RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

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

'83 APR 22 A10:38

APPLICANTS' ANSWERS TO CONSERVATION COUNCIL'S INTERROGATORIES TO APPLICANTS (First Set)

Applicants Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency, pursuant to 10 C.F.R. §2.740b, hereby submit the following responses to "Conservation Council's Interrogatories to Applicants (First Set)." The provision of answers to these interrogatories is not to be deemed a representation that Applicants consider the information sought to be relevant to the issues to be heard in this proceeding.

ANSWERS TO GENERAL INTERROGATORIES

INTERROGATORY NO. 1. State the name, present or last known address, and present or last known employer of each person known to the Applicants to have first-hand knowledge on which the responses are based, in each of the contentions which are the subject of this set of interrogatories.

ANSWER. Applicants assume this question to mean those with "first-hand knowledge" of the specifiic responses as provided, and as such, the answer to this interrogatory is contained in Attachment A attached hereto.

INTERROGATORY NO. 2. Identify those facts concerning which each such person has first-hand knowledge.

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ANSWER. The answer to this interrogatory is contained in Attachment A attached hereto.

INTERROGATORY NO. 3. State the specific basis or facts which support each response.

ANSWER. The specific basis or facts supporting each response are indicated in the answers to each specific interrogatory on the contentions.

INTERROGATORY NO. 4. State the name, present or last known address, and present or last employer of each person who provided information upon which the Applicants relied in answering each interrogatory herein.

ANSWER. The answer to this interrogatory is contained in Attachment A attached hereto.

INTERROGATORY NO. 5. Identify all such information which was provided by each such person and the specific interrogatory response in which such information is contained.

ANSWER. The answer to this interrogatory is contained in Attachment A attached hereto.

INTERROGATORY NO. 6. State the name, address, title, employer and educational and professional qualifications of each person the Applicants intend to call as an expert witness or a witness relating to any contention which is the subject of this set of interrogatories.

ANSWER. The Applicants do not know at this time which, if any, expert or other witnesses they expect to call relating to any contention which is the subject of this set of interrogatories. When and if Applicants identify such witnesses, Applicants will supplement this response in a timely manner.

INTERROGATORY NO. 7. Identify the contention(s) regarding which each person in Interrogatory 6 is expected to testify.

ANSWER. See answer to Interrogatory No. 6.

INTERROGATORY NO. 8. State the subject matter to which each person in Interrogatory No. 6 is expected to testify.

ANSWER. See answer to Interrogatory No. 6.

INTERROGATORY NO. 9. Identify all documents in Applicants' possession, custody, or control, including all relevant page citiations, pertaining to the subject matter of, and upon which the Applicants relied in formulating responses in each contention which is the subject of this set of interrogatories.

ANSWER. Applicants have identified all such documents within each response to the specific interrogatories on the contentions.

INTERROGATORY NO. 10. State the specific response in each contention which Applicants contend each document supports.

ANSWER. Applicants have stated the specific response which Applicants contend each document supports within each response to the specific interrogatories on the contentions.

INTERROGATORY NO. 11. Identify all documents in Applicants' possession, custody or control, including all relevant page citations, upon which you relied in answering each interrogatory herein.

ANSWER. Applicants have identified all such documents within each response to the specific interrogatories on the contentions.

INTERROGATORY NO. 12. Identify all other sources of information, not identified in response to Interrogatories 5, 8 and 11, which was used in answering the interrogatories set forth herein.

ANSWER. Applicants have identified all such other sources of information within each response to the specific interrogatories on the contentions.

INTERROGATORY NO. 13. Identify all documents which the Applicants intend to offer as exhibits during this proceeding to refute contentions which are the subject of this set of interrogatories.

ANSWER. The Applicants have not at this time identified which documents, if any, they intend to offer as exhibits to

refute contentions which are the subject of this set of interrogatories. When and if Applicants identify such exhibits, Applicants will supplement this response in a timely manner.

ANSWERS TO INTERROGATORIES ON CONTENTION 4

OBJECTIONS

Applicants object to providing answers to Interrogatories 4-1 through 4-5, which address the transportation of unirradiated fuel assemblies (as opposed to spent fuel) to the Harris Plant. CCNC Contention 4 is limited to the issue of the "environmental effects associated with transportation of spent fuel from other CP&L reactors to Shearon Harris."

Interrogatories 4-1 through 4-5, which do not address in any way the transportation of spent fuel assemblies to the Harris Plant, do not pose questions that are relevant to the issue admitted in this proceeding or that are reasonably calculated to lead to the discovery of admissible evidence. The environmental effects of the transportation of unirradiated fuel to the Harris Plant are set forth in Table S-4 to 10 C.F.R. §51.20 and are not litigable in the operating license proceeding.

Applicants object to responding to Interrogatory 4-14, which addresses disposal of radioactive wastes and spent fuel produced by the operation of the Harris Plant. Interrogatory 4-14 does not seek information relevant to the issue admitted in this proceeding or that is reasonably calculated to lead to the discovery of admissible evidence. Furthermore, the environmental effects of the transportation of spent fuel to a reprocessing plant or waste repository are set forth in Table S-4 to 10 C.F.R.

§51.20 and are not litigable in the operating license proceeding.

Note: APPLICANTS HAVE NO PLANS TO SHIP RADIOIACTIVE WASTE FROM CP&L'S ROBINSON OR BRUNSWICK PLANTS TO THE SHNPP SITE; HENCE, THE RESPONSES TO INTERROGATORIES 4-6 THROUGH 4-13 DISCUSS ONLY SPENT NUCLEAR FUEL.

INTERROGATORY NO. 4-6(a). Please describe the shipping casks which the Applicants plan to utilize in transporting radioactive wastes and spent fuel from other reactors to the SHNPP site.

(b). What are their model numbers?

(c). What are their technical and design criteria?

(d). What has been the past experience of the Applicants with these particular casks?

(e). What has been the past experience of the Applicants with similar casks?

(f). What has been the past experience of other utilities with these particular casks or with similar casks?

(g). Have these particular casks or similar casks ever been involved in an accident?

(h). If so, please describe the accident(s), including but not limited to the date of the accident, the place, which utility and shipper were involved, the amount of radiation released, was any party held liable for the accident?

(i). Have any of these casks ever failed or otherwise released any radiation?

ANSWER 4-6(a). In the event of shipments of spent fuel from Robinson to SHNPP or Brunswick to SHNPP, Applicants will use casks which are licensed by the NRC, such as CP&L's IF-303 cask.

(b). CP&L currently owns the IF-303 (one of the IF-300 series) spent fuel shipping cask. It is, therefore, likely that any such shipments referred to in Answer 4-6(a) above, in the near term, would make use of this cask. Applicants have not identified other casks for future shipments.

(c). NRC licensed spent fuel shipping casks must meet the generic criteria established in 10 C.F.R. Part 71, Subpart C and the applicable appendices referenced in Subpart C. For CP&L's cask, these criteria are addressed throughout the IF-300

Shipping Cask Consolidated Safety Analysis Report (NEDO-10084-2) are summarized in Section X.

