



November 6, 2002

AEP:NRC:2016-04

Docket No: 50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Unit 2
REQUEST FOR NOTICE OF ENFORCEMENT DISCRETION
FROM TECHNICAL SPECIFICATION 3.8.1.1 LIMITING CONDITION FOR
OPERATION FOR THE CD EMERGENCY DIESEL GENERATOR

Indiana Michigan Power Company (I&M), the licensee for the Donald C. Cook Nuclear Plant (CNP) Unit 2 (DPR-74), requests regional enforcement discretion from compliance with the requirements of Technical Specification (TS) 3.8.1.1, Action "b." I&M requests that the 72-hour allowed outage time included in TS 3.8.1.1, Action "b" be extended by an additional 72 hours to accomplish restoration of the Unit 2 CD Emergency Diesel Generator (EDG) to an operable status.

On November 2, 2002, the Unit 2 CD EDG was declared inoperable and the 72-hour action requirements of TS 3.8.1.1, Action "b," were entered in preparation for monthly surveillance testing in accordance with TS 4.8.1.1.2.a.5. During the surveillance test, the EDG load began oscillating approximately 150 kW within 10 minutes of the EDG reaching full load (3500 kW). Subsequent attempts to correct this condition were expected to exceed the 72-hour allowed action requirements of TS 3.8.1.1, Action "b."

CNP evaluated the above described condition and determined that the risk of the requested extension does not warrant an unnecessary plant transient to shut down Unit 2. Requesting a license amendment would not be practical because the Unit 2 CD EDG would be restored to compliance with the TS before a license amendment could be issued.

Therefore, I&M requested enforcement discretion to preclude a required entry into Mode 3 by 1427 hours for Unit 2 on November 5, 2002. To accomplish this, I&M requested the 72-hour allowed outage time for Unit 2 TS 3.8.1.1, Action "b" be extended by 72 hours.

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The details contained in the attachment to this letter were discussed with the Nuclear Regulatory Commission (NRC) staff in a conference call beginning at 2007 hours on November 4, 2002. Regional enforcement discretion was verbally granted at 2235 hours on November 4, 2002.

At the time of the request for enforcement discretion, a replacement for the EDG hydraulic actuator was not available at CNP. Time was required to transport a new actuator from Rocky Mount, South Carolina. Subsequent inspection of the original hydraulic actuator determined that it was still functional and it was reinstalled on the 2 CD EDG. This permitted the 2 CD EDG to be returned to service ahead of the original schedule.

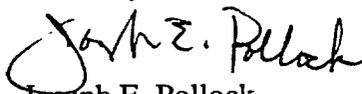
On November 6, 2002, the Unit 2 CD EDG governor was repaired and the diesel was declared operable at 0049 hours. At that time, Unit 2 exited Limiting Condition for Operation, Action "b," for TS 3.8.1.1.

Copies of this letter and its attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91.

This submittal contains no new commitments.

Should you have any questions, please contact Mr. Brian A. McIntyre, Manager of Regulatory Affairs, at (269) 697-5806.

Sincerely,



Joseph E. Pollock
Site Vice President

BWO/jen

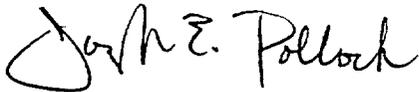
Attachment

c: K. D. Curry – AEP Ft. Wayne
J. E. Dyer – NRC Region III
MDEQ - DW & RPD
NRC Resident Inspector
J. F. Stang, Jr. – NRC Washington DC
R. Whale – MPSC

AFFIRMATION

I, Joseph E. Pollock, being duly sworn, state that I am Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this Request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

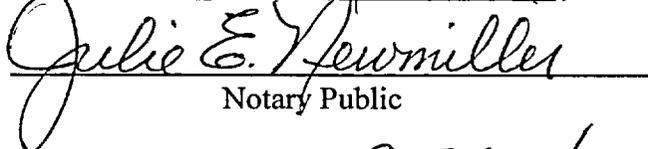
Indiana Michigan Power Company



Joseph E. Pollock
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 6th DAY OF November, 2002


Notary Public

My Commission Expires 8-22-04

JULIE E. NEWMILLER
Notary Public, Berrien County, MI
My Commission Expires Aug 22, 2004



ATTACHMENT TO AEP:NRC:2016-04

WRITTEN REQUEST FOR A NOTICE OF ENFORCEMENT DISCRETION

1. TECHNICAL SPECIFICATION REQUIREMENT OR OTHER LICENSE CONDITIONS THAT WILL BE VIOLATED

Technical Specification (TS) 3.8.1.1 Limiting Condition for Operation (LCO) states, in part, that:

“As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- b. Two separate and independent diesel generators, each with:
 - 1. A separate day fuel tank containing a minimum of 70 gallons of fuel,
 - 2. A separate fuel storage tank containing a minimum of 46,000 gallons of fuel, and
 - 3. A separate fuel transfer pump.”

