriate, that question is now, by virtue of the NPDES permit, under the exclusive jurisdiction of EPA.

Respectfully submitted,



George F. Trowbridge
Counsel for Carolina Power
& Light Company

cc: L. Dow Davis IV, Esquire
John D. Whisenhunt, Esquire
Docketing and Service Section, USNRC

August 5, 1975

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

In the Matter of
Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261

Gentlemen:

Enclosed is the following Staff testimony, submitted in response to inquiries by the Board contained in its Order of July 14, 1975 entitled, "Questions from the Board Directed to Applicant and Regulatory Staff":

1. Answers to safety questions include: Professional Qualifications sheet of Donald N. Bridges (Licensing Project Manager); Response of Donald Bridges to Board safety questions (Board questions numbered 1, 2, 3 and 14); Enclosure 1 (SER Supplement No. 1); Appendix A (ACRS Letter); Appendix B (Bibliography); Enclosure 2 (Revisions to H. B. Robinson Safety Technical Specifications); and Enclosure 3 (Robinson "Stretch" SER). All of these documents are stapled together in one package.

2. Environmental answers are contained in a document entitled, "Staff Responses to Questions Raised by the Board on July 14, 1975" which includes Attachments 1 through 6; Professional Qualifications sheets of S. Singh Bajwa (Environmental Project Manager), Francis P. Cardile, Gary J. Marmer, Rajendra K. Sharma and Meyer Novick. (Staff witnesses who were responsible for compiling the foregoing answers to the Board's questions.). All of these documents are stapled together in one package.

The Staff expects to distribute draft copies of the proposed environmental technical specifications and the main body of the technical specifications currently in effect for Robinson 2 at the hearing.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

Revisions to the technical specifications occasioned by the "stretch" application are included in the present package as Enclosure 2 of Donald Bridges' testimony.

Sincerely,

L. Dow Davis
Counsel for NRC Staff

Enclosures: As stated
See letter hearing
cc (w/encl.):
Hartsville Memorial Library
George F. Trowbridge, Esq.
Richard Jones, Esq.
John D. Whisenhunt, Esq.
Atomic Safety and Licensing
Appeal Board
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M. Novick

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SURNAME ➤	LDDavis/dbr	JScinto				
DATE ➤	8/5/75	8/5/75				

part in the performance of the function of City Recorder, thus eroding the time available for preparation and filing of testimony for the captioned proceeding. For these reasons, Intervenor requests modification of the filing deadline for his proposed written testimony until August 5, 1975, and modification to permit Intervenor the opportunity to seek subpoenas for persons whose testimony cannot be obtained in writing voluntarily.

The Staff has no objection to Intervenor's motion and believes he has shown adequate justification for such extension. With respect to the potential need for subpoenas, we do not believe that the original schedule establishing a date for the filing of proposed written testimony was intended to preclude opportunity to seek subpoenas in proper circumstances for persons whose testimony could not be obtained voluntarily.

Applicant's answer to Intervenor's motion does not object to Intervenor's motion to postpone the filing date for further written testimony until August 5, 1975, provided an additional copy of such testimony is made available to Applicant at its offices at Raleigh, North Carolina. This appears to be a reasonable condition of the extension, and the Staff has no objection to such a request by Applicant.

Applicant, however, appears to misconstrue the second portion of Intervenor's request for modification of the deadline, to permit Intervenor to subpoena witnesses if necessary, as a request for the Board

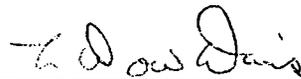
to indicate its willingness to issue subpoenas upon Intervenor's request. Applicant's response indicates that each specific application for a subpoena must be considered on its merits by the Board to determine whether the request complies to the Commission's regulations and is proper under the circumstances of such request. Applicant indicates certain factors which it believes should be considered by the Board when entertaining Intervenor's subpoena request (if any). Applicant concludes by assuming that the subpoena process will delay the hearing and submits that this would be "unfair and prejudicial to the Company".

The Staff believes that Applicant's entire discussion of the subpoenas is based upon its misapprehension of Intervenor's request. Intervenor's request is simply one for extension of a filing date to assure that it will have an opportunity to seek subpoenas to obtain the testimony of unwilling witnesses. As Applicant point out in its argument, a determination of the propriety of a subpoena should await the specific application. Arguments on the merits of assumed subpoena requests and a conclusion that such requests "would be unfair and prejudicial to the Company" are clearly premature at this time in the absence of a request for subpoenas, and are inappropriate when dealing with a request for modification of a schedule date so as to assure that Intervenor will have the opportunity to seek subpoenas under proper circumstances.

CONCLUSION

For the foregoing reasons, we believe the Intervenor's request for a modification of the filing date for Intervenor's proposed testimony should be granted until August 5, 1975 for the testimony of Intervenor's voluntary witnesses. For witnesses properly subpoenaed, if any, their testimony and evidence should be in accordance with the terms of the Board's further orders with respect to such witnesses.

Respectfully submitted,



L. Dow Davis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 1st day of August, 1975

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
(H. B. Robinson, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSE TO INTERVENOR'S MOTION FOR RELIEF, REQUIREMENT OF PRE-WRITTEN PROPOSED TESTIMONY," dated August 1, 1975 in the above-captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 1st day of August, 1975:

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Hartsville Memorial Library
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Hartsville, South Carolina 29550

George F. Trowbridge, Esq.
Shaw, Pittman, Potts & Trowbridge
910 17th Street, N. W.
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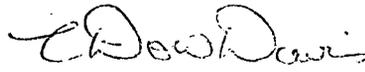
Richard Jones
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Atomic Safety and Licensing
Appeal Board
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Docketing and Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
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Atomic Safety and Licensing
Board Panel
U. S. Nuclear Regulatory Commission
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L. Dow Davis
Counsel for NRC Staff

July 30, 1975

John F. Wolf, Esq., Chairman
3409 Shepherd Street
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Dr. A. Dixon Callihan
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Washington, D. C. 20555

In the Matter of
Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261

Gentlemen:

Enclosed are copies of two tables to be added to the Staff
Testimony entitled "Staff Responses to Questions Raised by the
Board at the Prehearing Conference held on December 30, 1975."

Sincerely,

L. Dow Davis, IV
Counsel for NRC Staff

cc: (w/encl.)
Hartsville Memorial Library
George F. Trowbridge, Esq.
Richard Jones
John D. Whisenhunt, Esq.
Atomic Safety and Licensing
Appeal Board
Atomic Safety and Licensing
Board Panel
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H-4

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SURNAME ➤	LDDavis/dkw	JTourtellotte			
DATE ➤	7/30/75	7/30/75	8/31/75		

Table 1. Numbers and Weights of Fishes Per Surface Acre Collected with Rotenone in Three Locations of the Robinson Impoundment during August 1974

August 1974	Lower Impoundment		Mid-Impoundment		Upper Impoundment	
	Number	Weight (gms)	Number	Weight (gms)	Number	Weight (gms)
Eastern mudminnow	-	-	-	-	6	9
Redfin pickerel	10	220	8	441	3	197
Chain pickerel	24	4,684	35	3,153	31	1,470
Golden shiner	28	45	23	69	157	260
Unid. shiner	3	3	-	-	-	-
Creek chubsucker	10	35	8	26	150	260
Spotted sucker	56	7,733	-	-	16	1,181
White catfish	3	7	-	-	-	-
Yellow bullhead	-	-	40	830	19	144
Pirate perch	10	73	7	36	16	28
Starhead topminnow	10	17	-	-	44	13
Mosquitofish	237	91	-	-	19	6
Mud sunfish	-	-	-	-	6	185
Blackbanded sunfish	70	73	30	50	188	232
Bluespotted sunfish	930	683	259	150	903	931
Redbreast sunfish	171	2,485	-	-	-	-
Warmouth	582	795	348	7,234	611	6,443
Bluegill	1,223	2,464	12,751	22,191	1,749	4,723
Dollar sunfish	-	-	13	23	887	934
Largemouth bass	10	105	102	3,505	31	157
Swamp darter	10	10	5	5	44	19
TOTAL	3,387	19,523	13,629	37,713	4,880	17,192
		=		=		=
		43.00		83.07		37.90
		lbs.		lbs.		lbs.

Table 2. Numbers and Weights of Fish Per Surface Acre Collected with Rotenone from Three Locations on Black Creek near Robinson Impoundment during August 1974. Station J is upstream and Stations H and K are downstream of the dam. Location of Stations is given in Figure 1 of the progress report entitled "H. B. Robinson Environmental Surveillance Program."

	STATION J		STATION H		STATION K	
	Number/Acre	Weight/Acre (gms)	Number/Acre	Weight/Acre (gms)	Number/Acre	Weight/Acre (gms)
Americal Eel	-	-	-	-	15	1,467
Pirate Perch	319	595	-	-	7	15
Swamp Darter	218	102	-	-	22	22
Bluespotted Sunfish	73	261	-	-	15	58
Tessellated Darter	116	189	-	-	15	44
Sawcheek Darter	29	58	-	-	-	-
Lake Chubsucker	15	5,082	-	-	-	-
Banded Pigmy Sunfish	44	29	-	-	-	-
Blackbanded Sunfish	131	479	-	-	15	44
Creek Chubsucker	102	203	-	-	-	-
Lined Topminnow	29	15	7	15	58	29
White Catfish	44	29	-	-	-	-
Yellow Bullhead	218	102	15	109	15	36
Warmouth	87	2,047	15	1,975	-	-
Bluegill	15	595	1,634	9,213	1,263	4,661
Dollar Sunfish	15	116	-	-	15	22
Redbreast Sunfish	160	1,074	-	-	-	-
Largemouth Bass	29	131	7	15	7	1,728
Spotted Sucker	15	2,120	-	-	-	-
Dusky Shiner	915	624	-	-	-	-
Tadpole Madtom	348	363	-	-	-	-
Marginated Madtom	1,249	363	-	-	-	-
Piedmont Darter	102	116	-	-	-	-
Chain Pickerel	-	-	-	-	15	4,095
Redfin Pickerel	-	-	-	-	7	29
Mosquitofish	-	-	-	-	7	7
TOTAL	4,273	14,693 = 32.4 lbs.	1,678	11,327 = 24.9 lbs.	1,476	12,257 - 27.0 lbs.

7-24-75

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

REQUEST FOR REPORTING SERVICE
Work Order No. AF- 483

OFFICE OF THE SECRETARY

Case: CAROLINA POWER & LIGHT COMPANY (H.B. Robinson, Unit 2)

Docket No.: 50-261

Address of: Prehearing _____

Hearing Music Room, Coker College, Hartsville, South Carolina 29550

CONTACT: Mr. Curtis Redden (803/332-1381)

Duration: Prehearing _____ Hearing four days

Date of: Prehearing _____ Hearing 12-15 August 1975

Time of: Prehearing _____ Hearing 10:00 a.m.

Service Required: Prehearing _____

Hearing Schedule E

Type of Hearing: Appendix D, Section B Environmental and OL Modification

Board: Chairman Wolf; Members Cole, Callihan

Copies of the transcript may be sold.

Date of oral request: 7/24/75
Date of confirmation: 7/24/75

By: _____

K. M. Mason
Docketing and Service Section

- bcc: Dr. Cole
- Mr. Wolf
- Mr. Massar
- ASLBP
- Reg. Files
- S. Teets
- M. Duncan
- ASLAB
- CON

SPECIAL INSTRUCTIONS:

Start with page 37. Last proceeding
was prehearing November 30, 1974.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CAROLINA POWER & LIGHT COMPANY	)	Docket No. 50-261
	)	50-261 (OL Modification)
(H. B. Robinson, Unit 2))	

CAROLINA POWER & LIGHT COMPANY'S ANSWER
TO INTERVENOR'S MOTION FOR RELIEF,
REQUIREMENT OF PRE-WRITTEN PROPOSED TESTIMONY

On July 19, 1975, Intervenor John D. Whisenhunt filed "Intervenor's Motion for Relief, Requirement of Pre-Written Proposed Testimony." Carolina Power & Light Company ("the Company") herein submits its answer to Intervenor's motion.

The Atomic Safety and Licensing Board ("the Board") issued a Memorandum and Order on May 6, 1975, which established the schedule for actions leading to the commencement of the evidentiary hearing in this proceeding. The schedule provided that advance written testimony was to be filed by July 22, 1975. One of the requests in Intervenor's motion is that "he be permitted to file any written testimony available to him by placing same in the United States Mail, postage prepaid, no later than Tuesday, August 5th" In support of this request Intervenor cites certain hardships which have arisen recently as a result of his position as Assistant City Recorder for the City of Florence, South Carolina.

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The Company does not object to Intervenor's request that he be permitted to file further written testimony ^{1/} no later than August 5, 1975, provided that, in addition to service upon the under-signed counsel, Intervenor serves copies of any further written testimony no later than August 5, 1975, upon the following:

Richard E. Jones, Esquire
Associate General Counsel
Carolina Power & Light Company
P.O. Box 1551
Raleigh, North Carolina 27602

The Company notes that the proposed written testimony served by Intervenor on July 19, 1975, consists of seventeen statements. Ruling on Intervenor's oral motion ^{2/} of November 30, 1973, to dispense with the advance filing of proposed written testimony, the Board held as follows:

"With respect to admission of evidence and the right to cross-examine, previously submitted proposed testimony as required by Sec. 2.743(b) does not enter the record until such time as it is sponsored at the hearing by appropriate witness(es) and formally introduced into the evidentiary record. No evidence will be received into the record without proper foundation and when entered, is subject to cross-examination by any party and to questioning by the Board." ^{3/} (Footnote omitted.)

1/ Intervenor submitted proposed written testimony along with the motion.

2/ Tr. 7.

3/ Prehearing Conference Order, January 2, 1974, at 4, 5.

The Company takes this occasion to remind Intervenor that proposed written testimony, even though served in advance of the hearing, must be sponsored at the hearing by a witness subject to cross-examination.

Intervenor also requests, in the instant motion, that the Board permit him to subpoena those persons whose testimony cannot be obtained in writing prior to the hearing and to present their testimony under oath at the hearing.^{4/} The Company submits that, for the reasons set forth below, this request by Intervenor should be denied.

The Commission's regulations, at 10 C.F.R. §2.720, set forth the procedure for the issuance of subpoenas, by the Board Chairman upon application by a party, requiring the attendance and testimony of witnesses. As an initial matter, it would not be appropriate for the Board to indicate, in the absence of a specific application for a subpoena, its willingness to issue subpoenas to compel the attendance of witnesses at the hearing. A subpoena must be directed to a person and would direct the person to attend and give testimony at a designated time and place. 10 C.F.R. §2.720(b). Further, the Board may require a showing of general relevance of the testimony or evidence sought. 10 C.F.R. §2.720(a). The Board should not, therefore, indicate

^{4/} In his motion, Intervenor observes that he has written to the Board Chairman relative to securing subpoenas, but has not yet received a reply. The Company has not been served with copies of this correspondence and, as of July 22, 1975, copies of such correspondence were not available in the Commission's public document room. The Company reminds Intervenor and the Board of the prohibition against ex parte communications. See 10 C.F.R. §2.780.

its disposition toward untendered applications to issue subpoenas to compel unknown persons from unknown locations to appear at the hearing.

Further, the Company submits that the subpoena process should not be invoked to summon witnesses on behalf of Intervenor, and thereby avoid the requirement for advance written testimony, simply because Intervenor has not been able to locate the witnesses, or because the witnesses are on vacation or otherwise not available to Intervenor at this time. The use of a subpoena to compel the attendance and testimony of witnesses should be reserved for involuntary witnesses.

Finally, the Company submits that the consideration of last-minute applications for subpoenas to compel the attendance of witnesses at the hearing would prejudice the hearing schedule. In addition to the time required, after any application by Intervenor, for the Board to consider and possibly to issue a subpoena, Section 2.720(f) contemplates that the person to whom the subpoena is directed has the opportunity to move the Board to quash or to modify the subpoena. Intervenor advised the Board, in his motion, that he would be out of the country for two weeks beginning July 20, 1975. Presumably, then, he could not apply for subpoenas before August 4, 1975. The hearing is scheduled to commence on August 12, 1975. Invocation of the subpoena process at this late date would undoubtedly interfere with the conduct of the evidentiary hearing on the schedule established by the Board. The Company submits that any

disruption of the hearing schedule, which has been known to Intervenor ^{5/} for a period of time sufficient to allow arrangements to be made for witnesses, including any necessary subpoenas, would be unfair and prejudicial to the Company. The Board is urged to exercise its authority to take appropriate action to avoid delay in the conduct of the hearing. See 10 C.F.R. §2.718.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE


George F. Trowbridge

Dated: July 23, 1975

5/ The parties' stipulation, adopted by the Board in its Prehearing Conference Order of January 2, 1974, provided that hearings would commence a prescribed period of time after issuance of the Staff's Final Environmental Statement. The Statement was issued on April 16, 1975, and on May 6, 1975, the Board issued a Memorandum and Order establishing the current schedule.

July 23, 1975

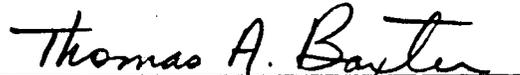
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "Carolina Power & Light Company's Answer to Intervenor's Motion for Relief, Requirement of Pre-Written Proposed Testimony," dated July 23, 1975, were served upon the parties on the attached Service List by deposit in the United States mail, postage prepaid, this 23rd day of July, 1975.


Thomas A. Baxter

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit No. 2))

SERVICE LIST

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Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

July 22, 1975

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Dr. Richard F. Cole
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Washington, D. C. 20555

In the Matter of
Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261

Gentlemen:

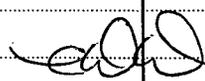
Enclosed is the first round of Staff Testimony for the hearing set in this case on August 12, 1975 in Hartsville, South Carolina. The documents included are:

1. Testimony of Dr. Gary Marmer Regarding Thermal Characteristics of Lake Robinson and his attached qualification sheet;
2. Testimony of Dr. R. K. Sharma Regarding the Thermal Effects on Aquatic Biota of Lake Robinson, his qualification sheet, and his Staff Responses to Questions Raised by the Board at the Prehearing Conference;
3. Affidavit of Francis P. Cardile on Radioactive Releases from Robinson 2, dated July 22, 1975 and his qualification sheet;
4. H. B. Robinson FES Errata and Revisions sheet.

The Staff also intends to present additional written testimony in response to the questions propounded by the Board in its "Questions from the Board Directed to Applicant and Regulatory Staff" dated July 14, 1975. This testimony will include an SER Supplement and should be mailed by August 1, 1975.

Sincerely,

L. Dow Davis, IV
Counsel for NRC Staff



OFFICE ➤				
SURNAME ➤				
DATE ➤				

cc; (w/encls.)
 John F. Wolf, Esq.
 Dr. A. Dixon Callihan
 Dr. Richard F. Cole
 Hartsville Memorial Library
 George F. Trowbridge, Esq.
 Charles D. Barham, Jr., Esq.
 Mr. George A. Marshall
 John D. Whisenhunt, Esq.
 Tom Baxter, Esq.,
 Atomic Safety and Licensing
 Appeal Board
 Atomic Safety and Licensing
 Board Panel
 Docketing and Service Section

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SURNAME	LDDavis/dkw	JTourtellotte			
DATE	7/22/75	7/22/75			

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 22, 1975

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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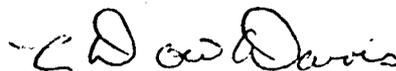
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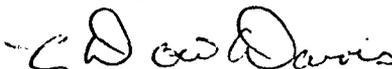
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H. B. ROBINSON NUCLEAR STEAM-ELECTRIC PLANT UNIT 2

FINAL ENVIRONMENTAL STATEMENT

ERRATA AND REVISIONS

1. Page 2-18, Table 2.8:
Replace with revised table dated June 1975 (attached)
2. Page 3-15, Para. 5, second sentence, revise to read:
"Cooling water temperatures were reported by the applicant to be 46°F at the ... at these same points (ER, Sup. 1, p. S 5. 1b-1)."
3. Page 3-15, Para. 5, 5th Line, change:
"18°F° to "16°F"
4. Page 3-30, Table 3-5, Last line change:
100 Ci to 1000 Ci
5. Page 5-3, Fig. 52:
Replace with revised figure dated July 1975 (attached)
6. Page 5-5, Para. 2, Line 4, change:
date to "June 24, 1964"
7. Page 5-6, Para. 1, last sentence:
"Delete last sentence"
8. Page 5-6, Para. 6, first sentence:
"Delete first sentence"
9. Page 5-6, Para. 6, lines 5 and 6 revised to read:
"ensure compliance with applicable water quality standards on a schedule acceptable to EPA, in the event that the ..."
10. Page 5-6, Sec. 5.3.2, line 2, change to read:
" ... Unit 2 in liquid and gaseous effluents have been estimated by the staff and are given in Table 3.5 and 3.6 respectively."

11. Page 5-9, Para. 2, Line 2, change:

reference section to "(Sec. 5.4)"

12. Page 5-11, Para. 2, lines 4, 5 and 6, change to read:

"... surroundings. In general, the individual radiation doses calculated by staff are intended to apply to a maximum exposed person. Normally an individual will receive lower doses, depending upon his age, living habits, food preferences, or recreational activities."

13. Page 5-11, Para. 3, line 3, change:

reference section to "Section 5.4.4.3"

14. Page 5-13, Table 5.4, Footnote b, Line 2, change to read:

" ... for twelve months annually plus inhalation."

15. Page 5-16, Section 5.4.6, Para. 1, lines 2 and 3, change to read:

" ... miles of the plant is less than 0.001 mrem/yr as shown in Table 5.6. Maximum individual doses due to liquid and gaseous effluent releases are less than 85 mrem/yr as seen in Table 5.3 and 5.4"

16. Page 5-21, Sec. 5.5.2.4, Para. 1, line 8, change to read:

" ... limits the concentration of free available chlorine to a maximum ..."

17. Page 9-4, Para. 4, first sentence, change to read:

"If the approval is not granted (Section 402 NPDES Permit), the ..."