(d). CP&L has safely transported 304 PWR assemblies in 44 shipments from its Robinson Plant near Hartsville, S. C., to its Brunswick Plant near Southport, N. C., using the IF-303 cask. In addition, 144 BWR assemblies in eight shipments were transferred from the spent fuel pool of Brunswick 2 to the spent fuel pool of Brunswick 1. Records on these shipments include shipping papers, bills of lading, and material transfer reports to the NRC.

(e). Applicants have no past experience with similar casks.

(f). Applicants do not have information regarding the experience of other utilities with similar casks.

(g). To Applicants' knowledge, none of the IF-300 series of casks has ever been involved in an accident.

(h). Not applicable.

(i). To Applicants' knowledge, none of the IF-300 series of casks has ever failed or released radioactive material in violation of the cask license or federal regulations.

INTERROGATORY NO. 4-7(a). Do the Applicants plan on transporting radioactive waste or spent fuel from other reactors to the SHNPP site?

(b). If so, from which reactor(s)?

(c). Please describe the routes which the Applicants plan on utilizing to transport radioactive waste or spent fuel from other reactors.

(d). For each of the above routes, please describe each intersection and provide an assessment of the particular dangers of each.

(e). What quantities of radioactive waste or spent fuel are the Applicants planning on shipping to the SHNPP site?

(f). How radioactive will each shipment of radioactive wastes or spent fuel be?

(g). Please provide a schedule for shipping radioactive wastes or spent fuel from other reactors to the SHNPP site, including dates for each shipment, hours which each shipment is to be made, and estimate times of arrival at the SHNPP site.

(h). Please describe all contingency plans and schedules which the Applicants will follow in case of inclement weather.

ANSWER 4-7(a). Shipment of spent fuel from CP&L's Robinson and/or Brunswick Plant to the SHNPP site in the future is a possibility. The actual transporting will be performed by the railroad or trucking company.

(b). See Answer 4-7(a).

(c). Applicants have not defined the schedules or the mode (i.e., truck or rail) of transportation of spent fuel to the SHNPP site, have not selected the routes, and have not requested NRC approval of any routes for such shipments.

(d). No routes have been defined; see Answer 4-7(c).

(e). No quantities of spent fuel to be shipped to the SHNPP site have been defined.

(f). The cask contents of any spent fuel shipment will be determined so that cask licensing conditions are not exceeded with respect to radioactivity, and so that the DOT package radiation limits will not be exceeded. NRC cask licensing conditions are defined in 10 C.F.R. Part 71. DOT radiation limits are described in 49 C.F.R. §173.393. For CP&L's shipping cask, the limitations on cask spent fuel content are described in the NRC cask license (NRC Certificate of Compliance Number 9001).

(g). See Answer 4-7(c).

(h). See Answer 4-7(c). Applicants will not make spent fuel shipments when it would be imprudent to do so.

INTERROGATORY NO. 4-8(a). Describe population concentration along the route(s) which the Applicants plan to transport radioactive wastes and spent fuel from other reactors to the SHNPP site, including but not limited to, employees at the originating site and at SHNPP, security personnel at both sites, temporary office personnel at both sites, construction workers on the SHNPP site, residencies, businesses, towns, cities and recreation areas.

(b). What steps will be taken by the Applicants to safeguard the health and safety of each person described in 4-8 (a)?

(c). Will any of the above persons be supplied with radiation monitors?

(d). If so, who will be so provided and with what type of monitor?

(e). What exposure to radiation is each of the above persons likely to receive in normal conditions of transportation of radioactive wastes and spent fuel from other reactors to the SHNPP site?

(f). What exposure to radiation is each of the above persons likely to receive in case of an accident during transport?

ANSWER 4-8(a). Such routes have not been established; hence, we cannot define population concentrations along such routes.

(b). For all spent fuel shipments, Applicants will comply with all applicable regulations.

(c). Yes.

(d). Federal regulations (10 C.F.R. §20.202) address personnel monitoring requirements. In accordance with these regulations, Applicants will supply appropriate personnel monitoring equipment and will require use of such equipment. Regulations define the persons who shall be subject to such monitoring. Monitoring equipment types could be film badges, pocket dosimeters, etc.

(e). In normal conditions of transportation of spent fuel, each person engaged in such transportation should receive exposures at or near background levels, since the cask contents will be limited to comply with NRC and DOT regulations.

(f). NRC licensed casks are designed to NRC regulations. 10 C.F.R. §71.36(a)(1) requires that the dose rate following an accident be not more than 1,000 MR/HR at three feet from the cask surface. The exposure that any individual might receive depends on his/her distance from the cask, the amount of time at such distance, and the specific contents of the cask.

INTERROGATORY NO. 4-9(a). What modes of transportation do the Applicants plan on utilizing for each shipment of [spent] fuel to the SHNPP?

(b). What are the qualifications of personnel utilized in each of the above modes of transportation?

(c). What training have the above personnel received or will receive before they are utilized in transporting radioactive waste or spent fuel from other reactors to the SHNPP site?

ANSWER 4-9(a). If Applicants were to ship spent fuel from other reactors to SHNPP, the most likely modes of transportation would be by rail and/or by truck.

(b). The qualifications of carrier personnel used in each of the above modes is determined by the carrier. Applicants have no information on such qualifications. CP&L-provided escorts must complete a training program. See Answer 4-9(c) below.

(c). Training which the above carrier personnel received or will receive before they are utilized in transporting spent fuel from other reactors to SHNPP is or will be that provided by the carriers. Applicants have no information regarding such training. In the past, escorts have been provided by CP&L. Prior to use as escorts, each individual was required to undergo a six-module training course and pass an examination on the course material. The manual used by CP&L's training unit is entitled "Physical Protection of Irradiated Reactor Fuel In-

Transit Training Program." This program complies with the NRC requirements in 10 C.F.R. Part 73, Appendix D.

INTERROGATORY NO. 4-10(a). Please describe all possible accidents which could possibly arise in transporting radioactive waste or spent fuel from other reactors to the SHNPP site.

(b). What plans have the Applicants made or will make in regards to each of the above accidents?

ANSWER 4-10(a). The accidents which could occur while transporting spent fuel from other reactors to the SHNPP site in licensed casks are described in the cask safety analysis reports. Safety analysis reports (SAR) are available from the NRC for each licensed cask. For CP&L's cask, see the IF-300 Shipping Cask Consolidated SAR (NEDO-10084-2).

(b). In the event of any transportation accident, Applicants will take the necessary steps to advise the state authorities (i.e., State Police, Highway Patrol, etc.) which have jurisdiction over such accidents and by law the responsibility to respond. As Applicants deem necessary or appropriate, Applicants' response teams will be dispatched to provide assistance.

INTERROGATORY NO. 4-11(a). What experience have the Applicants in transporting radioactive wastes or spent fuel from any of their other reactors?

