



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-OLA
)	
(H.B. Robinson Steam Electric)	August 1, 1983
Plant, Unit 2)	

THE HARTSVILLE GROUP
SECOND SET OF INTERROGATORIES AND REQUESTS TO PRODUCE
OF CAROLINA POWER & COMPANY

Pursuant to 10 CFR Sections 2.740(b) and 2.741, The Hartsville Group (Intervenor) hereby serves its Second Set of Interrogatories and Requests to Produce upon the Applicant in the above-captioned proceeding. These Interrogatories and Requests to Produce involve The Hartsville Group's Contentions 1(a), 1(b), and 3.

Each interrogatory shall be answered fully in writing, under oath or affirmation, and include all pertinent information known to the Applicant including its officers, directors employees, agents, advisors or counsel. Each request to produce applies to pertinent documents which are in the possession, custody or control of the Applicant, including its officers, directors, employees, agents, advisors or counsel. In answering each interrogatory and responding to each request, please recite the

interrogatory or request preceding each answer or response. Also, identify the person providing each answer or response, including but not limited to his or her name, address, employer, current position, and a statement of professional qualifications.

These interrogatories and requests shall be continuing in nature. Thus, any time information is obtained which renders any previous response incorrect or indicates that a response was incorrect when made, the Applicant should supplement its previous response to the appropriate interrogatory or request to produce.

The term "document" shall include any writings, drawings, graphs, charts, photographs, and other data compilations from which information can be obtained. We request that at a date or dates to be agreed upon, you make available for inspection and copying all documents subject to the requests set forth below.

REQUESTS FOR DOCUMENTS

Pursuant to 10 CFR Section 2.741, the Intervenor requests you to make available for inspection and copying, at a time and location to be designated, any and all documents of whatsoever description identified in the responses to the Intervenor's interrogatories below; including but not limited to:

(1) any written record of any oral communication between or among Applicant, its advisors, consultants, contractors, agents, attorneys, and/or any other persons, including but not limited to the NRC Staff, the intervenor, and their advisors, consultants, contractors, agents, attorneys and/ or any other persons; and

(2) any documents, correspondence, letters, memoranda, diagrams, reports, charts, photographs, or any other writing of whatsoever description, including but not limited to work papers, prior drafts and notes of meetings.

If you maintain that some documents should not be made available for inspection, you should specify the documents and explain why such are not being made available. This requirement extends to any such document, described above, in the possession of the Applicant, their advisors, consultants, agents or attorneys.

INTERROGATORIES

Pursuant to 10 CFR Section 2.740(b), the Intervenor requests the Applicant by and through their attorneys to answer separately and fully in writing, under oath or affirmation, by persons having knowledge of the information requested, the following interrogatories.

A. INTERROGATORIES RELATING TO HARTSVILLE CONTENTION 1 (PARTS A & B)

1-1. For each person identified with respect to Applicant's responses to General Interrogatory 1 (G-1) to "The Hartsville Group First Set of Interrogatories and Requests to Produce," please describe that person's professional qualifications.

1-2. Describe in detail the administrative structure of each of the following CP & L departments. The description should include the Table of Organization with the incumbent in each position identified and assignment of responsibilities for ensuring adherence to NRC operating procedures, rules and regulations.

- a) Corporate Quality Assurance
- b) Corporate Nuclear Safety and Research
- c) Nuclear Operations Department
- d) Nuclear Plant Engineering Department

e) Nuclear Plant Construction Department

1-3. For each person who has occupied the position of Plant Manager at Robinson, Brunswick or Harris since January 1, 1978, please provide that person's name, current position and address, and a statement of professional qualifications.

1-4. Why was the decision made to create a separate Vice Presidential level position to oversee the Brunswick Nuclear Plant?

1-5. Identify any and all correspondence, memoranda, notes or minutes of meetings or any other documents which describe, discuss or otherwise refer to the background to and decision to create the position of Vice President-Brunswick Nuclear Project.