Table 2.8. Black Creek Flow (cfs) near McRee, S. C. (U. S. Hwy. 1)

	1959-1960	1960-1961	1961-1962	1962-1963	1963-1964	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969	1972-1973	1973-1974
October	353	133	81	56.9	59.9	347	146	73.5	71.2	124	97.7	75.8
November	225	118	117	153	121	195	164	71.9	100	166	168	75.6
December	191	134	167	119	187	242	131	96.4	166	137	267	148
January	251	149	219	217	300	207	200	149	256	158	245	170
February	411	272	225	214	297	306	227	164	140	273	293	244
March	318	264	285	237	340	342	262	127	144	271	282	155
April	338	286	200	135	246	256	165	75.5	97.7	261	336	151
May	188	228	74.3	115	127	128	172	90.5	73.8	165	172	128
June	134	200	108	114	110	181	79.9	45.3	71.5	272	262	89
July	150	151	66.4	81.4	195	204	49.4	62.1	132	201	173	112
August	512	203	55.2	68.9	168	264	63.2	191	47.4	244	115	228
September	142	140	80.8	68.5	210	138	68.2	128	26.7	216	94	139
Max. daily	734 (4/7)	750 (2/26)	846 (3/13)	651 (1/22)	770 (3/18)	1020 (10/18)	560 (3/6)	630 (8/26)	615 (1/13)	1010 (6/18)	700 (4/3)	453 (8/10)
Max. instant.	804 (4/7)	840 (2/26)	906 (3/13)	678 (1/22)	1070 (3/17)	1100 (10/16)	670 (3/6)	715 (8/26)	640 (1/13)	1100 (6/18)		
Min. daily	91 (7/23)	72 (9/30)	26 (9/4)	26 (8/20)	39 (10/15)	68 (5/7)	31 (8/3)	24 (6/20)	22 (9/25)	22 (10/3)	54 (10/11)	45 (7/3)
Min. instant.	88 (7/23)	72 (9/30)	26 (9/4)	24 (8/20)	38 (10/22)	65 (5/8)	30 (8/3)	23 (6/21)	21 (9/25)	21 (10/3)		
Mean daily	237	189	139	131	197	234	144	106	111	207	208	143

From ER.

Revised June 1975

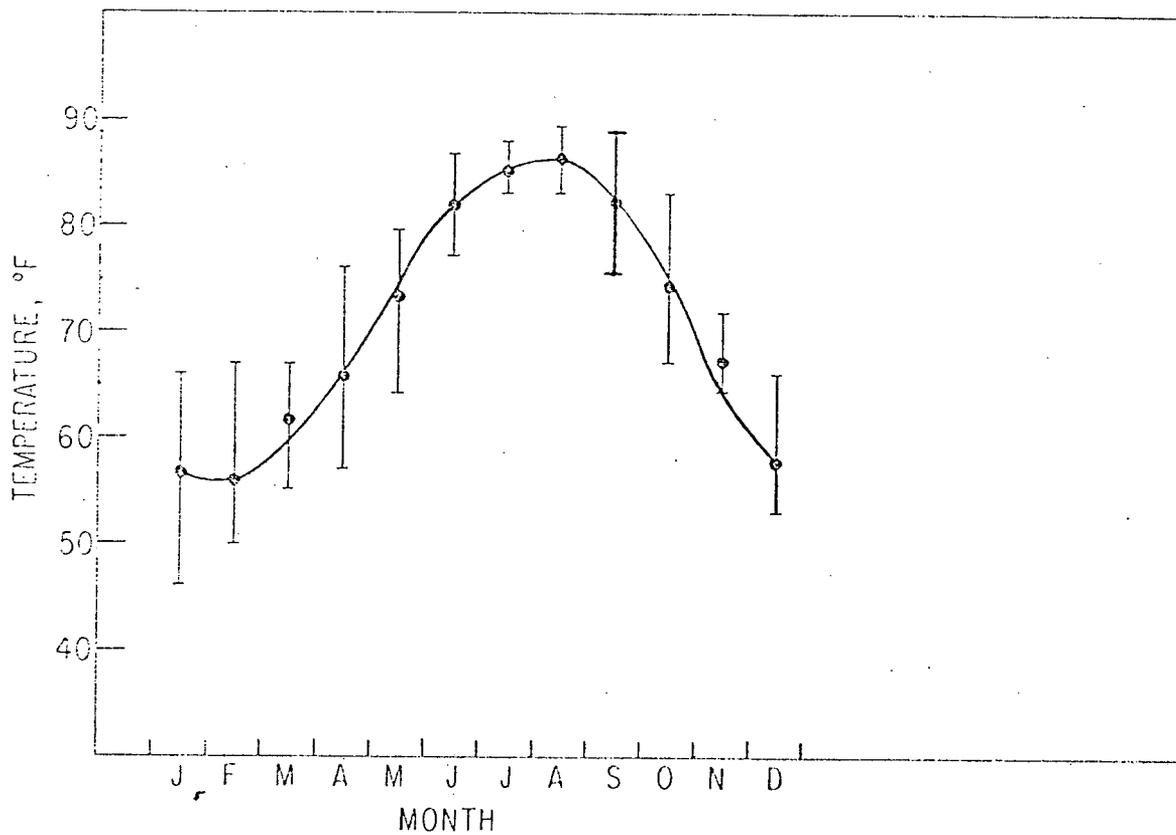


Fig. 5.2. Black Creek Temperature at S.C. Hwy. 23, Unit 2 Operating.

Revised July 1975

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

CAROLINA POWER AND LIGHT COMPANY

Docket No. 50-261

(H. B. Robinson Nuclear Plant,
Unit 2)

Affidavit of Francis P. Cardile on
Radioactive Releases from
H. B. Robinson, Unit 2

I, Francis P. Cardile, do depose and state that:

1. My name is Francis P. Cardile and I am a Nuclear Engineer in the Effluent Treatment Systems Branch in the Office of Nuclear Reactor Regulation of the U. S. Nuclear Regulatory Commission. My Statement of Professional Qualifications is attached as Exhibit A.
2. I am the lead engineer in the Effluent Treatment Systems Branch responsible for the review of the radwaste treatment systems for H. B. Robinson, Unit 2. As part of my review I have calculated the expected releases of radioactive material in liquid and gaseous effluents based on the radwaste treatment described in the Final Environmental for this facility and have reviewed the plant operating experience to date.

3. At the prehearing conference held on November 30, 1973, Dr. Cole asked for additional information as to:
 - a. How the Applicant will control the radioactivity of effluents to within the limits of the technical specifications (the Board felt that liquid discharges were currently in excess of the technical specifications). (TR. 25.)
 - b. How in-plant monitoring will control the Iodine-131 discharges (since the calculated amounts are in excess of the tech specs, page 3-33).

The following information (para. 4-7) is submitted in response to these questions.

4. As noted in Section 3.5.1 of the H. B. Robinson FES, the calculated amount of radioactivity in liquid effluent from the plant, exceeds the existing Technical Specification limit for unidentified nuclide mixtures. This very conservative limit is based on the assumption that the unidentified mixture may contain certain highly toxic radionuclides not normally found in liquid effluents from light water reactors. Prior to release of liquid effluents from H. B. Robinson, Unit 2, all of the radioactive constituents are identified by gamma scan analysis. Based on this analysis, actual liquid discharges from Robinson have not exceeded the Technical Specifications.

5. Concurrent with the continuance of the operating license (OL), the H. B. Robinson Plant will be issued a set of revised Technical Specifications covering releases of radioactive materials in effluents. These revised Technical Specifications implement the "as low as practicable" criteria and are based on the numerical design objectives of proposed Appendix I, noted in the Concluding Statement of the Regulatory Staff, Docket RM-50-2, February, 1974.

Although the staff's calculated releases of radioactive materials in liquid effluents given in Table 3.5 of the FES exceed the design objective value of 5 Ci/yr/reactor and the calculated thyroid dose exceeds the design objective value of 15 mrem resulting from releases of airborne iodine-131 noted in Table 5.4 of the FES, the licensee will be required to operate the facility such that the actual releases do not exceed the limits set forth in the revised Technical Specifications. In accordance with the Technical Specifications, the licensee will be required to continuously monitor and measure all effluent discharges to assure that limits specified are not exceeded.

6. The licensee can control the releases of radioactive materials in liquid and gaseous effluents to within the limits specified in the Technical Specifications by such methods as reducing equipment leakage in the plant, making equipment repairs where required, reducing the power level, modifications to the existing radwaste

treatment systems or by installing additional treatment equipment. In addition, the liquid effluent monitor will terminate discharges from the plant if the limits specified in the Technical Specification are exceeded.

7. A review of H. B. Robinson operating experience, as indicated in Section 11.1.3 of the FES, shows that releases of radioactive materials in effluents have been within the limits of the current Plant Technical Specifications. Based on operation of the plant to date there is reasonable assurance that the licensee can control releases within the limits specified in the revised Technical Specifications.

8. The following questions were raised by the Board during their review of the FES for H. B. Robinson.

Question 5:

The Staff's FES refers to and reports calculated values of performance characteristics which may be amenable to actual measurement. (See, for example, Releases of Radioactive Liquid Effluents, Table 3.5, p. 3-30; Gaseous Radioactive Effluents, Table 3.6, p. 3-32.) For these and other reported quantities, please give a comparison of the calculated and measured quantities and compare, where possible, with pre-operational predictions. Explain any absence of measured quantities.

How may releases cited above be compared with those reported on page 11-3 of the FES?

Response:

The Table on page 11-3 of the FES provides a summary of the actual liquid and gaseous effluents from the H. B. Robinson Plant for the years 1971-1974. These values can be compared with the calculated values of liquid and gaseous effluents contained in FES Tables 3.5 and 3.6. Table A, attached to this testimony, provides this comparison of these values and shows that the actual releases to date have been well below the calculated releases noted in the FES. The reason for these calculated/actual differences was explained in part 6 of the testimony supra. The sources of the Figures in Table A of this testimony and on page 11-3 of the FES are the H. B. Robinson semi-annual operating reports.

Question (6):

Table 3.5, p. 3-30 states an annual release of 100 Ci of tritium; please reconcile with the value 1000 Ci in the penultimate paragraph of Sec. 3.5.1, p. 3-28.

Response:

The value of the tritium release in Table 3.5 is a typographical error and should read 1000 Ci/yr as is stated in Section 3.5.1, p. 3-28.

Question (7):

Table 3.5 also reports an expected calculated release of 29 Ci/yr in all liquid effluents. Please justify on the basis of a Technical Specification of 9.5 Ci/yr (footnote b).

Response:

This question has been previously responded to in Paragraph 4 above.

Question 15(a):

What are the Applicant/Licensee's requirements with respect to compliance with the new Appendix "I"?

Response:

Section 50.34a of 10 CFR Part 50 and Section 20.1(c) of 10 CFR Part 20 require the release of radioactive materials in effluents from nuclear power reactors to be "as low as practicable". On May 5, 1975, the Commission adopted Appendix I to 10 CFR Part 50 which provides numerical guides for design objectives and limiting conditions for operation to meet the criterion "as low as practicable" for radioactive material in light-water-cooled nuclear power reactor effluents.

Section IV of Appendix I sets forth guidelines for limiting conditions for operation which will be used in developing the Technical Specifications for H. B. Robinson. The plant Technical Specifications will provide assurance that radioactive releases from the plant will be maintained at "as low as practicable" levels.

Section V of Appendix I requires the licensee to file with the Commission by June 4, 1976:

- (1) Such information as is necessary to evaluate the means employed for keeping levels of radioactivity in effluents to unrestricted areas as low as practicable, including all such information as is required by Section 50.34a(b) and (c) not already contained in his application; and
- (2) Plans and proposed Technical Specifications developed for the purpose of keeping releases of radioactive materials to unrestricted areas during normal reactor operations, including anticipated operational occurrences, "as low as practicable".

When the required information is submitted by the licensee, the staff will evaluate this information and determine its acceptability. Until then, the licensee will be required to operate the facility within the limits specified in the revised Technical Specifications.

TABLE A

COMPARISON OF CALCULATED RELEASES VERSUS OPERATING EXPERIENCE
FOR H. B. ROBINSON LIQUID AND GASEOUS EFFLUENTS
(Ci/yr)

	<u>FES</u>	<u>Operating Experience</u>			
	Calculated Value	1971	1972	1973	1974
<u>Liquid Effluents</u>					
Mixed Fission & Activation Products	29	0.74	0.83	0.6	2.9
Tritium	1000	118,	405	432	449
<u>Gaseous Releases</u>					
Noble Gases	4260	18	257	3100	2306
Iodine-131	0.62	Not Detected	0.024	0.051	0.046

Francis P. Cardile
Professional Qualifications
Office of Nuclear Reactor Regulation

My name is Francis P. Cardile. I am a nuclear engineer in the Effluent Treatment Systems Branch, Division of Technical Review, Office of Nuclear Reactor Regulation. I attended the University of Notre Dame and received a Bachelor of Science Degree in Mechanical Engineering in 1969. I attended the University of Illinois and received a Master of Science Degree in Nuclear Engineering in 1970.

After graduation I worked for the Bechtel Power Corporation which is an architect/engineering company engaged in the design and construction of nuclear power plants. I was responsible for assessing the effects of plant radioactive effluents on the environment and the preparation of Safety Analysis Reports and Environmental Reports. I also was responsible for the design of process systems and writing specifications for process equipment. My experience included work on both pressurized and boiling water reactors.

In 1974 I joined the Nuclear Regulatory Commission (formerly AEC) as a nuclear engineer in the Effluent Treatment Systems Branch, Division of Technical Review, In this position I am responsible for the review and evaluation of radwaste treatment systems and for

the calculation of releases of radioactivity from nuclear power reactors.

I have participated in generic studies of the relationship between reactor operation and radwaste generation and in the preparation of staff papers related to effluent control technology.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CAROLINA POWER AND LIGHT COMPANY

(H. B. Robinson Nuclear Steam-
Electric Plant Unit 2)

)
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)
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)

Docket No. 50-261

Supplemental Testimony Regarding Thermal
Characteristics of Lake Robinson Due to
Operation of the H. B. Robinson Station

by

Gary J. Marmer, Ph.D.
Environmental Statement Project
Argonne National Laboratory
Argonne, Illinois 60439

I am a physicist and a member of the staff of the Environmental Statement Project at Argonne National Laboratory. My prime responsibility is the analysis of the thermal effects of heated effluents from steam electric power plants upon the receiving body of water.

My contributions to the Final Environmental Statement related to the operation of H. B. Robinson Nuclear Steam-Electric Plant Unit 2 were:

- (1) Section 5.2.1 - Heat Dissipation to Surface Waters,
- (2) Appendix B - Analysis of Heat Dissipation in Lake Robinson.

The staff has investigated the effect of plant operation upon Lake Robinson for the purpose of characterizing the resulting temperature distributions. These modified temperature distributions are of interest in as much as they could possibly:

- a. affect aquatic biota,
- b. affect the recreational value of the lake,
- c. violate water quality standards.

The affect on aquatic biota is discussed in the testimony of Dr. Sharma.

Data gathered by the applicant show that the temperature on the shore opposite to the point of discharge is between 90°F and 100°F. The staff's calculations confirm this observation. At times, approximately 20% of the lake in the vicinity of the discharge can have surface temperatures greater than 90°F. Thus, during the summer months, these areas are probably unfit for water contact recreation. Although the high temperatures can be unpleasant for recreational purposes, it should be pointed out that high

temperatures provide for more efficient operation of a cooling lake. This occurs because the rate of heat transfer to the atmosphere increases with temperature.

One benefit of plant operation from a recreational standpoint, as noted in the FES, is ". . . the warmed waters may extend the period of time during which temperatures are pleasant for bathing."

A significant fraction of the heat input to the lake is attributable to short wave solar radiation and long-wave atmospheric radiation. In order to assess the effect upon the lake of Unit 2, the staff has calculated the temperature rise above ambient due to full power operation. In addition, the staff has compiled and analyzed pre-operational and post-operational temperatures from data supplied by the applicant. This is plotted in Figures 5.1, 5.2 and 5.3 of the FES, and reproduced in this testimony.

Figure 5.1 shows the monthly average lake outlet temperatures measured at the gauging station at S. C. Highway 23 (downstream of the plant) prior to operation of Unit 2. The bars through the solid points indicate the range of observed values for the given month. For example, in July, the average lake outlet temperature is 81.5°F, the maximum reported is 84°F, and the minimum 79°F.

Figure 5.2 is a similar plot with Unit 2 operating. The maximum temperature recorded was 89.7°F, which occurred during the month of August. Thus, the state standard, which requires that a temperature of 90°F not be exceeded,

has not been violated as indicated by the data supplied by the applicant. This is not to say that, under extreme meteorological conditions (high air temperature and relative humidity, low wind speed and cloud cover), this temperature might not be exceeded.

Figure 5.3 shows the measured and calculated values of the temperature increase at S. C. Highway 23 due to operation of Unit 2. The measured values for each month are just the differences of the values plotted in Figures 5.1 and 5.2. The details of the staff's calculations, plotted on Figure 5.3, are discussed in Appendix B. The state standards indicate that the temperature rise due to plant operation downstream of the impoundment should not exceed 5°F. A statistical analysis of the data upon which the values in Figure 5.3 are based indicates that the temperature increase due to plant operation during the months of November through March will exceed this 5°F limit with a confidence level of 95%. The data shows this ΔT to be about 8°F to 10°F. During the rest of the year, the ΔT will be about 5°F or less.

The ΔT is higher in winter because the rate of heat transfer to the atmosphere increases with temperature, as mentioned before, and thus the cooling pond is less efficient when it is cooler.

In summary, the staff recognizes that at times in the summer, portions of the lake may not be conducive to some forms of recreation. During the colder months, the temperature rise due to Unit 2 operation can exceed 5°F.

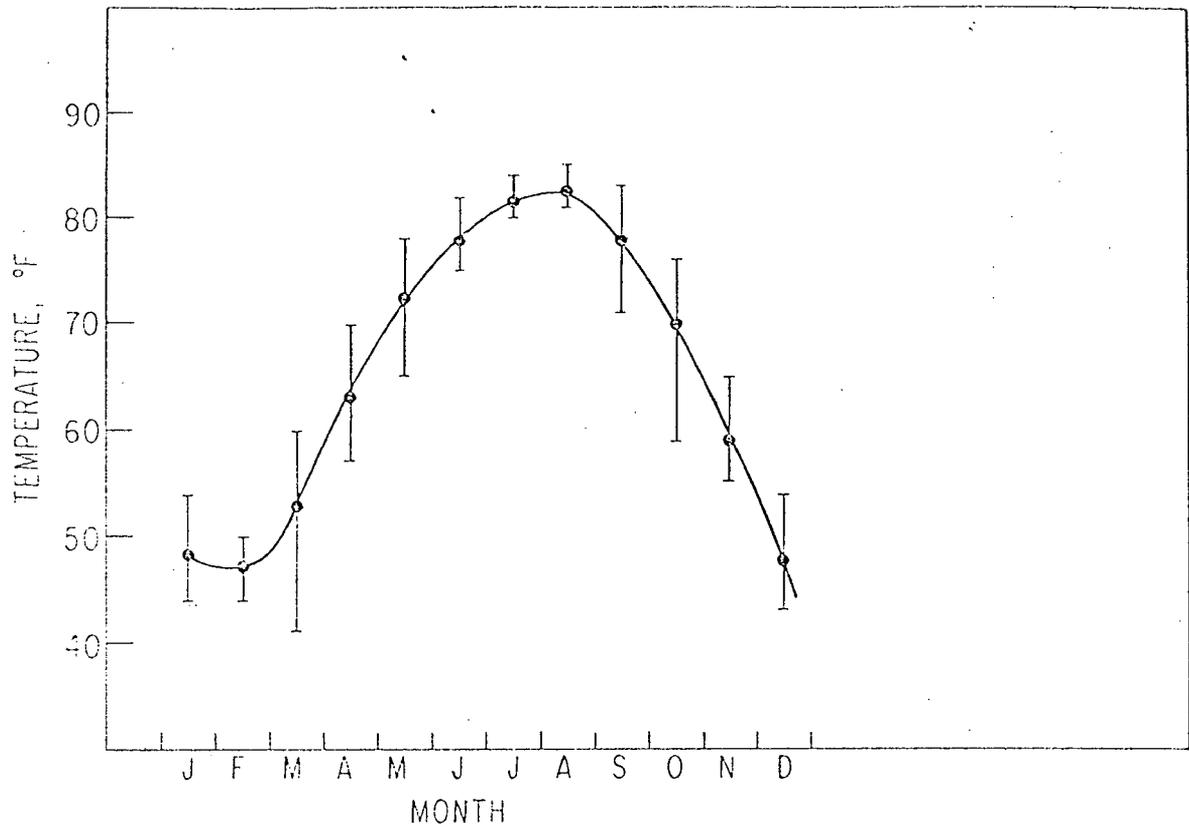


Fig. 5.1. Black Creek Temperature at S.C. Hwy. 23, No Units, or Unit 1 Only, Operating.

