



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

October 5, 2015

Mr. Lawrence J. Weber
Senior Vice President and
Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 – SECOND REQUEST
FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT
REQUEST TO REVISE TECHNICAL SPECIFICATION 3.8.1 (TAC NOS.
MF5436 AND MF5437)

Dear Mr. Weber:

By letter dated December 17, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14356A022), as supplemented by letter dated July 9, 2015 (ADAMS Accession No. ML15195A434), Indiana Michigan Power Company (I&M, the licensee) requested an amendment to Renewed Facility Operating Licenses DPR-58 and DPR-74 for Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would revise the Technical Specifications 3.8.1, "AC Sources – Operating," to allow testing of the onsite standby emergency diesel generators (DGs) during modes in which it is currently prohibited.

Specifically, the proposed changes would remove the mode restrictions in the notes of Surveillance Requirements 3.8.1.10 (DG single largest load rejection test), 3.8.1.11 (DG full load rejection test), and 3.8.1.15 (DG endurance run).


The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the subject submittal and supplement, and has determined that additional information is needed to complete the review, as described in the enclosed Second Request for Additional Information (RAI). The draft RAI was sent to I&M via electronic mail on September 23, 2015. The NRC staff clarified the draft RAI in a conference call conducted on October 1, 2015. Based on our discussion, we understand that a response to the RAI will be provided by October 30, 2015.

L. Weber

- 2 -

Please feel free to contact me at (301) 415-2846 if you have any additional questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Allison W. Dietrich". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Allison W. Dietrich, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosure:
Second Request for Additional Information

cc: Distribution via Listserv

SECOND REQUEST FOR ADDITIONAL INFORMATION REGARDING
LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SURVEILLANCE REQUIREMENTS 3.8.1.10, 3.8.1.11, AND 3.8.1.15
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-315 AND 50-316
TAC NOS. MF5436 and MF5437

The U.S. Nuclear Regulatory Commission staff has determined that the following additional information is needed to complete the review of the Indiana Michigan Power Company license amendment request dated December 17, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14356A022), as supplemented by letter dated July 9, 2015 (ADAMS Accession No. ML15195A434), for the Donald C. Cook Nuclear Plant (CNP), Units 1 and 2.

EEEEB-RAI-5

In response to EEEB-RAI-2c, the licensee addressed the emergency diesel generator (EDG) operation during a loss of offsite power (LOOP) with a loss-of-coolant accident (LOCA) while the EDG is operating in parallel with the offsite power. The licensee stated:

When the EDG [emergency diesel generator] is in test mode, the SI [safety injection] or load shed signal will automatically trip the 4 kV [kilovolts] Output Breaker during EDG test mode (these signals are blocked after two seconds, and therefore SI signal is prevented from reopening the breaker if a load shed occurs first, trips the breaker, then the breaker closes to load the EDG and a SI signal is initiated some time later).

- a. Please discuss the events or signals that initiate the load shed signal. If an SI signal also initiates a load shed signal, please clarify the sentence in parentheses in the above statement. Also, please explain the EDG operation during degraded grid voltage conditions while the EDG is being tested in parallel with the offsite power source in Mode 1 or 2.
- b. Please discuss the EDG operation, including timing of vital load loads sequencing, during a LOOP concurrent with LOCA scenario, while the EDG is being tested in parallel with the offsite power source in Mode 1 or 2. Also, please clarify whether manual action to reset the lockout relay is allowed during a LOOP concurrent with LOCA event in the CNP licensing design basis accident analysis.

Enclosure

- c. Please provide the timeline of tripping and closing of the EDG breaker, and discuss the timing of vital load sequencing for the following scenarios, with the EDG initially in test mode and paralleled with the offsite source:

- (1) LOOP followed by LOCA
- (2) LOCA followed by LOOP

EEEEB-RAI-6

In response to EEEB-RAI-3, the licensee stated that the EDG protective relays for generator overcurrent, generator differential, and generator neutral overcurrent remain active in non-emergency conditions.

- a. Please explain the conditions defined as “non-emergency” and “emergency.”
- b. Please provide a single line diagram showing the connection of the protective relays. Also, please discuss the physical location of the protective relays, including the lockout relay, for the EDG.

EEEEB-RAI-7

In response to EEEB-RAI-4, the licensee stated:

The maximum 3 phase fault contribution from the EDG is 4.1kA [kilo amperes]. The maximum fault at the T Bus is less than 42kA including the EDG contribution. The symmetrical interrupting rating of the 4 kV switchgear and breakers is 46.9 kA adjusted for the 4.16 kV rating. The maximum fault current, 42 kA calculated with the EDG in parallel does not exceed the fault rating of switchgear and breakers. The fault currents are conservatively estimated based on the low circuit impedances and maximum fault contribution from the system and the motors connected to the bus.

- a. Section 8.4 of the CNP Updated Final Safety Analysis Report states that one EDG supplies power to two 4.16 KV safety buses (e.g., T11A and T11B in Unit 1, Train B). Please clarify whether the EDG is connected to both 4.16 kV safety buses (e.g., T11A and T11B) during testing of the EDG paralleled with the offsite power source, and during emergency conditions.
- b. Please provide a summary of the short circuit calculations at the T Bus(es) that is(are) connected to the EDG with the EDG in parallel with offsite power.

L. Weber

- 2 -

Please feel free to contact me at (301) 415-2846 if you have any additional questions or concerns.

Sincerely,

/RA/

Allison W. Dietrich, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosure:
Second Request for Additional Information

cc: Distribution via Listserv

DISTRIBUTION:

PUBLIC

RidsNrrDorlLpl3-1 Resource
RidsNrrPMDCCook Resource
RidsAcrsAcnw_MailCTR Resource
VGoel, NRR

LPL3-1 R/F
RidsNrrDeEeeb Resource
RidsNrrLAMHenderson Resource
AFoli, NRR

ADAMS Accession No.: ML15267A683

*via memorandum

OFFICE	DORL/LPL3-1/PM	DORL/LPL3-1/LA	DE/EEEB/BC*	DORL/LPL3-1/BC	DORL/LPL3-1/PM
NAME	ADietrich	MHenderson	JZimmerman	DPelton	ADietrich
DATE	9/24/2015	9/25/2015	09/23/2015	10/5/2015	10/5/2015

OFFICIAL RECORD COPY