

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

AFFIDAVIT OF EDWARD J. TURK AND
THOMAS G. SWANSIGER IN SUPPORT OF
APPLICANTS' ANSWER TO "NRC STAFF SUPPLEMENTAL
RESPONSE (BASED UPON NEW INFORMATION IN
BOARD NOTIFICATION BN-83-160) TO OCRE MOTION
FOR ADMISSION TO RESUBMIT PROPOSED CONTENTION 2"

County of Lake)
 : ss:
State of Ohio)

Edward J. Turk and Thomas G. Swansiger, being duly sworn,
depose and say as follows:

1. I, Edward J. Turk, am Senior Engineer, Nuclear Design
& Analysis Section, The Cleveland Electric Illuminating Company
("CEI"). My business address is 10 Center Road, Perry, Ohio
44081. A summary of my professional qualifications and experi-
ence is attached hereto as Exhibit A. I have personal
knowledge of the matters set forth herein and believe them to
be true and correct.

2. I, Thomas G. Swansiger, am Engineer, Nuclear Quality
Assurance Department, Procurement/Administration Quality
Section, CEI. My business address is 10 Center Road, Perry,

8312200255 831216
PDR ADOCK 05000440
G PDR

Ohio 44081. A summary of my professional qualifications and experience is attached hereto as Exhibit B. I have personal knowledge of the matters set forth herein and believe them to be true and correct.

3. We have reviewed Board Notification BN-83-160, dated October 21, 1983, including Enclosures 2 and 5 to Board Notification BN-83-160. For the reasons stated below, none of the concerns raised in Board Notification BN-83-160 affects adversely the reliability of the diesel generators at the Perry Nuclear Power Plant ("PNPP").

CRANKSHAFT CRACKING AT SHOREHAM

4. Board Notification BN-83-160 addresses in large part the recent failure of the main crankshaft on one of the three standby diesel generators at the Shoreham Nuclear Power Station and the subsequent discovery of cracks in the crankshafts of the other two diesel generators at Shoreham. The crankshaft cracking problem at Shoreham was previously documented in IE Information Notice No. 83-58, dated August 30, 1983. The manufacturer of the Shoreham diesel generators, Transamerica Delaval, Inc. ("Delaval"), is also the manufacturer of the PNPP standby diesel generators.

5. At the time Board Notification BN-83-160 was written, Long Island Lighting Company ("LILCO") still was in the process of investigating the cause of crankshaft cracking at Shoreham. As documented in Board Notification BN-83-160A, dated November 17, 1983, at 1, an independent design review of the Shoreham

diesel generators performed for LILCO by Failure Analysis Associates has now determined that the cause of crankshaft cracking at Shoreham was high torsional stress on the crankshafts caused by an incorrect design. This design problem does not apply to the PNPP diesel generators.

6. The crankshafts supplied for Shoreham were dimensionally unlike those furnished for any other nuclear or nonnuclear power plant. Specifically, the Shoreham crankshafts had crank pins with only an 11 inch diameter. The diesel generator crankshafts for PNPP have crank pins with a 13 inch diameter. In addition, the PNPP diesel generators have V-16 engines while the Shoreham diesel generators have eight cylinder in-line engines. Taking these and other factors into account, the crankshaft stress to which the PNPP crankshafts will be subjected is calculated to be, at most, only 60 percent of the maximum stress which the crankshafts were designed to handle. In contrast, at Shoreham the crankshafts were operating at 100 percent of their design stress. Moreover, if the design margin at Shoreham had been increased by only a few percent, the crankshaft failure should not have occurred for the life of the plant. Since the maximum stress on the PNPP crankshafts is only 60 per cent of the design stress, the margin of safety at PNPP is sufficiently great that there is reasonable assurance that the crankshafts will not crack from torsional stress throughout the life of the plant.