(b). Please describe the amounts of material shipped, the routes taken, casks used, and any accidents or radiation released.

(c). What training have the Applicants in transporting radioactive wastes or spent fuel?

(d). Please describe the training, including who on the Applicants staff has received such training.

ANSWER 4-11(a). See Answer 4-6(b).

(b).

	PWR Fuel	BWR Fuel
Amount of Material shipped	304 Assemblies	144 Assemblies
Route taken	Rail via McBee, Hamlet, & Leland	Not applicable (on site transfer)
Casks used	IF-303	IF-303
Any accidents	No	No
Any radiation released	None exceeding regulatory limitations	None exceeding regulatory limitations

(c). CP&L does not conduct training in the actual transporting of spent fuel since such transporting is done by the carrier.

(d). See Answer 4-11(c).

INTERROGATORY NO. 4-12(a). What will be the cool down time of the radioactive waste or spent fuel before it is transported from other reactors to the SHNPP site.

(b). How radioactive will the radioactive waste or spent fuel be when it is transported?

ANSWER 4-12(a). Cool-down time of spent fuel prior to any shipment to SHNPP from other CP&L reactors would be that required to meet the cask license condition, which is set forth in the Cask Safety Analysis Report and/or the cask license. For CP&L's shipping cask, the prior cool-down time is determined by the license (NRC Certificate of Compliance No. 9001) requirements that for dry shipments the maximum decay heat per package (i.e., cask) not exceed 40,000 BTU/HR or maximum of 5,725 BTU/HR/PWR assembly and 2,225 BTU/HR/BWR assembly. This is equivalent to a cool-down time of approximately three years. If spent fuel is shipped to SHNPP from either Robinson or Brunswick, the cool-down

time for such spent fuel will most probably be five years or more.

(b). The radioactivity of any spent fuel which might be shipped to SHNPP will not exceed the cask license condition or exceed the DOT package radiation limitations.

INTERROGATORY NO. 4-13. Do the Applicants plan on transporting radioactive waste or spent fuel that is currently in spent fuel pools at other reactors?

ANSWER. All spent fuel generated at CP&L reactors will ultimately be shipped from their spent fuel pools.

ANSWERS TO INTERROGATORIES ON CONTENTION 12

INTERROGATORY NO. 12-1(a). Have any pressure readings been taken in the Buckhorn Dam by the Applicants or anyone else?
(b). If so, what were the readings?
(c). Have the Applicants or anyone else ever made any studies of or analysis of those conditions which could cause the Buckhorn Dam to break?
(d). If so, what were the findings of those studies or analysis?
(e). Who made those studies or analysis and what were their qualifications?

ANSWER 12-1(a). The Applicants have not taken pressure readings in the Buckhorn Dam and are not aware of any readings taken by others.

(b). Not applicable.

(c). The Applicants have not made any such studies or analyses and are not aware of any studies or analyses made by others.

(d). Not applicable.

(e). Not applicable.

INTERROGATORY NO. 12-2(a). Has there been any analysis or study made on the effects of a flood on the Cape Fear intake?
(b). If so, what were the findings of such study or analysis?

(c). Who made those studies or analysis and what were their qualifications?

ANSWER 12-2(a). A frequency analysis for the flood flows in the Cape Fear River and a curve showing the corresponding expected water surface elevations just below Buckhorn Dam were performed. Based upon these findings the flood levels at the Cape Fear River intake above the Buckhorn Dam were predicted. These predicted water levels have been confirmed by a study of the U. S. Army Corp of Engineers, Wilmington, North Carolina:

Flood	River Stage (feet MSL)	
	Upstream side of Buckhorn Dam	10,000 feet upstream from Buckhorn Dam
100 year	165.5	168.5
Standard Project	182.0	186.5

(b). The predicted extreme high water level and high water level in the Cape Fear River at the Cape Fear intake are 185 feet MSL and 175 feet MSL, respectively. The pump deck of the intake structure is at El. 190 feet MSL which is 5 feet above the predicted extreme high water level in the Cape Fear River.

(c). The analysis is the responsibility of Dr. C. H. Zee, Consulting Civil Engineer, Ebasco Services Incorporated. Ebasco is an architectural/engineering firm under contract to Applicants. Dr. Zee holds a B.S. degree in Civil Engineering from National Central University of China, a M.S. degree in Hydraulic Engineering from the University of Iowa, and Ph.D. in Engineering Science from Utah State University. He has been employed with Ebasco for four years.

INTERROGATORY NO. 12-3(a). Have any pressure readings been taken in the Main Dam at the Shearon Harris site by the Applicants or anyone else?

(b). If so, what were the readings?

(c). Have the Applicants or anyone else ever made any studies of or analysis of those conditions which could cause the Main Dam to break?

(d). If so, what were the findings of those studies or analysis?

(e). Who made those studies or analysis and what were their qualifications?

ANSWER 12-3(a). Piezometric pressure in the impervious core and in rock under the core trench of the Main Dam are being observed at the locations shown in FSAR Figure 2.5.6-1 and discussed in FSAR Section 2.5.6.8, and Section 2.5F.1.8.1 of Appendix 2.5F of the FSAR. The readings are taken by the Applicants.

(b). Applicants have a large number (several thousand) of such pressure readings (measured in terms of water depths), dating from December 1980 to the present and contained in documents listing each piezometer and approximately weekly pressure readings therefrom, located in the corporate offices of CP&L, 411 Fayetteville Street Mall, Raleigh, N. C. The burden of ascertaining the answer to this interrogatory would be the same for CCNC as for the Applicants. Therefore, Applicants will produce said documents for review and copying by CCNC at CCNC's request.

(c). The following studies were made for the safety of the Main Dam:

(1). Probable maximum flood water level in the Main Reservoir together with the design wind wave runup and design wind setup. The studies are presented in FSAR Section 2.4.3.

(2). Effect of failure of the Auxiliary Dam on the Main Dam (see FSAR Section 2.4.4.2).

(3). Wave runup and wind setup due to the probable maximum wind and normal reservoir water level (FSAR Section 2.4.5.3.3).

(4). Static and pseudo-static analysis of the dam (FSAR Section 2.5.6.5.4.1).

(5). Dynamic analysis of the dam against earthquake (FSAR Section 2.5.6.5.4.2 and Appendix 2.5D).

(d). The top of the Main Dam (El. 260 feet MSL) is higher than the maximum water level (approximately El. 243 feet) as determined in the Main Reservoir by the studies noted in (1), (2), and (3) above. The analyses of the dam as stated in (4) and (5) above indicate adequate factors of safety for various conditions. The factors of safety for static and pseudo-static analyses are given in Table 2.5.6-1, Figures 2.5.6-19 and 2.5.6-20 as discussed in Section 2.5.6.5.6.1 of the FSAR. The factors of safety for dynamic analyses are given in Sections 2.5D.5.4.7, 2.5D.5.4.8, 2.5D.8.2, 2.5D.9.5.2.6., and 2.5D.18 of Appendix 2.5D of the FSAR.