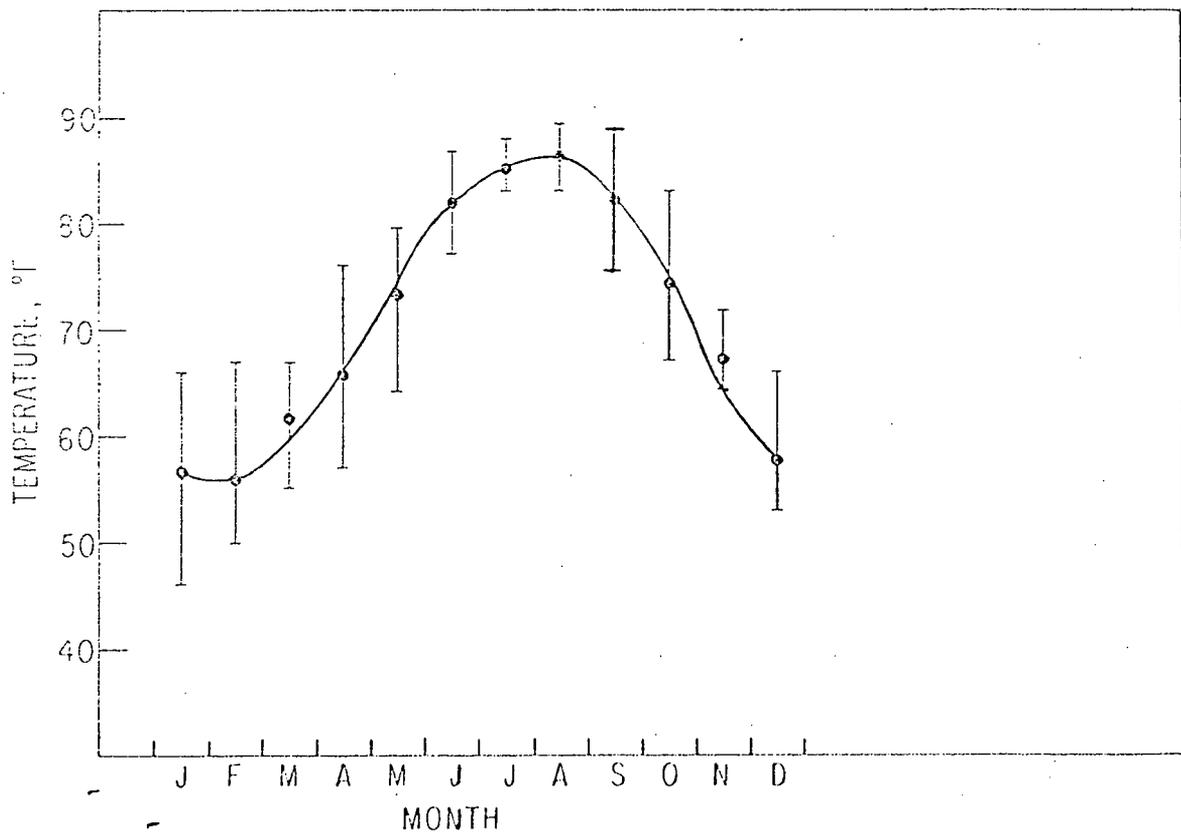


Fig. 5.2. Black Creek Temperature at S.C. Hwy. 23, Unit 2 Operating.
Revised July 1975

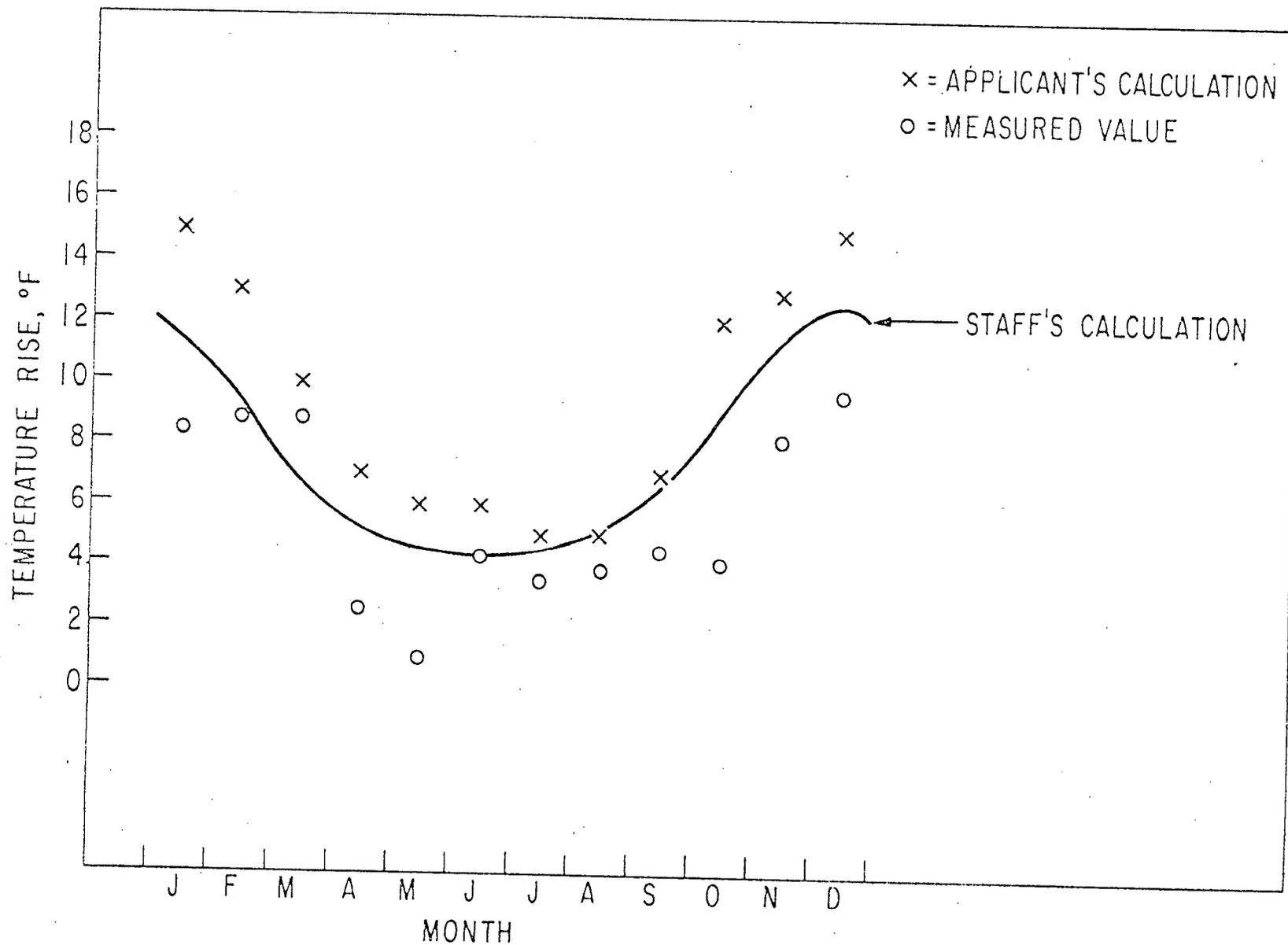


Fig. 5.3. Temperature Rise at S.C. Hwy. 23 due to Operation of Unit 2.

PROFESSIONAL QUALIFICATIONS

Gary J. Marmer

Argonne National Laboratory

I am a member of the staff of the Environmental Statement Project. My prime responsibility is the analysis of the thermal effects of heated effluents from steam electric power plants upon the receiving body of water. In addition, I have also contributed to the assessment of alternative cooling methods and alternative discharge structures for several stations. During the period 1972 to 1975, I participated in the preparation of 16 environmental statements and appeared as a witness at one ASLB hearing.

I received a B. S. degree in physics from Case Institute of Technology (1960), an M. S. degree in physics from Auburn University (1962), and a Ph.D. in physics from Ohio State University (1968).

I was employed by the Accelerator Division of Argonne National Laboratory from July 1968 until August 1972 at which time I joined the Environmental Statement Project. I was involved in accelerator research and development, collaborated in four high energy physics experiments, am a coauthor of twenty publications in high energy and accelerator physics and delivered three oral papers.

I have coauthored three papers relating to thermal discharges. I am a member of a writing group that is drafting ANSI Standard N231, Discharge of Thermal Effluents into Surface Waters and a member of a review committee for a three year study "Open-Circulating-Water Cooling Systems for Large Electric Power Plants" at Illinois Institute of Technology.

I am a member of the American Water Resources Association and the International Water Resources Association.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY)
(H. B. Robinson Nuclear Steam-)
Electric Plant Unit 2))

Docket No. 50-261

Supplemental Testimony Regarding Thermal
Effects on Aquatic Biota of Lake Robinson
Due to Operation of H. B. Robinson Station

by

R. K. Sharma, Ph.D.
Environmental Statement Project
Argonne National Laboratory
Argonne, Illinois 60439

The effects of thermal discharge from H. B. Robinson Station on the aquatic biota of Lake Robinson have been discussed at length in the Final Environmental Statement (FES). As noted by the staff in the FES -

"The heated discharge produces a region of the lake which, during the summer months, is detrimental to the existence of most fish species present in the lake, or above their preferenda.²⁹⁻³¹ The Staff considers this region to be that which is above 85°F. No fish kills have been reported for the critical summer months and none are expected to occur. It is likely that fish simply avoid the region of the lake which exceeds their thermal tolerance or preferenda. The net result is that the area of the lake in which fish, especially game fish, range for such activities as forage, cover, and breeding is reduced during the summer. However, since the warmest water is at the surface within the first 10 feet of depth, fish will be able to penetrate under it and utilize much of the area beneath the plume. During periods when most of the lake is heated above 85°F, fish are probably temporarily displaced to cooler regions of the impoundment. High fish impingement during August (Table 5.9) indicates that although most of the lake may be above 85°F, the lake is far from being totally devoid of fish."

Studies conducted by the applicant during August 1974 have yielded estimates of fish ranging from 37.9 to 83.07 lbs per surface acre of the lake at various locations. The lake water is slightly acidic and as such cannot be considered very conducive to fish production. However, these standing crop estimates are indicative of moderate fish production in the lake.

Three staff visits to the Black Creek and Lake Robinson (October 1972, January 1974, and June 1975) did not reveal any conditions that can be considered undesirable or damaging to aquatic biota due to thermal discharge in the lake. The staff did not notice any excessive algal mats or fish kills in the lake or the creek. The Black Creek upstream of the lake

flows through swamp which has good cover and protective areas to serve as spawning, nursery, and rearing grounds for several fish species. It is quite conceivable that fish displaced from the vicinity of the discharge during summer find ample cover, protection, and forage in the upstream portion of the lake and the creek. On return of favorable conditions, these fish move back to their thermally preferred areas in the lake. The standing crop of fish has been estimated to be 32.4 lbs per surface acre in the Black Creek upstream of the lake.

The staff believes that similarly, the effect of thermal discharge does not extend to any significant distance downstream from the dam. Staff observations at several locations below the dam (almost up to the next impoundment downstream) did not reveal any excessive algal mats or fish kills etc. to indicate adverse impacts on fish of Black Creek. The studies conducted at two locations downstream of the dam have yielded fish estimates of 24.9 and 27.0 lbs per surface acre.

In summary, the staff believes that the aquatic biota in waters of Lake Robinson and of Black Creek upstream and downstream of the impoundment has not been damaged to any detectable or unacceptable levels.

PROFESSIONAL QUALIFICATIONS

Rajendra K. Sharma

Argonne National Laboratory

I am a Biologist in the Environmental Statement Project of the Argonne National Laboratory. I have responsibility for contributing to the Environmental Impact Statements for the nuclear power plants in the area of biological effects of plant construction and operation on the aquatic ecosystem. I also have responsibility for contributing to and supervising related research and generic problems.

I obtained a Bachelor of Science degree in Botany, Chemistry, and Zoology in 1959 and a Master of Science degree in Zoology with courses in fisheries in 1961 from Agra University, India. I received a Doctor of Philosophy degree in Fishery Biology at Utah State University in 1968.

From July 1962 to February 1965 I served as a Senior Research Assistant at the Fisheries Research Laboratory, Lucknow, India, where I conducted fishery surveys of inland waters for evaluation of fisheries potential. I was also involved in conducting experiments on artificial spawning of commercially important fishes.

While studying for the Ph.D. degree (February 1965 - April 1968) I was employed as a part-time Research Assistant in the Department of Wildlife Resources, Utah State University under a USAEC research grant. Under laboratory conditions, I studied the effects of gamma radiation dose and the interacting effects of gamma radiation dose and sodium halide concentrations on rainbow trout. This work was submitted as a dissertation for the Ph.D. degree.

During May - June, 1968, I worked as a Research Assistant in the Department of Animal Science, Utah State University where I assisted in various biochemical analyses.

I joined the University of Arizona as a postdoctoral Research Associate in July, 1968, in the Department of Agricultural Biochemistry. For two years I studied the effects of insecticide and flavonoid interactions on growth and survival of fish.

In July 1970, I joined the Consolidated Edison Company of New York as a Biologist in the Office of Environmental Affairs. I was Project Manager of the Fish Advisory Board (a group of Con Ed consultants in biology and engineering) whose primary responsibility was to search for a solution of the intake fish kill problem at Indian Point. I was also Project Manager

for the ecological studies in connection with the Cornwall Hydroelectric Project and the Astoria Station. I prepared proposals for ecological studies to assess the construction and operational effects of thermal and pumped storage power plants. I contributed to the Environmental Reports (sections of biological impacts) and to a report on Fish Protection at Indian Point (Appendix S of the Environmental Report for Unit 3). Other duties in this position included management of various other support projects. I resigned from Con Ed in July 1972 to assume my current position.

I am a Certified Fisheries Scientist and a member of the American Fisheries Society.

1. Questions: What affect will fish impingement have upon fish population? (TR, 17)

Answer: This comments is based on Table 5.5 of the DES. Additional information is now available on fish impingement at the H. B. Robinson plant and is summarized in Table 5.9 of the FES. Bluegill is the only species impinged in large enough numbers to warrant any discussion of the fish impingement impacts. Cdrrently available information from the applicant indicates that bluegills are not in short supply in the lake and that their losses due to impingement will not have a serious effect on the fish population.

2. Question: How does the Staff know the water temperature in the discharge canal drops 1° as it flows from the plant to Lake Robinson? (TR 18)

Answer: The value of the temperature drop in the discharge canal was given to the Board during its visit to the plant site. The staff believes that 1°F is reasonable for this value. However, no credit was taken for the cooling effect in the canal in the staff's estimate of temperature drop in the lake as indicated in Appendix B in the FES.

3. Question: What are the fish populations in the discharge canal? (TR 18)
Answer: No information is currently available on fish populations in the discharge canal.

4. Question: What affects will plant shutdown have on plant mortality? (TR 19)

Answer: The staff is not aware of any planned experiments that have been conducted to determine if shutdown of the plant and removal of the source of heat has effects on fish mortality. The applicant reports that the two units have not been shut down simultaneously and no fish mortality was observed due to shutdown of one unit at a time. Staff believes that any cold shock mortality of fish can be avoided by scheduling shutdowns of the units such that during winter source of heat is not totally removed.

5. Question: Why is the Shearon Harris plant mentioned in a footnote in Table 2.3 of the DES? (TR 19)

Answer: Table 2.3 in the DES was intended to characterize the lake with respect to dissolved oxygen content (and associated temperatures) throughout its depth and useful length; No such information was found by the staff that covered the period previous to the starting of Unit 2. The earliest information that was obtained is that indicated in the table and was used in the Shearon Harris Environmental Report. This published ER was then used as a reference by the staff in preparing the H. B. Robinson Unit 2 environmental statement.

Information on temperatures during plant operation throughout the lake and during the warmer seasons is indicated in Figs 3.10, 3.11, and 3.12 in the DES and the FES.

6. Question: What was the nature of the request made by the applicant on June 29, 1971? (TR20)

Answer: The request made on June 29, 1971 to the South Carolina Pollution Control Authority and granted on November 16, 1972, was for certification that continued operation of the plant was not likely to contravene State Water Quality Standards as required by the Water Quality Improvement Act of 1972.

Request for certification under the 1972 FWPCA amendments was requested at a later date and such certification was issued on December 20, 1974 as indicated in the FES.

7. Question: Has the applicant met all of the State Water Quality Standards? (TR 20)

Answer: Whether the applicant has met all of the conditions imposed by the State is a matter determined by the State inspection and monitoring activities. It is not within the jurisdiction of the NRC because Section 511 (c)(2)(A) of the Federal Water Pollution Control Act (FWPCA) prevents any agency from questioning the adequacy of a FWPCA Section 401. However, the environmental effects of the actual conditions in the Lake may be considered by the Board in its overall cost-benefit analysis. The Technical Specifications will require monitoring by NRC.

8. Question: Have the South Carolina state water quality standards been approved by EPA? (TR 20-21)

Answer: The "Water Classification-Standards System for the State of South Carolina" were promulgated under authority of the South Carolina Act Number 1154, of 1970. The standards were adopted by the South Carolina Pollution Control Authority of September 8, 1971 and approved by the U.S.E.P.A. on December 23, 1971. These standards were subsequently submitted to the U.S.E.P.A. again for approval as required by the 1972 Amendments to the FWPCA and received its approval on January 15, 1973.

The standards are intended to define the quality requirements of the waters of the state according to their various use classifications and to maintain "reasonable standards of purity of the water resources of the State---" as indicated in the document.

Lake Robinson has been classified as Class A waters (suitable for use as swimming waters and for other uses requiring waters of lesser quality). Applicable quality requirements are reproduced in Table 2.7 and in Section 5.2.3.1 of the FES.

9. Question: What are the flow ratios of Black Creek? (TR 22)

Answer: The staff has reviewed the flow records of Black Creek above and below Lake Robinson as listed in Table 2.8 and 2.9 in the FES. (Table 2.8 is in error. A corrected copy is attached). Calculated flow ratios are as follows:

For years prior to Unit 2 operation - (Water year beginning in October)

(SEE TABLE)

Based on the above, it appears that the required ratio of 1.47 is not met during some months but has been met in essence on an annual basis during Unit 2 operation. It also is evident that this requirement was not met for some years prior to the operation of the Unit.

The staff has recommended in the FES that the flow ratio be reviewed as provided for in the SPCCA permit.

10. Question: Why did Table 2.6 of the DES exclude figures/or the months of May and August of 1972? (TR 23)

Answer: Table 2.6 on page 2-19 of the DES was intended to characterize the temperature increases that occurred in Black Creek waters as they flowed through Lake Robinson prior to the operation of Unit 2. Information concerning the increases following the startup of this unit as furnished by the applicant was also included for use later in the DES in the assessment of the temperature increases attributable to Unit 2. The staff has assumed that May and August, 1972 readings were omitted by the applicant since they were not representative for reasons such as plant shutdown or low power operation.

Because of the lack of staff concurrence in the applicant's method of estimating temperature increases due to the operation of Unit 2 (as discussed in Sec. 5.2 of the DES and FES), this table has been deleted in the FES and replaced with a new Table 2.6 that includes the results of all data made available for the applicant on maximum, minimum and average temperatures of Black Creek waters above and below the lake for the years 1959-1964, to characterize the temperature prior to the operation of Unit 2. These data are also plotted in Fig. 5.1 in the FES. Temperatures following the startup of Unit 2 are plotted in Fig. 5.2.

11. Question: What is the temperature difference between intake and discharge waters? (TR 24)

Answer: The temperature at the discharge as indicated in Fig. 3.12a in the DES is influenced by some mixing with lake waters at the point of measurement. This is discussed further in Section 3.4.3.2 in the FES. The staff believes that the temperature rise of cooling water in passing through the plant during operation at rated power is 20°F. During "stretch" or design level, it would be 21°F as stated on page 3-12 in the DES.

12. Question: Are the South Carolina Pollution Control Temperatures still applicable to Lake Robinson? (TR 26)

Answer: The temperature standards mentioned on page 5-3 of the DES are still applicable at this time.

13. Question: What rare plants might be endangered by the operation of the plant? (TR 26)

Answer: Detailed answer to this comment will be provided by the applicant. These plants have been listed on p. 2-27 of the FES.

14. Question: Give estimates of the quantity of fish available in Lake Robinson to make impingement numbers more significant. (TR 27)

Answer: The information collected by the applicant during August 1974 on numbers and weight of fish on a per surface acre basis is summarized in the two tables attached. Table 1 provides values for three locations of Robinson Impoundment and Table 2 provides values for one upstream and two downstream locations on Black Creek near Robinson Impoundment.

15. Question: How was the 50 lbs per day loss of fish figure contained in the FES arrived at? (TR 27)

Answer: This value was regarded as a reasonable limit by the staff and equivalent to fish mortality due to angling as estimated from local information. This value has been deleted in the DES.

16. Question: Why does table 2.6 of the DES show a temperature difference in October in the Lake, the same with no units operating as with 2 units operating? (TR 28)

Answer: Table 2.6 in the DES was based on information supplied by the applicant. The staff takes no credit for its accuracy or its implication.

This table was inserted in the DES for the reference in assessment later in the DES of the effects of plant operation as asserted by the applicant. It was deleted in the FES since the staff does not agree that the data is representative of the effect of plant operation with the exclusion of perturbing effects. The effect of either plant operation or of insolation cannot be deduced by the comparison of temperatures above and below the lake measured simultaneously because of the time necessary for water passage through the lake, variations in operating level during this time, variations in meteorological conditions during this time, etc.

17. Question: What are the nature of the property interests in the land surrounding the cooling reservoir and what restrictions (or benefits) occurred to their owners at the time of sale? (TR 29)

Answer: The nature of property interests in site land surrounding the cooling reservoir is discussed in Section 2.2.2 of the DES and Sections 2.1.2 and 2.1.3 of the FES. The applicant will furnish further information concerning this and restrictions that might have been put on land use at the time of sale.

18. Question: Where is the velocity of cooling water 2.1 feet per second As it goes into the cooling water intake pipe? (TR 29)

Answer: The velocity of cooling water at maximum conditions is about 2.1 feet per second through the traveling screens. This is described in Section 3.4.2 of the DES.

YearMean Daily Flow Ratio

1960 - 1961	1.41
1961 - 1962	1.55
1962 - 1963	1.51
1963 - 1964	1.40
1964 - 1965	1.37
1965 - 1966	1.48
1966 - 1967	1.69
1967 - 1968	1.62
1968 - 1969	1.28

For years during Unit 2 operation

1972 - 1973	1.46
1973 - 1974	1.49

For each month in 1972 - 1974.

	<u>1972 - 1973</u>	<u>1973 - 1974</u>
October	1.32	1.69
November	1.42	1.65
December	1.34	1.55
January	1.42	1.56
February	1.48	1.35
March	1.44	1.48
April	1.43	1.61
May	1.55	1.48
June	1.44	1.76
July	1.55	1.41
August	1.72	1.41
September	1.62	1.44

7-21-75

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit No. 2))

I hereby certify that copies of the letter dated July 21, 1975 supplementing our answer to Interrogatory 48 has this 21st day of July, 1975 been served upon the following by the deposit of same in the United States mail, postage prepaid addressed as follows:

Mr. John D. Whisenhunt, Esq.
Bridges & Whisenhunt
Bridges Building
P. O. Box 26
Florence, South Carolina 29501

Docketing & Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. John F. Wolf, Esq.
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan *A-4*
Union Carbide Corp.
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing
Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. L. Dow Davis IV, Esq.
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

R. E. Jones

R. E. Jones
Associate General Counsel
Carolina Power & Light Company

A-4

7-21-76
CP&L

Carolina Power & Light Company

July 21, 1975

Mr. John D. Whisenhunt, Esquire
Bridges and Whisenhunt
Bridges Building
Florence, South Carolina 20501

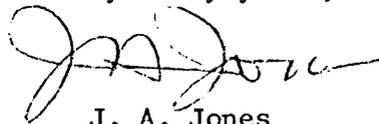
RE: Carolina Power & Light Company
(H. B. Robinson Unit 2)
Docket No. 50-261, 50-261 (OL Modification)

Dear Mr. Whisenhunt:

Pursuant to 10CFR2.740(e)(1) we are hereby supplementing our answer to Interrogatory 48 by adding an additional witness as follows:

Mr. John M. Carter
Project Engineer, Environmental Engineering
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Very truly yours,



J. A. Jones
Executive Vice President
Engineering, Construction and Operations

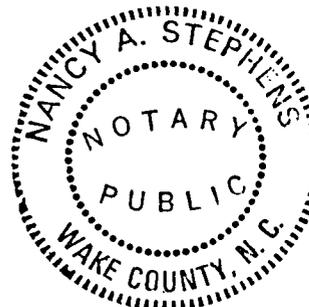
17-4

JAJ/nc

Sworn to and subscribed before me this 21st day of July, 1975

Nancy A. Stephens (Yancey)
Notary Public

My Commission Expires: *June 29, 1976*



11-11

7/16/75

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:]	
]	
CAROLINA POWER & LIGHT COMPANY	]	DOCKET NO. 50-261
	]	and 50-261 (OL modification)
(H. B. Robinson, Unit No. 2]	

INTERVENOR'S MOTION FOR RELIEF,
REQUIREMENT OF PRE-WRITTEN PROPOSED TESTIMONY

Intervenor-Petitioner recognizes that the Atomic Safety and Licensing Board has previously ruled on his Motion to do away entirely with the requirement of filing of advance written testimony, and that such ruling was adverse to him. Intervenor-Petitioner herein seeks modification, and intends to submit herewith all advance written testimony in the possession of the Intervenor with the submission of this Petition. This Petition is based upon hardship, partially in meeting the deadline of July 22nd for filing such testimony, and partially because of non-cooperation of persons believed upon good grounds to have evidence, who refused to give a statement, and must be subpoenaed. Petitioner has written to the Chairman, relative to securing subpoenae, but has not yet received a reply at the dictation of this Petition, Thursday, July 17th, and Petitioner will leave the Country for two (2) weeks on Sunday, July 20th.

