February 8, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

APPLICANTS' ANSWERS TO OHIO CITIZENS FOR RESPONSIBLE ENERGY TENTH SET OF INTERROGATORIES TO APPLICANTS RELATING TO ISSUE NO. 16

Applicants for their answers to Ohio Citizens for Responsible Energy ("OCRE") Tenth Set of Interrogatories to Applicants, dated January 6, 1984, state as follows:

All documents supplied to OCRE for inspection will be produced at Perry Nuclear Power Plant ("PNPP"). Arrangements to examine the documents at PNPP can be made by contacting Mr. Bradley S. Ferrell of The Cleveland Electric Illuminating Company ("CEI") at (216) 259-3737, extension 5520. 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. Ferrell.

In compliance with the Licensing Board's Special Prehearing Conference Memorandum and Order, LBP-81-24, 14 N.R.C. 175, 230-31 (1981), Applicants' counsel, Michael A. Swiger, conferred on February 8, 1984 by telephone with OCRE Representative Susan L. Hiatt regarding Applicants' objections to Interrogatories #10-2, #10-9 and #10-10. Specifically, Mr. Swiger explained that Applicants believe information concerning commercial considerations related to the PNPP standby diesel generators is irrelevant and beyond the scope of Issue No. 16. Ms. Hiatt agreed to withdraw Interrogatory #10-2 insofar as it requests information concerning commercial considerations involved in hiring consultants on Issue No. 16. Mr. Swiger and Ms. Hiatt were unable to agree on the relevance of commercial considerations involved in the procurement of the standby diesel generators.

RESPONSES

10-1. Identify all persons Applicants intend to call as witnesses on Issue #16, and identify the employer and business address of each person so identified. Provide the professional qualifications of each person so identified. Produce all testimony or drafts of testimony each such person will present, or, if not available, summarize the areas each such person's testimony will cover. Provide the bases of all facts and opinions to be advanced in testimony.

Response:

Applicants have not yet determined which persons they will call as witnesses on Issue No. 16 or the subject matter of testimony on this issue.

10-2. Identify each person or organization whose expertise will be utilized by Applicants on Issue #16. Provide the professional qualifications of each consultant identified. Explain the services rendered by each consultant, and provide a copy of the contract agreement.

Response:

Applicants have not yet determined which person(s) or organization(s), if any, they will use as a consultant on Issue No. 16. To the extent that the Interrogatory requests information concerning commercial considerations involved in hiring consultants on Issue No. 16, the Interrogatory has been withdrawn.

10-3. Identify all persons known by Applicants to be knowledgeable on diesel generator reliability (and specifically that of Transamerica Delaval diesels), and provide the business address and professional qualifications of each person so identified.

Response:

Applicants believe the following organizations to be knowledgeable concerning diesel generator reliability:

Southwest Research Institute
P.O. Box 28510
6220 Culebra Road
San Antonio, Texas 78284

Battelle-Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201

Teledyne Engineering Services
130 Second Avenue
Waltham, Massachusetts 02254

Failure Analysis Associates
2225 East Bayshore Road
Palo Alto, California 94303

Failure Analysis Associates is believed by Applicants to be knowledgeable specifically with respect to the Transamerica Delaval, Inc. ("Delaval") standby diesel generators at Shoreham.

10-4. What is the basis of Applicants' belief in the reliability of the Transamerica Delaval, Inc. diesel generators ("TDI DGs") to be used at PNPP?

Response:

The reliability of the PNPP Delaval standby diesel generators is assured by a number of factors, including selection, design, qualification, testing, and surveillance and maintenance of the diesel generators in accordance with applicable NRC regulations and guidance and industry standards. Reliability is further assured by Applicants' quality assurance ("QA") review and control over the manufacture of the standby diesel generators.

The PNPP standby diesel generators were selected in accordance with Regulatory Guide 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," Rev. 0 (March 10, 1971). The specification for the standby diesel generators was written to comply with applicable regulatory requirements and guidance and industry standards.