Technical Specification 3.8.1.1, Action “b,” states that “With a diesel generator of the above required A.C. electrical power sources inoperable, ...restore diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.”

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP), requests regional enforcement discretion from compliance with TS 3.8.1.1, Action “b,” for Unit 2 such that the 72-hour allowed outage time will be extended by 72 hours to accomplish restoration of the Unit 2 CD Emergency Diesel Generator (EDG) to an operable status.

2. CIRCUMSTANCES SURROUNDING THE SITUATION, INCLUDING APPARENT ROOT CAUSES, THE NEED FOR PROMPT ACTION AND IDENTIFICATION OF RELEVANT HISTORICAL EVENTS

TS Surveillance 4.8.1.1.2 states, in part:

“Each diesel generator shall be demonstrated OPERABLE:

- a. In accordance with the frequency specified in Table 4.8-1 on a STAGGERED TEST BASIS by:
 - 5. Verifying the diesel is synchronized and loaded and operates for greater than or equal to 60 minutes at a load of 3500 kw**.

** Momentary load transients do not invalidate this test.”

At 0827 hours on November 2, 2002, TS LCO 3.8.1.1, Action "b," was entered to perform TS surveillance requirement 4.8.1.1.2 for the Unit 2 CD EDG. During performance of the surveillance, the EDG load began oscillating approximately 150 kW within 10 minutes of the EDG reaching full load (3500 kW). Subsequently, EDG load was reduced to 2500 kW and the oscillations ceased.

On November 2, 2002, at approximately 2120 hours, attempts were made to "tune" the Unit 2 CD EDG governor, and the EDG was loaded to 3500 kW. The load on the EDG began oscillating approximately 200 kW. The load was again reduced to 2500 kW and the oscillations ceased. At this time, based on an apparent cause evaluation that indicated the control circuitry of the 2 CD EDG to be the probable cause of the equipment malfunction, the decision was made to replace both the Electronic Governing Module (EGM) and Governor Hydraulic Actuator (EGB) modules of the Unit 2 CD EDG governor.

Replacement of the modules was completed at 1108 hours on November 3, 2002 and post-maintenance testing (PMT) was performed with the new governor modules installed. During governor tuning in preparation for the PMT run, the Unit 2 CD EDG speed was increased using the EGB. The EGM was then placed in service and the EDG speed began to swing, causing high field amperage and voltage. The Unit 2 CD EDG was then tripped and a second EGM was installed at 0318 hours on November 4, 2002. Preparations for paralleling the CD EDG to the "A" train of the 4 kV distribution system to perform a full load test of the diesel were commenced. However, a 1-ampere fuse opened in the EDG synchronizing circuit and the EDG run was stopped at 0942 hours on November 4, 2002.

Due to the unavailability of a spare 1-ampere fuse, the decision was made to install a 0.5-ampere fuse in the synchronizing circuit to allow testing of the Unit 2 CD EDG. During testing, the EDG load began oscillating approximately 500 kW with the EDG at 3500 kW. In addition, local EGB indication of governor oil level was not visible. The CD EDG was subsequently tripped at 1749 hours on November 4, 2002. The apparent cause of this failure was attributed to an infant mortality failure of an oil seal on the newly-installed EGB.

At the time that enforcement discretion was requested, the formal root cause of the Unit 2 CD EDG governor failure had not been completed. CNP had performed a supporting/refuting evaluation, which identified the apparent cause of the governor failure to be the failure of the EGM. The possibility of a common-mode failure with respect to the EGM failure was also evaluated. CNP concluded that no act was taken or condition established that presented a common-mode failure threat to the redundant Unit 2 AB EDG. This conclusion was based on the fact that no maintenance or testing common to both the Unit 2 AB and CD EDGs was performed and no other common work activity in the vicinity of the Unit 2 AB and CD EDG speed regulators was performed. In addition, the Unit 2 AB and CD EDG EGMs were not installed at the same time.