(e). All of the studies listed in Answer 12-3(c)(1) through (4) are the responsibility of Dr. C. H. Zee and Mr. Shiam Goyal, Principal Civil Engineer, Ebasco Services Incorporated, whereas the study referred to in Answer 12-3(c)(5) was performed by Woodward-Moorhouse & Associates Inc., 2730 Adeline Street, Oakland, California, 94607. Woodward-Moorhouse & Associates, Inc., is a firm of consulting engineers and geologists and

consultants in applied earth sciences. Dr. Zee's qualifications are provided in Answer 12-2(c) above. Mr. Goyal holds a Bachelor's Degree in Civil Engineering from the University of Roorkee, India, and M.S. degree in Mechanics and Hydraulics from the University of Iowa. He has been employed by Ebasco for fourteen years and has been in his present position for the past six.

INTERROGATORY NO. 12-4(a). What is the elevation of the base of the downstream side of the Main Dam at the SHNPP site in feet MSL?

(b). Please provide in detail a topographical layout of the Main Dam site, including elevation and distance from the downstream face of the terrain surrounding the downstream side of the dam.

(c). What is the length of the longest wind fetch on the downstream side of the dam which fronts into the dam?

(d). Please provide a drawing of the downstream face of the Main Dam with any indications of anticipated current and turbulance patterns for inundations of the face of the dam up to 217 feet MSL.

(e). What engineering studies, if any, have been made to determine the effect on the downstream face and structural stability of the Main Dam of inundation up to 217 feet MSL?

(f). If any, what were the findings of such studies?

(g). What studies or analysis have been made to determine the effects of rapid drawdown from the downstream face of the Main Dam, especially while the upstream side water level remains at flood stage?

(h). If any, what were the findings of such studies?

ANSWER 12-4(a). The elevation of the base of the downstream side of the Main Dam at the SHNPP site is approximately El. 160 feet MSL.

(b). The topographical layout of the Main Dam and Main Dam site are shown in Ebasco drawings CAR-2167-G-6240 and CAR-2167-G-6010. These drawings are in the possession of the Applicants and are available for review by Conservation Council upon request at CP&L's corporate offices.

(c). The longest wind fetch on the downstream side of the dam which fronts into the dam is approximately 1200 feet at El. 180.4 feet MSL (corresponding to a 100-year return water level in the Buckhorn Creek) and approximately 1500 feet at El. 184.2 feet MSL (corresponding to a 500-year return water level in the Buckhorn Creek).

(d). The topography of the area downstream of the dam is shown in the two drawings referred to in Answer 12-4(b), above. No study for anticipated current and turbulence patterns for inundations of the face of the dam up to El. 217 feet MSL have been made.

(e). No such study has been made for downstream water level at El. 217 feet.

(f). Not applicable.

(g). No study for a rapid drawdown condition on the downstream face with flood stage on the upstream side of the dam has been made. However, a rapid drawdown condition from El. 190 feet to El. 165 feet MSL on the downstream face of the dam with water level in the reservoir at El. 250 feet MSL was considered for static, pseudo-static and dynamic analyses of the dam as discussed in Section 2.5.6.5.4 and Appendix 2.5D of the FSAR.

(h). The analyses stated in Answer 12-4(g), above, indicate that the dam has an adequate factor of safety for the rapid drawdown condition.

INTERROGATORY NO. 12-5(a). What is the lowest level of the Auxiliary Reservoir at which adequate cooling water can be received through the Emergency Service Water Intake Channel, assuming that this is the only source for reactor cooling water at the time?

(b). Is there a backup intake route for service water when [sic] the Auxiliary Reservoir when the water level in the Reservoir is too low to be received through the Emergency Service Water Intake Channel?

(c). If any, please describe this backup route, including its location and size.

(d). Does this route rely on water from any source other than the Auxiliary Reservoir?

ANSWER 12-5(a). The Emergency Service Water Intake Channel has been designed to draw the required quantity of water from the Auxiliary Reservoir with the reservoir water level as low as 246.5 feet MSL, the lowest level reached following four months emergency shutdown operations (FSAR Table 2.4.11-15). As the bed of the intake channel is at El. 238 feet MSL (FSAR Section 2.5.6-7), adequate cooling water can still be drawn from the Auxiliary Reservoir, if required, even when the reservoir water level is lower than El. 246.5 feet.

(b). In answering this interrogatory, Applicants assumed that the first "when" in Interrogatory 12-5(b) should read "from." The Emergency Service Water Intake Channel is the only route between the Auxiliary Reservoir and the plant intakes. When the Auxiliary Reservoir is unavailable for any reason, the Main Reservoir will serve as the backup water supply (FSAR Section 2.4.2.2 and Section 2.4.11.7). In accordance with Regulatory Guide 1.27, the reservoir system is designed such that both reservoirs will not be unavailable at the same time.

(c). Not applicable.

(d). Not applicable.

INTERROGATORY NO. 12-6(a). How do the Applicants plan to maintain the water level in the Auxiliary Reservoir at 250 feet MSL in dry periods?

(b). If water is to be pumped from the Main Reservoir during dry periods, what power source(s) will be used for such pumps?

(c). What is the location(s) of such pump(s)?
(d). Please describe all situations in which water will be pumped from the Main Reservoir into the Auxiliary Reservoir.
(e). Please describe the route(s) in which water pumped from the Main Reservoir to the Auxiliary Reservoir will take.
(f). Please describe the amount of energy such pump(s) will use and detail how the amount of energy used will change as hydrological and weather conditions change.
(g). Please describe the location, course, and origin of the supplying power lines, if any, which provide energy for the pump(s).

ANSWER 12-6(a). The water level in the Auxiliary Reservoir is maintained at 250 feet MSL during dry periods by pumping from the Main Reservoir (FSAR Section 2.4.11.7). The Cooling Tower Make-Up Water Pumps are utilized for this purpose.

(b). The Cooling Tower Make-Up Water Pumps are fed from the normal power supply from the unit generator or offsite power source.

(c). The pumps, designated 1X-NNS, 2X-NNS and 1 & 2X-NNS, are located in the Emergency Service Water and Cooling Tower Make-up Intake Structure, bays C, A and B, respectively, at the Main Reservoir Intake Channel.

(d). Level transmitters located in the Emergency Service Water Screening Structure at the Auxiliary Reservoir Intake Channel monitor water levels in the Auxiliary Reservoir. These level transmitters provide indication that the minimum water level is being approached by annunciation and alarm in the main control room. Make-up water to the Auxiliary Reservoir is continuous while the Cooling Tower Make-up Pumps are operating and the make up valve is open. If for any reason the make-up valve is closed when the control room operator receives a low level alarm for the Auxiliary Reservoir, the operator will open

the valve from the Main Control Room by use of a control switch on the Main Control Board.