OTHER PROBLEMS WITH DELAVAL DIESEL GENERATORS

7. Enclosure 2 to Board Notification BN-83-160 lists a number of problems with Delaval diesel generators which have arisen in the last three years. None of these problems affects adversely the reliability of the PNPP diesel generators. Many of the items in Enclosure 2 do not apply to the PNPP diesel generators. Each of the items which does apply or may potentially apply either has been corrected, is in the process of being corrected, or is planned to be specifically addressed in the PNPP surveillance and maintenance program. A discussion of the items in Enclosure 2 in the order in which they are listed with the dates indicated follows:

8. (8/12/83) This item concerns the recent crankshaft failure at Shoreham discussed in ¶¶ 4-6, above. The cause of the crankshaft failure at Shoreham has been determined to be a design problem which does not apply to PNPP. See ¶¶ 5-6, above.

9. (3/30/83) This item concerns failure of the holddown capscrews in the rocker arm assembly of one of the Shoreham diesel generators. The holddown capscrews in the rocker arm assemblies at PNPP have a different design than the design of those at Shoreham. The PNPP design is an improved design which is intended to increase the stress capacity of the capscrews and will avoid failures such as occurred at Shoreham. This item does not apply to PNPP.

10. (3/08/83) This item concerns cracked cylinder heads in the Shoreham diesel generators. The PNPP diesel generator cylinder heads, as with all Delaval diesel generator cylinder heads manufactured since 1975, were subjected to an improved heat treatment which will prevent cracking. There have been no instances of cylinder head cracking among Delaval diesel generator engines subjected to the improved heat treatment. This item does not apply to PNPP.

11. (3/03/83) This item concerns failure of fuel oil lines at Shoreham and Grand Gulf. The failure at Grand Gulf was a failure of an engine mounted fuel oil line resulting from excessive vibration caused by inadequate support. The failure is addressed by CEI in Deviation Analysis Report ("DAR") 145. CEI has committed to installing additional supports for the PNPP engine mounted fuel oil lines in accordance with Delaval's recommendations. See Attachment 1. A final report is currently scheduled to be submitted to the NRC Staff ("Staff") by January 31, 1984. The failure at Shoreham was a failure of high pressure fuel oil injector lines caused by defective tubing. The failure is discussed in IE Inspection Report No. 99900334/83-01, dated October 3, 1983, in Enclosure 5 to Board Notification BN-83-160 ("Inspection Report"), at 6-8. As stated in the Inspection Report, at 7-8, only the diesel generators furnished to Grand Gulf and San Onofre utilized tubing from the potentially defective purchase lot. The failure at Shoreham has no applicability to PNPP.

12. (12/13/82) This item, which concerns unqualified control cables at Grand Gulf, is addressed by CEI in DAR 109. CEI is in the process of replacing the control cables in question at PNPP with qualified cables. In addition, CEI is replacing the control cable terminators. A final report is currently scheduled to be submitted to the Staff by December 30, 1983.

13. (9/17/82) This item concerns failure in two of the Shoreham diesel generators of jacket water pump shafts caused by fatigue cracking at the shaft keyways. The design of the PNPP jacket water pumps and pump shafts is an entirely different design than the design of those at Shoreham. The PNPP design is an improved design which is intended to increase the stress capacity of the pump shafts and will avoid cracking such as occurred at Shoreham. Further, operating experience and testing of the V-16 diesel engine, which is the design of the PNPP diesel engines, have not resulted in fatigue cracking at the shaft keyway. This item does not apply to PNPP.

14. (7/22/82) This item concerns an incorrect valve position indication in the high jacket water temperature trip at Grand Gulf. The incorrect indication was probably the result of installation error rather than a design deficiency. CEI has examined the valve position indicators on the PNPP diesel generators and the valve line-up was proper. In addition, CEI plans to include the valve position indicators in the PNPP surveillance and maintenance program in order to monitor for instrument drift.

15. (6/23/82) This item, which concerns potential deterioration of an isoprene element used in the governor drive coupling at Grand Gulf, is addressed by CEI in DAR 101. CEI is in the process of replacing the PNPP governor drive couplings according to Delaval's recommendations.

16. (5/13/82) This item, which concerns improper capscrew length in the starting air valve assemblies at Grand Gulf, is addressed by CEI in DAR 099. CEI has completed inspection of the capscrews in the PNPP starting air valve assemblies and has determined that the capscrew lengths are proper. This item does not apply to PNPP.