The standby diesel generators were factory tested according to IEEE Standard 387-1977, "IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations." IEEE Standard 387-1977 is also the basis for Applicants' type qualification of the standby diesel generators. The Grand Gulf Delaval standby diesel generators, which are the prototype for the PNPP standby diesel generators, passed the 300 start-and-load type qualification testing program of IEEE Standard 387-1977. See NUREG-0887, Safety Evaluation Report Related to the Operation of Perry Nuclear Power Plant, Units 1 and 2 (May 1982) ("SER"), § 8.3.1. Applicants have committed to conduct an additional 20 start-and-load tests per unit on the standby diesel generators to supplement the Grand Gulf prototype testing. In addition, Applicants will conduct a preoperational testing program in accordance with Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Rev. 1 (August 1977). See SER § 8.3.1; Letter from B.J. Youngblood to Murray R. Edelman (September 14, 1983).

In addition to preoperational testing, Applicants will perform periodic inservice testing of the standby diesel generators in accordance with Regulatory Guide 1.108. Applicants will also develop a surveillance and maintenance program which will include measures to prevent problems affecting the safety function of the standby diesel generators and measures to detect and correct such problems should they occur.

Finally, Applicants' QA program was applied to the manufacture of the PNPP standby diesel generators. In September 1975 Applicants conducted a Pre-Award Survey of Delaval. Applicants and Architect-Engineer Gilbert Associates, Inc. ("Gilbert") held a Post-Award Meeting with Delaval in April 1976 in which it was verified that Delaval's responses to the findings of the Pre-Award Survey had been implemented. Also at the Post-Award Meeting Applicants and Gilbert reviewed with Delaval the QA requirements of the diesel generator contract and identified the Delaval procedures which had to be reviewed and approved before Delaval would be permitted to begin fabrication of the diesel generators.

Review and approval of the necessary procedures was completed by November 1977; and on November 30, 1977 Gilbert issued a fabrication release to Delaval. Gilbert also developed a manufacturing surveillance plan for the standby diesel generators which was reviewed and approved by Applicants. To date Gilbert has conducted a total of 44 surveillances in connection with the PNPP standby diesel generators.

In addition to the manufacturing surveillance program, in May 1978 Applicants and Gilbert conducted an audit of Delaval's activities in connection with the manufacture of the PNPP standby diesel generators. The audit concluded that in general Delaval's QA procedures were adequate and were being satisfactorily implemented. A July 1978 meeting with Delaval confirmed Applicants' and Gilbert's confidence in Delaval's program. As

a result of this favorable evaluation, Applicants approved shipment from Delaval of the PNPP standby diesel generators.

A subsequent audit of Delaval was conducted by Applicants and Gilbert in February 1982. A May 1982 follow-up meeting at Delaval concluded that Delaval's QA program during the manufacture of the PNPP standby diesel generators was adequate to assure their reliability.

10-5. List and provide the bases for all arguments Applicants will use in their defense on Issue #16.

Response:

Applicants have not yet determined the bases for the arguments they will use in connection with Issue No. 16.

10-6. Do Applicants intend to take credit for the Division 3 HPCS DG in meeting the requirements of GDC 17 of 10 CFR 50 Appendix A and in their defense on Issue #16? If so, why?

Response:

Applicants have not yet determined what their defenses will be on Issue No. 16.

10-7. Do Applicants intend to take credit for the reliability of off-site power in meeting the requirements of GDC 17 of 10 CFR 50 Appendix A, and in their defense on Issue #16? If so, why?

Response:

Applicants have not yet determined what their defenses will be on Issue No. 16.

10-8. Provide the specifications for the TDI DGs to be used at PNPP. List and explain all measures and procedures used to assure that these specifications were met.

Response:

Specification SP-562-4549-00, "Class 1E Diesel Generator Units, Perry Nuclear Power Plant, Units 1 and 2" (March 13, 1975), was the bid specification originally supplied to Delaval for PNPP. The conformance specification, Rev. 1, is dated December 15, 1975. These documents, along with all attachments and subsequent revisions, are available for examination at PNPP.