1-6. Identify and provide statements of professional qualifications for the Robinson Steam Generator Repair Project Team Manager, Project Construction Manager, the Manager-Corporate Quality Assurance and the Senior Engineer noted at page 22 of "Applicant's Answers to The Hartsville Group First Set of Interrogatories and Requests to Produce" (Applicant's Answers).

1-7. Describe in detail the procedure for the Corporate Health Physics assessments of the health physics programs identified in response to Interrogatory 1-11 of the prior set of Intervenor's Interrogatories (Applicant's Answers, p. 25).

1-8. Please provide a copy of the procedure referenced in Interrogatory 1-7, above.

1-9. Please provide to Intervenor or make available for copying a copy of the Corporate Quality Assurance Program Manual,

Revision 4 (Blue Book) or any more recent revision thereof.

1-10. Describe in detail the General Employee Training program.

1-11. What is the documentary basis for your response to Interrogatory 1-10?

1-12. Please provide to Intervenor or make available for copying the Nuclear Training Section General Employee Training Manual, lesson plans, textbooks, and any other materials employed in the General Employee Training program.

1-13. Describe in detail the difference in job functions and qualifications of a Quality Assurance Technician and a Quality Assurance Specialist.

1-14. What records does CP & L maintain at a) the Corporate level and b) at the site level with respect to disciplinary actions taken with respect to CP & L employees or contractor or subcontractor employees with regards to non-compliance with NRC operating and administrative rules, regulations and procedures?

1-15. Identify by name and provide the professional qualifications of the following persons:

- a) Site Personnel Director - Robinson
- b) Site Director of Quality Assurance - Robinson
- c) the "representative of the Manager of Construction" referenced at p. 34, Applicant's Answers
- d) Site Personnel Director - Harris
- e) Site Manager of Quality Assurance and Quality

Control - Harris

- f) Construction Site General Manager - Harris
- g) Site Personnel Director - Brunswick
- h) Site Director of Quality Assurance and Quality
Control - Brunswick.

B. INTERROGATORIES RELATING TO
HARTSVILLE CONTENTION 3

3-1. How many Westinghouse Model 44 steam generators have experienced significant degradation of tubes resulting in tube leaks?

3-2. Identify each reactor employing Westinghouse Model 44 steam generators which has experienced tube leaks.

3-3. What data do you possess on the frequency and severity of tube leaks in reactors equipped with Westinghouse Model 44 steam generators?

3-4. What are the bases for your responses to Interrogatories 3-1 through 3-3?

3-5. How many tube ruptures have occurred at reactors employing Westinghouse Model 44 steam generators?

3-6. At which reactors employing Westinghouse Model 44 steam generators, have:

- a) steam generator tubes been plugged;
- b) steam generator tubes been sleeved; or,
- c) lower steam generator assemblies been replaced?

3-7. Identify any additional reactors employing Westinghouse Model 44 steam generators where the operators or owners anticipate:

- a) plugging steam generator tubes;
- b) sleeving steam generator tubes; or,
- c) replacing the lower steam generator assemblies.

3-8. What are the bases for your responses to

Interrogatories 3-5 through 3-7?

3-9. How many leaks have been experienced in the steam generator tubes in Robinson 2?

3-10. For each instance of leaking steam generator tubes at Robinson 2, identify the date of the occurrence, the leakage rate, and the cause of the leakage.

3-11. Is Applicant aware of any litigation in which its supplier Westinghouse is involved in which it has been alleged that there have been defects or deficiencies in the design, manufacture or operation of Westinghouse steam generators?

3-12. If the answer to Interrogatory 3-11 is affirmative, identify each such litigation, the parties involved, and the allegations made.

3-13. What are the bases for your responses to Interrogatories 3-11 and 3-12? Identify all documents, testimony or oral statements by any person upon which you rely in support of your position.