17. (3/19/82) This item, which concerns potential leakage during a seismic event in a check valve installed in the starting air system, is addressed by CEI in DAR 079. The design of the check valve in the starting air system has been modified and has passed seismic testing. Modification of the PNPP diesel generator check valves is currently expected to be completed by the end of December 1983.

18. (3/15/82) This item concerns sheared bolts in the rear crankcase cover at Grand Gulf. As stated in the Inspection Report, at 10, the sheared bolts appear to have been the result of over or under-torqueing during installation. CEI has reinstalled the rear crankcase covers in the PNPP diesel generators and verified that the covers are correctly installed. In addition, the PNPP diesel generators, unlike those at Grand Gulf, have screens to prevent sheared bolts from entering the generators. This item does not apply to PNPP.

19. (12/09/81) This item, which concerns improper mounting location of the governor lube oil cooler, is addressed by CEI in DAR 081. Delaval has supplied instructions and materials for remounting the PNPP governor lube oil coolers. Relocation of the coolers is currently expected to be completed for both Units 1 and 2 by January 1984.

20. (11/05/81) This item, which concerns a defective link rod at Grand Gulf, is addressed by CEI in DAR 038. Inspection showed that the deficiency does not exist for the PNPP diesel generator link rods. This item does not apply to PNPP.

21. (7/14/83) This item concerns a cracked instrument line in the lube oil system at San Onofre Unit 1. Delaval has informed CEI that the cracked instrument line was an additional line not called for in the design and incorrectly installed by the utility. No such line exists for the PNPP diesel generators. This item does not apply to PNPP. However, CEI plans to include the lube oil system instrument lines in the PNPP surveillance and maintenance program to ensure that instrument lines are properly installed and maintained and that the instrument lines do not leak.

22. (3/23/81) This item concerns use of non-qualified motors in the auxiliary lube oil and jacket water pumps at Grand Gulf. CEI specified different types of motors for the PNPP auxiliary lube oil and jacket water pumps than those at Grand Gulf. The motors specified by CEI are designed and qualified for nuclear application. This item does not apply to PNPP.

23. (12/16/80) This item, which concerns a problem with lubrication of the turbocharger thrust bearings at San Onofre Unit 1, is addressed by CEI in DAR 044. Delaval has provided a modified lubrication oil drip system design which avoids the problem experienced at San Onofre. CEI has committed to installation of this system for both Units 1 and 2 prior to pre-engine start testing.

INSPECTION REPORT NO. 99900334/83-01

24. Enclosure 5 to Board Notification BN-83-160 consists of copies of a cover letter, a Notice of Violation, a Notice of Nonconformance, and Inspection Report No. 99900334/83-01, which were sent to Delaval by the Staff on October 3, 1983. The potential violations and nonconformances addressed in these documents concern the implementation of Delaval's quality assurance ("QA") program associated with its manufacture of standby diesel generators. CEI understands that Delaval has submitted its required written statement responding to the findings of the Inspection Report. However, Delaval's written statement has not been provided to CEI. To CEI's knowledge, the Staff has not yet formally responded to Delaval's submittal.

25. Regardless of the results of the Staff's evaluation of Delaval's submittal, none of the potential QA violations, nonconformances or other problems at Delaval identified in the Inspection Report adversely affects the reliability of the PNPP

diesel generators. First, PNPP is not identified in the Inspection Report as one of the plants to which the Inspection Report is potentially applicable. In a section entitled "Plant Site Applicability," the Inspection Report specifies by docket number the facilities to which the report applies. PNPP is not listed as one of the affected plants. See Inspection Report at 1-2.

26. Second, almost all the potential QA problems identified in the Inspection Report have to do with Delaval's implementation of its QA program in the last one to two years. The major components of the PNPP diesel generators, in contrast, were manufactured from December 1977 to September 1978.

