



June 14, 2002

AEP:NRC:2016-02

Docket Nos: 50-315  
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 1 and Unit 2  
REQUEST FOR NOTICE OF ENFORCEMENT DISCRETION  
FROM LIMITING CONDITION FOR OPERATION 3.0.5 REGARDING  
ESSENTIAL SERVICE WATER PUMP OPERABILITY

Indiana Michigan Power Company (I&M), the licensee for the Donald C. Cook Nuclear Plant (CNP) Unit 1 (DPR-58) and Unit 2 (DPR-74), requests regional enforcement discretion from compliance with certain requirements of Technical Specification (TS) 3.0.5. I&M requests that the 2-hour allowed action time included in TS 3.0.5 be extended by an additional 10 hours to accomplish restoration of the Unit 2 East Essential Service Water (ESW) pump to an operable status.

The Unit 2 East ESW pump was out of service for planned maintenance to replace the pump. Because the ESW cross-tie valves were open between the units, the Unit 1 West ESW pump was also inoperable. Subsequently, on June 12, 2002, an explosion and fire occurred in the CNP 345-kilovolt (kV) switchyard. As a consequence of this event, several switchyard breakers tripped open or were opened to isolate the fault, resulting in the loss of the preferred offsite reserve power source. With both ESW trains and their normal power supplies inoperable, CNP entered the 2-hour action requirements of TS 3.0.5 at 1345 hours for Unit 1 and 1359 hours for Unit 2.

CNP has evaluated the above described condition and determined that the risk of the extension to the required action time does not warrant an unnecessary plant transient to shut down both operating units. Requesting a license amendment would not be practical because the Unit 2 East ESW pump replacement would restore compliance with the TS before a license amendment could be issued.

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Therefore, I&M requests enforcement discretion to preclude a required entry into Mode 3 by 2145 hours for Unit 1 or 2159 hours for Unit 2 on June 12, 2002. To accomplish this, I&M requests the 2-hour allowed action time for TS 3.0.5 for both units be extended by approximately 10 hours to 0145 hours on June 13, 2002.

The details contained in this letter were discussed with the Nuclear Regulatory Commission (NRC) staff in a conference call at 1925 hours on June 12, 2002. Regional enforcement discretion was verbally granted at 2115 hours on June 12, 2002. This letter documents the information provided to the staff during that conference call. Contrary to a statement made during the call regarding the restoration of power range neutron flux channel 1-N-41 from the Nuclear Instrumentation surveillance requirement, TS LCO 3.3.1.1 was actually exited at 1605 hours. This occurred prior to the Notice of Enforcement Discretion (NOED) call, but was not known to the participants of the call when the statement was made. This does not impact any of the information relied on when the NOED was granted.

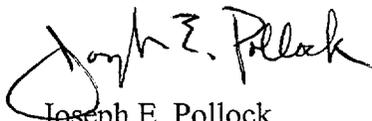
On June 12, 2002 at 2123 hours, the ESW cross-tie valve was closed between the units, and the Unit 1 West ESW pump declared operable. At that time, Unit 1 exited TS LCO 3.0.5. At 2157 hours on June 12, 2002, the Unit 2 East ESW pump was declared operable, and Unit 2 exited TS LCO 3.0.5.

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. Gordon P. Arent, Manager of Regulatory Affairs, at (616) 697-5553.

Sincerely,



Joseph E. Pollock  
Site Vice President

BWO/jen

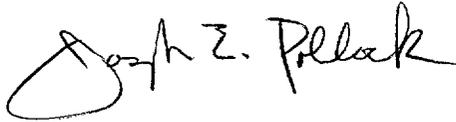
Attachment

c: K. D. Curry  
J. E. Dyer  
MDEQ - DW & RPD  
NRC Resident Inspector  
R. Whale

**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.

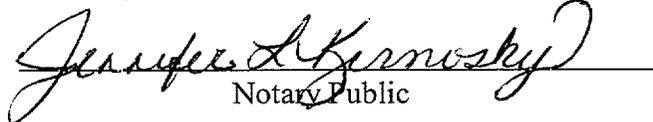
Indiana Michigan Power Company



Joseph E. Pollock  
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 14 DAY OF JUNE, 2002

  
Notary Public

My Commission Expires 5/26/05

**JENNIFER L KERNOSKY**  
Notary Public, Berrien County, Michigan  
My Commission Expires May 26, 2005

ATTACHMENT TO AEP:NRC:2016-02

WRITTEN REQUEST FOR A NOTICE OF ENFORCEMENT DISCRETION

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

Technical Specification (TS) 3.0.5 states that "When a system, sub-system, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable LCO, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), sub-system(s), train(s), component(s), and device(s), are OPERABLE, or likewise satisfy the requirements of this specification.