3-14. Has CP & L made any written or verbal complaints to Westinghouse regarding the adequacy of the design, manufacture or operation of any steam generators provided to or currently on order by CP & L from Westinghouse?

3-15. If the answer to Interrogatory 3-14 is affirmative, describe in detail each such complaint.

3-16. What are the bases for your responses to Interrogatories 3-15 and 3-16? Identify all documents, testimony or oral statements by any person upon which you rely in support

of your position.

3-17. Has CP & L filed suit against Westinghouse with respect to the operation, non-operation, or recovery of costs for defects, deficiencies, or failures of Westinghouse steam generators?

3-18. Does CP & L contemplate suing Westinghouse with respect to any matter related to steam generators?

3-19. What are the bases for your responses to Interrogatories 3-17 and 3-18?

3-20. Please provide a copy of the "estimated/cash flow" referred to in response to Interrogatory 3-95 of Intervenor's first set of interrogatories.

3-21. Please provide a copy of the 1983 construction budget, as approved, referred to in Applicant's Answer to Interrogatory 3-95.

The following questions refer to Applicant Responses to NRC staff requests 1-10, supplied by S.R. Zimmerman under a cover letter dated July 14, 1983.

3-22. With respect to Staff Request 1, the cost of replacing the Robinson 2 steam generator lower assemblies (SLGA's) is estimated as follows:

Labor	\$ 37,485,000
Equipment	37,161,000
Other	<u>31,027,000</u>
Total	\$ 105,673,000

It is also stated that because of (a) contractual agreements

And (b) support modifications already performed, "a commitment has already been made for approximately \$67 million of the \$105,673,000 total cost."

a) Please disaggregate the estimate of "other costs" into overheads, contingency funds, AFUDC, and miscellaneous.

b) Please disaggregate the \$105,673,000 according to the following table:

	<u>Contractually</u>		<u>Performed</u>		<u>Not</u>		<u>Total</u>	
	<u>Committed</u>		<u>Modifications</u>		<u>Committed</u>			
Labor	\$	x	\$	x	\$	x	\$	x
Equipment		x		x		x		x
Overheads		x		x		x		x
Contingency		x		x		x		x
AFUDC		x		x		x		x
Miscellaneous		x		x		x		x
Total	\$	x	\$	x	\$	x	\$105,673,000	

If the table cannot be accurately completed, please provide best current estimates and indicate which entries are so estimated.

3-23. With respect to Staff Request 1, please supply all workpapers, including but not limited to the inputs and outputs of production costing models, used in developing the \$41 million estimate of replacement power costs.

3-24. With respect to Staff Request 2, the cost comparison of sleeving and the proposed plan appears to consider only capital costs.

a) Is this true?

b) Is it accurate to assume that any non-capital costs

savings under the sleeving plan would not be sufficient to offset the greater replacement power costs?

c) Please provide workpapers showing the development of both the nominal and present value cost comparison.

3-25. With respect to Staff Request 3, explain why a fifteen year study period (1984 through 1998) was chosen.

3-26. With respect to Staff Request 3, is Robinson 2 to be retired in 1998?

3-27. If the answer to Interrogatory 3-26 is negative, please provide estimates of the following plant-related costs from 1998 to retirement:

- a) Fuel
- b) Spent fuel disposal
- c) Operation and Maintenance
- d) Additional capital costs
- e) Decommissioning cost
- f) Nuclear insurance cost
- g) Property taxes
- h) Other costs (explain).

3-28. With respect to Staff Request 3, please provide outputs of the production cost simulations for Alternatives (1) and (2) on an annual basis.

3-29. With respect to Staff Request 3, please provide copies of all input assumptions for the simulations referred to in Interrogatory 3-28 above.

3-30. With respect to Staff Request 3, please provide

operating capacity factor, scheduled outage periods, actual capacity factor, and energy generation for Robinson Unit 2:

a) Annually, based on historic experience from commercial operation through 1982;

b) Annually, based on projections, from 1984 until decommissioning.