As to the hardship in supplying the advance written testimony by the deadline of July 22nd, set in the Order of May 6th, Petitioner has met with unexpected problems in that he serves as Assistant City Recorder for the City of Florence, and on or about Friday, June 13th, the City Recorder, C. C. McDonald, Esquire,

H-4

suffered a heart attack, which has necessitated the expenditure of considerable time of Petitioner in the performance of duties as City Recorder, both non-jury and jury trials, thereby eroding considerable time that Petitioner had planned to devote to the obtaining and filing of this advance written testimony. In addition, some of those who had promised to testify for Petitioner, as Intervenor, have subsequently sold their homes on the Lake, and Petitioner has had difficulty in locating their permanent address. Others are either on vacation, or out of pocket, and not available to Petitioner at this time. Efforts, not only by Petitioner, but others interested in the matter, to locate these people and obtain their written testimony have continued. As to these people missing, for one reason or another, Petitioner seeks a modification of the deadline date, with the request that he be permitted to file any written testimony available to him by placing same in the United States Mail, postage pre-paid, no later than Tuesday, August 5th, which would be one week prior to the commencement of the hearing. As to those whose testimony cannot be obtained in writing prior to the hearing, Petitioner seeks a modification to permit him to subpoena said persons, and have them present their testimony under oath at the scheduled hearing.

Although this Petition is being dictated, as previously stated, on Thursday, July 17th, Petitioner does not anticipate placing same in the mail until Saturday, July 19th, in an effort to present herewith all available advance written testimony.

Respectfully submitted,


JOHN D. WHISENHUNT, Intervenor

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:]	
]	
CAROLINA POWER & LIGHT COMPANY	]	DOCKET NO. 50-261
	]	and 50-261 (OL modification)
(H. B. Robinson, Unit No. 2]	

CERTIFICATE OF SERVICE

I hereby certify that copies of Intervenor-Petitioner's Motion to modify the Orders relative to the requirement of filing of advance written testimony and the deadline, together with the copies of all advance written testimony in the possession of the Intervenor-Petitioner, were served on the following by depositing in the United States mail, first class postage pre-paid, this 19th day of July, 1975:

John F. Wolf, Esquire, Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

L. Dow Davis, Esquire
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

George F. Trowbridge, Esquire
Shaw, Pittman, Potts & Trowbridge
910 17th Street, N. W.
Washington, D. C. 20006

Docketing and Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555


JOHN D. WHISENHUNT, Intervenor

We have a home on Lake Robinson. We really enjoyed fishing, skiing, and using our place until the new hot water outlet was put up our way. There is no way to catch fish at our place now the little pads and mess is dead and water is too hot.

Our children did not swim any during summer 1973 - 1974. This year so far some days the water is comfortable and others too hot.

We all hope that satisfactory arrangements can be made to correct this situation.

Ernest S. Sullivan, Jr.



To Whom it May Concern.

I am now retired from service - I am too old to go out in a boat. I use to catch fish from a relatives pier, now I can only catch a few small ones in winter at same spot, since the water gets so hot in the lake now. I hope this problem will be corrected shortly.

Rennie W. Newson



Mr. Laurie C. Lawson
P. O. Box 518
Darlington, S. C. 29532
July 18, 1975

Mr. John D. Whisenhunt
318 W. Palmetto St.
Florence, S. C.

Dear Mr. Whisenhunt:

We are genuinely concerned over the water temperature of Lake Robinson. When we first used Lake Robinson, it was a wonderful place in every respect; and the water was refreshing as Black Creek water always is. However, since Carolina Power & Light Company began operating the Nuclear Plant, the water has become very warm indeed. So warm, in fact, that certain days in the summer our children do not care to go swimming at all or in it at all, because it is so hot. We enjoy our lot at Lake Robinson, our boating, and our swimming; and we regret very much that Carolina Power & Light Company has not cooled the water to an acceptable temperature before putting it back into the lake after they use it.

Very truly yours,

Mr. & Mrs. L. C. Lawson

Mr. & Mrs. Laurie C. Lawson

LCL:EPL

July 16, 1975

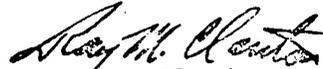
Carolina Power & Light Co.
201 North 5th Street
Hartsville, S. C. 29550

Gentlemen:

Several years ago my wife and I purchased a lot from you on Lake Robinson. At this time we were told that this was a fine recreational body of water; and it was until the coming of the Nuclear Generating Plant. Since then the water temperature has been ranging from uncomfortably warm to disgustingly hot.

I am using this letter to register with you my strongest protests against the high water temperatures of Lake Robinson. I sincerely urge you to take whatever steps necessary to bring this water temperature back to normal.

Sincerely,



R. M. Clanton
P. O. Box 51
Darlington, S.C.

RMC/jj

141 Oak St.
Darlington, S.C. 29537
July 16, 1975

Dear Sirs:

This letter is to register a strong complaint against the extreme heat of the water in Lake Robinson. When the lake was made, property was sold by you and others for recreational purposes. Until the addition of the nuclear plant, the lake served you and property owners as promised. However, with the addition of the nuclear plant, the temperature varies from undesirably warm to unbearably hot. As a property owner I strongly protest this heat pollution and feel it detrimental to our environment and health.

Yours Truly,
Amelia J. Wilson
(Mrs. John M. Wilson)

July 18, 1975
P. O. Box 114
Darlington, S. C. 29532

To Whom It May Concern:

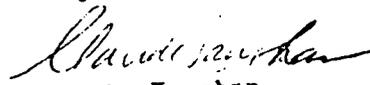
As owner of a secondary residence at Lake Robinson, I would like to register a protest about the over heated waters of the lake. This condition has developed since activation of the Nuclear Plant by Carolina Power and Light Company. Prior to its activation the temperature of the water of the lake was at entirely acceptable levels.

My wife and I have made a substantial investment in our residence, which is regularly used by us for rest and recreation. We feel our investment has materially reduced in value because of the excessive temperature of the lake waters.

The heat of the water has greatly reduced the pleasure of swimming in it. Also, fishing these waters is now most unrewarding. It is my observation the public's use of Lake Robinson for swimming, boating, and fishing activities has declined to a large extent since the Nuclear Plant began operation.

While recognizing Lake Robinson was developed by Carolina Power and Light Company at great expense, it is my opinion the waters are the property of the citizens of South Carolina and that Carolina Power and Light Company should be required to desist from the excessive over heating of said waters as well as provide all reasonable safeguards against its pollution.

Very truly yours,


Claude Vaughan

CV/bk

July 18, 1975

Carolina Power and Light Company
Robinson H B S E Plant

Dear Sir:

I am writing this letter on behalf
of my family and the many others
who enjoy the recreational pleasures
of Lake Robinson.

Please consider the enjoyment
that will have to end if the water
temperature is raised to the level
that it reached during the summer
of '74. On many days the
water was so hot that it was
impossible to remain in it for

more than a few minutes. Lake
Robinson can serve many functions
if the water temperature is allowed
to remain as it has been during
the summer of '75.

We would like to state
by means of this letter a vote of
protest to any measure that would
allow the water temperature to be
raised to a temperature that is un-
bearable for swimming.

Sincerely,

Mr. & Mrs. Wilton Auman

Dear Sirs:

I would like to express my sincere beliefs concerning Lake Robinson and the Carolina Power & Light nuclear reactor.

I realize the lake is man made and for the purpose of electricity and that the lake was not there before but was created.

It was my understanding that a major selling pt was for recreation and and enjoyment. Since the installation of the nuclear reactor, I personally feel pollution has increased severely. Thermal pollution is most certainly alarming to myself as well as others. I feel as though the people in this area and especially landowners surrounding the lake have been dealt a low blow. Enjoyment + entertainment has decreased;

Lake Robinson is now a hot bath. I would certainly appreciate some sort of ^{reply} ~~reply~~ acknowledging this letter and expressing your opinion on this matter. If you choose not to respond I will be encouraged to

file my complaint elsewhere.

sincerely,

THOMAS G WILSON
14 1/2 ST.
DARLINGTON, S.C. 29532

(Concerning Lake Robinson Water temperature.)

Walter J. Brown

1501 Woodland Dr.

Hartsville, S. C. 29550

July 15, 1975

Do when it may concern:

Something should be done to control the temperature of the water. It is too hot to swim in and on many occasions fish have been found dead as a result of this hot water.

When the water temperature is up, which is most of the time, heat waves can be felt instead of a breeze at night.

Anything would be a help to the condition we now have.

Thank you,
Walter J. Brown

July 15, 1975

John D. Whisenant
P. O. Box 26
Florence, S.C. 29501

To whom it may concern:

The reason for my writing this letter is my concern over the temperature of Lake Robinson outside of Hartsville, S.C. By the summer of 1967, my family had built a summer house on Lake Robinson. We all had spending practically every weekend and sometimes weeks on the lake. The water, at that time and for several years to follow, was delightful. My father bought a boat, and we spent many days skiing and swimming in the lake. The main reason, of course, for his building the house was so that we could enjoy the lake and the water sports we had become accustomed to. We took all of our friends up, and everyone looked forward to

going.

This was all to come to a screwing
halt, however several years later. ✓
If you were to dive into Lake Robinson
on any one out of ten given days,
between May and September, your
system would really be in for a
shock. The water is hot! - not
pleasantly warm - but hot! One can't
get out fast enough. It is very un-
comfortable - any thing but refreshing
as you might expect lake water to
be. Particularly so since the property
surrounding the lake was bought
with the intent to enjoy the lake.
Who would want a house on a lake
that swimming & skating are unpleasant
in? I would no longer think of asking
friends to the lake for recreational
purposes. That lake has been
ruined as far as recreation interests
are concerned. If this lake, owned
by Carlson, Paulsen, and Light, had
to be used for cooling purposes, then
the property should never have

been sold to unsuspecting buyers.
I feel that the whole thing is dishonest
to the point of being a fraud.
My family, and everyone else who owns
property on Lake Robinson, has been
taken for a long ride by Carolina,
Power, and Light. I feel the time
has long passed when something
should have been done to protect
the property owners on this lake.

Your consideration of my and my
family's views and feelings on this
matter would be greatly appreciated.
I will be available at any time for
additional information or confirmation
of any statement I have made.
Thank you.

Sincerely,
Marionita Whisenand

7-15-75

To whom It May Concern:

We purchased a lot from Carolines Power & Light with the understanding that the lake could be used for boating, skiing, swimming, and fishing. Unfortunately the water has become so heated at different times the boat cannot be operated efficiently for the hot water running through the engine. Several friends have been up to ski, and because of the intense heat, it was impossible because of fatigue from the hot water. On two different occasions, we've had to help the skiers into the boat to rest.

Many occasions we've found dead fish lying on the shoreline.

We hope some solution can be worked out for the cooling of Lake Robinson.

Yours very truly,
Geo. A. Marshall

July 14, 1975

SUBJECT: HOT WATER IN LAKE ROBINSON

WITNESS: J. W. MARTIN, JR.
P. O. BOX 72
MCBEE, SOUTH CAROLINA 29101 TELEPHONE 803/335-8405

STATEMENT:

I own a home facing on Lake Robinson. We built this dwelling in 1968-69. It is located just below the bridge that crosses the lake and is the first house downstream from the bridge. It is diagonally across the lake, just upstream from the outlet of the return water canal.

I am a graduate of Clemson University with a degree in Civil Engineering, and am a Registered Land Surveyor, South Carolina Registration No. 1717.

Since the beginning of operation of the atomic unit at Lake Robinson I have made observations of the temperature of the water at the end of my dock. I used a professional calibrated thermometer made by Taylor Instruments. During one period I observed water temperatures of 107⁰ F. for several consecutive weeks. On many observations covering prolonged periods I have observed temperatures in excess of 100⁰ F.

Since the advent of this heated water the use of the house as a summer home or place of recreation has been severely limited. When the water is hot swimming is out of the question - the water is sometimes hotter than one would find comfortable in a very warm bath. Fishing is also eliminated by the hot water. Even the use of the house as a dwelling is adversely affected because the breeze off the lake is warmer and more humid than the air in the surrounding area.

I have observed at various times, when the water was very warm, large numbers of dead larvae and small fish floating on the surface of the water.


J. W. Martin, Jr.

July 14, 1975

To Whom It May Concern:

I, Raymond L. Scull, of 603 West College Ave, Hartsville, S.C., have a lake house on Lake Robinson, better known under the name, "The Hot Hole", since the atomic power plant was put in effect.

Fishing, swimming and skiing were real good up until this was done. A lot of my friends and my son, Dr. Ray Scull and his friends use to use this lake for an outing, but now it is just a hot hole when the atomic power plant is running. The water has a real bad smell and some dead fish have been seen. The water temperature in July 1974 was 100 to 104 degrees. I have had to remove my boat from the water.

I pay twenty-five (25.00) dollars a year to Carolina Power & Light for water rights but the lake is no good to me in the summer time as the water is too hot.

All of my church suppers and picnics have quit coming to the lake. Their statement is always the same. Water too hot for our children to go swimming and skiing.

The best thing I think to do is to get it and try to get my money back unless something is done to cool the water by C.P. & L.

Yours truly, Raymond L. Scull

1331 Wenonah Avenue
Florence, South Carolina 29501
July 14, 1975

Mr. John Whisnant- Esq.
P.O. Box 26
Florence, South Carolina 29501

Dear John;

Word has reached me you are in the process of representing the general public on the Lake Robinson issue. Please consider me as being an interested party.

This lake was one of the best I have ever fished in until Carolina Power and Light Company completed and put into use the new hot water outlet, and now the brim have gone elsewhere, red breast have vanished, poor bass and no trout.

The algae, sea grass and other fungi are slowly but surely taking over due to the increased temperature of the water.

Yes, John, I admit C. P. L. built this lake for their use but they had to dam up a good fishing stream to get it.

Sincerely,

Jean D. Bailey, Sr.

(Mr.) Jean D. Bailey, Sr.

When we built our lake house
I was 10 yrs old. For years I
thoroughly enjoyed going to Lake Robinson
with my family. Often I would take
friends & we would all have a
good time swimming & skiing. Lake
Robinson provided a convenient place for
us to go since it was only 32 miles
away from Florence. However, after
the completion of the nuclear facility,
my friends & I lost interest in Lake
Robinson & started going to other
places such as Santee & the beach.
This was necessary as no one enjoyed
swimming at all in Lake Robinson due
to the intense heat of the water. So
we had to travel much farther to go
to a place where the water was
comfortable & suitable for both swimming
& skiing.

On July 20, 1972 I obtained my
senior lifesaving certificate from the
Red Cross. That August (1972) I
was employed as a lifeguard at the

-OVER-

Florence Country Club. The following
Summer I again was employed as a
lifeguard and on August 17, 1973
I obtained my WATER SAFETY INSTRUCTOR
(WSI) from the Red Cross. This
August (1973) I will begin my fourth
year as an employee (lifeguard) at the
Florence Country Club. Since obtaining my
WSI I have taught numerous swimming
courses open to anyone wishing to take
them. I teach these courses under Red
Cross Regulations - one of which is
never to charge any student to take
a course. I have thoroughly enjoyed
teaching these courses & have enjoyed
my employment as a lifeguard as I
love & respect the water very much.
I deeply regret that my family
has invested in property of a Lake
Robinson as I obtain no satisfaction
or enjoyment from swimming in this
lake.

Sincerely,
Malcolm Whisenand

When we first built our house at the Lake, I had wanted one at the beach instead. But I enjoyed skiing and got much use out of the Lake during the first few years. The water is now too hot to swim or ski in. I very seldom go up there or take friends now. Last summer I only went about three times. I am a senior in college and I could be getting a lot of use out of the Lake if it was not so hot. I now usually go to the beach or other lakes with my friends instead of inviting them to Lake Robinson. The Lake is too pretty to be destroyed by hot water. The lots were sold with the intention of building vacation homes but it is not much of a vacation if you cannot go in the water. I think that the lots should not have been sold in the first place if the outcome was to be like this. So many people have invested too much money in their property to be taken advantage of this way.

John David Whisenand, Jr.

STATE OF SOUTH CAROLINA)
)
COUNTY OF FLORENCE)

AFFIDAVIT

PERSONALLY appeared before me Jack L. Nettles, who being
duly sworn, deposes and says as follows:

1. Deponent resides at 819 Mohawk Drive, Florence,
South Carolina.

2. On May 13, 1965, deponent attended a publicized
auction of real estate conducted by the Carolina Power & Light Com-
pany whereby certain real estate bordering on Lake Robinson,
Subdivision No. 2 was ~~held~~ ^{passed} and deponent bid in Lot 15.

3. That at the time of said auction, there was one (1)
fossil fuel electric generating plant located on the lake.

4. Thereafter, in May of 1967, deponent sold his
interest in said lot to John D. Whisenhunt.

5. On October 21, 1966, deponent and his wife, Ann R.
Nettles, purchased Lot 17 on Subdivision Plat No. 1 of the lands of
Carolina Power & Light Company, Lake Robinson, Chesterfield County
South Carolina, recorded November 20, 1962 in Plat Book 13 at page
6 in the office of the Clerk of Court for Chesterfield County. At
that time, there was only one (1) fossil fuel electric generating
plant located on Lake Robinson.

6. That by profession, deponent is an attorney, duly
licensed to practice before the Supreme Court of the State of
South Carolina. Prior to May, 1959, deponent was associated with
the law firm of James P. Mazingo, III at Darlington, South Caroli
and as such, deponent participated in an action entitled W. Alher

#1
JK

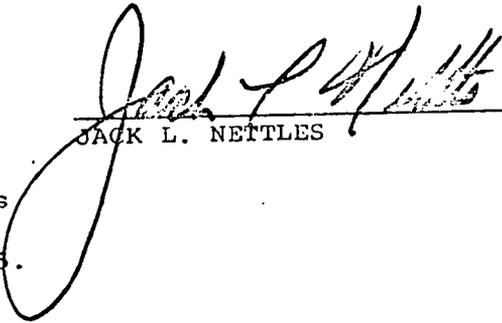
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Jh

Atkinson v. Carolina Power & Light Co. which was instituted in the Court of Common Pleas for Darlington County regarding the condemnation by Carolina Power & Light Company of property belonging to Albert Atkinson for the purposes of constructing what is now Lake Robinson. Although deponent did not participate in said action subsequent to May, 1959, deponent did participate up to that time and in the course of that participation, deponent had an opportunity to read an Affidavit filed in support of a Motion by Carolina Power & Light Company that it was the intent of Carolina Power & Light to construct up to five (5) fossil fuel electric generating plants on Lake Robinson and at no time was any indication given that Carolina Power & Light Company intended to construct a nuclear electric generating plant. One of the issues involved in the case at that time was the necessity of Carolina Power & Light Company to condemn more property than was then necessary. The case was subsequently appealed to the Supreme Court of the State of South Carolina and is reported at 121 S.E. 2d 743. The Opinion is dated September 14, 1961, prior to deponent's purchase of any property bordering on Lake Robinson.

7. Up until the placing in operation of the present nuclear electric generating plant, the water in front of deponent's property was not affected temperature wise by the then operating fossil fuel electric generating plant and during that period, deponent's family was able to use the lake for recreational purposes without detriment due to high temperature of the waters

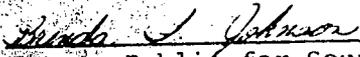
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impounded and deponent's wife in particular was able to fish with some success. However, since the placing in operation of the nuclear plant, the fishing has steadily worsened and on at least one occasion, the temperature reached one hundred two (102°F) Fahrenheit in front of deponent's property which at the time made the water unbearably hot for swimming. Deponent does not recall the exact date but believes it was sometime during the last week in June or the first week in July two or three years ago. Otherwise, the temperature of the water has been high and very uncomfortable.


JACK L. NETTLES

SWORN to before me this

15 day of July, 1975.

 (L.S.)
Notary Public for South Carolina

My Commission Expires: 1-23-83

7-16-75

July 16, 1975

50-261

Mr. Curtis Redden
Associate Director of Development
Coker College
Hartsville, South Carolina 29550

Dear Mr. Redden:

Pursuant to our telephone conversation yesterday, I am requesting the use of the music room at Coker College. The room would be used for a public evidentiary hearing by the Atomic Safety and Licensing Board in the matter of Carolina Power and Light Company's H. B. Robinson nuclear facility. This hearing is scheduled for August 12-15, 1975, starting at 10 a.m. Since a notice of this hearing must go out to the involved parties and to the public, I would appreciate hearing of the College's disposition of my request as soon as possible. Please call me collect on 202/634-1487 when the decision has been made.

Thank you for your courtesy and assistance.

Sincerely,

Kathleen M. Mason
Assistant Supervisor
Docketing and Service Section

- bcc: Dr. Cole
- Mr. Wolf
- ASLBP
- Reg. Files
- S. Teets
- M. Duncan
- ASLAB
- KMM Reading - 2

7-14-75

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

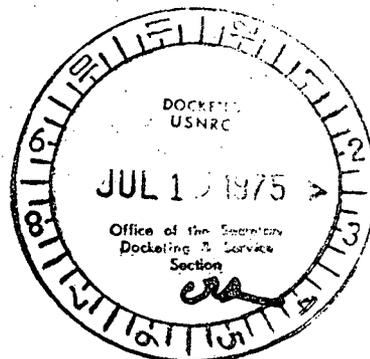
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
CAROLINA POWER AND LIGHT COMPANY	)	Docket Nos. 50-261
(H. B. Robinson, Unit 2)	)	50-261 (OL -
	)	Modification)
)	

QUESTIONS FROM THE BOARD DIRECTED
TO APPLICANT AND REGULATORY STAFF

The following comments and questions are the result of a preliminary review of documents pertaining to the subject plant, and are being forwarded prior to beginning the public evidentiary hearing so that the appropriate parties might have adequate time to prepare informed responses. In the event that there should be additional questions, such will be presented orally at the hearing.

