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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY
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Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
THE CLEVELAND ELECTRIC)	Docket Nos. 50-440
ILLUMINATING COMPANY, <u>ET AL.</u>)	50-441
)	
(Perry Nuclear Power Plant,)	
Units 1 and 2))	

APPLICANTS' ANSWER TO OHIO CITIZENS
FOR RESPONSIBLE ENERGY SEVENTH SET
OF INTERROGATORIES TO APPLICANTS

Applicants for their answers to Ohio Citizens for Responsible Energy ("OCRE") Seventh Set of Interrogatories, dated September 30, 1982, state as follows:

All documents supplied to OCRE for inspection will be produced at Perry Nuclear Power Plant ("PNPP"). Arrangements to examine the documents can be made by contacting Mr. Ronald Wiley of The Cleveland Electric Illuminating Company at (216) 259-3737. Applicants will provide copies of any of the produced documents, or portions thereof, which OCRE requests, at Applicants' cost of duplication. Arrangements for obtaining copies can be made with Mr. Wiley.

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RESPONSES

7-1. The response to Interrogatory 4-8 states that Applicants have no plans to use chlorination to control Corbicula. Does this mean that chlorination has been eliminated as a Corbicula control method, or that Applicants have no plans at all for Corbicula control? If Applicants have any plans for Corbicula control, please produce them.

Response:

Although Applicants believe that there are several methods to control Corbicula should they enter PNPP, Applicants have not committed themselves to any one method at this time. Applicants have no plans to use chlorination to control Corbicula, but have not eliminated chlorination entirely as a control method.

7-2. The response to Interrogatory 4-5 states that the openings in the intake structure itself are too large to be blocked by Corbicula. Please give the factual bases for this statement, including dimensions of the intake openings and citation to authority stating that blockage by clams of openings of this size is not possible.

Response:

The openings of the intake structure are four feet by twelve feet and five inches. The opening of the discharge structure is three feet in diameter. Both tunnels are approximately ten feet in diameter. Applicants do not believe blockage of these size openings by Corbicula to be possible.

Nor are Applicants aware of any openings of this size ever having been blocked by Corbicula, or of any basis for assuming that such blockage is possible.

7-3. Will the intake structure be periodically inspected for possible flow blockage conditions? If so, give the frequency of inspections and the methodology to be employed.

Response:

No inspections of the intake structure for Corbicula blockage are planned. See Applicants' Response to Interrogatory #7-2, supra.

7-4. The response to Interrogatory 4-9 states that sedimentation in the intake and discharge tunnels presents no problem. Does this mean that sedimentation will not occur, or that the sedimentation that will occur is not expected to cause problems?

Response:

It is anticipated that small amounts of sedimentation will occur in the intake and discharge tunnels. However, this small amount of sedimentation should not cause any reduction in flow through the tunnels.

7-5. Define what type of "problem" was referred to in the response to Interrogatory 4-9.

Response:

The type of "problem" referred to was flow blockage of any type.

7-6. To what depth is sediment expected to accumulate in the intake and discharge tunnels over the operating life of PNPP? What is the nature of the sediment expected, e.g., mainly sand, or largely organic matter?

Response:

Since sedimentation normally occurs only in quiescent bodies of water, the flow of water through the tunnel should prevent any appreciable accumulation of sediment. Any deposited sediment should be identical in composition to the fine sediment found on the Lake bottom in the immediate vicinity of the openings of the intake and discharge structures. A description of the Lake bottom near the PNPP intake and discharge is contained in a memorandum from Nugent to Zucker, dated September 22, 1982. A copy of the memorandum will be supplied for examination at PNPP.

7-7. Can the response to Interrogatory 4-9 be construed to mean that Applicants will have no provisions to control sediment in the intake, discharge, or ESWS? If this is not what was meant, please clarify.

Response:

Applicants believe that the flow of water through the tunnels and the Emergency Service Water System will provide adequate control. No additional sediment control is planned at this time.

7-8. What is the flow rate of water in the intake structure and tunnel (in both gallons/minute and feet/second), maximum expected, for:

- (a) normal operation
- (b) ESWS in use.

Response:

The maximum flow rates through intake structure and tunnel are:

- (a) normal operation: 70,500 gallons/minute or 157.06 cubic feet/second;
- (b) Emergency Service Water System in use: 93,200 gallons/minute or 207.64 cubic feet/second.

7-9. Is any temperature difference expected between the water in the intake tunnel and the water in the lake? Provide the bases for the answer.

Response:

The temperature of the incoming water ranges from 33°F to 80°F and the normal ground temperature encompassing the intake tunnel is approximately 55°F. Based on these facts, and in light of the large volume of water flowing through the tunnel, there should be only an insignificant temperature differential between the water in the intake tunnel and the water in the Lake.

7-10. The response to Interrogatory 4-13 states that visual monitoring of certain potential locations in the ESWS for Corbicula blockage will occur during plant outages. Define each and every potential location for Corbicula blockage, and explain why these locations would be susceptible to flow blockage by clams.

Response:

The "potential locations" that will be inspected pursuant to Applicants' inspection program will be the pump-house travelling screens, the trash racks, and the upstream pump strainers. These components will be inspected because their function is to filter debris and foreign materials out of the Emergency Service Water System, and they thus would be prime locations for collection of any Corbicula in the System.

