



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 20, 2000

Mr. Robert P. Powers, Senior Vice President
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: DONALD C. COOK - SUMMARY OF APRIL 17, 2000, PUBLIC MEETING
REGARDING UNDER VOLTAGE PROTECTION (TAC NOS. MA6799 AND
MA6800)

Dear Mr. Powers:

This letter summarizes the meeting held on April 17, 2000, between members of your staff and the Nuclear Regulatory Commission (NRC) related to under voltage protection for the safety related electrical systems at the Donald C. Cook (D. C. Cook) nuclear plant. The meeting was held at NRC headquarters in Rockville, Maryland. This meeting was open for public observations. Enclosure 1 provides a list of meeting attendees.

The licensee presented information related to the design and licensing basis for the under voltage protection of the safety related electrical distribution system at D. C. Cook. Enclosure 2 is the licensee's slide presentation. The licensee made a presentation of the licensing basis of the electrical distribution system with emphasis on under voltage protection. The licensee presented the results of an extensive study they completed which traced the origin of the licensing basis from the first Generic Letter which was issued by the NRC in 1977 to the present. The licensee concluded that the current under voltage protection scheme protecting the electrical distribution system at D. C. Cook is in accordance with the licensing basis as described in the Updated Final Safety Analysis Report and as approved by the NRC through amendments to the operating licenses.

The licensee also presented the plans to enhance the current under voltage protection prior to restarting Unit 2. In the short term, the licensee will implement new procedures and administrative controls to monitor the offsite electrical distribution grid as described in licensee event report (LER) 315/1992-022-01, "Electrical Bus Degraded Voltage Too Low For Safety Related Loads," dated March 23, 2000. The monitoring will aid to prevent potential degraded grid voltage conditions from affecting the performance of the electrical distribution system at D. C. Cook. In addition, the licensee presented plans for future corrective actions to permanently enhance the under voltage protection of the electrical distribution system at D. C. Cook.

The meeting helped the NRC staff to have a better understanding of the current licensing basis concerning under voltage protection of the electrical distribution system as well as the implementation of short term and long term enhancements of the electrical distribution system at D. C. Cook.

At the close of the meeting, the NRC staff requested the licensee to confirm in a letter both the short term and planned long term enhancements to the electrical distribution system. In addition, the NRC stated that changes to plant procedures should be performed in accordance with the appropriate rules and regulations.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosures will be available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and accessible electronically through the ADAMS Public Electronic Reading Room link at the NRC Web site (<http://www.nrc.gov>).

If you have any questions regarding this matter, please contact me at 301-415-1345.

Sincerely,

/RA/

John F. Stang, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Attendee List
2. Licensee's Slide Presentation

cc w/encls: See next page

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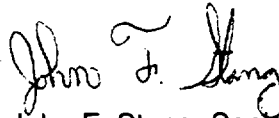
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If you have any questions regarding this matter, please contact me at 301-415-1345.

Sincerely,

A handwritten signature in black ink, appearing to read "John F. Stang". The signature is fluid and cursive, with the first name "John" and last name "Stang" clearly distinguishable.

John F. Stang, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

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2. Licensee's Slide Presentation

cc w/encls: See next page

Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

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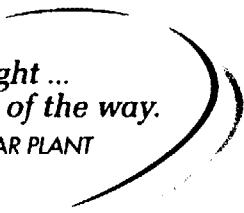
Robert P. Powers, Senior Vice President
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

ATTENDANCE LIST FOR APRIL 17, 2000, MEETING

<u>NAME</u>	<u>ORGANIZATION</u>
Michael Rencheck	AEP/V. P. Engineering
Robert Godley	AEP/Director Regulatory Affairs
Scot Greenlee	AEP/Director Design Engineering
Michael Finissi	AEP/Plant Engineering
George Wadkins	AEP/Licensing Engineer
Christopher Soltis	AEP/ElectricDesign Manager
Dave Lochbaum	Union of Concerned Scientists
Amar Pal	NRC/NRR
John Stang	NRC/NRR
Singh Bajwa	NRC/NRR
Claudia Craig	NRC/NRR
Bill Reckley	NRC/NRR
David Terao	NRC/NRR
Tom Scarbrough	NRC/NRR
Jim Luehman	NRC/OE
Jose Calvo	NRC/NRR
Gene Imbro	NRC/NRR
Paul Gill	NRC/NRR
John Grobe	NRC/Region III
Anton Vogel	NRC/Region III

ENCLOSURE 1

*Doing it right ...
Every step of the way.*
COOK NUCLEAR PLANT



American Electric Power

Meeting with

Nuclear Regulatory Commission

Degraded Voltage Discussion

Restarting D. C. Cook
April 17, 2000



Agenda

- Agenda/Opening Remarks
- Current Outage Operability
- Degraded Voltage Setpoint Overview
- Degraded Voltage Protection Licensing Basis
- Closing Remarks
- Mike Rencheck
- Scot Greenlee
- Mike Finissi
- Robert Godley
- Mike Rencheck

