

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED  
USNRC

85 FEB -5 A9:54

In the Matter of )  
 )  
THE CLEVELAND ELECTRIC )  
ILLUMINATING COMPANY )  
 )  
(Perry Nuclear Power Plant, )  
Units 1 and 2) )

Docket Nos. 50-440  
50-441

OFFICE OF SECRETARY  
OF ENERGY

AFFIDAVIT OF  
DAVID R. GREEN  
ON CONTENTION JJ

County of Lake )  
 ) ss  
State of Ohio )

David R. Green, being duly sworn, deposes and says:

1. I am a Senior Project Engineer, Nuclear Engineering Department of The Cleveland Electric Illuminating Company. My business address is 10 Center Road, Perry, Ohio 44081. I am the head of Systems and Equipment Design in the Nuclear Design and Analysis Section and am responsible for all the electrical systems and the electrical technical support for the plant. A current statement of my professional and technical qualifications is attached hereto. I have personal knowledge of the matters stated herein and believe them to be true and correct. I make this affidavit in support of Applicants' Motion for Summary Disposition of Contention JJ.

2. Contention JJ states that the emergency plans do not provide for back-up power so that evacuation procedures and activities can be carried out. Sunflower Alliance's explanation of this contention argues that the emergency plans should address the availability of electrical power "to compensate for the loss of power from PNPP that would accompany an accident." Sunflower Alliance's Particularized Objections to Proposed Emergency Plans in Support of Issue No. 1, dated August 20, 1984, p. 17.

3. Sunflower's argument incorrectly assumes that an accident at Perry would cause a loss of power in the area surrounding the plant. The Final Safety Analysis Report, Section 8.2.2.2, addresses the availability of electrical power from the transmission system under the conditions that would accompany an accident, i.e., the loss of power from PNPP. As shown in the FSAR, load flow and stability studies show that a full load trip of both units or the tripping of one unit with the other online or offline will not impair the ability of the preferred source to provide power to the Class IE System. FSAR § 8.2.2.2. The "preferred source" mentioned in the FSAR is the offsite power from the transmission grid system. This power is available from generating stations other than PNPP through the transmission grid and distribution system. Therefore, sufficient power would be available in the area to "operate sirens, emergency-set traffic lights, independent radiation

monitoring equipment, gasoline pumps and the like" even if the Perry facility were to shut down because of an accident.

David R. Green  
David R. Green

Subscribed and sworn before me  
this 1<sup>st</sup> day of FEBRUARY, 1985

Joseph C. Szwejkowski  
Notary Public

JOSEPH C. SZWEJKOWSKI

Notary Public, State of Ohio - Cuya. Cty.

My Commission Expires: My Commission Expires July 14, 1986

DAVID R. GREEN

PROFESSIONAL QUALIFICATIONS

My name is David R. Green. I am employed as a Senior Project Engineer in the Nuclear Engineering Department of The Cleveland Electric Illuminating Company. I have extensive and intensive experience in design, construction, startup, operations, maintenance, and electrical equipment failure diagnosis and repair engineering for both nuclear and fossil-fueled power plants. I also act as CEI's Rotating Electrical Machinery Specialist.

- EXPERIENCE - The Cleveland Electric Illuminating Company since 1955
- 1983-Present Senior Project Engineer; Electrical, Instrumentation and Control, Chemical, Environmental and Equipment Qualification, Nuclear Design and Analysis Section of the Nuclear Engineering Department.
- 1981-83 Senior Project Engineer, Engineering Unit, Nuclear Design Section of Nuclear Engineering Department - responsible for construction and startup support engineering (electrical and mechanical) for Perry Nuclear Power Plant. Also responsible to serve as CEI's Rotating Electrical Machinery Specialist.
- 1979-81 Senior Project Engineer, Electrical and Instrumentation and Control - responsible for electrical, instrumentation and control design for Perry Nuclear Power Plant.
- 1975-79 Senior Electrical Engineer - responsible for all electrical design for Perry Nuclear Power Plant.
- 1973-75 Project Electrical Engineer - responsible for electrical design construction and startup for Avon 10 and Eastlake 6 plants, both 35-MW gas turbine projects.
- 1968-72 Project Electrical Engineer - responsible for electrical engineering on all phases of Eastlake Plant, a 650-MW coal-fueled unit, including the direction of the electrical check, test and startup.
- 1969-71 Project Engineer - responsible for design, construction, startup on the world's first 345 KV SF6 Gas-Insulated Bus, installed at the Eastlake Plant.



1965-68

Project Electrical Engineer - participated in various engineering positions on the following projects: Avon 9 (a 650-MW fossil plant), Lakeshore 18, Avon 8, Ashtabula 5, and Eastlake 4 (all 250-MW coal-fueled plants).

Served as Plant Electrical Operator during two company strikes for periods totaling six months (1968 and 1973).

EDUCATION:

B.S. Electrical Engineering, Case Institute of Technology, 1955.

Power Systems Engineering Course (9 months), General Electric, 1966-67.

Numerous seminars and short courses including General Electric BWR training.

REGISTRATION:

Professional Engineer, Ohio, 1958.

SOCIETIES:

IEEE Memberships include:

Rotating Machinery Committee, 1967-present.

Synchronous Machinery Subcommittee, 1967-present.

Working Group Chairman - Turbine Generator Shaft Stress, 1972-present.

Excitation Systems and Equipment - 1967-present.

Nuclear Power Engineering - Qualification Subcommittee, 1975-present.

Working Group Member, IEEE 649 Qualification of Motor Control Centers for Nuclear Plant Use, 1977-present.

Working Group Member, IEEE 323 Electrical Equipment Qualification for Nuclear Plants, 1975-78.

Liaison IEEE 387 Diesel-Generators for Nuclear Plant Use, 1980-present.

ANSI Memberships include:

Rotating Synchronous Machinery (C50.10-14).

Power Plant Motors (C50.19).

PUBLICATIONS:

IEEE 62-970 - Proper Motor Application and Engineering Can Reduce Costs and Improve Reliability.

IEEE 70 CP 217 - Electrical Features of Avon Unit 9.  
Electrical World - 1973, World's First 345 KV SF6 Bus.