7-11. Applicants state that they are not familiar with the design of the RHR heat exchangers used at Brunswick or Pilgrim I. It would seem that General Electric, NSSS vendor for PNPP, would have such information. Please refer the applicable portions of Interrogatories 4-15 and 4-20 to GE.

Response:

Neither Applicants nor General Electric Company have made the comparisons or conducted the analyses requested by the Interrogatories. Although Applicants do not believe that they are obligated to obtain this information, Applicants have requested Pilgrim I and Brunswick to send them their heat exchanger design specifications. Applicants will provide to OCRE for examination at PNPP the design specifications of the PNPP, Pilgrim I and Brunswick heat exchangers, from which OCRE can make its own comparisons and conduct its own analyses.

7-12. The response to Interrogatory 4-16 states that there is no possibility of bypass leakage between the tube and shell sides of the RHR heat exchangers. Would this statement be true even in the situation which occurred at Brunswick, i.e., displacement of the baffle plate which divides the water box of the heat exchanger, which allowed service water to bypass the tubes. Explain why or why not.

Response:

Applicants' response to Interrogatory #4-16 remains true. Hydrostatic tests performed on both the shell and tube sides of the heat exchangers will insure the integrity of the component.

7-13. The response to Interrogatory 4-16 states that deviations between measured performance of the RHR heat exchangers and design data will be corrected. Explain how this would be corrected.

Response:

Deviations between the measured performance of the RHR heat exchangers and design data will be corrected pursuant to the procedures established in General Electric Operating and Maintenance Instructions GEK-75600, Volume VII, Part II. This document will be made available for examination at PNPP.

7-14. The response to Interrogatory 4-18 states that the "dead spot" in the RHR heat exchangers will be drained and refilled with demineralized water when the ESWS is shut down. Is this the only portion of the ESWS so treated? List all portions of the ESWS so treated.

Response:

The tube side of the heat exchangers, including the Emergency Service Water System piping up to the inlet and outlet isolation valves, are drained and refilled with demineralized water when the Emergency Service Water System is shut down. The "dead spot" area described in response to Interrogatory #4-18 is included in the tube side portion of the

heat exchanger. This is the only portion of the Emergency Service Water System so treated.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By: *Robert L. Willmore*
Jay E. Silberg, P.C.
Robert L. Willmore

Counsel for Applicants

1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000

Dated: October 19, 1982

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
CLEVELAND, OHIO

Raymond F. Zucker, Jr., being duly sworn according to law, deposes that he is Chemical Engineer of The Cleveland Electric Illuminating Company and that the facts set forth in the foregoing Applicants' Answers to Ohio Citizens for Responsible Energy Interrogatories 7-1 through 7-7 and 7-9 dated September 30, 1982, are true and correct to the best of his knowledge, information and belief.

Ray F Zucker Jr

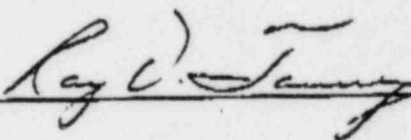
Sworn to and subscribed
before me this 18th day
of OCTOBER, 1982

Joseph C. Szwejkowski

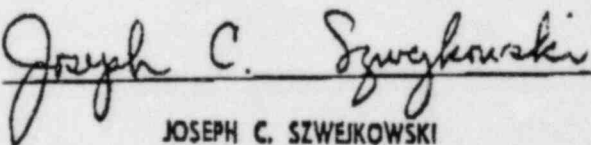
JOSEPH C. SZWEJKOWSKI
Notary Public, State of Ohio - Cuya. Cty
My Commission Expires July 14, 1986

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
CLEVELAND, OHIO

Ray V. Tanney, being duly sworn according to law, deposes that he is Associate Engineer, of The Cleveland Electric Illuminating Company and that the facts set forth in the foregoing Applicants' Answers to Ohio Citizens for Responsible Energy Interrogatories 7-8 and 7-10 through 7-14 dated September 30, 1982, are true and correct to the best of his knowledge, information and belief.



Sworn to and subscribed
before me this 19th day
of OCTOBER, 1982



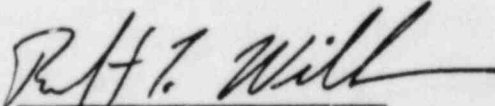
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CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing "Applicants' Answer to Ohio Citizens For Responsible Energy Seventh Set of Interrogatories to Applicants," were served by deposit in the U.S. Mail, First Class, postage prepaid, this 19th day of October, 1982, to all those on the attached Service List.


Robert L. Willmore

Dated: October 19, 1982

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SERVICE LIST

Peter B. Bloch, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Jerry R. Kline
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Frederick J. Shon
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

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

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

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

Atomic Safety and Licensing
Appeal Board 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

James M. Cutchin, IV, Esquire
Office of the Executive
Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Ms. Sue Hiatt
OCRE Interim Representative
8275 Munson Avenue
Mentor, Ohio 44060

Daniel D. Wilt, Esquire
Post Office Box 08159
Cleveland, Ohio 44108

Donald T. Ezzone, Esquire
Assistant Prosecuting Attorney
Lake County Administration Center
105 Center Street
Painesville, Ohio 44077

John G. Cardinal, Esquire
Prosecuting Attorney
Ashtabula County Courthouse
Jefferson, Ohio 44047

Terry Lodge, Esquire
915 Spitzer Building
Toledo, Ohio 43604