



July 17, 2001

C0701-05  
10 CFR 50.90

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 Units 1 and 2  
EXIGENT TECHNICAL SPECIFICATION CHANGE REQUEST  
REACTOR PROTECTION SYSTEM ACTION REQUIREMENTS

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to revise T/S 3.3.1.1, Table 3.3-1, Action 2a to increase the amount of time allowed to place an inoperable power range neutron flux channel in the tripped condition from one hour to six hours.

The proposed T/S change is being requested on an exigent basis because I&M recently discovered that the power range nuclear instrumentation calibration surveillance cannot be performed within the limitations of the T/S. The T/S surveillance for power range nuclear instrumentation is required to be performed quarterly for CNP Unit 1 and Unit 2. The next surveillance is due August 12, 2001, which includes the 25% extension allowed by T/S 4.0.2. Thus, I&M requests approval of the proposed change by August 8, 2001 with an implementation period of 3 days.

The proposed change was generically evaluated in the mid-1980s for the Westinghouse Owners Group as part of licensing topical report WCAP-10271-A, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," May 1986. The Nuclear Regulatory Commission (NRC) issued a Safety Evaluation Report on WCAP-10271 in a letter to the Westinghouse Owners Group, dated February 21, 1985.

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February 21, 1985. The letter stated that the WCAP report is acceptable for referencing in plant specific license applications.

In accordance with 10 CFR 50.91(a)(6)(vi), an explanation of the exigency and why it cannot be avoided is provided in Attachment 1. Attachment 1 also provides the safety analysis to support the proposed change. Attachments 2A and 2B provide marked-up T/S pages for Unit 1 and Unit 2, respectively. Attachments 3A and 3B provide the proposed T/S pages with the changes incorporated for Unit 1 and Unit 2, respectively. Attachment 4 describes the evaluation performed in accordance with 10 CFR 50.92(c), which concludes that no significant hazard is involved. Attachment 5 provides the environmental assessment. No new commitments are made in this submittal.

No previous submittals affect T/S pages that are included in this request. If any future submittals affect these T/S pages, I&M will coordinate changes to the pages with the NRC Project Manager to ensure proper T/S page control when the associated license amendment requests are issued.

Should you have any questions, please contact Mr. Ronald W. Gaston, Manager of Regulatory Affairs, at (616) 697-5020.

Sincerely,



A. C. Bakken III  
Site Vice President

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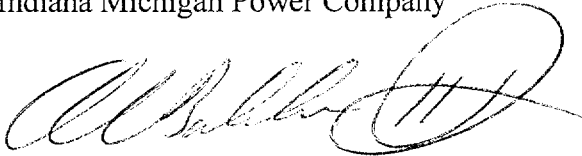
Attachments

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

**AFFIRMATION**

I, A. Christopher Bakken III, 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.

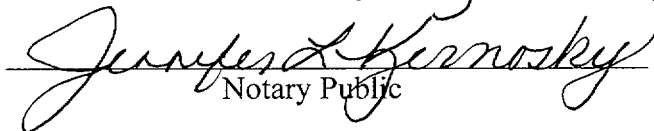
Indiana Michigan Power Company



A. C. Bakken III  
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 17 DAY OF JULY, 2001

  
Notary Public

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

My Commission Expires 5/26/05

## ATTACHMENT 1 TO C0701-05

### DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGE

#### A. Summary of Proposed Change

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to revise T/S 3.3.1.1, Table 3.3-1, Action 2a to increase the amount of time allowed to place an inoperable power range neutron flux channel in the tripped condition from one hour to six hours.

The proposed T/S change is being requested on an exigent basis because I&M recently discovered that the power range nuclear instrumentation calibration surveillance cannot be performed within the limitations of the T/S. The T/S surveillance for power range nuclear instrumentation is required to be performed quarterly for CNP Unit 1 and Unit 2. The next surveillance is due August 12, 2001, which includes the 25% extension allowed by T/S 4.0.2.

In accordance with 10 CFR 50.91(a)(6)(vi), an explanation of the exigency and why it cannot be avoided is provided in Section F of this attachment. The proposed change is described in detail in Section D of this attachment. T/S pages that are marked to show the proposed changes are provided in Attachments 2A and 2B for Unit 1 and Unit 2, respectively. The proposed T/S pages, with the changes incorporated, are provided in Attachments 3A and 3B for Unit 1 and Unit 2, respectively.

#### B. Description of the Current Requirements

CNP T/S 3/4.3.1 provides requirements for reactor trip system instrumentation. This T/S includes the power range neutron flux trip system requirements and action requirements as functional units two through four on T/S 3.3.1.1, Table 3.3-1. There are four channels associated with the power range neutron flux trips. With the number of operable power range neutron flux channels one less than the total number of channels, Action 2a allows power operation to proceed provided the inoperable channel is placed in the tripped condition within one hour.

#### C. Bases for the Current Requirements

T/S 3.3.1.1, Table 3.3-1 requires a power range neutron flux channel to be placed in the tripped condition if a channel is out of service to ensure the reactor trip function logic is maintained. The reactor trip function logic would be one-out-of-three once the channel is placed in the tripped condition, which is more limiting than the two-out-of-four design. The one-hour completion time is consistent with NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors."