To assure that the specification was met, the following measures were taken. First, Applicants released the specification for bidding only to bidders Applicants and Gilbert considered capable of meeting the requirements of the specification. Second, Delaval's proposal to supply the standby diesel generators was recommended only after a determination that the proposal met the specification's requirements. Third, a Pre-Award Survey of Delaval was conducted in order to evaluate Delaval's QA program. All of Applicants' QA concerns identified during the Pre-Award Survey were resolved prior to manufacture of the standby diesel generators. Fourth, Applicants and Gilbert held

a Pre-Award Meeting to address technical issues raised by Delaval's proposal; and all such issues were resolved prior to the award of the contract to Delaval. Fifth, prior to fabrication of the standby diesel generators Gilbert reviewed for conformance to the specification selected Delaval documentation required by the specification, such as procedures and drawings. Sixth, Gilbert established hold/witness points during the manufacture of the standby diesel generators beyond which Delaval was not permitted to proceed without Gilbert's concurrence. Seventh, a number of manufacturing surveillances of Delaval were conducted during the manufacture of the standby diesel generators. See response to Interrogatory #10-4, supra. Eighth, Applicants' QA program was applied to the standby diesel generators. See response to Interrogatory #10-4, supra. Ninth, at the completion of manufacturing of the standby diesel generators Gilbert reviewed for conformance to the specification Delaval's hardware documentation package. Tenth, the factory, type qualification, preoperational and periodic inservice testing programs for the standby diesel generators all help to assure that the diesel generators conform to the specification. See response to Interrogatory #10-4, supra.

10-9. Produce all documents in the possession of Applicants concerning the design, procurement, or reliability of the TDI DGs.

Response:

Documents in the possession of Applicants relating to the design, procurement or reliability of the PNPP standby diesel generators are available for examination at PNPP. To the extent that the Interrogatory requests the production of documents relating to commercial considerations connected with the standby diesel generators, Applicants object to the Interrogatory as irrelevant and beyond the scope of Issue No. 16.

10-10. Why was TDI chosen to supply DGs for PNPP? Specifically:

(a) Summarize the process by which TDI was chosen, from the inception of the specifications, through the bidding process, to the award of the contract. Explain what audits or reviews of TDI were performed by CEI or any of its agents. Identify any agent or consultant utilized by Applicants in selecting and evaluating DG vendors. List all DG vendors considered by Applicants, and explain why they were rejected.

(b) To what extent were monetary concerns (e.g., amount of bid) a factor in selecting TDI as the DG vendor?

(c) To what extent were quality, reliability, and experience factors in selecting TDI as the DG vendor?

(d) Explain the process by which the potentially competing concerns of cost and quality were reconciled in the selection of the DGs.

Response:

(a) The specification for the standby diesel generators was prepared by Gilbert and reviewed by Applicants. Prior to releasing the specification for bidding, a list of potential bidders was developed which identified vendors considered capable of meeting the requirements of the specification.

Three of the listed manufacturers bid on the specification: Delaval, Cooper Industries and Colt Industries. Alternate bids, as allowed by the letter of inquiry, were also received. Gilbert and Applicants each performed independent evaluations of the proposals in accordance with Perry Project procedures. Gilbert and Applicants both concluded that Delaval and Cooper Industries had placed bids that were acceptable and that the Colt Industries bids did not meet the specification. Based on greater loading capability, QA and technical acceptability of the proposal, and experience, Delaval was recommended to supply the standby diesel generators.

As a result of this recommendation, Applicants' QA Department conducted a Pre-Award Survey at Delaval to determine the acceptability of the Delaval QA program. Applicants and Gilbert also held a Pre-Award Meeting with Delaval to address open technical items raised by the proposal. Upon resolution of all technical and QA concerns, the contract was awarded to Delaval.

(b) The contract was awarded to Delaval because Delaval met the technical and QA requirements of the bid specification. To the extent that the Interrogatory addresses commercial considerations involved in the award of the contract, Applicants object to the Interrogatory as irrelevant and beyond the scope of Issue No. 16.

(c) Quality, reliability and experience were considered in the selection of Delaval as the vendor for the standby

diesel generators in addition to the fact that Delaval's proposal met the requirements of the bid specification.

(d) Cost and quality were not competing concerns in the selection of the standby diesel generators. The specification for the standby diesel generators was written to comply with applicable regulatory requirements and guidance and industry standards. Delaval's proposal to supply the standby diesel generators met the requirements of the specification. To the extent that the Interrogatory addresses commercial considerations involved in the award of the contract, Applicants object to the Interrogatory as irrelevant and beyond the scope of Issue No. 16.

10-11. When were the TDI DGs for PNPP designed? Name all persons responsible for the designing of the DGs.

Response:

Applicants are not aware of the names of the persons responsible for the design of the standby diesel generators or the time during which they were designed.