Unless both conditions (1) and (2) are satisfied, within 2 hours, actions shall be initiated to place the unit in a MODE in which the applicable LCO does not apply by placing it as applicable in:

- 1) At least HOT STANDBY within the next 6 hours,
- 2) At least HOT SHUTDOWN within the following 6 hours, and
- 3) At least COLD SHUTDOWN within the subsequent 24 hours.

This specification is not applicable in MODES 5 and 6."

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP), requests regional enforcement discretion from compliance with TS 3.0.5 for Unit 1 and Unit 2 such that the 2-hour allowed action time included in TS 3.0.5 will be extended by approximately 10 hours (0145 hours on June 13, 2002) to accomplish restoration of the Unit 2 East Essential Service Water (ESW) pump to an operable status.

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

The Unit 2 ESW pump was out of service for planned maintenance to replace the pump beginning on June 11, 2002. Unit 2 TS 3.7.4.1, Action a, states that "When Unit 2 is in Modes 1, 2, 3, and 4: With only one ESW water loop OPERABLE, restore at least two loops 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." Because the ESW crosstie valves were open between the units, the Unit 1 West ESW pump was also inoperable in accordance with TS 3.7.4.1, Action b.1, which states that "When Unit 1 is in MODES 1, 2, 3 and 4: With any Unit 2 essential service water pump not OPERABLE, within one hour close at least one crosstie valve on the associated header or have Unit 1 enter ACTION a for Unit 1 Specification 3.7.4.1 for the Unit 1 essential service water pump sharing the same header with the inoperable Unit 2 essential service water pump." The ESW crosstie valves were maintained open to preclude depressurizing the Unit 2 East ESW header and thereby rendering that train of ESW unavailable.

On June 12, 2002, at 1345 hours, the "BC" 34.5 kilovolt (kV) circuit breaker opened and a trouble alarm for the TR101CD reserve auxiliary transformer was received in the control room. This was caused by an explosion in the 345 kV switchyard and oil fire in the "L" switchyard output feeder breaker. As a result, the 34.5 kV TR4 reserve feed transformer was rendered inoperable, affecting the CD bus of reserve feed. This resulted in a loss of the preferred offsite power source to the Unit 1 East ESW pump. Unit 1, therefore, entered TS 3.0.5 at 1345 hours.

Additionally, at 1359 hours, protective switching by the system load dispatcher resulted in the 34.5 kV TR5 reserve feed transformer being de-energized, affecting the AB bus of reserve feed. This resulted in a loss of the preferred offsite power source to the Unit 2 West ESW pump. Unit 2, therefore, entered TS 3.0.5 at 1359 hours.

At 1657 hours, reserve feed power was restored through the TR5 reserve transformer. However, the voltage output from the TR5 reserve transformer was below the acceptable range required for operability. Additionally, the CNP switchyard and the local area grids were in a degraded materiel condition due to the fault discussed above (5 of the 6 tie-lines in the 345 kV switchyard were open). In this degraded condition, taking both Unit 1 and Unit 2 off line could have changed the electrical load flow patterns on the grid and increased the probability of grid instability and the likelihood of a loss of offsite power. Further, taking both units off line would have resulted in the unit loads being transferred to the TR5 reserve transformer, further increasing the probability of a loss of power from this source due to its low voltage.

Compliance with the action time stated in TS 3.0.5 required that CNP Unit 1 and Unit 2 be in Mode 3 by 2145 hours and 2159 hours, respectively. Based on the above discussion, I&M believed that the increased likelihood of a loss of offsite power from a unit shutdown, and the ensuing transient, presented a greater risk to the health and safety of the public than continued plant operation.

**3. SAFETY BASIS FOR THE REQUEST, INCLUDING AN EVALUATION OF THE SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES OF THE PROPOSED COURSE OF ACTION. THIS EVALUATION SHOULD INCLUDE AT LEAST A QUALITATIVE RISK ASSESSMENT USING BOTH RISK INSIGHTS AND INFORMED JUDGEMENTS, AS APPROPRIATE**

Safety Basis/Risk Impact:

This Notice of Enforcement Discretion (NOED) request has been evaluated qualitatively from a risk perspective. The evaluation has determined that there is not a net increase in risk related to operating Unit 1 and Unit 2 for an additional 10 hours with the Unit 2 ESW pump and one source of offsite power inoperable.

Currently, Unit 1 and Unit 2 are stable with power being supplied by the unit main generators through the unit auxiliary transformers. The reserve source of offsite power was only available through a single transformer (TR5) and voltage output from this transformer was below the

operability range, but stable. Additionally, the CNP switchyard and the local area grids are in a degraded material condition due to the fault discussed above (5 of 6 tie-lines in the 345 kV switchyard were open). In this degraded condition, taking the units off line would change the electrical load flow patterns on the grid and would increase the probability of grid instability and the likelihood of a loss of offsite power. Additionally, in taking the units off line, unit loads would be transferred to the TR5 reserve transformer, further increasing the probability of a loss of power from this source due to its low voltage. Loss of offsite power would cause a significant plant transient, resulting in the emergency diesel generators (EDG) supplying the safety-related electrical buses, loss of forced flow through the reactor core, and a loss of the normal heat sink for the core (circulating water cooling of the main condensers).