Electrical Distribution System Operability - Current Outage

- **Electrical Distribution System Design Reviews**
- **Majority of Load Flow and Electrical Protection Calculations Reconstituted**
- **Auto Tap Changing Transformers Needed for Design Improvements**

Electrical Distribution System Operability

- **Load Flow Analysis Establishes “Analytical Limit” for 4kV Buses**
 - Limiting accident conditions used in analysis
 - Modeling goes to equipment terminals

- **Operation > Analytical Limit Ensures Equipment Can Operate Under Normal, Abnormal and Limiting Accident Conditions**

Electrical Distribution System Operability

- **Assurance of Operation > Analytical Limit Provided by Grid Study**

- **Grid Study**
 - **Loss of a nearby generating unit**
 - **Loss of critical transmission grid element**
 - **CNP units down**
 - » **One unit in shutdown**
 - » **One unit in LOCA**
 - **Transmission system heavily loaded**

Electrical Distribution System Operability

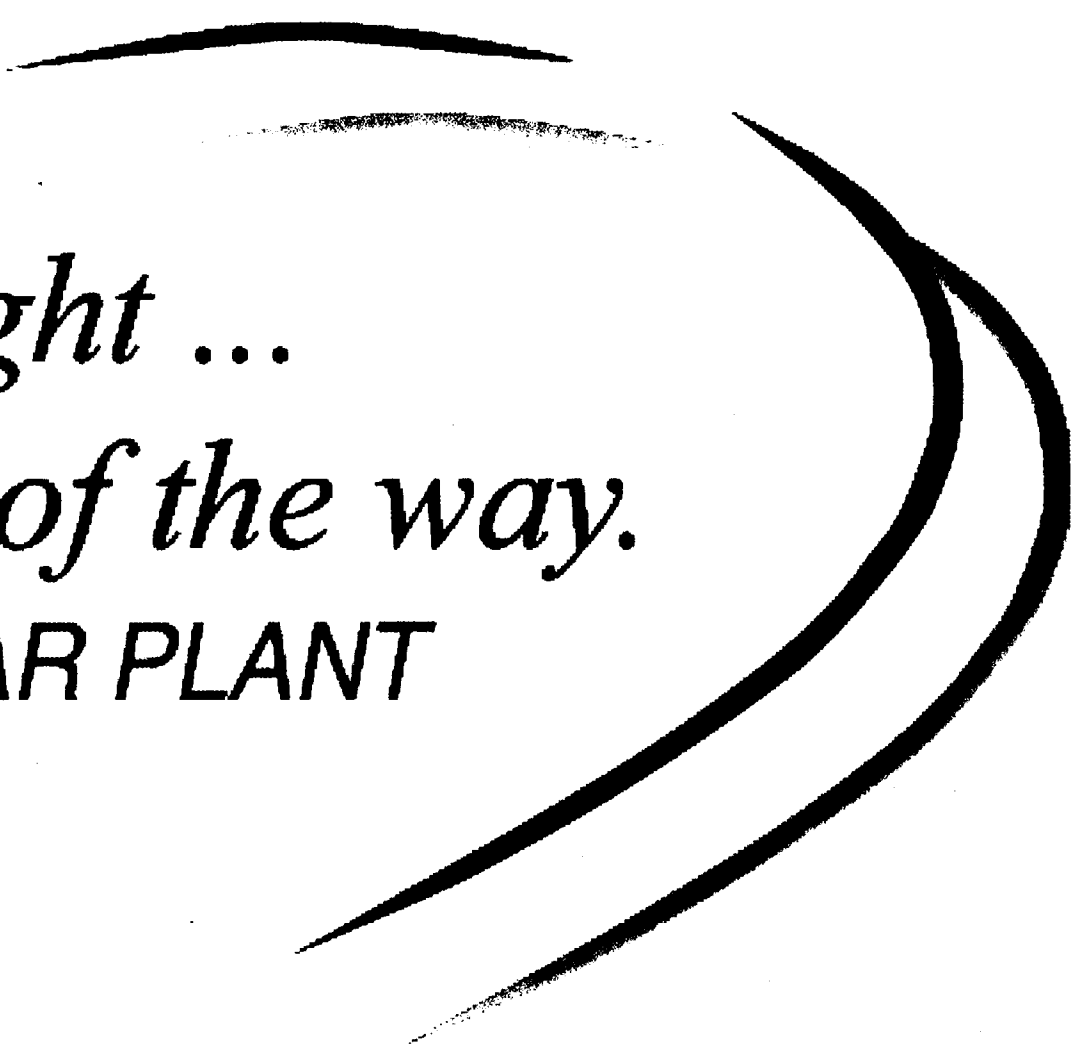
■ Grid Study Results:

- Do not expect to reach analytical value**

■ Restart Modifications to Ensure 4kV Bus Analytical Limit Maintained

- New switchyard breaker**
- Transformer tap changes**

■ New Working Agreement Between CNP and AEP System Operations to Monitor Grid Voltages and Failure Scenarios



Doing it right ...

Every step of the way.

COOK NUCLEAR PLANT