(e). Water is pumped from the Main Reservoir through any number of these Cooling Tower Make-up Water Pumps. The water then flows through the discharge valving provided on each of the pumps into a common header. A motor-operated valve controls flow by appropriate operator action into the Auxiliary Reservoir Intake Channel with the water being discharged through an open-ended line.

(f). The Cooling Tower Make-up Water Pump motors are rated at 1250 HP, 6.6 KV, 3 phase, 180 AMP (full load current). The motor characteristics are independent of hydrological and weather changes.

(g). The power feed for pumps 1X-NNS and 2X-NNS is from the 6.9 KV switchgear located in the reactor auxiliary building (El. 286.0' MSL). The power feed for pump 1&2X-NNS is from the 6.9 KV switchgear located in the turbine building (El. 261.0' MSL). The cable is routed via yard duct runs through manholes and terminated in the Emergency Service Water and Cooling Tower Make-up Water Structure.

INTERROGATORY 12-7(a). Please describe in detail the cooling pattern of water from, to, and through the Auxiliary Reservoir when it is the only source of reactor coolant.

(b). Please describe how this pattern is changed or loses effectiveness when the Auxiliary Separating Dike is breached.

(c). Please describe the effects on the cooling pattern when the Auxiliary Separating Dike is overtopped by the water in the Auxiliary Reservoir.

ANSWER 12-7(a). In no case is either reservoir the source of direct "Reactor Coolant".

The path of service water through the Auxiliary Reservoir is as follows: (Refer to FSAR Figures 1.2.2-1, 2.4.1-1 and 2.4.1-2). From the Auxiliary Reservoir through the Emergency Service Water Intake Channel to the Emergency Service Water Screening Structure, is routed by gravity flow through buried pipes to the Emergency Service Water and Cooling Tower Make-Up Intake Structure where the Emergency Service Water Pumps distribute the water to the plant through buried pipes. The heated water from the service water system is discharged from the Emergency Service Water Discharge Structure into the Emergency Service Water Discharge Channel. The water flows out the Discharge Channel into the northeastern finger of the Auxiliary Reservoir and through the Auxiliary Reservoir Channel into the central finger of the reservoir. The water then completes the circuit through the main body of the reservoir back to the Emergency Service Water Intake Channel (FSAR Section 9.2.1.2).

(b). If the seismic Category I Auxiliary Separating Dike was to fail, the designed cooling path through the Auxiliary Reservoir Channel described in Answer 12-7(a) above would be short-circuited and the ability of the Auxiliary Reservoir to perform its emergency cooling water function would be adversely affected. Under this postulated condition the Main Reservoir would function as a backup source of cooling water with discharge of water into the Auxiliary Reservoir by its normal route out of the Emergency Service Water Discharge Channel and then into the Main Reservoir over the Auxiliary Dam Spillway. The path thus established exceeds the heat dissipation requirements normally

provided by the Auxiliary Reservoir alone, and it is more than adequate for plant requirements (FSAR Section 2.4.4.1).

(c). If the Auxiliary Separating Dike is overtopped, the cooling pathway will be partially short circuited. However, the same conditions that caused the overtopping would also supply the reservoir system with unheated rain/flood waters that would dilute the heated discharge water and thereby lessen the requirements for full circulation of discharge water through the entire Auxiliary Reservoir.

INTERROGATORY 12-8(a). What assumptions are made regarding reservoir water temperature in FSAR Table 2.4.11-15?

(b). Please recalculate the above table using water temperatures of 82, 85 and 90 degrees Farenheit.

(c). At what point on any of these charts is the temperature of the water flowing into the service water system intake 91.5 degrees Farenheit?

ANSWER 12-8(a). The Auxiliary Reservoir temperatures are assumed to be the forced equilibrium temperatures for the post-accident periods considered in FSAR Table 2.4.11-15. The forced equilibrium temperature is independent of the initial reservoir water temperature; therefore, no assumptions regarding reservoir water temperature at the beginning of each period were made. The Auxiliary Reservoir temperatures are the result of the heat energy balance analysis of the reservoir, using the plant heat rejection rate indicated in the same table in conjunction with the worst monthly meteorological conditions shown in Table 2.4.11-3 for each period, and are listed below:

Time After Accident (Month)	0-0.25	0.25-0.5	0.5-0.75	0.75-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0
Month for Application of Worst Monthly Meteorological Conditions*	July	July	July	July	Aug.	Aug.	June	June	May	May
Forced Equilibrium Temperatures (°F)	90.7	86.9	86.7	86.6	87.4	87.4	87.6	87.5	83.1	83.1

*The four worst meteorological months were arranged in descending order.

(b). Applicants cannot be required by interrogatory to perform additional calculations and as such would normally object to this interrogatory as stated; however, since forced equilibrium temperature is independent of initial reservoir water temperature, as stated in Answer 12-8(a), calculations as requested would be meaningless and would not change the table in any way.

(c). None.

INTERROGATORY 12-9(a). Have any pressure readings been taken in the Auxiliary Dam or Auxiliary Separating Dike by the Applicants or anyone else?

(b). If so, what were the readings?

(c). Have the Applicants or anyone else ever made any studies of or analysis of those conditions which could cause the Auxiliary Dam to break?

(d). If so, what were the findings of those studies or analysis?

(e). Who made those studies or analysis and what were their qualifications?

ANSWER 12-9(a). Piezometric pressures in the impervious core and in rock under the core trench of the Auxiliary Dam are being observed by the Applicant at the location shown in FSAR Figure 2.5.6.3. (See FSAR Section 2.5.6.8, and 2.5F.2.5.1. of Appendix 2.5F of the FSAR). No piezometric pressure readings are being taken for the Auxiliary Separating Dike because the water levels on both sides of the dike are the same.

(b). Applicants have a large number (several thousand) of such pressure readings (measured in terms of water depths), dating from December 1980 to the present and contained in documents listing each piezometer and approximately weekly pressure readings therefrom, located in the corporate offices of CP&L, 411 Fayetteville Street Mall, Raleigh, N. C. The burden of

ascertaining the answer to this interrogatory would be the same for CCNC as for the Applicants. Therefore, Applicants will produce said documents for review and copying by CCNC at CCNC's request.

(c). The following studies were made for the safety of the Auxiliary Dam:

(1) Probable maximum flood water level in the Auxiliary Reservoir together with the design wind wave runup and design wind setup (see FSAR Section 2.4.3).

(2) Effect of failure of Auxiliary Separating Dike on the Auxiliary Dam (see FSAR Section 2.4.4.1).

(3) Wave runup and wind setup against the Auxiliary Dam due to the probable maximum wind and normal reservoir water level (FSAR Section 2.4.5.3.3).

(4). Static and pseudo-static analyses of Auxiliary Dam (FSAR Section 2.5.6.5.4.1).

(5). Dynamic analyses of Auxiliary Dam against earthquake (FSAR Section 2.5.6.5.4.2 and Appendix 2.5D).

(d). The top of Auxiliary Dam, El. 260 feet MSL, is higher than the maximum water level, approximately El. 258 feet MSL, in the Auxiliary Reservoir as determined by studies noted in (1) and (3), above.