27. Third, CEI's QA program has consistently provided effective overview and control of Delaval to assure that the PNPP diesel generators are reliable. In September 1975 CEI conducted a comprehensive Pre-Award Survey of Delaval. CEI 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 all of the findings of the Pre-Award Survey had been implemented. Also at the Post-Award Meeting CEI 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.

28. Review and approval of the necessary procedures was completed by November 1977; and on November 30, 1977 Gilbert issued a fabrication release to Delaval. The Gilbert manufacturing surveillance plan for Delaval, which was reviewed and approved by CEI, had been initiated in August 1977 with respect to certain Delaval subvendors. From December 1977 to September 1978, during the manufacture of the major components of the PNPP diesel generators, Gilbert conducted 15 surveillances at Delaval. These surveillances covered a wide range of Delaval activities. Three additional surveillances of Delaval subvendors were conducted between August 1977 and September 1978. To date Gilbert has conducted a total of 44 surveillances in connection with the PNPP diesel generators. All findings issued as a result of the Gilbert manufacturing surveillance program have been resolved.

29. In addition to the manufacturing surveillance program, in May 1978 CEI and Gilbert conducted a comprehensive audit of Delaval's activities in connection with the manufacture of the PNPP diesel generators. The audit concluded that in general Delaval's QA procedures were adequate and were being satisfactorily implemented. All audit findings resulting from the May 1978 audit were resolved. A July 1978 meeting with Delaval confirmed CEI's and Gilbert's confidence in Delaval's program. As a result of this favorable evaluation, CEI approved shipment from Delaval of the PNPP diesel generators.

30. A subsequent audit of Delaval was conducted by CEI 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 diesel generators was adequate to assure their reliability.

31. Audits and surveillances by CEI and Gilbert from 1975 to 1982 did identify problems with Delaval procedures and implementation of procedures similar to some of the QA problems documented in the Inspection Report, e.g., review and approval of production route sheets and other drafting room practices. However, Delaval responded to all audit and surveillance findings; and all CEI and Gilbert concerns with Delaval were resolved. Delaval's QA program thus raises no issues with respect to the reliability of the PNPP diesel generators.

CONCLUSION

32. In conclusion, none of the concerns raised in Board Notification BN-83-160 affects adversely the reliability of the PNPP standby diesel generators.

Edward J. Turk
Edward J. Turk

Subscribed and sworn to before me
this 13th day of December, 1983

James P. Williams
NOTARY PUBLIC

My Commission Expires:

11-12-1988

Thomas G. Swansiger
Thomas G. Swansiger

Subscribed and sworn to before me
this 13th day of December, 1983

James P. Williams
NOTARY PUBLIC

My Commission Expires:

11-12-1988



P.O. BOX 5000 - CLEVELAND, OHIO 44101 - TELEPHONE (216) 622-9800 - ILLUMINATING BLDG. - 55 PUBLIC SQUARE

Serving The Best Location in the Nation

MURRAY R. EDELMAN

November 10, 1983

VICE PRESIDENT
NUCLEAR

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Potential Defect with Engine
Mounted Fuel Oil Line/Transamerica
Delaval, Inc. [RDC 84(83)]

Dear Mr. Keppler:

This letter serves as an interim report pursuant to 10CFR50.55(e) concerning a possible problem with an engine mounted fuel oil line on the diesel generator engines supplied by Transamerica Delaval, Inc. (TDI). Mr. R. C. Knop of your office was first notified on October 11, 1983, by Mr. E. Riley of The Cleveland Electric Illuminating Company that this matter was being evaluated for applicability to the Perry Nuclear Power Plant (PNPP).

This report contains a description of the potential deficiency, of corrective action taken to date, and the planned date for our final report.

Description of Potential Deficiency

The potential deficiency is associated with the Fuel Oil Line which runs between the engine mounted Fuel Transfer Pump to the Fuel Oil Header on the diesel generator. This problem was first identified at Grand Gulf I where the Fuel Oil Line broke shutting the engine down. Initial information indicated that the line break at Grand Gulf I resulted from excessive line vibration.