#### D. Description of the Proposed Changes

The proposed change revises T/S 3.3.1.1, Table 3.3-1, Action 2a to allow six hours instead of one hour to place the inoperable power range neutron flux channel in the tripped condition if the number of operable channels is one less than the total number of channels.

#### E. Bases for the Proposed Changes

The proposed change to increase the time allowed to place an inoperable power range neutron flux channel in a tripped condition from one hour to six hours is consistent with WCAP-10271-A. The NRC approved referencing WCAP-10271-A in license applications in a letter from Cecil O. Thomas to J. J. Sheppard, Chairman of the Westinghouse Owners Group, "Acceptance for Referencing of Licensing Topical Report WCAP-10271, 'Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation Systems,'" dated February 21, 1985. In this letter the NRC states, "We do not intend to repeat our review of the matters described in the report and found acceptable when the report appears as a reference in license applications except to assure that the material presented is applicable to the specific plant involved." The letter includes the safety evaluation, which describes more detailed requirements for adopting the generically approved changes. These requirements are addressed below for the power range nuclear instrumentation trip logic system only, as the proposed change does not impact other systems.

I&M performed a review of the power range nuclear instrumentation channels and the solid state protection system used in CNP Units 1 and 2. WCAP-10271-A, Figure 2-1 presents a typical analog channel. The power range nuclear instrumentation channels used at CNP are the standard Westinghouse design and are consistent with the typical analog channel. The Westinghouse solid state protection system is used at CNP and is the same as that on Figure 2-3 in WCAP-10271-A. I&M has verified that the CNP power range nuclear instrumentation is consistent with that considered in the WCAP. Therefore, the conclusions of the generic analysis apply.

In the safety evaluation for WCAP-10271-A, the NRC concludes that an acceptable basis has been achieved to allow approval of plant specific T/S change requests for four items. I&M's proposed change is enveloped by Item 2, "Increase in the time which an inoperable RTS analog channel may be maintained in an untripped condition from one hour to six hours." Based on a review of the criteria listed in the safety evaluation associated with Item 2, I&M concludes that no further actions are required to adopt Item 2.

I&M reviewed the NRC imposed conditions of WCAP-10271-A, for the power range nuclear instrumentation. I&M concludes that none of the conditions listed impact this proposed change. Therefore, no further action is required for the proposed change.

In the safety evaluation report for WCAP-10271-A, the NRC recognizes that the proposed change results in a benefit to the plant. This benefit is realized by reducing the potential for

inadvertent reactor trips and subsequent plant transients during surveillance testing. I&M has confirmed that the proposed six hours is sufficient to complete the required surveillance testing.

Based on the information above, I&M concludes that WCAP-10271-A is applicable for use in supporting the requested T/S change.

The proposed change is consistent with NUREG-1431, "Standard Technical Specifications," Revision 1. T/S 3.3.1, Action D11, allows six hours to place the inoperable channel in a tripped condition. The bases specifically references WCAP-10271-A to support the six-hour completion time.

#### F. Explanation of Exigency

The proposed T/S change is being requested on an exigent basis because I&M recently discovered that the surveillance test procedure for the quarterly power range neutron flux channel calibration, required by T/S 4.3.1.1.1, Table 4.3-1, was not being performed in accordance with T/S 3.3.1.1, Table 3.3-1, Action 2a. This has been determined to be reportable under 10 CFR 50.73(a)(2)(i)(B).

As stated above, the problem exists with the quarterly power range neutron flux channel calibration surveillance, defined by T/S 1.9. The manner in which the testing is performed requires the detector to be disconnected from the instrumentation. This makes the channel inoperable. Since the channel calibration takes longer than one hour to perform, the channel is placed in the tripped condition. To complete the test the channel must be taken out of the tripped condition prior to reconnecting the detector input. The channel remains inoperable because it is disconnected; thus, Action 2a can not be met.

I&M has performed a review of the surveillance test procedure and concludes that the test cannot be performed in a manner that is consistent with meeting the current one-hour completion requirement of Action 2a. In order to restore compliance with the T/S, the one-hour completion requirement should be increased to a time that would allow completion of the required testing.

The next surveillance is due August 12, 2001, which includes the 25% extension allowed by T/S 4.0.2. I&M could not have avoided the exigency due to the short duration between when the problem was discovered and the date when the next surveillance is due.

ATTACHMENT 2A TO C0701-05

TECHNICAL SPECIFICATIONS PAGE  
MARKED TO SHOW PROPOSED CHANGE

REVISED PAGE  
UNIT 1

3/4 3-6

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.
- = The provisions of Specification 3.0.4 are not applicable.
- \*\* High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied.
  - a. The inoperable channel is placed in tripped condition within ~~1~~<sup>6</sup> hour<sup>s</sup>.
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the other channels per Specification 4.3.1.1.1.
  - c. Either THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.c.
- ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:



ATTACHMENT 2B TO C0701-05

TECHNICAL SPECIFICATIONS PAGE  
MARKED TO SHOW PROPOSED CHANGE

REVISED PAGE  
UNIT 2

3/4 3-5

TABLE 3.3-1 (Continued)

TABLE NOTATION

\*With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

\*\*The provisions of Specification 3.0.4 are not applicable.