Any party may present evidence in response to the Board's questions, but it is expected that the Regulatory Staff will answer all questions except possibly numbers 11 and 12, while Applicant/Licensee will address question numbers 1, 2, 5, 8 through 13, 17 and 18.



BOARD QUESTIONS

1. Please describe the Applicant/Licensee's position with respect to conformance with the Acceptance Criteria for the Emergency Core Cooling System. What linear power generation was maintained in Fuel Cycle 3?
2. The ACRS, in its review, dated June 11, 1974, of the proposed action cited a number of items relevant to the power increase. Please discuss the implementation of the Committee's recommendations, including the schedule for those items not yet put into effect.
3. Please supply copies of the Technical Specifications for Robinson, Unit 2 to the members of the Board and to the parties as appropriate.
4. What is the schedule for issuance of the Environmental Technical Specifications? Please supply copies if issue date has passed.
5. The Staff's FES refers to and reports calculated values of performance characteristics which may be amenable to actual measurement. (See, for example, Releases of Radioactive Liquid Effluents, Table 3.5, p. 3-30; Gaseous Radioactive Effluents, Table 3.6, p. 3-32; temperature of water leaving Lake Robinson, Fig. 5.2 p. 5-3). For these and other reported quantities please give a comparison of the calculated and measured quantities and compare, where possible with pre-operational predictions. Explain any absence of measured quantities.

How may the releases cited above be compared with those reported on page 11-3 of the FES?

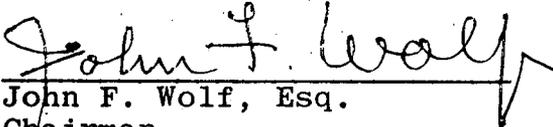
6. Table 3.5, p. 3-30 states an annual release of 100 Ci of tritium; please reconcile with the value 1000 Ci in the penultimate paragraph of Sec. 3.5.1, p. 3-28.
7. Table 3.5 also reports an expected calculated release of 29 Ci/yr in all liquid effluents. Please justify on the basis of a Technical Specification of 9.5 Ci/yr (footnote b).
8. Please describe in detail the status of the relations between the Applicant/Licensee and various federal agencies (EPA, for example) and the State of South Carolina in the matter of issuances of permits and approvals and variances thereof, necessary to the operation of Robinson, Unit 2, as presently constructed.
- 9(a) Please report the results available from the monitoring program initiated by the State of South Carolina in August 1970 and mentioned in Sec. 6.3.1 in the final paragraph of p. 6-5 of the FES.
- (b) Please report also for the EPA monitoring program mentioned in the same section (6.3.1).
10. Please provide a comprehensive description of the Applicant/Licensee's environmental monitoring program (both radiological and non-radiological) and discuss its compliance with NRC and EPA requirements.
11. Please provide the results, if any, of studies on the cost of installing a spray cooling system in the existing discharge canal (FES, p. 9-7).

12. Please discuss the results obtained from the improved on-site meteorological equipment and their influence on the predicted gaseous-effluent dispersion.
13. Please respond to the questions posed by the Board during the prehearing and conference of November 30, 1973 (Tr 16-31).
14. What is the status of the staff review of the Robinson No. 2 plant pertaining to ATWS? (Section II.C of Licensing Position On Anticipated Transients Without Scram (ATWS) for Water-Cooled Power Reactors).
- 15a) What are the Applicant/Licensee's requirements with respect to compliance with the new Appendix "I"?
 - b) Does the "stretch" power application affect Applicant/Licensee's status for the purpose of implementation of Appendix "I"?
16. Please check and revise if necessary Table 5.1 (FES p 5-7). Particular attention should be given to column headings and time limitations on discharge of chlorine.
17. Please discuss in more detail the operation of the travelling water screens and possible impact on impinged fish.
18. Please elaborate upon and provide basic data for the CP&L claim that about 60% of the increase in outlet temperature of the lake is due to natural solar radiation (ER, Supp. 1, 5.1d).

Answers to the foregoing questions can be provided in writing or orally at the public evidentiary session which will begin on August 12 in Hartsville, South Carolina. Additional details concerning the hearing will be contained in a notice of hearing to be issued shortly.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD


John F. Wolf, Esq.
Chairman

Issued at Bethesda, Maryland
this 14th day of July, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket Nos. 50-261
(H. B. Robinson, Unit 2)) 50-261 (OL -
) Modification)
)

QUESTIONS FROM THE BOARD DIRECTED
TO APPLICANT AND REGULATORY STAFF

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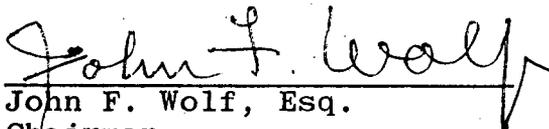
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It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD


John F. Wolf, Esq.
Chairman

Issued at Bethesda, Maryland
this 14th day of July, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CAROLINA POWER AND LIGHT COMPANY) Docket No.(s) 50-261
)
(H. B. Robinson, Unit No. 2))
)
)
)
)
)

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document(s) upon each person designated on the official service list compiled by the Office of the Secretary of the Commission in this proceeding in accordance with the requirements of Section 2.712 of 10 CFR Part 2 - Rules of Practice, of the Nuclear Regulatory Commission's Rules and Regulations.

Dated at Washington, D.C. this.

15th day of July 1975.

Peggy A. Downey
Office of the Secretary of the Commission

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

CAROLINA POWER AND LIGHT COMPANY)

(H. B. Robinson, Unit No. 2))
)
)
)
)
)

Docket No.(s) 50-261

SERVICE LIST

John F. Wolf, Esq., Chairman
Atomic Safety and Licensing Board
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Atomic Safety and Licensing Board
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

William Massar, Esq.
Counsel for NRC Staff
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

George F. Trowbridge, Esq.
Shaw, Pittman, Potts, Trowbridge
and Madden
910 - 17th Street, N. W.
Washington, D. C. 20006

Charles D. Barham, Jr., Esq.
Associate General Counsel
Carolina Power and Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

Mr. John D. Whisenhunt
P. O. Box 26
Florence, South Carolina 29501

Hartsville Memorial Library
Home and Fifth Avenues
Hartsville, South Carolina 29550

SHAW, PITTMAN, POTTS & TROWBRIDGE

910 SEVENTEENTH STREET, N. W.
WASHINGTON, D. C. 20006

RAMSAY D. POTTS
STEUART L. PITTMAN
GEORGE F. TROWBRIDGE
STEPHEN D. POTTS
GERALD CHARNOFF
PHILLIP D. BOSTWICK
R. TIMOTHY HANLON
GEORGE M. ROGERS, JR.
BRUCE W. CHURCHILL
LESLIE A. NICHOLSON, JR.
MARTIN D. KRALL
RICHARD J. KENDALL
JAY E. SILBERG
BARBARA M. ROSSOTTI
GEORGE V. ALLEN, JR.
WM. BRADFORD REYNOLDS
BARRY M. SMOLER

STEPHEN L. PARKER
MARK AUGENBLICK
FRED DRASNER
JEFFRY R. DWYER
ERNEST L. BLAKE, JR.
CARLETON S. JONES
THOMAS A. BAXTER
JAMES THOMAS LENHART
STEVEN L. MELTZER
DEAN D. AULICK
SHELDON J. WEISEL
ELISABETH M. PENDLETON
ROBERT W. ANNAND
LAURENCE STORCH
STEPHEN B. HUTTLER
JAY H. BERNSTEIN
WINTHROP N. BROWN

*NOT ADMITTED IN D. C.

(202) 296-3888
CABLE: "SHAWLAW"
TELEX: 440143

BRACKLEY SHAW
OF COUNSEL

June 24, 1975

John D. Whisenhunt, Esquire
Bridges and Whisenhunt
Bridges Building
Florence, South Carolina 20501

Re: Carolina Power & Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261, 50-261 (OL
Modification)

Dear Mr. Whisenhunt:

Please find enclosed Carolina Power & Light Company's answers to your interrogatories of June 7, 1975. The provision of these answers does not in any way concede that all of the matters raised in the interrogatories are relevant to the issues to be heard in this proceeding.

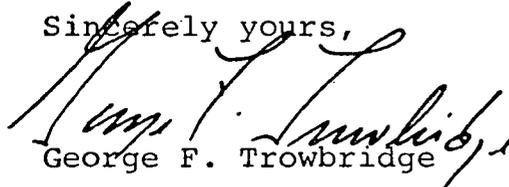
The Company is unable to provide an answer to that portion of Interrogatory No. 50 which asks whether information in the Environmental Report is based on theory or actual knowledge. You also request the sources of the theory or actual knowledge. We find these portions of the interrogatory too vague to permit a response. It would be necessary, for instance, to know precisely the information to which you refer and your definitions of the terms "theory" and "actual knowledge" as applied to such information.

I must comment, finally, on the sentence in parentheses in Interrogatory No. 48, which is also incorporated by reference into Interrogatory No. 51. The Company has provided you with a list of witnesses in response to these interrogatories. We must

John D. Whisenhunt, Esquire
June 24, 1975
Page Two

take issue, however, with any implication that the Company is prohibited from calling witnesses not listed in these answers. Any limitation on the witnesses to be called at the hearing is for the Atomic Safety and Licensing Board to establish in the context of a prehearing conference. See 10 C.F.R. §2.752.

Sincerely yours,



George F. Trowbridge

Enclosure

cc: Per Certificate of Service

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Answers to the Interrogatories of Intervenor Whisenhunt," dated June 24, 1975, were served upon the parties on the attached Service List, by deposit in the United States mail, postage prepaid, this 24th day of June, 1975.



Richard E. Jones
Associate General Counsel
Carolina Power & Light Company

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit No. 2))

SERVICE LIST

John F. Wolf, Esquire
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P.O. Box Y
Oak Ridge, Tennessee 37830

L. Dow Davis IV, Esquire
Office of the Executive Legal
Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

John D. Whisenhunt, Esquire
Bridges and Whisenhunt
Bridges Building
Florence, South Carolina 20501

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
H. B. Robinson, Unit No. 2)

AFFIDAVIT OF J. A. JONES

City of Raleigh)
)
North Carolina)

J. A. Jones, being duly sworn according to law, deposes and says that he is Executive Vice President, Engineering, Construction & Operation, of Carolina Power & Light Company; that the answers contained in "Licensee's Answers to the Interrogatories of Intervenor Whisenhunt dated June 7, 1975" are true and correct to the best of his knowledge and belief.



J. A. Jones
Executive Vice President,
Engineering, Construction & Operation

Sworn to and subscribed before
me this 24th day of June, 1975.

Margaret M. Cox
Notary Public

My Commission expires July 4, 1975

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-261
) 50-261 (OL Modification)
(H. B. Robinson, Unit No. 2))

LICENSEE'S ANSWERS (SET NO. 1) TO THE
INTERROGATORIES OF INTERVENOR WHISENHUNT

1. INTERROGATORY: Has the Licensee received any complaints, written or verbal, relating to the heated waters of Lake Robinson since it began commercial operation of H. B. Robinson, Unit No. 2?

ANSWER: Yes.

2. INTERROGATORY: If the answer to the foregoing interrogatory is "yes," please furnish the following:
- (A) The number of complaints received, separating those verbal and those in writing.
 - (B) The names and addresses of those making the complaints.
 - (C) The general nature of the complaint.
 - (D) The response, if any, of the Licensee.

ANSWER:

(A) The Company has conducted a reasonable search of its correspondence files and records in order to respond to this interrogatory. An exhaustive investigation would have been impractical and burdensome. This reasonable search has uncovered six written and two verbal complaints. Communications to government agencies, including formal petitions for leave to intervene, have been included here as complaints received by the Company.

- (B) (1) John D. Whisenhunt
P. O. Box 26
Florence, South Carolina

- (2) Malcolm R. Whisenhunt
P. O. Box 26
Florence, South Carolina
- (3) George A. Marshall
122 Harlington Drive
Hartsville, South Carolina
- (4) Ray Clanton
P. O. Box 51
Darlington, South Carolina
- (5) Mrs. W. C. Gandy, Sr.
Route 3
Darlington, South Carolina
- (6) Betty Sue Gandy, Sr.
Route 3
Darlington, South Carolina
- (7) Ms. Sylvia Saxon
Apartment 25
2200 Williamsburg Drive
Gastonia, North Carolina
- (8) M. H. Long
Cheraw, South Carolina

(C) The complaints all concerned Lake Robinson water temperature as it affected the lake suitability for swimming. Two complaints additionally related to temperature effects on life forms in the lake.

(D) In most of the eight cases cited above, written documentation has been located describing the Company's response. Telephone complaints were responded to by telephone. Written complaints were answered by letter. In every case the substance of the Company's response was to explain that the primary purpose of Lake Robinson was for turbine cooling and that during hot weather a greater demand for electricity necessitated peak production from the electrical generating plant. Complainants were advised that this factor contributed to the lake temperature during those hot periods.

3. INTERROGATORY: Has the Licensee received any complaints, written or verbal, relating to the heated waters of Black Creek since it began commercial operation of H. B. Robinson, Unit No. 2?

ANSWER: With the exception of your own petition for leave to intervene, no complaints have been found which address the temperature of Black Creek.

4. INTERROGATORY: If the answer to Interrogatory Number 3 is "yes," please furnish in connection therewith the information requested in (A) through (D) of Number 2.

ANSWER: Not applicable.

5. INTERROGATORY: State whether the Licensee has now, or ever has had any plans to reduce the heat in the waters of Lake Robinson and/or Black Creek?

ANSWER: The Company has no plans to reduce heat in these waters, as the heat load on the lake is within the design basis for the lake as planned. However, as reflected in the Environmental Report of the Company and in the NRC's Final Environmental Statement, alternate cooling systems have been evaluated and were rejected.

6. INTERROGATORY: If the answer to Number 5 is "yes," please advise what those plans are or were and their present status.

ANSWER: Not applicable.

7. INTERROGATORY: State whether or not plans for the extension of the cooling canal originally called for it to end North of the highway bridge which crosses the north end of the lake.

ANSWER: When Lake Robinson was originally impounded in the late 1950's, only Unit No. 1 was constructed and the discharge canal was built approximately 4,000 feet long. At that time, the Company made known the fact that the lake was designed for greater capacity than Unit No. 1 and that the discharge canal would be extended when more units were built to utilize

more of the lake for cooling. The original plans for extension of the discharge canal did not propose that the canal go beyond the highway bridge.

8. INTERROGATORY: If they did, state why those plans were changed and who made the decision.

ANSWER: Not applicable.

9. INTERROGATORY: By calendar months give the number of days each month that H. B. Robinson, Unit No. 2 has operated at maximum allowable capacity since being authorized to do so.

ANSWER: Attachment 1 consists of graphs of the average daily core thermal power levels for H. B. Robinson Unit 2. These are monthly graphs from September, 1970 to December, 1974 and were taken from the Semiannual Routine Operating Report Nos. 1 through 9 which were submitted to the Nuclear Regulatory Commission. Attachment 2 is the monthly reports submitted to the NRC covering the months of January, 1975 through May, 1975. These contain the monthly net electrical output of Unit 2 for those months.

10. INTERROGATORY: By calendar months give the reason H. B. Robinson, Unit No. 2 was not operated at maximum allowable capacity for those days it was not so operating since being authorized to do so.

ANSWER:

September, 1970	Unit No. 2 was not at full power (2200 MWt)
through	because the unit was undergoing initial
February, 1971	startup and tests.
March, 1971	Unit 2, when not at full power, was under-
through	going periodic tests, scheduled and un-
November, 1972	scheduled outages for maintenance (see

response to number 11), or normal operating fluctuations which cause the daily average power levels to be less than 2200 MWt.

December, 1972
through
March, 1973

A power coastdown to extend core life was commenced on December 2, 1972. This consisted of allowing power to decrease to compensate for fuel burnup.

March, 1973
through
May, 1973

First refueling outage.

May 16, 1973
through
June 4, 1973

Unit 2 was limited to 75% of rated power pending AEC review of the fuel densification report on the unit.

June 5, 1973
through
July 24, 1973

Unit 2 was limited to 94.8% of rated power pending further review of incore surveillance methodology using an Axial Power Distribution Monitoring System (APDMS).

July 25, 1973
through
April, 1974

When not at full power, Unit 2 was undergoing periodic tests, outages (see response to number 11), or normal operating fluctuations which cause the daily average to be less than the full 2200 MWt.

May, 1974

Second refueling outage.

through

June, 1974

June, 1974

to

Present

No restrictions on power levels have been incurred during this period. Unit 2 was at full power except for outages (see response to number 11), normal operational fluctuations, or periodic tests.

11. INTERROGATORY: By calendar months give the dates of each month that H. B. Robinson, Unit No. 2 has been "shut down" since being authorized to operate at 2200 MWt.

ANSWER: Attachment 3 lists the dates, causes, and duration of all outages occurring at H. B. Robinson Unit No. 2. These tables are taken from the Semiannual Routine Operating Report Nos. 1 through 9 which were submitted to the Nuclear Regulatory Commission. Attachment 2 consists of monthly operating reports which have been submitted to the NRC and cover the months of January, 1975 through May, 1975. These reports contain a listing of the outages which occurred during these months.

12. INTERROGATORY: Advise the number of hours it takes H. B. Robinson, Unit No. 2 to reach its maximum allowable operating capacity from "start-up."

ANSWER: Assuming for the purpose of this question that "start-up" refers to the initiation of heat rejection to the cooling water, it is approximately 2 hours from opening the main steam isolation valves to reach full capacity.

13. INTERROGATORY: State the number of hours from "start-up" that will elapse before the waters being discharged into the lake at the end of the cooling canal will be at its maximum temperature.

ANSWER: With both units operating at full flow, it takes approximately 3-1/2 hours for water to flow the length of the discharge canal. Therefore, from "start-up" as defined in answer to Interrogatory 12, it would be approximately 5-1/2 hours for water heated the maximum amount to reach the end of the discharge canal.

14. INTERROGATORY: Give the name and title of the person responsible for the taking of temperature readings of the waters in the discharge canal, the waters of Lake Robinson and the waters of Black Creek. Give the names and addresses of those actually making the readings.

ANSWER: Although the Plant Manager (J. B. McGirt) and the Manager of Nuclear Generation (N. B. Bessac) are basically responsible for all matters pertaining to operation of the H. B. Robinson Plant, temperature readings of the water in the discharge canal, the water of Lake Robinson, and the waters of Black Creek are actually made by the following individuals:

Carolyn W. Anderson
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina

J. B. Blecha
Carolina Power & Light Company
Route 4, Box 22-A
Apex, North Carolina

Ronald Denny
H. B. Robinson S. E. Plant
Box 790
Hartsville, South Carolina

W. H. Tarplee, Jr.
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina

D. H. Faulkner
H. B. Robinson S. E. Plant
Box 790
Hartsville, South Carolina

Sandra F. Miller
Carolina Power & Light Company
Route 4, Box 22-A
Apex, North Carolina

J. D. Edeburn
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina

15. INTERROGATORY: What instructions, if any, are given to those who actually take the temperature readings? What equipment is used to make these measurements? What supervision is given to those who actually make the readings and what type of testing is utilized to determine the accuracy of the equipment?

ANSWER: Individuals taking temperature readings are instructed to take the readings as specified in the temperature monitoring program described in the answer to Interrogatory 16 and to ensure that equipment is in working order. The following equipment is being or has been used to record temperature data:

Monthly temperature profile: International Biophysics Corporation Temperature and Dissolved Oxygen Monitoring Unit; Yellow Springs Instrument 54 Oxygen (and Temperature) Meter; and (at present) a Hydrolab TDO-2.

Weekly temperatures: Yellow Springs Instrument 54 Oxygen (and Temperature) Meter.

Continuous monitoring: five Atkins Model #22348-09 Custom Watertight Temperature Strip Chart Recording Systems.

All individuals making readings are familiar with the equipment, location of sampling points and procedures. Field supervision is not necessary. With the exception of the Atkins units, field equipment is calibrated with laboratory equipment approximately once every 3 months. Maintenance of equipment follows distributors' recommendations.

Calibration of the Atkins continuous recorders was checked and corrected when necessary prior to their being placed in the field. Manufacturer's specifications for the units indicate an accuracy of $\pm 0.6^{\circ}\text{C}$ (resolution and repeatability).

16. INTERROGATORY: How often are the temperature readings taken? Where are these readings recorded and in whose possession are these records?

ANSWER: Water temperatures are recorded monthly at three-foot intervals at each station identified in Figure 16-1 and in each of the 33 areas identified in Figure 16-2.

On a weekly basis surface temperatures are recorded in the following areas: the seal wells, the end of the discharge canal, S.C. 346, the intake, Black Creek at U.S. 1, Black Creek at S.C. 23, Black Creek at S.C. 39, Prestwood Lake at S.C. 20, and Black Creek at S.C. 50.

Beginning in June, 1975, five Atkins temperature strip chart recording systems were installed in the areas of Station F, Station E-3, south of Station C-3, at the spillway, and Station K, see Figure 16-1.

In addition, miscellaneous temperature readings are made at the time that biological samples are collected.

Data collected from these temperature monitoring programs are maintained in the files of the Environmental Assessment Unit in Raleigh, North Carolina. In addition, copies of the data are filed with the Plant Manager (J. B. McGirt) at the H. B. Robinson S. E. Plant and with the Manager of Nuclear Generation (N. B. Bessac) in Raleigh, North Carolina.

17. INTERROGATORY: State whether or not the temperature readings actually made are greater or lesser than those anticipated while H. B. Robinson, Unit No. 2 was in the planning stages and if so, by what margin.

ANSWER: To date, actual temperatures measured have generally been less than those predicted, and occasionally approach the predicted temperatures. In order to predict temperatures, it is necessary to assume a certain load factor and meteorological conditions. At this point in time, we

do not have enough data points at meteorological and load conditions duplicating those used in the predictions to specify the margin of variance.

18. INTERROGATORY: State whether or not H. B. Robinson, Unit No. 2 was in the planning stages when Licensee offered at public auction the lots in a subdivision designated as "Subdivision Number 2, Carolina Power & Light, Lake Robinson."

ANSWER: At the time of the auction, a second unit of the H. B. Robinson Plant was being planned. Studies were still being conducted, however, to determine if the second unit would be built as a fossil or nuclear unit.

19. INTERROGATORY: State whether or not Licensee, its officers and agents knew the waters of Lake Robinson and Black Creek would be heated to the extent they presently are when H. B. Robinson, Unit 2 is operating at 2200 Mwt when they offered said lots and access to the Lake to the public with the inducement of the lake waters as a means of swimming, boating and other water recreational facilities including fishing.