10-12. When were the TDI DGs manufactured? (Specify for each DG to be used at Perry.)

Response:

The PNPP standby diesel generators were manufactured from approximately December 1977 to September 1978. Applicants do

not have information on specific dates of manufacture for each standby diesel generator.

10-13. When were the DGs received at PNPP? When installed? Where and under what conditions were the DGs stored prior to installation? (Answer for each DG.)

Response:

The Unit 1 standby diesel generators for both Divisions 1 and 2 were received at PNPP on September 21, 1978. The Unit 2, Division 2 diesel generator was received on October 23, 1978; and the Unit 2, Division 1 diesel generator was received on October 24, 1978. All four diesel generators were stored at the Diamond Shamrock Boiler Shop Building in Fairport Harbor, Ohio prior to installation. Regular maintenance on the diesel generators during storage was performed in accordance with PNPP procedures.

10-14. To what codes or standards were the TDI DGs designed and manufactured? Produce each such code or standard. How did Applicants assure that these codes and standards were met?

Response:

The codes and standards governing the design and manufacture of the standby diesel generators are identified in the specification. Measures taken to assure that the requirements of the specification were met are addressed in response to

Interrogatory #10-8, supra. The specification, as well as the applicable codes and standards, are available for examination at PNPP.

10-15. Demonstrate that Applicants' audits of TDI included coverage of Criterion III, "Design Control", of Appendix B to 10 CFR 50, and that TDI's quality assurance program met the requirements of this criterion.

Response:

Applicants' and Gilbert's audits of Delaval have consistently included coverage of design control, beginning with the September 1975 Pre-Award Survey and including audits in May 1978 and February 1982. See response to Interrogatory #10-4, supra. Although some problems were identified during these audits in the area of design control, follow-up meetings with Delaval concluded that in general Delaval's design control program was adequate and was being satisfactorily implemented. See response to Interrogatory #10-4, supra. Documentation of these audits is available for examination at PNPP.

10-16. Provide and explain Applicants' measures used to assure quality of the design of the TDI DGs.

Response:

The specification for the standby diesel generators imposed requirements governing quality of design specifically intended to meet the requirements of 10 C.F.R. Part 50,

Criterion III. Further measures taken to assure quality of the design are detailed in response to Interrogatories #10-4, #10-8 and #10-15, supra.

10-17. Explain and provide the basis for the statement in ¶ 6, p. 3 of the affidavit of Edward J. Turk and Thomas G. Swansiger, filed December 16, 1983, that the crankshaft stress for the PNPP DGs is 60% of maximum. Demonstrate that the affiants are competent to testify on the kinds and magnitude of crankshaft stresses.

Response:

The information was supplied by Delaval. See Letter from G.E. Trussell to A.P. Pusateri (November 14, 1983) (available for examination at PNPP).

10-18. Produce a concise list of all the deficiencies of which Applicants are aware pertaining to the TDI DGs used at PNPP, and indicate the cause and correction of each.

Response:

Lists of all Deviation Analysis Reports and Nonconformance Reports pertaining to the PNPP standby diesel generators, as well as documentation indicating the cause and correction of each nonconformance or deficiency, are available for examination at PNPP.

10-19. Were the PNPP DG crankshaft fillet radii shot peened or rolled, in accordance with "common industry practice" (BN-83-160A, Enclosure 1, p. 1-2)?

(a) If not, why not?

(b) If not, were the radii examined for surface roughness?

Explain the methods used and results found.

Response:

The PNPP standby diesel generator crankshaft fillet radii were shot peened. See Letter from Lee Duck to A.P. Pusateri (January 24, 1984) (available for examination at PNPP).

10-20. What is the crankpin fillet radius? Provide a drawing like Fig. 4-1 of Enclosure 2 of BN-83-160A, including the detail of the fillet.

Response:

The crankpins on the PNPP standby diesel generators have a .75 inch fillet radius. See Meeting Minutes of Delaval Diesel Generator Owners Group, produced in response to Interrogatory #10-29, infra. Applicants do not have a drawing like Fig. 4-1 of Enclosure 2 to BN-83-160A which includes details of the fillet.

10-21. Produce all specifications for the TDI DG crankshafts, including material specifications, material supplier, and all drawings and dimensions of the crankshafts.

Response:

Applicants do not have the requested information.