\*\*\*High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in the tripped condition within  $\frac{1}{6}$  hour.<sup>4.5</sup>
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the other channels per Specification 4.3.1.1.1.
  - c. Either, THERMAL POWER is restricted to  $\leq 75\%$  of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to  $\leq 85\%$  of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.c.
- ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

ATTACHMENT 3A TO C0701-05

PROPOSED TECHNICAL SPECIFICATIONS PAGE

REVISED PAGE  
UNIT 1

3/4 3-6

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.
- # The provisions of Specification 3.0.4 are not applicable.
- ## High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied.
- a. The inoperable channel is placed in tripped condition within 6 hours.
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the other channels per Specification 4.3.1.1.1.
  - c. Either THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.c.
- ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

ATTACHMENT 3B TO C0701-05

PROPOSED TECHNICAL SPECIFICATIONS PAGE

REVISED PAGE  
UNIT 2

3/4 3-5

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.
- # The provisions of Specification 3.0.4 are not applicable.
- ## High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing PER Specification 4.3.1.1.1.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - a. The inoperable channel is placed in the tripped condition within 6 hours.
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the other channels per Specification 4.3.1.1.1.
  - c. Either, THERMAL POWER is restricted to  $\leq 75\%$  of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to  $\leq 85\%$  of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.c.
- ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

## ATTACHMENT 4 TO C0701-05

### NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Indiana Michigan Power Company (I&M) has evaluated this proposed amendment and determined that it does not involve a significant hazard. According to 10 CFR 50.92(c), a proposed amendment to an operating license does not involve a significant hazard if operation of the facility in accordance with the proposed amendment would not:

1. involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;
2. create the possibility of a new or different kind of accident from any previously evaluated; or
3. involve a significant reduction in a margin of safety.

The proposed change revises Technical Specification (T/S) 3.3.1.1, Table 3.3-1, Action 2a to increase the amount of time allowed to place an inoperable power range neutron flux channel in the tripped condition from one hour to six hours. The proposed T/S change is being requested on an exigent basis because I&M recently discovered that the power range nuclear instrumentation calibration surveillance cannot be performed within the limitations of the T/S.

The proposed change was generically evaluated in the mid-1980s for the Westinghouse Owners Group as part of licensing topical report WCAP-10271-A, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," May 1986. The Nuclear Regulatory Commission issued a Safety Evaluation Report on WCAP-10271 in a letter to the Westinghouse Owners Group, dated February 21, 1985. The letter stated that the WCAP report is acceptable for referencing in plant specific license applications.

The determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

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

The change involves an increase in the amount of time allowed prior to placing an inoperable reactor protection channel in a tripped condition. By placing a channel in a tripped condition when the channel is inoperable, it places the reactor protection system from two-out-of-four reactor trip logic to one-out-of-three reactor trip logic. This places the reactor closer to a tripped condition if a spurious signal should occur on one of the other channels. By not placing the reactor closer to an inadvertent reactor trip, the probability of a reactor trip is not significantly increased. One channel being inoperable is not a precursor to any accident and thus does not significantly increase the probability of occurrence of any accident previously evaluated.

Due to the redundancy in the reactor trip logic, the channel remaining in an untripped condition still allows a two-out-of-three reactor trip logic. This ensures that even if another channel failed, the reactor trip, if required, would still function. Thus, the consequences of an accident are not significantly increased.

Thus, the proposed change does not involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

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

The proposed changes do not involve hardware modifications or provide functional changes to the reactor protection system. The way in which the reactor protection is taken to a tripped condition remains the same, only the time-frame within which it is required to be placed in the tripped condition is extended. Allowing additional time before placing an inoperable channel in a tripped condition does not create the possibility of a new or different kind of accident.

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

The margin of safety is not significantly reduced by allowing the proposed six hours prior to requiring an inoperable channel to be placed in a tripped condition. The proposed change does not alter the function of the reactor trip logic. The two-out-of-three reactor trip logic that will exist without the channel in a tripped condition continues to ensure that with a single failure of a second channel, the reactor trip function will still occur. Thus, the accident analyses remain protected. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves no significant hazards consideration.



## ATTACHMENT 5 TO C0701-05

### ENVIRONMENTAL ASSESSMENT

Indiana Michigan Power Company (I&M) has evaluated this license amendment 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 this license amendment request meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria.

- (i) The amendment involves no significant hazards consideration.

As demonstrated in Attachment 4, this proposed amendment does not involve significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed changes do not impact the operation of any potentially radioactive system, and do not create any potential for increasing the release of any contained radioactive fluids from any system. The proposed changes will not result in the generation of any additional effluents. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes will not result in significant changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any significant change in the normal radiation levels within the plant. Therefore, there will be no significant increase in individual or cumulative occupational radiation exposure resulting from this change.