3. SAFETY BASIS FOR THE REQUEST, INCLUDING AN EVALUATION OF THE SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES OF THE PROPOSED COURSE OF ACTION, INCLUDING A QUALITATIVE RISK ASSESSMENT USING BOTH RISK INSIGHTS AND INFORMED JUDGEMENTS

The EDGs provide an automatic onsite source of emergency alternating current (AC) power for accident mitigation and safe shutdown in the event normal power is lost. The EDGs are required to reach rated speed, and to be ready to accept load in less than or equal to 10 seconds, and be able to operate for a minimum of 7 days.

Safety Basis/Risk Impact:

This Notice of Enforcement Discretion (NOED) was evaluated from a probabilistic risk perspective. This evaluation determined that the risk associated with maintaining the plant at power with the Unit 2 CD EDG inoperable is lower than the risk associated with performing a reactor shutdown.

An evaluation was performed using the updated 2001 version of the CNP probabilistic risk assessment (PRA) model using Safety Monitor™. The evaluation was performed using a zero test and maintenance version of the PRA model and assumed that the Unit 2 CD EDG was unavailable. The evaluation assumed the present configuration of the plant and includes an environmental/test factor for fuel burnup and the middle hotwell pump (2-PP-5M) out of service. No other equipment that would have an effect on Unit 2 risk was out of service.

The results of the PRA evaluation indicated an increase in the core damage frequency (CDF) of $4.9E-7$ per day, and an increase in large early release frequency (LERF) of $8.2E-8$ per day over the Safety Monitor base case model results (CDF and LERF for the base case are $3.82E-5$ per year and $4.33E-6$ per year, respectively).

The increases in CDF and LERF were also compared to the conditional core damage probability (CCDP) and conditional large early release probability (CLERP) associated with a reactor shutdown. The CCDP associated with a reactor shutdown was determined to be $5.2E-6$ (based on the contribution to CDF from transients with power conversion available and a transient event frequency of 1.54 per year). The CLERP associated with a reactor shutdown was determined to be $3.9E-7$ (based on the contribution to LERF from transients with power conversion available and a transient event frequency of 1.54 per year). These results indicated that LERF is the limiting risk factor, and there is no net increase in risk associated with maintaining Unit 2 at power for a total of approximately 114 hours (based on LERF) beyond the 72-hour allowed outage time.

In conclusion, the assessments of the current plant configurations and state of equipment indicated that there was no net increase in risk to operating the plant for an additional 72 hours with the Unit 2 CD EDG unavailable.

4. THE JUSTIFICATION FOR THE DURATION OF THE NONCOMPLIANCE

I&M proposed to extend the 72-hour allowed outage time to a total of 144 hours to allow sufficient time to obtain parts and perform repairs to the Unit 2 CD EDG governor, test, and restore the EDG to an operable status. As discussed above, there was no net increase in risk associated with operating Unit 2 for an additional 72 hours. With enforcement discretion granted at 2235 hours on November 4, 2002, Unit 2 avoided the unnecessary transient of a reactor shutdown.

5. BASIS FOR THE CONCLUSION THAT THE NONCOMPLIANCE WILL NOT BE OF POTENTIAL DETRIMENT TO THE PUBLIC HEALTH AND SAFETY AND THAT NO SIGNIFICANT HAZARD CONSIDERATION IS INVOLVED

I&M has evaluated this request for enforcement discretion against the criteria set forth in 10 CFR 50.92 and concludes that the request involves no significant hazards consideration. The evaluation is provided below.

1. Does the change involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated?

The requested action does not physically alter any plant structures, systems, or components, and does not affect or create new accident initiators or precursors. The allowed outage time for a component is not an accident initiator; therefore, there is no effect on the probability of accidents previously evaluated.

The EDGs provide an automatic source of emergency AC power for accident mitigation and safe shutdown in the event normal power is lost. Extending the 72-hour allowed outage time by an additional 72 hours does not significantly increase the consequences of an accident since the redundant Unit 2 AB EDG remains operable and capable of performing its design function. In addition, the probability of an accident occurring during the 72-hour extension is low. Also, the requested action does not affect the types or amounts of radionuclides released following an accident, or the initiation and duration of their release.