10-22. What specification requirements were in effect at the time of design, procurement, and/or fabrication of the connecting rod bearings for the PNPP TDI DGs? What specification requirements are in effect now?

(a) If these specifications were changed, why was this done?

(b) Do any of these specifications have a porosity requirement for the bearing material? Demonstrate that the requirement was met.

(c) Has there been any non-destructive evaluation of the bearing material for void sizing? If so, produce all methodology and results.

Response:

Applicants do not have the requested information.

10-23. What is the type of bearing alloy used for connecting rod bearings in the TDI DGs?

Response:

The material used in the connecting rod bearings for the PNPP standby diesel generators is an Alcoa B850-T5 material which is a 6% tin aluminum alloy. See Meeting Minutes of Delaval Diesel Generator Owners Group, produced in response to Interrogatory #10-29, infra.

10-24. Describe any difference between the connecting rod bearings used at Shoreham and those used for the PNPP DGs.

Response:

Differences between the connecting rod bearings which failed at Shoreham and the PNPP standby diesel generator connecting rod bearings are addressed in the meeting minutes of the Delaval Diesel Generator Owners Group, produced in response to Interrogatory #10-29, infra.

10-25. What is the calculated oil film hydraulic pressure on the bearing shell for the connecting rod bearings for the PNPP DGs? Describe the method by which this was calculated. What is the recommended maximum pressure for these bearings?

Response:

Applicants do not have the requested information.

10-26. What schedule is there for the replacement of the connecting rod bearings of the PNPP DGs?

Response:

There is no schedule to replace the connecting rod bearings on the PNPP standby diesel generators.

10-27. What schedule is there for the inspection/NDE of the connecting rod bearings? Describe all inspection/NDE methods used.

Response:

Connecting rod bearing inspections have not been scheduled for the preoperational phase of engine inspection and testing. Once the diesel engines have completed preoperational testing and have been placed in operation, Delaval preventative maintenance recommendations will be followed. These recommendations include an annual connecting rod bearing inspection which will be performed in accordance with the Transamerica Delaval Instruction Manual, Volume I, Section 6, Part C and Volume I, Section 8, Appendix III. The Instruction Manual is available for examination at PNPP.

10-28. What size is the bore chamfer on the ends of the PNPP DG connecting rods? Of the connecting rod bearings? Provide a drawing of the rod and bearing like Fig. 3 of Enclosure 3 of BN-83-160A.

Response:

The connecting rod and bearings both have 1/16 inch by 45 degree chamfers at the bore ends. See Meeting Minutes of Delaval Diesel Generator Owners Group, produced in response to Interrogatory #10-29, infra. Applicants do not have a drawing of the rod and bearing like Fig. 3 of Enclosure 3 to BN-83-160A.

10-29. Is CEI a member of a TDI DG Owners Group? If so:

(a) List all meetings of any such group attended by CEI representatives;

(b) Name the representatives attending;

(c) List any meeting of such group not attended by CEI representatives;

(d) for all the meetings listed in response to the above, provide the date and place of the meeting, along with any notes, minutes, or reports on same.

Response:

CEI is a member of the Delaval Diesel Generator Owners Group. Documents containing the requested information are available for examination at PNPP.

10-30. Have Applicants or their agents/representatives conducted any inspections on the condition and quality of manufacturing equipment used to manufacture the PNPP DGs or any component thereof? If so, provide all findings. If not, why not?

Response:

Audits and surveillances of Delaval performed by Applicants and Gilbert during manufacture of the standby diesel generators included review of Delaval's control of measuring and test equipment. The review included verification of Delaval's calibration of selected equipment used during manufacture. All Audit Reports and Surveillance Reports relating to the standby diesel generators are available for examination at PNPP.

10-31. Does TDI have a program wherein parts or components are modified (e.g., design margins reduced) in order to improve profitability? If so, to what extent are the PNPP DGs affected by this policy?

Response:

Applicants are aware of no Delaval program whereby parts or components are modified in order to improve profitability.

10-32. What tests have been conducted on the PNPP DGs?

(a) How many hours of factory testing were conducted? Were any of these tests observed by Applicants?

(b) Describe all deficiencies, failures, or anomalies revealed in these tests, and give the causes and corrections for them.