I&M compared the risk profile associated with continued plant operation with one source of offsite power inoperable to the risk profile resulting from taking both Unit 1 and Unit 2 off line. Since CNP's Probabilistic Risk Assessment (PRA) models were not developed to the level of detail required to quantitatively evaluate this event, the Initiating Event Summary Tables from the current CNP PRA were used to compare the change in risk. The comparison was specifically performed by considering Dual Unit Loss of Offsite Power (DLOOP) and transient event contributions to core damage frequency (CDF) and Large Early Release Frequency (LERF). In the case of CDF, the DLOOP and transient event contribution are approximately equal in contribution indicating that the risks from Mode 1 and Mode 3 operation in the current state are similar relative to CDF. In the case of LERF, the DLOOP contribution is approximately 22 percent, while the transient event contribution is approximately 7 percent. Further, the DLOOP contribution to LERF would increase due to the increased probability of a DLOOP occurring while the units are shut down, given the current condition of the local area grids. This indicates that any action taken to place the plant in a condition where the likelihood of the DLOOP increases is contrary to risk management principles.

In conclusion, the assessments of the current plant configurations and state of equipment indicate that there is no net increase in risk to operating the plant for approximately 10 hours (0145 hours on June 13, 2002) with one Unit 2 ESW pump and one offsite power supply unavailable.

#### **4. THE JUSTIFICATION FOR THE DURATION OF THE NONCOMPLIANCE**

I&M proposes to extend the 2-hour allowed action time by 10 hours to allow sufficient time to restore the Unit 2 East ESW pump to an operable status and exit TS LCO 3.0.5. As discussed above, there is no net increase in risk associated with operating the plant for approximately 10 additional hours.

**5. BASIS FOR THE LICENSEES 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 and 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 action time for a component is not an accident initiator; therefore, there is no effect on the probability of accidents previously evaluated.

The ESW system is required to mitigate the consequences of accidents previously evaluated in the Updated Final Safety Analysis Report. The requested action to extend the 2-hour allowed action time by approximately 10 hours does not significantly increase the consequences of those accidents due to the low probability of an accident occurring in the 10-hour extension. Additionally, the redundant train of ESW on both units remains operable and capable of performing its required function. 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?

Extending the 2-hour allowed action time by approximately 10 hours does not introduce new failure modes or mechanisms associated with plant operation. Furthermore, the additional 10-hour period associated with the restoration of the Unit 2 East ESW pump 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 East ESW pump is inoperable. I&M has determined that no net increase in risk is associated with extending the 2-hour allowed action time by approximately 10 hours. Although the proposed action deviates from a requirement in TS 3.0.5, 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 West ESW pump 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 LICENSEES 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. ANY PROPOSED COMPENSATORY MEASURES**

During the time that the Unit 2 East ESW pump is inoperable, the following compensatory measures will be in effect:

- 1) To preclude the potential for inadvertent switching operations that would disturb existing switchyard conditions, transformer TR4 will not be energized until the Unit 2 East ESW pump is returned to service.
- 2) I&M is currently in an Alert status as a result of the switchyard event. I&M will remain in an Alert status until the TS 3.0.5 LCO is exited.
- 3) The Unit 1 and Unit 2 EDGs and the 69 kV alternate offsite power source will be guarded.
- 4) A senior reactor operator will be present in the switchyard for all recovery actions.

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

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

**9. THE REQUEST MUST SPECIFICALLY ADDRESS WHICH OF THE NOED CRITERIA FOR APPROPRIATE PLANT CONDITIONS SPECIFIED IN SECTION B IS SATISFIED AND HOW IT IS SATISFIED**

I&M has 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 considers that the current condition satisfies this criterion. Compliance with TS 3.0.5, could initiate an undesirable transient by requiring both Unit 1 and Unit 2 to be in Mode 3 by 2145 hours and 2159 hours, respectively, on June 12, 2002. In addition, due to the current degraded materiel condition of the switchyard, the risk associated with maintaining both units on line for approximately 10 hours is less than the risk associated with taking both Unit 1 and Unit 2 off line. No corresponding health and safety benefit is gained by requiring a plant shutdown. Based on the above, the criteria are satisfied.

**10. IF A FOLLOWUP LICENSE AMENDMENT IS REQUIRED, THE WRITTEN NOED REQUEST MUST INCLUDE MARKED-UP TS PAGES SHOWING PROPOSED CHANGES**

No TS changes are required.

**11. DISCUSSION OF CIRCUMSTANCES INVOLVING SEVERE WEATHER OR OTHER NATURAL EVENTS**

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