The analyses as stated in (4) and (5) above indicate that the Auxiliary Dam Separating Dike has adequate factors of safety. The factors of safety for static and pseudo-static analyses are given in Table 2.5.6-2, Figures 2.5.6-18 and 2.5.6-21, as discussed in Section 2.5.6.5.6.1 of the FSAR. The factors

of safety for the dynamic analyses are given in Sections 2.5D.6.4.6, 2.5D.6.5.4, 2.5D.6.6, 2.5D.8.3, 2.5D.9.6.2.5 and 2.5D.18.3.2 of Appendix 2.5D of the FSAR.

(e). All the studies listed in Answer 12-9(c)(1) through (4) are the responsibility of Dr. C. H. Zee of the Civil Consulting and Mr. Shiam Goyal of the Civil Engineering departments of Ebasco Services Incorporated. The study in Answer 12-9(c)(5) was performed by Woodward-Moorhouse & Associates, Inc., 2730 Adeline Street, Oakland, California, 94607. The qualifications of those named are provided in Answer 12-3(e).

ANSWERS TO INTERROGATORIES ON CONTENTION 14

INTERROGATORY 14-1(a). Have any studies or analysis been made by the Applicants or anyone else on the impact of hydrilla on the reservoirs at the SHNPP site?

(b). If any, what are the findings of such studies or analysis?

(c). Who made such studies or analysis and what are their qualifications?

ANSWER 14-1(a). Yes, such an analysis has been made by the Applicants.

(b). It is feasible for hydrilla to possibly become established in the shallow areas of the SHNPP reservoirs. This could interfere to some extent with expected recreational use in the Main Reservoir.

(c). The person making the analysis is Mr. David H. Schiller. Mr. Schiller holds an M.S. degree in Botany from N.C. State University. He has been employed by CP&L as a biologist since 1973. He has been involved in vegetation studies at several of the Applicants' power plants including hydro, coal and nuclear sites since 1973. He is a co-author of the report

entitled "The Status of Hydrilla in North Carolina" (a report cited by CCNC in its Answer to Applicants' Interrogatory 14-1(b) to Conservation Council, dated 3/10/83) which was instrumental in the establishment of the North Carolina Interagency Council on Aquatic Weed Control. He presently serves on the education committee of that council. He is a charter member of the South Carolina Aquatic Plant Management Society, Inc., founded in 1979. He presently serves on the Board of Directors and chairs the Bylaws Committee of that organization. He is a licensed applicator for aquatic herbicides (North Carolina Department of Agriculture License Number 855).

INTERROGATORY 14-2(a). Have any of the Applicants' personnel or outside consultants made any studies or analysis of the impact of hydrilla on any lake in Piedmont North Carolina?

(b). If any, what are the findings of such studies or analysis?

(c). Who made such studies or analysis and what are their qualifications?

ANSWER 14-2(a). Yes.

(b). According to a report entitled "The Status of Hydrilla in North Carolina," cited in Answer 14-1(c) above, hydrilla was known to be established at 13 locations in Wake County, North Carolina. The report concludes that the presence of hydrilla in North Carolina poses a potential threat to the state's aquatic resources. Awareness of the problem and the development of a hydrilla management program offers promise of minimizing the impact of hydrilla and preventing its spread into adjacent lakes.

(c). The information in the Answer 14-2(b) is based on the report entitled "The Status of Hydrilla in North Carolina"

which was written by ten persons representing state, federal, and private organizations. This report was forwarded to the Governor of North Carolina on February 8, 1982, from James A. Graham, Commissioner of Agriculture, and Joseph W. Grimsley, Secretary of Natural Resources and Community Development. The authors of the report consisted of an ad hoc committee representing various fields of the biological and physical sciences including, but not limited to, botany, zoology, soils, crop science, and biological engineering. Mr. David H. Schiller, one of the authors, is a botanist employed by CP&L. Mr. Schiller's qualifications are provided in Answer 14-1(c).

INTERROGATORY NO. 14-3(a). How many recreational boats are expected to use the SHNPP reservoirs each year?

(b). Which sections of the reservoirs will boats be allowed in?

(c). Will there be any inspection of such boats or boat trailers for hydrilla before they are allowed to enter the reservoirs?

(d). How many waterfowl and herons are expected to be found in the SHNPP reservoirs for any part of the year?

(e). What sections of the reservoir will they be found in?

(f). What are the sources of hydrilla infestation known to the Applicants?

(g). For each of the above sources, what procedures will be used by the Applicants to prevent infestation of hydrilla in the reservoirs?

ANSWER 14-3(a). The number of recreational boats which will use the SHNPP Main Reservoir each year is unknown. Because proposed public boat ramp facilities at the Main Reservoir would provide parking spaces for 50 vehicles with trailers at each of two locations, the maximum daily use would be limited to approximately 100 boats. No recreational boats are expected to use the Auxiliary Reservoir.

(b). Boats will have access to most parts of the Main Reservoir except an area immediately adjacent to the Cooling Tower Make-up Channel. No access will be provided to the Auxiliary Reservoir.

(c). Boats and trailers will be inspected on a voluntary basis. See Answer 14-3(g).

(d). The actual number of waterfowl and herons expected to be found in the SHNPP reservoirs for any part of the year is unknown. However, waterfowl and waterbird surveys conducted during the fall and winter of 1981-82 and 1982-83 indicate that 16 species of these birds utilized the reservoirs in limited numbers.

(e). The waterfowl and other waterbirds may be found in locations in the SHNPP reservoirs that provide appropriate habitat. Most species of wading birds (herons and egrets) may be found along the shoreline in shallow waters of the reservoirs. Waterfowl species are generally distributed in reservoirs depending upon feeding habits. For example, dabbling ducks frequent shallow areas while diving ducks will generally visit both shallow and somewhat deeper areas.

(f). In general, hydrilla is known to be introduced into various bodies of water from fragments attached to boats or trailers that are used on lakes where hydrilla occurs and which are then transported to another body of water. The same phenomenon may occur due to fragments clinging to waterbirds which move among various bodies of water.

(g). As part of a program to prevent the establishment of hydrilla in the SHNPP Main Reservoir, signs will be posted and brochures will be made available at each of the public boat ramp facilities on the Main Reservoir. These informational items will point out the potential problems caused by hydrilla, describe the plant, request that boat users inspect their equipment prior to launching, and provide a telephone number to call to report hydrilla in the reservoir. Public boat access to the Auxiliary Reservoir will not be provided. No action is feasible to prevent the introduction of hydrilla into the SHNPP reservoir by waterfowl or other birds.

INTERROGATORY NO. 14-4(a). Is there any hydrilla currently in the SHNPP reservoirs?

(b). If any, what quantity is present and where is it located?

(c). Has a field study been made to determine if hydrilla is currently in the reservoirs at the SHNPP site?

(d). If any, what are the findings of the study?