Therefore, the probability of occurrence or the consequences of accidents previously evaluated are not significantly increased.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The requested action does not physically alter any structures, systems, or components, and does not affect or create new accident initiators or precursors. The accident analysis assumptions and results are unchanged. No new failures or interactions have been created.

Extending the 72-hour allowed outage time by an additional 72 hours does not introduce new failure modes or mechanisms associated with plant operation. Furthermore, the additional 72-hour period associated with the restoration of the Unit 2 CD EDG would not create a new accident type.

Therefore, the change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The applicable margin of safety is the period of time that the Unit 2 CD EDG is inoperable. I&M has determined that no net increase in risk is associated with extending the 72-hour allowed outage time by an additional 72 hours. Although the proposed action deviates from a requirement in TS 3.8.1.1, it does not affect any safety limits, other operational parameters, or setpoints in the TS, nor does it affect any margins assumed in the accident analyses. The redundant Unit 2 AB EDG continues to be operable to perform its required design function.

Therefore, the proposed action does not significantly reduce the margin of safety.

6. **THE BASIS FOR THE CONCLUSION THAT THE NONCOMPLIANCE WILL NOT INVOLVE ADVERSE CONSEQUENCES TO THE ENVIRONMENT**

I&M has evaluated the requested enforcement discretion request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. I&M has determined that the requested action meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that the proposed action is being requested as enforcement discretion to a license issued pursuant to 10 CFR 50, and that the change involves no significant hazards considerations. Although the proposed action involves noncompliance with the requirements of an LCO:

- (i) The proposed action involves no significant hazards consideration.

- (ii) There is no significant change in the types or a significant increase in the amounts of any effluent that may be released offsite, since the proposed action does not affect the generation of any radioactive effluent nor does it affect any of the permitted release paths.
- (iii) There is no significant increase in individual or cumulative occupational radiation exposure. The action proposed in this request for enforcement discretion will not significantly affect plant radiation levels, and, therefore, does not significantly affect dose rates and occupational exposure.

Accordingly, the proposed action meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

7. PROPOSED COMPENSATORY MEASURES

During the period that the Unit 2 CD EDG was inoperable, the following compensatory measures and restrictions were in effect:

- 1) No Unit 2 safety-related equipment was to be removed from service for maintenance.
- 2) No Unit 2 vital secondary equipment was to be removed from service for maintenance, or returned to service.
- 3) No switchyard work was to be performed.
- 4) No work was to be performed on unit-shared safety significant systems.
- 5) The Unit 2 AB EDG and the switchyard equipment was to be guarded.

In addition, during the period that the Unit 2 CD EDG was inoperable, any forecast of severe weather was to be evaluated by CNP for potential impact on offsite power sources. If such an impact was identified, Unit 2 was to be shutdown in an orderly manner.

8. STATEMENT THAT THE REQUEST HAS BEEN APPROVED BY THE FACILITY ORGANIZATION THAT NORMALLY REVIEWS SAFETY ISSUES

This request was reviewed and approved by the Plant Operations Review Committee.

9. CRITERIA FOR APPROPRIATE PLANT CONDITIONS SPECIFIED IN NRC INSPECTION MANUAL CHAPTER 9900 SECTION B

I&M evaluated the requested enforcement discretion against the criteria specified in Section B.2.1.1.a of NRC Inspection Manual Chapter 9900. This section states that the NOED is intended to avoid unnecessary transients as a result of compliance with the license condition and thus, minimize potential safety consequences and operational risks.

I&M considered that the condition satisfied this criterion. Compliance with TS 3.8.1.1, Action "b," could have initiated an undesirable transient by requiring Unit 2 to be in Mode 3 by 1427 hours on November 5, 2002. Extending the allowed outage time from 72 hours to 144 hours allowed continued Unit 2 operation for that additional time needed to perform the required Unit 2 CD EDG governor replacement and subsequent testing of the diesel. No corresponding health and safety benefit was gained by requiring a plant shutdown. Based on the above, the criteria were satisfied.

10. FOLLOWUP LICENSE AMENDMENT

No TS changes are required.

11. CIRCUMSTANCES INVOLVING SEVERE WEATHER OR OTHER NATURAL EVENTS

The proposed enforcement discretion did not involve severe weather or other natural events.