Response:

(a) Engine factory tests, which consisted of observing and recording engine operating parameters such as temperature, pressure and load at predetermined engine loads, were performed on the PNPP standby diesel generators. Engine operation elapsed times were as follows:

Unit 1, Division 1 - 12.25 hours

Unit 1, Division 2 - 15.83 hours

Unit 2, Division 1 - 12.00 hours

Unit 2, Division 2 - 18.16 hours

In addition, the specification for the PNPP standby diesel generators required qualification tests to be performed on the Unit 1, Division 1 diesel engine. The following qualification tests were performed:

Starting Air System Tests
Sequential Load Tests
Load Rejection Tests
Margin Tests
Load Tests
Overspeed Test
Torsiograph Test
Engine Emissions Test
Starting and Loading Test

Total elapsed running time was two hours. Thirty-six engine generator starts were conducted.

Applicants or Gilbert were present and observed a number of the above factory and qualification tests.

(b) Documentation of all test results is available for examination at PNPP.

10-33. Describe what tests will be performed by Applicants on the PNPP DGs.

Response:

Twenty start-and-load tests per unit will be conducted to supplement the prototype type qualification testing approved by the NRC staff. See SER § 8.3.1; Letter from B.J. Youngblood to Murray R. Edelman (September 14, 1983). In addition, preoperational testing and periodic inservice testing will be conducted in accordance with Regulatory Guide 1.108. See id. Tests to be performed include:

Starting Air System Tests
Fuel Oil System Tests
Jacket Water System Tests
Lube Oil System Tests
Exhaust, Intake, and Crankcase Ventilation Systems Test
Generator Lockout Relay, Differential Relay and Overspeed Trip Tests

Load Rejection Tests
Ten Start and Load Test
Consecutive Start and Load Tests
24 Hour Load Test

10-34. Regarding the questions developed by the NRC Staff on the TDI DG problem, as listed in the December 28, 1983 letter from B. J. Youngblood to Murray R. Edelman:

(a) Provide Applicants' responses to these questions to the Board and parties to the proceeding, under oath or affirmation;

(b) Identify the persons responsible for answering each question, and provide their professional qualifications.

Response:

Applicants have not yet developed their responses to the NRC Staff's questions concerning the Delaval standby diesel generators.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By: Michael A. Swiger
Jay E. Silberg, P.C.
Michael A. Swiger

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

DATED: February 8, 1984

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Edward C. Christiansen, being duly sworn according to law, deposes that he is Engineer, Nuclear Construction Department, of the Cleveland Electric Illuminating Company, and that the facts set forth in the answers to Ohio Citizens for Responsible Energy Interrogatories 10-1 through 10-14, 10-17, 10-19 through 10-24, and 10-31 through 10-34 in the foregoing "Applicants Answers to Ohio Citizens for Responsible Energy Tenth Set of Interrogatories to Applicants Relating to Issue No. 16," dated February 8, 1984, are true and correct to the best of his knowledge, information, and belief.

Edward C Christiansen

Sworn to and subscribed
before me this 7th day
of February 1984

Notary Public

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Thomas G. Swansiger, being duly sworn according to law, deposes that he is Engineer, Nuclear Quality Assurance Department, of the Cleveland Electric Illuminating Company, and that the facts set forth in the answers to Ohio Citizens for Responsible Energy Interrogatories 10-4, 10-8, 10-10, 10-11, 10-14 through 10-18, and 10-30 in the foregoing "Applicants Answers to Ohio Citizens for Responsible Energy Tenth Set of Interrogatories to Applicants Relating to Issue No. 16," dated February 8, 1984, are true and correct to the best of his knowledge, information, and belief.

Thomas G. Swansiger

Sworn to and subscribed
before me this 7th day
of February 1984

Notary Public

February 8, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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	)	
(Perry Nuclear Power Plant,	)	
Units 1 and 2)	)	

CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing "Applicants' Answers to Ohio Citizens for Responsible Energy Tenth Set of Interrogatories to Applicants Relating to Issue No. 16" were served by deposit in the United States Mail, First Class, postage prepaid, this 8th day of February, 1984, to all those on the attached Service List.

Michael A. Swiger

Michael A. Swiger

DATED: February 8, 1984

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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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. Glenn O. Bright
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. W. Reed Johnson
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

Colleen P. Woodhead, 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

Terry Lodge, Esquire
618 N. Michigan Street, Suite 105
Toledo, Ohio 43624

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