(e). Who made such study and what are their qualifications?

ANSWER 14-4(a). Not to the Applicants' knowledge.

(b). Not applicable.

(c). Yes. Aquatic vegetation surveys of both the Main and Auxiliary Reservoirs at SHNPP have been completed and will continue to be conducted on a regular schedule during spring, summer and fall as part of the regular nonradiological environmental monitoring program.

(d). No hydrilla was observed in the SHNPP reservoirs.

(e). The surveys were made by Mr. David H. Schiller, whose qualifications are provided in Answer 14-1(c), and by Dr. W. T. Hogarth (Manager of CP&L's Environmental Technology

Section) and Dr. B. J. Ward (Principal Scientist of CP&L's Biology Unit). Dr. Hogarth holds B.S. and M.S. degrees from the University of Richmond (Va.) and a Ph.D. from N.C. State University. He joined CP&L's staff as a biologist in September 1972. Dr. Ward holds a B.S. degree from East Carolina University and M.S. and Ph.D. degrees from N.C. State University. He joined CP&L's staff as a biologist in March 1973.

INTERROGATORY NO. 14-5(a). What procedure will be followed by the Applicants to prevent the spread of hydrilla in the SHNPP reservoirs if and when it appears?

(b). Who are the personnel responsible for preventing the spread of hydrilla and what are their qualifications?

(c). If herbicides are to be used, which ones are being considered?

(d). Please describe any adverse environmental impacts from the use of such herbicides.

(e). What is the annual cost of the use of such herbicides?

(f). Will it be necessary to drain the reservoirs so that the herbicides can be effective against hydrilla?

(g). What other techniques have the Applicants considered to control the spread of hydrilla in the SHNPP reservoirs?

ANSWER 14-5(a). If hydrilla should be discovered in the SHNPP reservoir(s), Applicants intend to have the affected area marked with buoys and buoy float lines and marked with suitable signs. All reasonable efforts will be made to keep boats out of that area. If and when it should prove necessary for hydrilla control, Applicants may apply herbicides in an appropriate manner.

(b). The person responsible for preventing the spread of hydrilla in the SHNPP reservoir(s), if and when it is introduced, is David H. Schiller. Mr. Schiller's qualifications are given in Answer 14-1(c).

(c). If and when it should prove necessary that herbicides be used to control hydrilla at the SHNPP reservoirs, then the selection of herbicides to be used would be based on the best aquatic vegetation control technology available at that time. Currently, it is generally known that the most common and effective chemical control of hydrilla has been the combination of Diquat (Chevron Chemical Company) and various copper compounds (Cutrine Plus, Komeen). Also, formulations of Endothall (Pennwalt Corporation) have been effective. Additional efficacy has been achieved by the utilization of carriers (inverts or polymers) to cause the herbicides to sink and stick to hydrilla.

(d). No significant adverse environmental impacts should occur if herbicides are applied according to label instructions.

(e). The annual cost of the use of herbicides varies with location, application rate, the herbicides used, the size of the areas treated, and other factors; however, it is estimated that the cost of chemicals for control of hydrilla is approximately $150 to $175 per acre per year, while the cost of equipment, manpower, travel and other required items may add $10 per acre.

(f). No.

(g). Applicants have considered the use of herbivorous fish for aquatic weed control.

INTERROGATORY NO. 14-6(a). Describe all intake structures designed to prevent vegetable and other material from entering the reactor(s), including but not limited to coarse strainers, fine screens, and travelling screen mechanisms.

(b). What is the size of the mesh used in each of the above structures and mechanisms?

(c). What is the size of the opening at each of the above points?

(d). What is the velocity, quantity, direction, and temperature of the water entering each of the above structures?

ANSWER 14-6(a). The SHNPP Emergency Service Water (ESW) and Cooling Tower Make-up (CTMU) Intake Structure and the Emergency Service Water Screening Structure (including opening sizes) are described in FSAR Sections 3.8.4 and 9.2.1 and are depicted in the figures associated with these sections. Coarse screens are the first trash barrier for lake water entering the plant. Both of the above structures have coarse screens consisting of 3/8 inch diameter vertical bar on 3 inch centers-type constructed of ASTM A-36. The next barriers preventing trash from entering the plant are travelling water screens on both structures. These screens are 0.08 inch diameter W&M wire gauge 14 with clear openings of 3/8 square inches. The mesh material is S.S. type 304. The third barriers preventing trash from entering the plant are pump discharge self-cleaning strainers on both the Cooling Tower Make-Up Pumps and the Emergency Service Water Pumps. The cooling tower pump discharge strainers have an open area of 3916 square inches with a total area of 13,054 square inches and are of a perforated S.S. type 304 sheet design. Each CTMU pump strainer is designed for a continuous flow of 52,000 gpm. The strainer has an equivalent diameter opening of 1/16 inch. Each Emergency Service Water Strainer has a total area of 72.6 square feet with 37.1 square feet of open area. The opening size is 1/16 inch equivalent diameter and is S.S. type 304 slot design. Each ESW pump strainer is designed for a continuous flow of 21,500 gpm.

(b). See Answer 14-6(a).

(c). See Answer 14-6(a).

(d). The velocity and flow into and within the above structures is estimated as follows:

	CTMU Bays	ESW Intake Bay	ESW Screening Bay
velocity (fps)	0.44	0.41	0.64
flow (cfs)	67	49	53

Water temperature is estimated to vary between 33°F and 95°F.

INTERROGATORY NO. 14-7(a). If hydrilla or other vegetable material passes through the above intake structures and mechanisms, can it lodge in any point in the Service Water System or elsewhere in the reactor(s)?

(b). If so, please describe in detail all points in which vegetable material can lodge, including but not limited to their locations, dimensions, and the velocity, quantity, temperature, and direction of the water flowing through that point.

(c). If hydrilla or other vegetable material passes through the above intake structures and mechanisms, can it clog any valves in the Service Water System or elsewhere in the reactor(s)?

(d). If so, please describe in detail all such valves which vegetable material can clog, including but not limited to their locations, dimensions, and the velocity, quantity, temperature, and direction of the water flowing through that valve.

ANSWER 14-7(a). No. Particulates of hydrilla or other vegetable materials passing through the 1/16 inch equivalent diameter opening in the strainers will be of such small size that they will pass through the Service Water system and will not lodge in it due to the relatively high water flow in the system. It is not possible for anything from the Service Water System to get into the reactor due to the closed-loop nature of the reactor cooling water system.

(b). Not applicable

(c). No.

(d). Not applicable.

INTERROGATORY NO. 14-8(a). What procedures will be followed by Applicants to dislodge vegetable matter within the reactor(s)?

(b). What procedures will be followed by the Applicants to unclog valves of vegetable material within the reactor(s)?

(c). Who are the personnel responsible for dislodging vegetable material and unclogging valves, and what are their qualifications?

ANSWER 14-8(a). See Answer 14-7(a).

(b). Not applicable.

(c). Not applicable.