ANSWER: It is not possible to ascertain with any degree of precision the state of knowledge of the Company, all of its officers and its agents at the time of the auction referred to in Interrogatory 18. The Company did file an application for Lake Robinson with the South Carolina Water Pollution Control Authority in 1957 and sent an engineering report in 1958. At that time, it was stated that water temperatures could at times exceed 100°F during some summer months in the vicinity of the discharge canal for the ultimate plant. The auction referred to in Interrogatory 18 took place in May, 1965.

20. INTERROGATORY: State whether or not when Lake Robinson was first built, Licensee planned only to put multiple fossil plants on the lake and if so, how many?

ANSWER: At the time Lake Robinson was built, it does not appear anyone anticipated that a nuclear facility would be built on the lake. The

testimony of Mr. Dale, referred to in a subsequent interrogatory reflects on the possibility of multiple fossil units. The lake is designed for a kilowatt capacity of over 1,000,000 KW as described in the earlier referenced testimony, rather than for a certain number of units.

21. INTERROGATORY: State whether or not Licensee has made the statement that the operation of the fossil plant at Lake Robinson has a negligible effect on the waters of Lake Robinson as to heat.

ANSWER: The Company is not aware of a precise statement to that effect.

However, the heat load on Lake Robinson due only to Unit 1 operation is relatively small for a lake designed for over 1,000,000 kilowatts.

22. INTERROGATORY: Based upon the actual operational data obtained by Licensee, state the number of fossil plants of the same capacity as that situated at Lake Robinson, the waters of Lake Robinson could accommodate before its waters would be heated to the extent they are now when both the fossil plant and H. B. Robinson, Unit No. 2 are operating at full allowable capacity.

ANSWER: If 4-5 additional units the same size as Unit 1 were installed and operated as Unit 1 is, the heat load on the lake would be the same. This would be equivalent to about 850 MWe of fossil generation (gross) compared with H. B. Robinson Unit 2 presently licensed at 739 MWe gross.

23. INTERROGATORY: State whether or not Applicant has conducted or had conducted tests to determine the effect upon fish and other wildlife the heated waters from H. B. Robinson, Unit No. 2 has had or is now having both in Lake Robinson and the waters of Black Creek, both those above and below Lake Robinson?

ANSWER: Carolina Power & Light Company is presently conducting a demonstration program pursuant to Section 316(a) of FWPCA to determine if the thermal limitations imposed by that Act are more stringent than necessary for the protection and propagation of an indigenous community of fish, shellfish, and wildlife in and on the receiving body of water. These studies being conducted on the impoundment and on Black Creek above and below the impoundment address thermal effects on fish and other wild-

life. While no studies were completed prior to the adoption of the 316 demonstration program an exploratory environmental monitoring program was begun in April, 1973. The data from these studies will be incorporated into the results of the 316(a) demonstration program.

24. INTERROGATORY: If the answer to Number 23 is "yes," please furnish the following:

- (A) When such tests were conducted.
- (B) By whom such tests were conducted.
- (C) At what points on Lake Robinson and the waters of Black Creek such tests were conducted.
- (D) The results of such tests.
- (E) In whose possession are the results of such tests, giving specifically the identity and address of the person in charge thereof.

ANSWER:

(A and B) In addition to the 1973-74 data, the Company is in the initial stages of a demonstration program pursuant to section 316(a) of the FWPCA. In August, 1974, the initial description of the monitoring program was transmitted to the U. S. Environmental Protection Agency, Region IV for review and comment to determine its acceptability as a 316 demonstration program study. After consultation with personnel of the EPA and the State of South Carolina, a final study program was submitted to the EPA in December, 1974. This environmental surveillance program is presently being conducted by the Company with in-house personnel.

(C) A copy of the program as submitted to the EPA in December, 1974, and modified in June, 1975, is enclosed as Attachment No. 4. Illustrations in Attachment 4 indicate the sampling points on Lake Robinson and in Black Creek.

(D) Data from the 316 demonstration have been collected and, in certain instances, tabulated. Data evaluation and interpretation will not be completed until after completion of the field sampling of the various physical, chemical and biological parameters contained in the

study program and the results will be presented in a final report to EPA in June, 1976.

(E) The tabulated data which have been obtained thus far are located in the files of the Environmental Assessment Unit of the Special Services Department in Raleigh, North Carolina. The name and address of the individual in charge of this unit is as follows:

Mr. D. W. Stephenson
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina

25. INTERROGATORY: State whether or not A. J. Skaala was Chief Engineer for Carolina Power & Light when Lake Robinson was built and the fossil fuel plant was erected and put into operation?

ANSWER: Mr. A. J. Skaale's title was not Chief Engineer.

26. INTERROGATORY: If the answer to Number 25 is "yes," advise when he became Chief Engineer, if he is still Chief Engineer and if not when he ceased to be.

ANSWER: Not applicable.

27. INTERROGATORY: If the answer to Number 25 is "no," advise in what capacity he served Applicant during this period of time, whether he is still serving in that capacity at this time and if not when he ceased to serve in that capacity.

ANSWER: Mr. Skaale served as Superintendent of System Operations and then as manager of the Operating & Engineering Department. Mr. Skaale retired in June, 1965.

28. INTERROGATORY: State whether or not A. J. Skaale is presently employed in any capacity by Applicant and if not when such employment ceased and the reason therefor.

ANSWER: Mr. Skaale retired in June, 1965.

29. INTERROGATORY: If known, give present address of A. J. Skaale, whether employed or not.

ANSWER: Mr. Skaale resides in Raleigh, North Carolina at 1006 Lake Boone Trail.

30. INTERROGATORY: State whether or not Applicant used A. J. Skaale as an expert witness to describe the operation of its fossil fuel plant located at Lake Robinson during land condemnation trials held in the Court of Common Pleas for Darlington County.

ANSWER: Mr. Skaale testified for the Company during the land condemnation hearings referred to and he described operation of the fossil plant.

31. INTERROGATORY: Did not A. J. Skaale testify under oath and in behalf of Applicant's condemnation of Atkinson land that on full load of the fossil fuel plant the water being discharged into the canal would be about fifteen degrees higher than the water taken in from the lake?

32. INTERROGATORY: Did he not at the same time and place testify that these heated waters were carried four thousand feet and discharged into the lake where this hot water formed an area of slime on the lake, on the surface of the lake?

33. INTERROGATORY: State what education, training and experience qualified A. J. Skaale as an expert qualified to so testify and whose testimony to this effect was sponsored and endorsed by Applicant.

ANSWERS: The testimony of Mr. Skaale relevant to these three interrogatories is attached.

34. INTERROGATORY: If Applicant knows or has access to such information, state whether the testimony of A. J. Skaale was based on theory or the actual operation of the fossil fuel plant at Lake Robinson.

ANSWER: The Company has no basis for characterizing the whole of Mr. Skaale's testimony as being founded upon theory or actual operating experience.

35. INTERROGATORY: If the answer to Number 34 is "theory," state whether or not there was available to Applicant and A. J. Skaale actual knowledge whether obtained from the fossil plant at Lake Robinson or fossil plants of a like or similar design.

ANSWER: Not applicable.

L. A. McCANTS

325 Q. It is not yet in operation?

A. No, sir; we have run the pumps—trial operated the pumps—the circulating water pumps that take the water from the lake.

Q. Is it proposed to commence operations of the plant with the lake as it is presently existing?

A. As far as I know, but I get my orders on those lines.

Q. That is not within your jurisdiction?

A. It is not within my work.

326

Re-cross Examination

By Mr. Greer:

Q. On some of these plant constructions on the river, I understand no dams were built at some?

A. That is correct.

Q. They would take the water out of the rivers as they flowed by?

A. That is correct.

Re-direct Examination

327 By Mr. Arledge:

Q. Mr. McCants, that is where you had a big flowing river with a relatively unlimited amount of water?

A. That is correct. At Kansas, the Neosho River practically goes dry in the dry season, and we have this big cooling lake to supplement the river in case there is not enough water in the river; in fact at the moment they are operating that plant plus another plant they put in across the river with another cooling lake.

328 Q. Mr. Wilmeth asked you with respect to the elevation of the dam, and you said you thought that was

L. A. McCANTS

A. J. SKAALA

230. You are speaking of the earth works of the dam itself?

A. That is correct, and the spillways.

Q. You have gates in there?

A. Yes, sir; tainter gates.

Q. When the water reaches an elevation of 220, does it spill over these gates?

A. Yes, sir.

Q. The earth works, the dam structure, as I understand, is ten feet higher than the grades on the flood gates when the flood gates are in position?

A. That is right.

Re-cross Examination

By Mr. Greer:

Q. Isn't it absolutely necessary that the dam level be higher than the flood gate level?

A. Yes, to take care of the wave and wind action principle.

Q. Ten feet is normally a safe margin?

A. Eight to ten feet.

Mr. A. J. SKAALA, being first duly sworn to speak the truth, the whole truth, and nothing but the truth, testified as follows:

Direct Examination

By Mr. Arledge:

Q. Mr. Skaala, what is your position with Carolina Power & Light Company?

A. I reside in Raleigh, North Carolina, and I am Manager of the Operating and Engineering Department of Carolina Power & Light Company.

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A. J. SKAALA

333 Q. What does that encompass with respect to the Power Company's activities?

A. I am responsible for its power supply, its transmission system, its distribution system, its metering system, and all phases of the operation and engineering connected therewith.

Q. Does that include the construction and operation of steam power plants of the company such as this Darlington Plant on Black Creek that is now being constructed?

A. It does.

334 Q. State whether or not the construction of the Darlington Steam Plant is being constructed under your immediate supervision?

A. We have Ebasco Services, Inc., in New York, which is handling this for Carolina Power & Light Company, and they are acting as designing engineers and also constructors for us of the Darlington Plant. There are many phases in the construction and design of this plant, such as the hydraulic end, the mechanical end, the foundations and the electrical end, and they
335 are designed and the actual construction is by them, but it clears through me with the Carolina Power & Light Company and through the various people of Ebasco Services, Inc.

Q. This plant is being erected and constructed under your general authority or supervision on behalf of the Carolina Power & Light Company?

A. That is correct.

336 Q. For the purpose of the record, Mr. Skaala, I don't believe you gave us your age?

A. I am sixty-two years old.

Appeal from Darlington County

A. J. SKAALA

337 Q. How long have you been working in the field of electricity from the standpoint of supplying electricity for public use?

A. You mean how long have I been engaged in operations?

Q. Anything you did when you worked for a power company in supplying power to the public?

A. I was in Great Western Power Company, of California, and I was with them from 1921 to 1930 and in various positions in other hydroelectric plants, steam electric plants, sub-stations and dispatcher's offices. I joined Carolina Power & Light Company in
338 1930, as operating engineer, and I have been with them ever since in positions of operating engineer, superintendent of power, and my present position is Manager of the Operating and Engineering Department.

Q. Have you studied in the field of electricity prior to that experience?

A. I attended public school at Berkeley, California, the University of California from 1916 to 1920, and I have been in that study since, except for sixteen months when I was instructor in radio Naval School,
339 Harvard University during World War I.

Q. During that time did you study electricity?

A. I did, in liberal sciences, and at the present time I am a member of the North Carolina Society of Engineers and American Institute of Electrical Engineers.

Q. Getting down to the Darlington County Steam Plant, do you know about, or tell us briefly the situation or considerations that led up to the erection of the steam plant on Black Creek where it is now being
340 constructed?

A. Well, we are continuously making studies to—

A. J. SKAALA

881 A. We run it up far enough when it is discharged into the lake. This hot water will form an area of slime on the lake, on the surface of the lake. When the water gets in the lake the cooling effect starts, and by the time the same water gets back to the plant it will be cooled off and be used again. It is a tremendous amount of water that has to be dissipated, and you have to spread it over a large area.

Q. That water has to be cooled off by the time it gets back to the steam plant?

A. Yes, sir.

882 Q. You will have to extend the canal further up the lake side and turn it by the highway into the reservoir?

A. That is correct.

Q. In order that it may be made clear, in building the lake, deciding on the location of the plant, and building the lake the size you built it and the dam the height you built it, state whether or not that was to serve only this particular generating unit that you are now installing or whether it takes into consideration the ultimate full development of that plant site?

883 A. In designing the plant, we looked at the possibility of building the lake fully big enough for only the present unit and having it complete; but we decided at that time it would be more economical and much better engineering plan to go ahead and build a lake for our ultimate capacity. We don't know exactly what it will be—it is something in the order of a million kilowatts—we think it will be larger than that—in round figures we just set a million kilowatts. This plant, it is the only one in our system today that we have designed to take care of long distance in the future. This is the 884 first time we decided we would build large size in that manner. We will step the voltage up 210 to two hun-

A. J. SKAALA

dred thirty thousand volts in order to get the energy out of the area. In doing this, we figured everything we possibly could think of in order to come up with an ideal plant site. 885

Q. What is the present generating capacity of the unit installed?

A. I believe it is one hundred eighty-two thousand—we refer to it as having a capability of one hundred eighty-five thousand.

Q. As a practical matter, how much current do you expect to get?

A. One hundred eighty-five thousand kilowatts out of it. 886

Q. You say you expect ultimately to add additional units?

A. That is correct.

Q. Until you reach a million?

A. I can't say we will stop at a million.

Q. With the lake at its present height?

A. Yes, the lake in its present capacity is designed for a million.

Q. Without doing anything more to the lake? 887

A. That is right.

Q. Based upon your experience on the growth of the demand for electricity from the Carolina Power & Light Company's system, when do you anticipate you will have installed additional units to generate your capacity of a million kilowatts?

A. Probably 1975 or 1980. In nine years from now our load will be doubled, and that is a tremendous amount of power.

Q. How does the growth of the system in South Carolina compare with the growth of the system as a whole? 888

A. J. SKAALA

373 back through the boiler feed pumps to get some of the heat back out of it, and then it goes back into the boiler and that cycle I just mentioned is repeated.

Q. When you say it passed the last plate and goes into the condenser, is that the condenser shown in the photograph?

A. Yes, it is the one that has 13,500 tubes. The water of the lake goes through the tubes and the steam is above it and trickles in between it. It is the area necessary to condense the steam.

374 Q. The water in the lake, what does it have to do with it, in the condenser?

A. In this Darlington Plant, with this first unit, we will use five hundred thousand tons of coal a year. Strange as it may seem, about thirty-five per cent. of the heat of the coal will be converted into electricity. As far as modern units go, that is good efficiency. The other part has to be dissipated—most of it is dissipated.

Q. Explain dissipation?

375 A. The lake water is pumped into the intake that has the screens in front of it to catch any debris, and then the pumps carry the water through into the water boxes of the condenser. The water flows through the tubes and then goes to another conduit into the canal that is located a small distance from the plant, and that water is then carried upstream about four thousand feet and pumped back into the lake.

Q. I don't know whether you made it clear—where is the steam in the process of that condensing?

376 A. It is going through the tubes and collected down below in the form of condensed water.

Q. Does it go through the pipes in the condenser?

A. J. SKAALA

A. No, it goes around the outside. There is no connection between the lake water and the steam condensed in there, unless you get leakage in there, and then the lake water flows into the steam cycle. 377

Q. That is only in case of leakage?

A. Yes, sir.

Q. Why do you need the cold water? Does it convert the steam back into water?

A. Yes, it converts the steam back into water. It condenses the steam in there, and the steam is converted into water, and then pumped back into the boiler, and then the cycle is repeated. 378

Q. That is the distilled water?

A. Yes.

Q. What becomes of the water that reduces the steam to water?

A. When the heat is taken out of steam, it is transformed back into water and that returns to the boiler. This water that is coming in from the lake, after it runs the whole length of the tubes, it is carried into the canal and back into the lake. On full load of this plant, the condensing water, as it leaves the tubes goes into the canal and would be about 15 degrees higher than the water that is taken in from the lake. That hot water is carried by canal about four thousand feet up above the lake and discharged back into the lake. 379

Q. Where is the canal?

A. On the side of the lake the plant is, and it is between elevation 222 and 230, and it runs parallel to the shore line for four thousand feet.

Q. It empties back into the lake?

A. Yes. 280

Q. Why do you run it there?

36. INTERROGATORY: State whether or not Applicant has sprayed chemicals on or into lakes other than Lake Robinson which it owns or controls for the purpose of controlling weeds therein.

ANSWER: Yes. Weed control chemicals were used at the Weatherspoon plant as described below.

37. INTERROGATORY: If the answer to Number 36 is "yes," state what chemicals were used, how often they were used and the effects such chemicals had on wildlife in the lakes other than to destroy the weeds. Also state what, if any, tests were conducted to determine the effect on other wildlife, who conducted such tests, giving the name and address of such persons, who has custody of the results of such tests, giving the name and address of such person.

ANSWER: The work was conducted as a test between the years 1958 and 1961. Copper sulfate at 0.3-1.0 ppm was used with little success. No tests were conducted to determine the effect on wildlife. On the recommendation of the Florida Fish & Game Commission, 2, 4-D and 2, 4, 5-T at 1 gallon per 2 acres was tried. In conjunction with this trial, 4 ppm sodium arsenate was added. This was applied to a small area closed off from the lake. Later 2, 4-D and 2, 4, 5-T were applied to the lake. The applications were discontinued sometime in 1961. No deleterious effects on wildlife were noted. Applications were not on a regular schedule.

38. INTERROGATORY: State whether or not Applicant is presently spraying the waters of lakes owned or controlled by it, exclusive of Lake Robinson, with chemicals to control weed growth in such lakes. If the answer is "no," state when this practice was stopped and the reason therefor.

ANSWER: No. As noted above, 1961 is the last date of application at Weatherspoon. Usage of these chemicals at Weatherspoon was terminated after conclusion of the test described in the answer to Interrogatory 37.

39. INTERROGATORY: State whether or not Applicant has sprayed chemicals onto or into Lake Robinson for the purpose of controlling weed growth.

ANSWER: No chemicals have been sprayed onto or into Lake Robinson for the purpose of controlling weed growth.

40. INTERROGATORY: If the answer to Number 39 is "yes," state what chemicals were used, how often they were used, who was in charge of such operation giving name and address, whether same is continuing and if not, when it ceased.

ANSWER: Not applicable.

41. INTERROGATORY: State whether or not Applicant has injected any chemicals into the waters of Lake Robinson for any purpose whatsoever.

ANSWER: During the normal course of operation, certain chemicals, as described in answer to Interrogatory 42 are released to the lake.

42. INTERROGATORY: If Applicant has injected chemicals into the waters of Lake Robinson for any purpose including the control of weeds, state what chemicals were used, the effect such chemicals have had on wildlife in Lake Robinson, what tests were conducted to determine the effect, the name and address of the person in charge of conducting such tests, the name and address of the person having custody of the records of such tests.

ANSWER: During normal operation of Unit 2, some chemicals are used at the plant and are then released into the circulating water system. Upon entering the circulating water flow, the chemicals are greatly diluted and flow into the discharge canal and then to the lake. Chemicals which have been released to the circulating water include: phosphate, caustic soda, hydrazine, NaOCl, neutralized H_2SO_4 , Na_2SO_3 , cyclohexylamine, morpholine (1971 and 1972). In 1975, a practice was instituted of adding 100 lbs. of ferrous sulfate to the intake water each month for plating out on the condenser tubing to protect against corrosion. No specific tests have been conducted by the Company for the purpose of determining the effects of the addition of these chemicals on the wildlife in Lake Robinson.

43. INTERROGATORY: State whether A. J. Skaala was correct or not when he testified under oath for Applicant that the efficiency of the steam turbine or steam cycle in connection with nuclear reactors was much lower than the conventional steam cycle, that there was more heat to

dissipate in the condenser and this would require more cooling water to take care of condensing requirements and that if Applicant were to use nuclear power on the lake, the amount of electrical capacity would be less than it could get under the conventional method.

ANSWER: Mr. Skaale makes this statement in his testimony, attached.

It is correct that the conversion cycle using nuclear fuel is less efficient.

44. INTERROGATORY: If the answer to Number 43 is "yes," why did Applicant shorten the length of the cooling canal to its present length with nuclear power rather than extending it even further to the North than had originally been planned with what Mr. Skaala termed "the conventional steam cycle"?

ANSWER: As explained in answer to Interrogatory No. 7, the original plans did not call for extension of the discharge canal to beyond the bridge.

The canal has not been shortened from original plans.

45. INTERROGATORY: If the answer to Number 43 is "no," please state when Applicant learned that such information was incorrect, the name and identity of the source determining such statement to be in error and the basis of such determination, that is whether by actual tests or theory.

ANSWER: Not applicable.

46. INTERROGATORY: Give the name, title and address of the officer of Applicant who is charged with the responsibility of certifying the accuracy of the information contained in the Environmental Report and the Supplements thereto filed with the Atomic Energy Commission, now the Nuclear Regulatory Commission, state how such information was compiled and what, if any, safeguards were applied to verify the accuracy of the information contained therein.

ANSWER: Mr. J. A. Jones, Executive Vice President, Engineering, Construction & Operation, Carolina Power & Light Company, P. O. Box 1551, Raleigh, North Carolina 27602.

In preparing the Environmental Report and Supplements, all necessary material is compiled into draft form. The draft is then circulated for multi-discipline review by various departments in the Company, and by any consultants who are involved with the respective phases of the pro-

A. J. SKAALA

805: Q. Have you stated whether or not the Company has dealt at all with the question of what it is going to do, or what conditions it will impose with respect to access to the Black Creek Lake?

A. No, we have been so busy building a steam plant and trying to acquire property we have given no consideration whatever to what we will do as to access on the lake or use of the lake or anything else. I am just anticipating a headache.

806: Q. On cross examination by Mr. Greer yesterday he asked you about the matter of the probability of a nuclear energy plant being used in the generation of electricity in the future. I would like to ask you what effect, if any, the changing from generation by coal, oil or gas as a fuel in modern days or generation by nuclear energy. As far as the matter is now known, what effect that would have upon your need of water at this plant, in case the present unit or new units should be changed over from the present conventional types to nuclear heat?

807: Mr. Greer: I object. There is no testimony this plant is liable to be converted into atomic energy. There is no testimony it could be, and I think the question is irrelevant.

808: Witness: At the present time we are a member of the Carolina-Virginia Nuclear Association, which includes Duke Power Company, South Carolina Gas and electric and Carolina Power Company, and we are putting in a new reactor at South Carolina Gas and Electric Company now. The only thing nuclear energy does is to replace the fuel. It would replace coal, and you would use uranium or plutonium to generate the heat. You would still have to condense and re-use the water. At the present time the efficiency of the steam turbines

A. J. SKAALA

809: or steam cycle in connection with nuclear reactors is much lower than the conventional steam cycle, due to the fact the efficiency is lower, and you have more heat to dissipate in the condensers, which means it takes more cooling water to take care of the condensing requirements. If we were to use nuclear power on the lake, the amount of the capacity would be less than we could get under conventional methods.