This item was reported to the NRC September 21, 1983, by Transamerica Delaval, Incorporated as a 10CFR21. Subsequently, Perry Nuclear Power Plant was notified of this as a possible problem by Transamerica Delaval, Inc.

Corrective Action Taken to Date

A review of the fuel oil line assembly attachments for each of the PNPP diesel engines supplied by TDI has been conducted by the Project Organization and representatives from TDI. Based upon this review, additional clamping devices were determined to be needed to minimize the potential vibration problem and the needed parts have been ordered. These parts will be installed prior to engine operation.

In addition to the mounting attachments, Project Organization personnel are evaluating other recommendations proposed by TDI. Currently we are reviewing recommended modifications in case of a Fuel Oil Line break and Project Organization maintenance activities associated with this potential vibration problem.

We are presently planning to submit our final report on this subject by January 31, 1984.

Please call if you have any questions.

Sincerely,

Murray R. Edelman

Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

Records Center, SEE-IN
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

EXHIBIT A

EDWARD J. TURK

Civilian
Education:

Illinois Institute of Tech, BSEE, 1963 (Electronics)
Cleveland State University, MBA, 1975 (Finance)
General Electric BWR Plant Design &
Fundamentals Course, San Jose, 1975
1981 National Electric Code

Military
Education:

U. S. Naval Submarine School, 1963-1964
U. S. Naval Nuclear Power School, 1964-1965
U. S. Naval Nuclear A-1-W Reactor Prototype, 1965
SSBN 640 Inertial Navigator School, 1967

Civilian
Experience:

1979-Present

Nuclear Engineering Department - Lead Balance
of Plant Engineer administering procurement and
installation specifications in support of
installation engineering including cash flow
and budget allocations.

Equipment qualification experience gained by
complying with IEEE 323-1974.

Special Project - Reactor Vessel Safe-End
replacement for Units 1 and 2.

Senior Design Development Engineer - Preparing
the Design Control Manual Procedures in compliance
with ANSI N45.2.11, Quality Assurance Requirements
for the Design of Nuclear Power Plants.

Interfacing with Nuclear Licensing Section, Pur-
chasing and Quality Assurance on the standby diesel
generators. Responsible for obtaining data on
diesel generators from other plant operators and
industry sources and making recommendations for
the PNPP standby diesel generators.

1975-1979

Nuclear Test Section - Developed the Test Program Manual, Test Sequence Network and Manning Plans.

Lead Balance of Plant Test Engineer - Developed Test Specifications, FSAR Chapter 14 and System Startup Scoping Packages in compliance with Regulatory Guide 1.68, Preoperational Test Program.

Prepared Responsibility Guide and Qualification Sheet for Senior Engineer, Nuclear Startup.

1974-1975

Perry Plant Department - Taught BWR Plant Design & Fundamentals Course to Nuclear Engineering Department, 1975-1977.

Duane Arnold Nuclear Plant - Outage Training - 10 weeks

Hatch Nuclear Plant - Operation Observation 1 week.

Military
Experience:

Submarine Qualified.
Main Propulsion Assistant, USS George Bancroft (SSBN 643).
Auxiliary Division Officer, USS George Bancroft (SSBN 643)
Navigator/Operations Officer, USS George Bancroft (SSBN 643)
Engineering Officer of the Watch, S-5-W, Reactor Plant.

Licenses:

Professional Engineer, Ohio, E-42506
Third Class Stationary Engineer, Ohio

Other:

American Nuclear Society, Local and National
Past Local Program Chairman, 1978-1979
Executive Committee Member, 1977-1980

EXHIBIT B

Thomas G. Swansiger PROFESSIONAL QUALIFICATIONS

My name is Thomas G. Swansiger. I am employed as an Engineer for The Cleveland Electric Illuminating Company and fill the position of Unit Supervisor of the Procurement Quality Unit of the Procurement/Administration Quality Section. In this capacity I have the responsibility for the quality assurance activities related to the procurement of equipment/materials for the Perry Nuclear Power Plant, including the Standby Diesel Generators manufactured by Transamerica Delaval, Inc. I also act as CEI's representative to the Coordinating Agency for Supplier Evaluation (CASE) for supplier qualification.