INTERROGATORY NO. 14-9(a). Can the travelling screen mechanism lift 24 tons of wet vegetable material per minute?

(b). Have there been any studies or analysis of the mass of vegetable material the travelling screen mechanism can lift per minute before it stops working?

(c). If any, what are the results of such studies or analysis?

(d). Who made such studies or analysis and what are their qualifications?

(e). Have there been any physical or material tests made of these or similar travelling screen mechanisms to determine the maximum mass of vegetable or other material they can lift per minute before it stops working?

(f). If any, what are the results of such tests?

(g). Who made such tests and what are their qualifications?

ANSWER 14-9(a). This is not known by Applicants.

(b). No.

(c). Not applicable.

(d). Not applicable.

(e). No tests have been done on the SHNPP screen mechanism; however, it is unknown by Applicants whether tests have been done elsewhere on similar screens.

(f). Not applicable.

(g). Not applicable.

ATTACHMENT A

Robert K. Kunita -- Answers 4-6, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, and 4-13
411 Fayetteville Street
Raleigh, N. C. 27602
employed by CP&L

Louis H. Martin -- Answers 4-6, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, and 4-13
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David H. Schiller -- Answers 14-1, 14-2, 14-3, 14-4 and 14-5
Shearon Harris Energy & Environmental Center
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New Hill, N. C. 27562
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Richard C. Yates -- Answers 14-1, 14-2, 14-3, 14-4 and 14-5
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David C. McCarthy -- Answers 14-6, 14-7, 14-8 and 14-9
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New York, New York 10048
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Dr. Chong-Hung Zee -- Answers 12-2, 12-3, and 12-9
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Dr. J. H. Huang -- Answer 12-8
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Murray Weber -- Answers 12-1, 12-2, 12-3, 12-4, 12-5, 12-7, 12-8, and 12-9
2 World Trade Center
New York, New York 10048
employed by Ebasco

Leonard S. Loflin -- Answers 12-1, 12-2, 12-3, 12-4, 12-5, 12-6, 12-7, 12-8, 12-9, 14-6, 14-7, 14-8, and 14-9
411 Fayetteville Street
Raleigh, N. C. 27602
employed by CP&L

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATION BY COUNSEL

I, Hill Carrow, Counsel for Applicants in this proceeding, certify that I have made the following efforts to resolve objections which Applicants have to certain of Conservation Council's Interrogatories to Applicants (First Set), dated March 18, 1983:

1. On Wednesday, April 6, 1983, I spoke to Mr. John Runkle, Counsel for Conservation Council, by phone concerning Applicants' objections to Interrogatories 4-1, 4-2, 4-3, 4-4, and 4-5 (on Contention 4) as they relate to fresh rather than spent fuel. I also raised an objection as to Interrogatory 4-9 to the extent that it relates to fresh fuel, and Interrogatory 4-14 in that it addresses disposal of spent fuel and radioactive waste from the Harris Plant.

2. Mr. Runkle stated that Conservation Council needed the information as requested and would take it to the Board if we objected. He stated that it was felt that Table S-4 and

regulations related thereto contemplated a "complete environmental assessment" of possible compounded dangers of fresh and spent fuels both being transported in and out of the Harris Plant at the same times and on the same roads, among other things.

3. In light of this response, I informed Mr. Runkle that I would contact him later if Applicants changed their stance on the objections.

4. I did not contact Mr. Runkle subsequently, as Applicants maintain their objections.

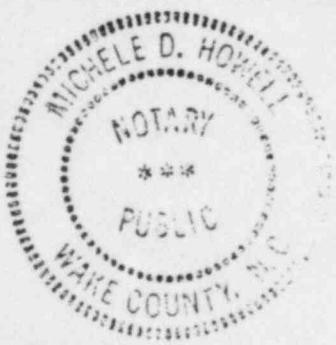
Hill Carrow

Hill Carrow
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602
(919) 836-6839

Sworn to and subscribed before
me this 20th day of April, 1983.

Michele D. Howell
Notary Public

My commission expires on 4/6/88.



SUMMARY OF OBJECTIONS

Interrogatories 4-1, 4-2, 4-3, 4-4, and 4-5 are objected to as irrelevant to Conservation Council of North Carolina's contention 4 in that the interrogatories address unirradiated fuel assemblies rather than spent fuel. Interrogatory 4-14 is objected to as irrelevant to Conservation Council of North Carolina's contention 4 in that the interrogatory addresses disposal of radioactive wastes and spent fuel produced by operation of the Harris Plant.

Hill Carrow

Hill Carrow
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602
(919) 836-6839

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

AFFIDAVIT OF LEONARD I. LOFLIN

County of Wake)
)
State of North Carolina)

Leonard I. Loflin, being duly sworn according to law, deposes and says that he is Manager - Engineering, Harris Plant, Carolina Power & Light Company; that the answers to Interrogatories on Contention 12 and answers to Interrogatories 14-6 through 14-9 contained in "Applicants' Answers to Conservation Council's Interrogatories to Applicants (First Set)" are true and correct to the best of his information, knowledge and belief; and that the sources of his information are the officers, employees, agents and contractors of Carolina Power & Light Company.

Leonard I. Loflin

Sworn to and subscribed before
me this 20th day of April, 1983.

Notary Public

My commission expires on 09-20-86.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

AFFIDAVIT OF LOUIS H. MARTIN

County of Wake)
)
State of North Carolina)

Louis H. Martin, being duly sworn according to law, deposes and says that he is Manager - Nuclear Fuel of Carolina Power & Light Company; that the answers to Interrogatories on Contention 4 contained in "Applicants' Answers to Conservation Council's Interrogatories to Applicants (First Set)" are true and correct to the best of his information, knowledge and belief; and that the sources of his information are the officers, employees, agents and contractors of Carolina Power & Light Company.

Louis H. Martin

Sworn to and subscribed before me this 19th day of April, 1983.

Susie H. Freeman
Notary Public

My commission expires 3/28/87.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'83 APR 22

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

AFFIDAVIT OF WILLIAM T. HOGARTH

County of Wake)
)
State of North Carolina)

William T. Hogarth, being duly sworn according to law, desposes and says that he is Manager - Environmental Technology Section of Carolina Power & Light Company; that the answers to Interrogatories 14-1 through 14-5 on Contention 14 contained in "Applicants' Answers to Conservation Council's Interrogatories to Applicants (First Set)" are true and correct to the best of his information, knowledge and belief; and that the sources of his information are the officers, employees, agents and contractors of Carolina Power & Light Company.

William T. Hogarth

Sworn to and subscribed before
me this 7th day of April, 1983.

Notary Public

My commission expires [illegible].

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Applicants' Answers to Conservation Council's Interrogatories to Applicants (First Set) has been served by deposit in the United States Mail, first class prepaid, addressed to the parties listed below this 20th day of April, 1983.

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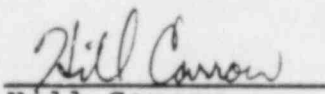

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