Q. Does that mean you would need more water?

A. That is right. It takes more condensing water.

Q. That is based upon what is now known at the present stage of nuclear energy?

810: A. Yes; of course we don't know what the future holds. Maybe they will improve the cycle. I don't know.

Cross Examination

By Mr. Shands:

Q. Mr. Skaala, what are these little rings on the edges of the map?

A. They are monuments. They shot to there, and then over there and to here and so forth.

Q. In one place it is loaded with them?

811: A. It is where they changed their bearings.

Cross Examination

By Mr. Wilmeth:

Q. You stated that your company and the officials have been too busy building the plant to make a decision about the use of the lake. Isn't it a fact that the company has postponed making any decision or announcing any position about what the public will be permitted to do on this lake until the lands are all acquired?

812: A. That would have a bearing on it. We would want to get all the land settled, but in the meantime we have

ject. Comments, suggestions, or corrections may result from this review and are then incorporated into the final version.

47. INTERROGATORY: Give the name, title and address of the persons or persons who supplied the information contained in said Environmental Report and Supplements relative to heat generated by the fossil plant individually, by the nuclear plant individually, by the two combined, those who supplied the information on heat dissipation by use of the cooling canal and the water of Lake Robinson, those who supplied the information as to the effect of such heated waters upon the fish and other wildlife in and around Lake Robinson and those who supplied the information as to the effect upon Black Creek, its waters, the fish and wildlife contained therein.

ANSWER: Information concerning the amount of heat generated and the heat dispersion in the lake was supplied by Ebasco Services, Inc., 2 Rector Street, New York, New York. Information in the Environmental Report regarding the effect of heated water was supplied by Mr. J. A. Padgett, Carolina Power & Light Company, P. O. Box 1551, Raleigh, North Carolina 27602 and Mr. D. W. Stephenson at the same address.

48. INTERROGATORY: Give the name, title and address of those who Applicant might call as witnesses to the matters detailed in Number 47 at the hearing before the Atomic Safety and Licensing Board. (It is not the purpose of this question to require you to positively name those you will call but the intent is to have you give the list from which your witnesses will come and to restrict you at the hearing from calling witnesses not listed in answer to this interrogatory.)

ANSWER:

Mr. J. M. Sell, Manager
Environmental Engineering
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina 27602

Mr. D. W. Stephenson
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina 27602

Mr. W. T. Hogarth
Project Scientist, Fisheries
Carolina Power & Light Company
Box 1551
Raleigh, North Carolina 27602

49. INTERROGATORY: Give the name, title and address of the person or persons who have supplied Applicant with the information as to the effect upon those matters detailed in Number 47 authorization to and operation of the nuclear plant at 2300 Mwt would have.

ANSWER:

Mr. J. M. Sell
Manager, Environmental Engineering
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina 27602

50. INTERROGATORY: State the qualifications of such person or persons and whether such information is based on theory or actual knowledge and the sources of the theory or actual knowledge.

ANSWER: Mr. Sell is presently the Manager of the Environmental Engineering Section at Carolina Power & Light Company and has been with the Company since 1960. He received a B.S. in 1959 and a professional degree in 1960 in chemical engineering from North Carolina State University.

51. INTERROGATORY: Give the name, title and address of all witnesses that Applicant might call as witnesses to the effects upon those matters detailed in Number 47 that operation at 2300 Mwt will have or can be expected to have. (The purpose and intent of this interrogatory is the same as Number 48.)

ANSWER: Refer to the answer to Interrogatory 48.

52. INTERROGATORY: State what effect increased heat in the discharge waters has upon the chemical makeup of the waters of Lake Robinson in their natural state and as affected by the injection of chemicals by Applicant for weed control or any other purpose.

ANSWER: Measurements to date show that the plant does not introduce any chemicals to substantially change the lake chemical makeup. Changes in chemical concentrations in the lake are insignificant in comparison to changes occurring as a result of natural processes. There is no evidence to indicate synergistic effects of heat on chemical makeup, although dissolved oxygen content does decrease with temperature. Even this effect does not appear to be significant.

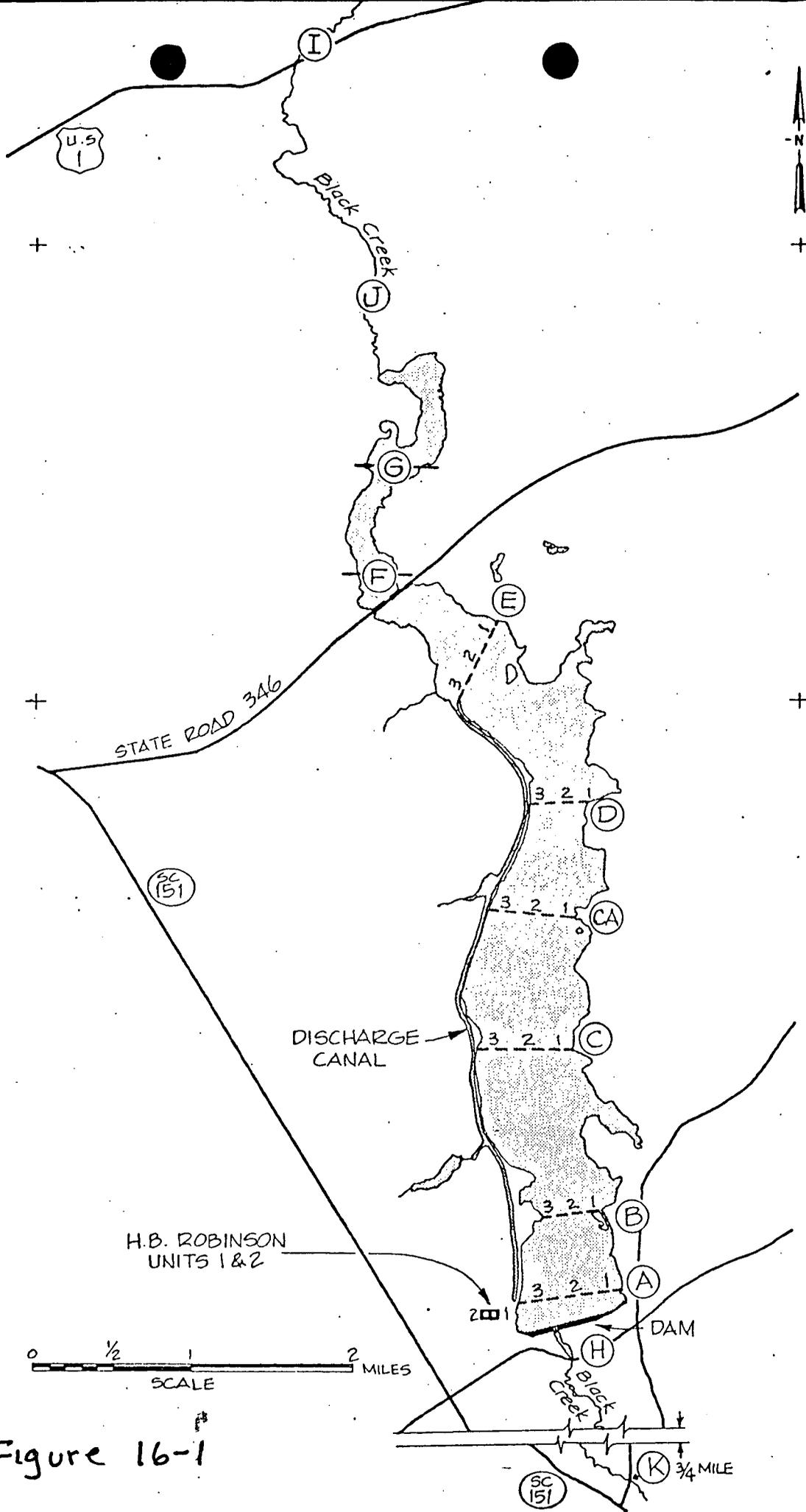


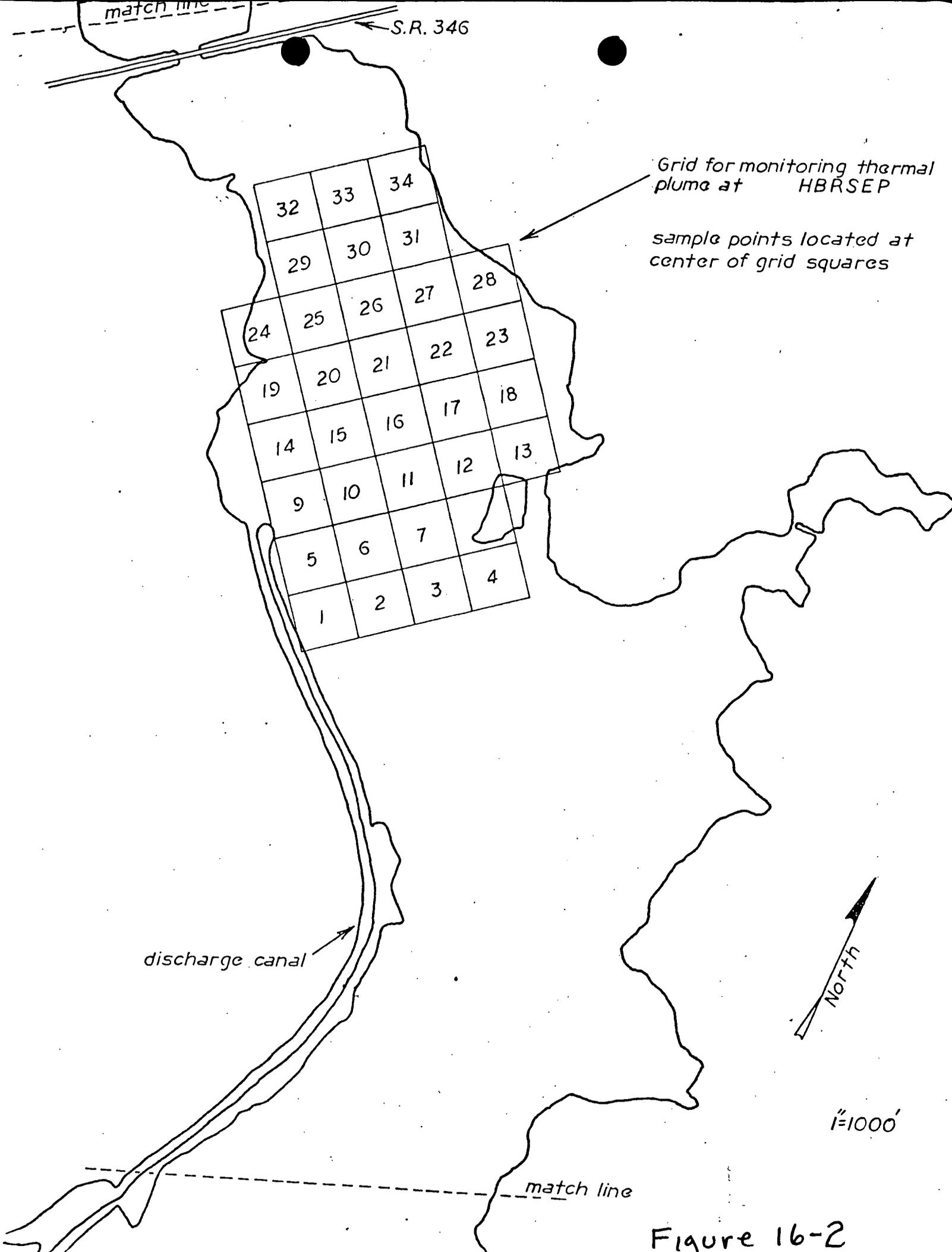
Figure 16-1

match line

S.R. 346

Grid for monitoring thermal plume at HBRSEP

sample points located at center of grid squares



discharge canal

North

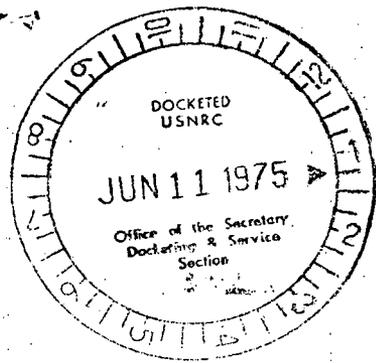
1"=1000'

match line

Figure 16-2

6-7-75

RELATED CORRESPONDENCE



UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
CAROLINA POWER & LIGHT COMPANY	)	Docket No. 50-261
(H. B. Robinson, Unit No. 2)	)	50-261 (OL Modification)

INTERROGATORIES PROPOUNDED BY INTERVENOR TO
 LICENSEE -APPLICANT

TO GEORGE F. TROWBRIDGE, ESQUIRE, COUNSEL FOR LICENSEE:

Within the designated time, please respond to the following inter-rogatories:

1. Has the Licensee received any complaints, written or verbal, relating to the heated waters of Lake Robinson since it began commercial operation of H. B. Robinson, Unit No. 2 ?
2. If the answer to the foregoing interrogatory is "yes", please furnish the following:
 - (A) The number of complaints received, separating those verbal and those in writing.
 - (B) The names and addresses of those making the complaints.
 - (C) The general nature of the complaint.
 - (D) The response, if any, of the Licensee.
3. Has the Licensee received any complaints, written or verbal, relating to the heated waters of Black Creek since it began commercial operation of H. B. Robinson, Unit No. 2 ?
4. If the answer to Interrogatory Number 3 is "yes", please furnish in connection therewith the information requested in (A) through (D) of Number 2.

5. State whether the Licensee has now, or ever has had any plans to reduce the heat in the waters of Lake Robinson and/or Black Creek?
6. If the answer to Number 5 is "yes", please advise what those plans are or were and their present status.
7. State whether or not plans for the extension of the cooling canal originally called for it to end North of the highway bridge which crosses the north end of the lake.
8. If they did, state why those plans were changed and who made the decision.
9. By calendar months give the number of days each month that H. B. Robinson, Unit No. 2 has operated at maximum allowable capacity since being authorized to do so.
10. By calendar months give the reason H. B. Robinson, Unit No. 2 was not operated at maximum allowable capacity for those days it was not so operated since being authorized to do so.
11. By calendar months give the dates of each month that H. B. Robinson, Unit No. 2 has been "shut down" since being authorized to operate at 2200 Mt.
12. Advise the number of hours it takes H. B. Robinson, Unit No. 2 to reach its maximum allowable operating capacity from "start up".
13. State the number of hours from "start up" that will elapse before the waters being discharged into the lake at the end of the cooling canal will be at its maximum temperature.
14. Give the name and title of the person responsible for the taking of temperature readings of the waters in the discharge canal, the waters of Lake Robinson and the waters of Black Crsek. Give the names and addresses of those actually making the readings.

15. What instructions, if any, are given to those who actually take the temperature readings? What equipment is used to make these measurements? What supervision is given to those who actually make the readings and what type of testing is utilized to determine the accuracy of the equipment?

16. How often are the temperature readings taken? Where are these readings recorded and in whose possession are these records?

17. State whether or not the temperature readings actually made are greater or lesser than those anticipated while H. B. Robinson, Unit No. 2 was in the planning stages and if so, by what margin.

18. State whether or not H. B. Robinson, Unit No. 2 was in the planning stages when Licensee offered at public auction the lots in a subdivision designated as "Subdivision Number 2, Carolina Power & Light, Lake Robinson."

19. State whether or not Licensee, its officers and agents knew the waters of Lake Robinson and Black Creek would be heated to the extent they presently are when H. B. Robinson, Unit No. 2 is operating at 2200 MWt when they offered said lots and access to the Lake to the public with the inducement of the lake waters as a means of swimming, boating and other water recreational facilities including fishing.

20. State whether or not when Lake Robinson was first built, Licensee planned only to put multiple fossil plants on the Lake and if so, how many?

21. State whether or not Licensee has made the statement that the operation of the fossil plant at Lake Robinson has a negligible effect on the waters of Lake Robinson as to heat.

22. Based upon the actual operational data obtained by Licensee, state the number of fossil plants of the same capacity as that situate at Lake Robinson, the waters of Lake Robinson could accommodate before its waters

would be heated to the extent they are now when both the fossil plant and H. B. Robinson, Unit No. 2 are operating at full allowable capacity.

23. State whether or not Applicant has conducted or had conducted tests to determine the effect upon fish and other wildlife the heated waters from H. B. Robinson, Unit no. 2 has had or is now having both in Lake Robinson and the waters of Black Creek, both those above and below Lake Robinson?

24. If the answer to Number 23 is "yes", please furnish the following:

(A) When such tests were conducted.

(B) By whom such tests were conducted.

(C) At what points on Lake Robinson and the waters of Black Creek such tests were conducted.

(D) The results of such tests.

(E) In whose possession are the results of such tests, giving specifically the identity and address of the person in charge thereof.

25. State whether or not A. J. Skaala was Chief Engineer for Carolina Power & Light when Lake Robinson was built and the fossil fuel plant was erected and put into operation?

26. If the answer to Number 25 is "yes", advise when he became Chief Engineer, if he is still Chief Engineer and if not when he ceased to be.

27. If the answer to Number 25 is "no", advise in what capacity he served Applicant during this period of time, whether he is still serving in that capacity at this time and if not when he ceased to serve in that capacity.

28. State whether or not A. J. Skaala is presently employed in any capacity by Applicant and if not when such employment ceased and the reason therefor.

29. If known, give present address of A. J. Skaala, whether employed or not.

30. State whether or not Applicant used A. J. Skaala as an expert witness to describe the operation of its fossil fuel plant located at Lake Robinson during land condemnation trials held in the Court of Common Pleas for Darlington County.

31. Did not A. J. Skaala testify under oath and in behalf of Applicant's condemnation of Atkinson land that on full load of the fossil fuel plant the water being discharged into the canal would be about fifteen degrees higher than the water taken in from the lake?

32. Did he not at the same time and place testify that these heated waters were carried four thousand feet and discharged back into the lake where this hot water formed an area of slime on the lake, on the surface of the lake?

33. State what education, training and experience qualified A. J. Skaala as an expert qualified to so testify and whose testimony to this effect was sponsored and endorsed by Applicant.

34. If Applicant knows or has access to such information, state whether the testimony of A. J. Skaala was based on theory or the actual operation of the fossil fuel plant at Lake Robinson.

35. If the answer to Number 34 is "theory", state whether or not there was available to Applicant and A. J. Skaala actual knowledge whether obtained from the fossil plant at Lake Robinson or other fossil plants of a like or similar design.

36. State whether or not Applicant has sprayed chemicals on or into lakes other than Lake Robinson which it owns or controls for the purpose of controlling weeds therein.

37. If the answer to Number 36 is "yes", state what chemicals were used, how often they were used and the effects such chemicals had on wild life in the lakes other than to destroy the weeds. Also state what, if any, tests were conducted to determine the effect on other wildlife, who conducted such tests, giving the name and address of such person, who has custody of the results of such tests, giving the name and address of such person.
38. State whether or not Applicant is presently spraying the waters of lakes owned or controlled by it, exclusive of Lake Robinson, with chemicals to control weed growth in such lakes. If the answer is "no", state when this practice was stopped and the reason therefor.
39. State whether or not Applicant has sprayed chemicals onto or into Lake Robinson for the purpose of controlling weed growth.
40. If the answer to Number 39 is "yes", state what chemicals were used, how often they were used, who was in charge of such operation giving name and address, whether same is continuing and if not, when it ceased.
41. State whether or not Applicant has injected any chemicals into the waters of Lake Robinson for any purpose whatsoever.
42. If Applicant has injected chemicals into the waters of Lake Robinson for any purpose including the control of weeds, state what chemicals were used, the effect such chemicals have had on wildlife in Lake Robinson, what tests were conducted to determine the effect, the name and address of the person in charge of conducting such tests, the name and address of the person having custody of the records of such tests.
43. State whether A. J. Skaala was correct or not when he testified under oath for Applicant that the efficiency of the steam turbine or steam cycle in connection with nuclear reactors was much lower than the conventional steam cycle, that there was more heat to dissipate in the condenser and this

would require more cooling water to take care of condensing requirement and that if Applicant were to use nuclear power on the lake, the amount of electrical capacity would be less than it could get under the conventional method.

44. If the answer to Number 43 is "yes", why did Applicant shorten the length of the cooling canal to its present length with nuclear power rather than extending it even further to the North than had originally been planned with what Mr. Skaala termed "the conventional steam cycle"?

45. If the answer to Number 43 is "no", please state when Applicant learned that such information was incorrect, the name and identity of the source determining such statement to be in error and the basis of such determination, that is whether by actual tests or theory.

46. Give the name, title and address of the officer of Applicant who is charged with the responsibility of certifying the accuracy of the information contained in the Environmental Report and the Supplements thereto filed with the Atomic Energy Commission, now the Nuclear Regulatory Commission, state how such information was compiled and what, if any, safeguards were applied to verify the accuracy of the information contained therein.

47. Give the name, title and address of the persons or persons who supplied the information contained in said Environmental Report and Supplements relative to heat generated by the fossil plant individually, by the nuclear plant individually, by the two combined, those who supplied the information on heat dissipation by use of the cooling canal and the waters of Lake Robinson, those who supplied the information as to the effect of such heated waters upon the fish and other wildlife in and around Lake Robinson and those who supplied the information as to the effect upon Black Creek, its waters,

the fish and wildlife contained therein.

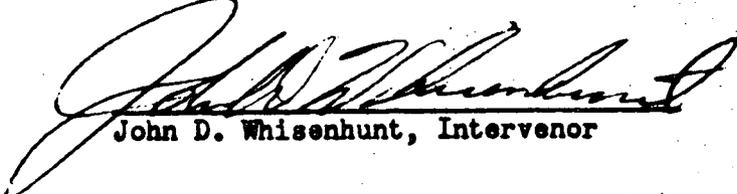
48. Give the name, title and address of those who Applicant might call as witnesses to the matters detailed in Number 47 at the hearing before the Atomic Safety and Licensing Board. (It is not the purpose of this question to require you to positively name those you will call but the intent is to have you give the list from which your witnesses will come and to restrict you at the hearing from calling witnesses not listed in answer to this interrogatory.)

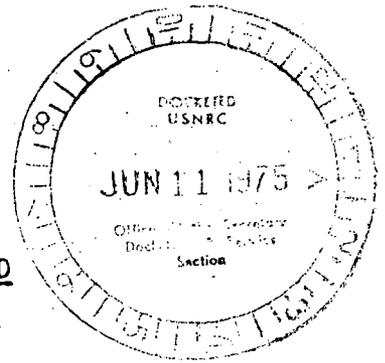
49. Give the name, title and address of the person or persons who have supplied Applicant with the information as to the effect upon those matters detailed in Number 47 authorization to and operation of the nuclear plant at 2300 MWt would have.