EXPERIENCE

The CLEVELAND ELECTRIC ILLUMINATING COMPANY
since 1968.

January 1981
to Present

Unit Supervisor/Procurement Quality Unit responsible for all phases of quality assurance activities for CEI procurement of equipment/materials for PNPP. Responsibilities also include supervision of the element responsible for coordination of reporting all 10 CFR 50.55(e) items and for coordination of PNPP responses to NRC identified findings.

June 1980 to
December 1980

Audit Coordinator, Program Quality Section, responsible for scheduling, planning, and implementation of the PNPP Internal Audit Program for 1980; developing the 1981 PNPP internal audit schedule; follow-up for close-out/verification of outstanding audit findings; program development for the PNPP audit program.

February 1979 to
June 1980

Quality Engineer, Program Quality Section, responsible for vendors supplying piping, structural steel, and steel plate material for the PNPP. Activities include specification review, supplier evaluations, procurement document reviews, vendor audits, assistance in problem resolution and participation in surveillance activities for assigned specifications. Interface with construction for equipment/material problems identified at PNPP.

Exhibit B
Page Two

September 1978 to February 1979 Quality Engineer, Program Quality Section, responsible for vendors supplying mechanical equipment (pumps/valves) for the PNPP. Activities included specification review, supplier evaluations, procurement document reviews, vendor audits, assistance in problem resolution, and participation in surveillance activities for assigned specifications. Interface with construction for equipment/material problems identified at PNPP.

June 1972 to September 1978 Engineer, Plant and Substation Department. Responsibilities were related to substation design both distribution (13.2kv, 33kv, and 138kv) and bulk power. Range of work included:

Electrical station layout;

Site preparation such as grading, drainage, and interpretation of soil test data;

Concrete design and analysis for needed foundations;

Design and analysis of steel support structures;

Design and layout of associated electrical cable subway.

September 1968 to June 1972 Co-op student under CEI's Scholastic Awards Program in the Plant and Substation Department. Responsibilities covered drafting and detailing associated with drawings needed for distribution and transmission stations. Activities included foundation detailing and structural steel detail drawings.

EDUCATION

Cleveland State University - Bachelor of Civil Eng. (Cum Laude) June 1972, Cleveland, Ohio

Cleveland State University - Master of Science Civil Eng. June 1977, Cleveland, Ohio

Exhibit B
Page Three

CONTINUING
EDUCATION/
TRAINING/
SEMINARS

Equipment Qualification, Wyle Laboratories,
February 1982.

Management by Objectives Course, University
of Michigan, December 2-4, 1981.

Principles of Reactor Operation Course, General
Physics Corp., September 14-18, 1981.

Metallurgy of Welding and Joining, Metals
Engineering Institute, March 21, 1980.

AWS Pipeline Welding and Inspection Seminar,
February 15-16, 1980.

AWS Fundamentals of Welding Inspection,
Spring 1979.

GAI Training Seminar in Quality Assurance
Auditing, completed February 16, 1979.

ASME Quality Assurance for Nuclear Power Plants
Seminar, completed January 23, 1979.

PROFESSIONAL
CERTIFICATION

Registered Engineer, State of Ohio EO41386
July 1976.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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))	

CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing "Applicants' Answer to 'NRC Staff Supplemental Response (Based Upon New Information in Board Notification BN-83-160) to OCRE Motion for Admission To Resubmit Proposed Contention 2'" and "Affidavit of Edward J. Turk and Thomas G. Swansiger in Support of Applicants' Answer to 'NRC Staff Supplemental Response (Based Upon New Information in Board Notification BN-83-160) to OCRE Motion for Admission To Resubmit Proposed Contention 2'" were served by deposit in the United States Mail, first class, postage prepaid, this 16th day of December, 1983, to all those on the attached Service List.

Michael A. Swiger
MICHAEL A. SWIGER

December 16, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

THE CLEVELAND ELECTRIC)
ILLUMINATING COMPANY)

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

Docket Nos. 50-440
50-441

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