3-31. With reference to Staff Request 3, Please provide the following information concerning Alternate (1), Replacement of Steam Generator Lower Assemblies in 1984.

a) Please define the first column shown on page 8, i.e. total annual revenue requirements under alternative (1).

b) For capital costs included under alternative 1, please provide annual capital expenditures, the impact of those expenditures on annual revenue requirements, and any and all workpapers and/or computer printouts used to translate investments into revenue requirements.

c) Please provide all data and assumptions used to make the above-cited translation. This should include assumptions concerning cost of capital (by component) capital structure, investment tax credits, deferred income taxes, depreciation for tax and book purposes, calculation of the rate base contribution of the investment, federal income tax, state income tax, revenue tax, amortization of different taxes and investment tax credits, property tax, other tax, other tax, and any other items not specifically mentioned above.

d) Please indicate whether capital costs other than

those of SGLA's are included in the analysis. If so, please indicate those separately, show their impact on annual revenue requirements in each year, and discuss any differences in the fixed charge factor used here and those used for the SGLA's costs.

e) Please indicate what costs, if any, are assumed under Alternate A to correct Pressurized Thermal Shock (embrittlement) at the Robinson 2 unit. If such costs were assumed, please provide estimates of costs and down-time associated with assessing and correcting the problem.

Interrogatories 3-32 through 3-46 all have reference to Applicant's responses to Staff Request 3.

3-32. Please supply a complete list of all differences between Alternatives A and B.

3-33. Please indicate every data item which differs between Alternatives A and B.

3-34. Please provide copies of all workpapers and other supporting documentation employed in estimating costs under alternatives A and B.

3-35. Please provide all fixed charge factors employed in the analysis, indicate for what years and capital costs each factor applies, and provide worksheets which show the development of each fixed charge factor.

3-36. Please provide the rationale for employing a discount rate of 9.42 percent.

3-37. Please provide any workpapers or calculations used in

developing the 9.42 percent discount figure.

3-38. Please supply all escalation rates employed.

3-39. Please supply annual estimates of Robinson 2 fuel costs. In each year, please indicate what amount, if any, is included for spent fuel disposal.

3-40. Please explain why purchase power costs increase during the study period by over 300% (page 9) while replacement power increases by about 90% (page 10).

3-41. Please define and explain the difference between the costs referenced in Interrogatory 3-40 above.

3-42. Please provide actual historic O & M costs for Robinson for each year of its life.

3-43. Please provide annual estimates of decommissioning costs under each alternative. Include workpapers showing the development of each alternative.

3-44. Please indicate what extra decommissioning costs, if any, would be incurred under Alternate A due to the higher level of radioactivity at the Robinson 2 unit.

3-45. Please provide estimates and workpapers showing the cost and in-service dates for newly constructed units under Alternate B.

3-46. Please provide Load and Resource Tables for Alternatives A and B. This should include annual peak loads, required reserves, capacity sales and purchases, and new and existing capacity.

3-47. Please provide estimates of the annual costs of

analyzing and correcting Pressurized Thermal Shock (embrittlement) problems at Robinson 2.

3-48. Please indicate whether the costs referred to in Interrogatory 3-47 are included in the estimate of "Net Construction Cost" supplied in response to Hartsville Interrogatory 3-107 in its first set of interrogatories.

3-49. Please supply all documentation and support for your response to Hartsville Interrogatory 3-107 in its first set of interrogatories.

3-50. Has the Company investigated a conservation program as an alternative to construction of generating facilities?

3-51. If the answer to Interrogatory 3-50 is affirmative, please provide any studies or documents which analyzes this alternative.

3-52. Please provide a copy of the Applicant's most recent load forecast.

3-53. For each Company forecast beginning in 1973, please provide the forecast 1990 peak load.

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