50. State the qualifications of such person or persons and whether such information is based on theory or actual knowledge and the sources of the theory or actual knowledge.

51. Give the name, title and address of all witnesses that Applicant might call as witnesses to the effects upon those matters detailed in Number 47 that operation at 2300 MWt will have or can be expected to have. (The purpose and intent of this interrogatory is the same as Number 48.).

52. State what effect increased heat in the discharge waters has upon the chemical makeup of the waters of Lake Robinson in their natural state and as affected by the injection of chemicals by Applicant for weed control or any other purpose.


John D. Whisenhunt, Intervenor



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER & LIGHT COMPANY)
(H. B. Robinson, Unit No. 2))

Docket No. 50-261
50-261 (OL modification)

CERTIFICATE OF SERVICE

I hereby certify that copies of "Interrogatories Propounded By Intervenor To Licensee-Applicant" dated June 7, 1975, were served on the following by deposit in the United States mail, first class postage prepaid this 7th day of June, 1975 :

John F. Wolf, Esquire, Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

William D. Paton, Esquire
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

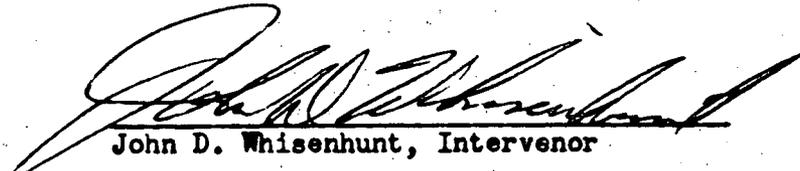
Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

L. Dow Davis, Esquire
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Docketing and Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

George F. Trowbridge, Esquire
Shaw, Pittman, Potts & Trowbridge
910 17th Street, N. W.
Washington, D. C. 20006


John D. Whisenhunt, Intervenor

6/2/75

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
CAROLINA POWER AND LIGHT COMPANY	)	Docket No. 50-261
(H. B. Robinson, Unit No. 2))	

NRC STAFF'S RESPONSE TO LICENSEE'S
MOTION TO ESTABLISH ISSUES FOR CONSOLIDATED HEARING

In a motion dated May 12, 1975, Carolina Power and Light Company (Licensee) moved that this Atomic Safety and Licensing Board (Board) specify the issues to be considered at the consolidated^{1/} hearing to be held in this case on August 12, 1975. The purpose of that hearing is to assess the environmental effect of continued licensing of the Robinson 2 plant under Section B of Appendix D to 10 CFR Part 50 and to determine whether the operating license should be amended under 10 CFR §50.90 to increase the authorized steady state power level of the Robinson facility from 2200 to 2300 MWt.

In its Motion to Establish Issues, the Licensee argues that the Board should decide only the two issues^{2/} submitted by Mr. John D.

^{1/} The Section B and "stretch" proceedings were consolidated by the Commission. AEC Consolidation Order, RAI-74-9 at 373 (Sept. 9, 1974)

^{2, 3/} Those issues were stated by Intervenor as whether:
"Periodically since the installation and operation of the nuclear plant, the waters of Lake Robinson have been heated to such an extent as to be unfit for use for recreational purposes. Fish and other wildlife have been in Petitioner's opinion damaged by the excessive heat generated by the nuclear plant.

(Footnote continued next page)

Whisenhut (Intervenor) in the Section B case. In the "stretch" case, the Licensee argues that the Board should only hear the same two issues^{3/} (Intervenor submitted identical issues in both proceedings). Licensee does acknowledge that the Board may sua sponte consider additional issues under "extraordinary" circumstances when serious safety, environmental, or common defense and security matters exist under the guidelines set forth in 10 C.F.R. §2.760a. Licensee's Motion to Establish Issues, at 7. However, Licensee implies that there are no extraordinary circumstances in this case.

I. Section B and License Amendment Jurisdiction

The Board is governed in this proceeding by the provisions of 10 C.F.R. Part 50, Appendix D, Section B. That section provides that in any hearing held pursuant to paragraph 3 of Section B, the provisions of sections A.10 and 11 will apply. 10 C.F.R. Part 50, Appendix D, Section B, Paragraph 3. The third paragraph of A.11 provides that:

"In a proceeding for the issuance of an operating license for a production or utilization facility described in paragraph 1 in which a hearing is held and matters covered by this appendix are in issue, the Atomic Safety and Licensing Board will decide those matters in controversy among the parties." 10 C.F.R. Part 50, Appendix D, Section B, Paragraph A.11. (Emphasis added).

(Footnote continued from previous page)

"Said plant is detrimental to the ecology of the waters of Black Creek which provides the main water supply of Lake Robinson, both those waters above as well as below the lake and the lake itself is kept at such a high degree of heat as to be unusable by human beings and harmful to all wildlife therein."

Since the instant Section B proceeding is a combined hearing on the issue of whether or not the operating license of Robinson 2 should be continued, modified, terminated or appropriately conditioned to protect environmental values, Notice of Opportunity for Hearing, 38 Fed. Reg. 19148, the proceeding falls under the operating license designation and the provisions of Paragraph A.11 of Section B apply to limit the issues to those in controversy. Consumers Power Company (Palisades Plant), ALAB-70, 5 A.E.C. 280 (1972).

The second half of this combined hearing, the "stretch" proceedings to determine whether or not the steady state power level of the Robinson facility should be increased from 2200 to 2300 MWt, is an amendment to an operating license under 10 C.F.R. §50.90.

Section 50.91 states that "In determining whether an amendment to a license or construction permit will be issued to the Applicant the Commission will be guided by the considerations which govern the issuance of initial licenses or construction permits to the extent applicable and appropriate." 10 C.F.R. §50.91. Thus the scope of the issues in a license amendment proceeding is the same as that of an initial license proceeding and is governed by 10 C.F.R. §2.760a, which provides that:

"In any initial decision in a contested proceeding on an application for an operating license for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on matters put into controversy by the parties to the proceeding and on matters which have been determined to be the issues in the proceeding by the Commission or the presiding officer." 10 C.F.R. §2.760a

Clearly, the Board must decide Intervenor's two thermal contentions in both the Section B and "stretch" proceedings.

II. Jurisdiction Over Other Environmental Issues

The Staff notes that the Board posed numerous questions concerning environmental matters at the Prehearing Conference held on November 30, 1973. Tr. 17-30. The theory of Applicant's Motion to Establish Issues for Consolidated Hearing suggests that there is a question whether the Board has the jurisdiction to raise and consider matters not put into issue by the parties. We do not believe that the Board is proscribed from inquiring into additional issues not raised by the parties. Both 10 C.F.R. §2.760a and the Indian Point decision^{4/} expressly provide that the Board is under no such constraint. The Staff is of the opinion that the Board is entitled to hear testimony on those issues it has raised plus any other serious environmental issues that may arise in the course of the proceedings.

In addition to requiring that a Board must decide matters contested by the parties at the operating license stage, Section 2.760a provides that:

"....Matters not put into controversy by the parties will be examined and decided by the presiding officer only in extraordinary circumstances where he determines that a serious safety, environmental, or common defense and security matter exists." 10 C.F.R. §2.760a

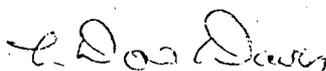
^{4/} Consolidated Edison Company (Indian Point Nuclear Generating Unit 3), ALAB-186, RAI-74-3 (March 26, 1974).

The questions raised by the Board indicate that environmental questions exist in the minds of the Board which fall within the ambit of "serious environmental matters" under Section 2.760(a). Unlike most cases in which a mandatory hearing and independent assessment of environmental matters is made at the construction permit stage, 10 C.F.R. §2.104 (d)(3), the Board in this case will be looking at environmental issues for the first time. Under these "extraordinary circumstances", the Board would be warranted in conducting an inquiry to satisfy itself of the adequacy of the Final Environmental Statement for the Robinson 2 Plant.

III. Conclusion

For the foregoing reasons, the Board, in addition to deciding the issues in controversy, has the authority to consider, sua sponte, other environmental issues it deems appropriate. Because one half of this proceeding is the stretch application which involves safety matters as well as environmental matters, the Board is also entitled to raise "serious safety issues" having to do with increasing the steady state power level of the plant. Any additional issues raised should be designated by the Board at the earliest possible date to give the parties reasonable notice as to the issues to be decided. Niagara Mohawk Power Corporation (Nine Mile Point Nuclear Station Unit 2), ALAB-264 slip op. at 14-15 (April 8, 1975).

Respectfully submitted,



L. Dow Davis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 2nd day of June, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CAROLINA POWER AND LIGHT COMPANY

(H. B. Robinson, Unit No. 2)

)
)
)
)

Docket No. 50-261

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSE TO LICENSEE'S MOTION TO ESTABLISH ISSUES FOR CONSOLIDATED HEARING," dated June 2, 1975 in the above-captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 2nd day of June, 1975:

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Hartsville Memorial Library
Home and Fifth Avenues
Hartsville, South Carolina 29550

George F. Trowbridge, Esq.
Shaw, Pittman, Potts & Trowbridge
910 17th Street, N. W.
Washington, D. C. 20006

Charles D. Barham, Jr., Esq.
Associate General Counsel
Carolina Power and Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

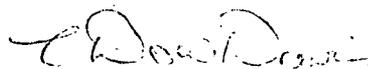
Mr. George A. Marshall
122 Harlington Drive
Hartsville, South Carolina 29550

John D. Whisenhunt, Esq.
Bridges and Whisenhunt
Bridges Building
P. O. Box 26
Florence, South Carolina 29501

Atomic Safety and Licensing
Appeal Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docketing and Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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



L. Dow Davis
Counsel for NRC Staff

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
(H. B. Robinson, Unit No. 2))

REQUEST FOR EXTENSION OF TIME FOR NRC STAFF'S
RESPONSE TO LICENSEE'S MOTION TO ESTABLISH ISSUES FOR
CONSOLIDATED HEARING

In a motion dated May 12, 1975, Carolina Power and Light Company moved that this Atomic Safety and Licensing Board specify the issues to be considered at the consolidated hearing to be held in this case on August 12, 1975. Because NRC Staff Counsel has been on travel in connection with another case, it is requested that the Staff be given until June 2, 1975 to respond to Licensee's motion.

The Board is advised that neither the Applicant nor the intervenor oppose this request for extension of time.

Respectfully submitted,

L. Dow Davis
L. Dow Davis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 27th day of May 1975



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
(H. B. Robinson, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "REQUEST FOR EXTENSION OF TIME FOR NRC STAFF'S RESPONSE TO LICENSEE'S MOTION TO ESTABLISH ISSUES FOR CONSOLIDATED HEARING," dated May 27, 1975 in the above-captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 27th day of May, 1975:

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
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Charles D. Barham, Jr., Esq.
Associate General Counsel
Carolina Power and Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

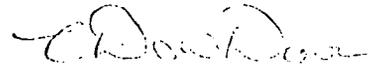
Mr. George A. Marshall
122 Harlington Drive
Hartsville, South Carolina 29550

John D. Whisenhunt, Esq.
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Florence, South Carolina 29501

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L. Dow Davis
Counsel for NRC Staff

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
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The Board is advised that neither the Applicant nor the Intervenor oppose this request for extension of time.

Respectfully submitted,
L. Dow Davis
L. Dow Davis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 27th day of May 1975

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
(H. B. Robinson, Unit No. 2))

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P. O. Box Y
Oak Ridge, Tennessee 37830

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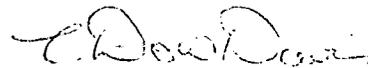
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Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



L. Dow Davis
Counsel for NRC Staff

5/13/75

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

CAROLINA POWER AND LIGHT COMPANY

(H. B. Robinson, Unit No. 2)

}
} Docket No. 50-261
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NOTICE OF APPEARANCE

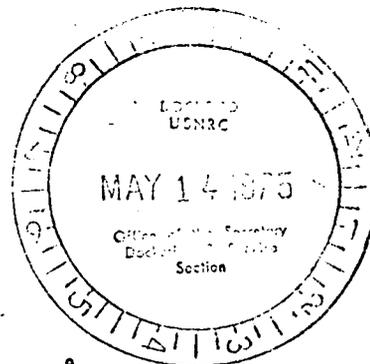
Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with 10 CFR 52.713(a), the following information is provided:

Name	- L. Dow Davis, IV
Address	- U.S. Nuclear Regulatory Commission Office of the Executive Legal Director Washington, D. C. 20555
Telephone	- Area Code 301-492-7501 (Or IDS Code 179 - Ext. 7501)
Admissions	- Superior Court for the District of Columbia - U.S. District Court for the District of Columbia - District of Columbia Court of Appeals
Name of Party	- NRC Staff U.S. Nuclear Regulatory Commission Washington, D. C. 20555

L. Dow Davis

L. Dow Davis, IV
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 13th day of May, 1975.



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
)
(H. B. Robinson, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "NOTICE OF APPEARANCE" of L. Dow Davis, IV, dated May 13, 1975 in the above-captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 13th day of May, 1975.

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
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Oak Ridge, Tennessee 37830

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Docketing and Service Section
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U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

L. Dow Davis

L. Dow Davis, IV
Counsel for NRC Staff

Reg. Cen

5/13/75

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
(H. B. Robinson, Unit No. 2))

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with 10 CFR §2.713(a), the following information is provided:

- Name - L. Dow Davis, IV
- Address - U.S. Nuclear Regulatory Commission
Office of the Executive Legal Director
Washington, D. C. 20555
- Telephone - Area Code 301-492-7501
(Or IDS Code 179 - Ext. 7501)
- Admissions - Superior Court for the District of
Columbia
- U.S. District Court for the District
of Columbia
- District of Columbia Court of Appeals
- Name of Party - NRC Staff
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

L. Dow Davis

L. Dow Davis, IV
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 13th day of May, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
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(H. B. Robinson, Unit No. 2))

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3409 Shepherd Street
Chevy Chase, Maryland 20015

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Atomic Safety and Licensing Board
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Washington, D. C. 20555

L. Dow Davis

L. Dow Davis, IV
Counsel for NRC Staff

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

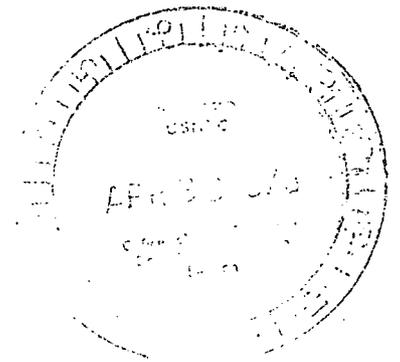
April 28, 1975

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

In the Matter of
Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261



Gentlemen:

Pursuant to your request made in the conference call of Friday, April 25, 1975, I enclose:

1. Safety Evaluation for Robinson 2 dated May 18, 1970;
2. "Power Increase" supplement to the Robinson 2 Safety Evaluation dated May 20, 1974;
3. Report on H. B. Robinson 2 by the Advisory Committee on Reactor Safeguards dated June 11, 1974.

I also enclose a copy of the Final Environmental Statement which was issued on April 21, 1975.

Sincerely,

L. Dow Davis by W.D. Patton

L. Dow Davis
Counsel for NRC Staff

cc (with encl.):
Hartsville Memorial Library
George F. Trowbridge, Esq.
Charles D. Barham, Jr., Esq.
Mr. George A. Marshall

John D. Whisenhunt, Esq.

cc (w/o encl.):
Atomic Safety and Licensing Appeal Board
Atomic Safety and Licensing Board Panel
Docketing and Service Section



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April 28, 1975

PDR John F. Wolf, Esq., Chairman
LPDR 3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

In the Matter of
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Sincerely,

L. Dow Davis
Counsel for NRC Staff

cc (with encl.):
Hartsville Memorial Library
George F. Trowbridge, Esq.
Charles D. Barham, Jr., Esq.
Mr. George A. Marshall

John D. Whisenhunt, Esq.

cc (w/o encl.):
Atomic Safety and Licensing Appeal Board
Atomic Safety and Licensing Board Panel
Docketing and Service Section

OFFICE >	OELD	OELD			
SURNAME >	L.D. Davis/db	JTourtellotte			
DATE >	4/28/75	4/29/75			

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
)
(H. B. Robinson, Unit No. 2))

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with § 2.713(a), 10 CFR Part 2, the following information is provided:

Name	- James R. Tourtellotte
Address	- U.S. Nuclear Regulatory Commission Office of the Executive Legal Director Washington, D. C. 20555
Telephone Number	- Area Code 301 - 492-7474 (Or IDS Code 179 - Ext.7474)
Admissions	- Supreme Court for the State of Oklahoma - Supreme Court of the United States
Name of Party	- NRC Staff U.S. Nuclear Regulatory Commission Washington, D. C. 20555



James R. Tourtellotte
Assistant Chief Hearing Counsel
for the NRC Staff

Dated at Bethesda, Maryland
this 21st day of March, 1975

H
4

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CAROLINA POWER AND LIGHT COMPANY) Docket No. 50-261
)
(H. B. Robinson, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of "NOTICE OF APPEARANCE" for James R. Tourtellotte, dated March 21, 1975, in the captioned matter, have been served on the following by deposit in the United States mail, first class or air mail, this 21st day of March 1975:

John F. Wolf, Esq., Chairman
3409 Shepherd Street
Chevy Chase, Maryland 20015

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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Panel
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

A handwritten signature in cursive script, reading "James R. Tourtellotte". The signature is written in black ink and is positioned above the printed name.

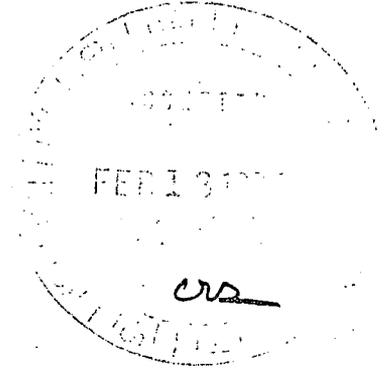
James R. Tourtellotte
Assistant Chief Hearing Counsel
for the NRC Staff

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

RELATED CORRESPONDENCE

February 12, 1975

John D. Whisenhunt, Esq.
Bridges and Whisenhunt
Bridges Building
P. O. Box 26
Florence, South Carolina 29501



In the Matter of Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261

Dear Mr. Whisenhunt:

Pursuant to our recent conversations concerning water law applicable to Robinson, I enclose a copy of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). As we discussed, the Environmental Protection Agency recently issued an authorization to Carolina Power and Light Company to discharge from the Robinson facility pursuant to Section 402 of the FWPCA and under Section 511(c)(2), NRC is not permitted to "review any effluent limitation or other requirement established pursuant to" the FWPCA nor are we authorized "to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this Act".

I hope you find this information helpful.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. D. Paton".

William D. Paton
Counsel for NRC Staff

Enclosure:
FWPCA

cc w/o enclosure:

John F. Wolf, Esq.
Dr. A. Dixon Callihan
Dr. Richard F. Cole
Hartsville Memorial
Library
George F. Trowbridge, Esq.
Charles D. Barham, Jr., Esq.

Mr. George A. Marshall
Atomic Safety and Licensing
Appeal Board Panel
Atomic Safety and Licensing
Board Panel
Docketing and Service Section



February 12, 1975

John D. Whisenhunt, Esq.
Bridges and Whisenhunt
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W. Regan-EP
NRC Central File
PDR
LPDR
ELD Reading File
ELD FF (2)

In the Matter of Carolina Power and Light Company
(H. B. Robinson, Unit No. 2)
Docket No. 50-261

Dear Mr. Whisenhunt:

Pursuant to our recent conversations concerning water law applicable to Robinson, I enclose a copy of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). As we discussed, the Environmental Protection Agency recently issued an authorization to Carolina Power and Light Company to discharge from the Robinson facility pursuant to Section 402 of the FWPCA and under Section 511(c)(2), NRC is not permitted to "review any effluent limitation or other requirement established pursuant to" the FWPCA nor are we authorized "to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this Act".

I hope you find this information helpful.

Sincerely,

William D. Paton
Counsel for NRC Staff

Enclosure:
FWPCA

cc w/o enclosure:

John F. Wolf, Esq.
Dr. A. Dixon Callihan
Dr. Richard F. Cole
Hartsville Memorial
Library

Mr. George A. Marshall
Atomic Safety and Licensing
Appeal Board Panel
Atomic Safety and Licensing
Board Panel
Docketing and Service Section

George F. Trowbridge, Esq.
Charles D. Barham, Jr., Esq.

OFFICE >	ELD				
SURNAME >	WPaton:am HWilchins				
DATE >	2/12/75				

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY)
(H. B. Robinson, Unit No. 2))

Docket No. 50-261

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "Notice of Appearance" for Richard E. Jones have been served on the following by deposit in the United States mail this 17th day of January, 1975.

John F. Wolf, Esquire
Chairman, Atomic Safety
and Licensing Board
3409 Shepherd Street
Chevy Chase, Maryland 20015

Howard M. Wilchins, Esquire (6)
William D. Paton, Esquire
Office of General Counsel
Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dr. A. Dixon Callihan
Union Carbide Corporation
P. O. Box Y
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Mr. Frank W. Karas (21)
Chief, Public Proceedings Branch
Office of the Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Atomic Energy Commission
Washington, D. C. 20545

Atomic Safety and Licensing Board Panel
U. S. Atomic Energy Commission
Washington, D. C. 20545

John D. Whisenhunt, Esquire
Bridges and Whisenhunt
Bridge Building
Florence, South Carolina 20501

Docketing and Service Section
Office of the Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545



Richard E. Jones
Carolina Power & Light Company
Associate General Counsel

<u>Item No.</u>	<u>Description</u>	<u>Date</u>
6. (cont.)	Certificate of Service of Amendment No. 4 on local officials.	12/15/66
7.	Letter from Shaw, Pittman, Potts, Trowbridge and Madden advising that proprietary notations on Amendment Nos. 2 and 4 should be disregarded.	12/19/66
8.	Amendment No. 5 to the application for license including: Fourth Supplement to Preliminary Facility Description and Safety Analysis Report. Certificate of Service of Amendment No. 5 on local officials dated 1/9/67.	1/6/67
9.	Amendment No. 6 to the application for license including: Fifth Supplement to Preliminary Facility Description and Safety Analysis Report.	1/27/67
10.	Amendment No. 7 to the application for license including: Sixth Supplement to Preliminary Facility Description and Safety Analysis Report. Certificate of Service of Amendment No. 6 and Amendment No. 7 on local officials	2/6/67 2/8/67