

Indiana Michigan
Power Company
500 Circle Drive
Buchanan, MI 49107 1373



February 14, 2004

AEP:NRC:4051
10 CFR 50.90

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

SUBJECT: Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
Containment Requirements During Movement Of Recently
Irradiated Fuel Assemblies

Dear Sir or Madam:

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 Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to revise Technical Specifications (TS) governing containment penetrations and the Containment Purge and Exhaust Isolation System, which are applicable during CORE ALTERATIONS and movement of irradiated fuel, such that those Specifications are only applicable during the movement of recently irradiated fuel. The Action which applies when radiation monitors that support the Containment Purge and Exhaust Isolation System are inoperable is revised to reflect the change to the Containment Purge and Exhaust Isolation System applicability. These changes incorporate line item improvements associated with the handling of recently irradiated fuel assemblies in accordance with Revision 2 of NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," (ISTS) and a portion of Technical Specification Task Force (TSTF) generic change Traveler TSTF-51, Revision 2, "Revise containment requirements during handling irradiated fuel and core alterations." The approach I&M has taken in requesting partial incorporation of TSTF-51 is consistent with other ice condenser plants.

I&M commits to implement the guidelines in NUMARC 93-01, Revision 3, Section 11.3.6.5, "Safety Assessment for Removal of Equipment from Service During Shutdown Conditions," subheading, "Containment - Primary (PWR) /

A034

Secondary (BWR)" as described in the Reviewer's Note in NUREG-1431, Revision 2, Specification 3.9.4 Bases, and in TSTF-51, Revision 2.

Enclosure 1 provides an affirmation statement pertaining to this letter. Enclosure 2 provides I&M's evaluation of the proposed change. Attachments 1A and 1B provide marked up TS pages for Unit 1 and Unit 2, respectively. Attachments 2A and 2B provide the proposed TS pages with the changes incorporated for Unit 1 and Unit 2, respectively. Attachment 3 contains a list of regulatory commitments made in this submittal.

Attachment 4 contains illustrative changes to the TS Bases. These example Bases pages are provided for information only. Changes to the TS Bases will be made in accordance with TS Bases Control Program.

I&M requests this amendment be granted no later than October 1, 2004 to support refueling operations during the Unit 2 Fall 2004 refueling outage. I&M requests a 45-day implementation period following approval.

I&M submittal AEP:NRC:3304, dated August 27, 2003, affects pages that are included in this submittal. I&M will coordinate changes to the pages with the NRC Project Manager to ensure proper TS page control when the associated license amendment requests are approved.

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.

Should you have any questions, please contact Mr. John A. Zwolinski, Director of Design Engineering and Regulatory Affairs at (269)-697-5007.

Sincerely,

A handwritten signature in black ink, consisting of a large, stylized 'J' followed by a horizontal line that extends to the right and then curves upwards.

J. N. Jensen
Site Vice President

KS/rdw

Enclosures:

1. Affirmation
2. Evaluation of the Proposed Change

Attachments:

- 1A. CNP Unit 1 Technical Specification Pages Marked To Show Changes
- 1B. CNP Unit 2 Technical Specification Pages Marked To Show Changes
- 2A. CNP Unit 1 Technical Specification Pages Retyped With Changes
- 2B. CNP Unit 2 Technical Specification Pages Retyped With Changes
3. List of Regulatory Commitments
4. CNP Technical Specification Bases Pages Marked To Illustrate Changes To Be Made Under The Technical Specification Bases Control Program

- c: J. L. Caldwell, NRC Region III
K. D. Curry, Ft. Wayne AEP, w/o enclosures/attachments
J. T. King, MPSC
MDEQ – WHMD/HWRPS
NRC Resident Inspector
J. F. Stang, Jr., NRC Washington, DC

Enclosure 1 to AEP:NRC:4051

AFFIRMATION

I, Joseph N. Jensen, being duly sworn, state that I am Site 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



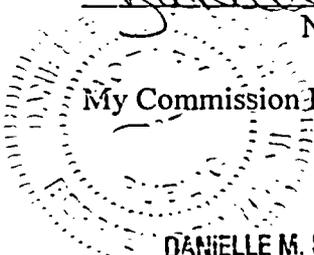
Joseph N. Jensen
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 14 DAY OF February, 2004

Danielle M. Schrader
Notary Public

My Commission Expires Apr 4, 2004



DANIELLE M. SCHRADER
Notary Public, Berrien County, MI
My Commission Expires Apr 4, 2004

Enclosure 2 to AEP:NRC:4051

LICENSEE'S EVALUATION

Subject: Containment Requirements During Movement Of Recently Irradiated Fuel Assemblies

1.0 DESCRIPTION

2.0 PROPOSED CHANGE

3.0 BACKGROUND

4.0 TECHNICAL ANALYSIS

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

5.2 Applicable Regulatory Requirements / Criteria

6.0 ENVIRONMENTAL CONSIDERATIONS

7.0 REFERENCES

8.0 PRECEDENT

1.0 DESCRIPTION

This letter is a request by Indiana Michigan Power Company (I&M) to amend Facility Operating Licenses DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant (CNP) Units 1 and 2. The proposed change will incorporate line item improvements associated with the handling of recently irradiated fuel assemblies within containment in accordance with Revision 2 of NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," (ISTS) and a portion of Technical Specification Task Force (TSTF) generic change Traveler TSTF-51, Revision 2, "Revise containment requirements during handling irradiated fuel and core alterations." The proposed change will revise Technical Specifications (TS) governing containment penetrations and the Containment Purge and Exhaust Isolation System, which are applicable during CORE ALTERATIONS and the movement of irradiated fuel, such that those Specifications are only applicable during the movement of recently irradiated fuel. Recently irradiated fuel will be defined in the TS Bases as any fuel that has been part of a critical reactor core within the previous 100 hours.

2.0 PROPOSED CHANGE

I&M proposes the following changes to the CNP Units 1 and 2 TS:

- Revise the Applicability statement of TS 3.9.4, "Containment Building Penetrations." The current Applicability statement is, "During CORE ALTERATIONS or movement of irradiated fuel within the containment." The proposed Applicability statement is, "During movement of recently irradiated fuel within the containment." The ACTION and SURVEILLANCE REQUIREMENTS of Specification 3.9.4 are also revised to eliminate references to CORE ALTERATIONS and to modify references to movement of irradiated fuel to references to movement of recently irradiated fuel.
- Revise the Applicability statement of TS 3.9.9, "Containment Purge and Exhaust Isolation System." The current Applicability statement is, "During CORE ALTERATIONS or movement of irradiated fuel within the containment." The proposed Applicability statement is, "During movement of recently irradiated fuel within the containment." The SURVEILLANCE REQUIREMENT of Specification 3.9.9 is revised to replace the Frequency of "once per 7 days during CORE ALTERATIONS" with "once per 7 days during movement of recently irradiated fuel."
- Revise the TS 3.3.3.1, "Radiation Monitoring Instrumentation," Action 22, which applies when the number of OPERABLE containment radiation monitors is less than the minimum number of channels requirement while in MODE 6. Action 22 requires compliance with the ACTION requirements of Specification 3.9.9. Action 22 is revised to require compliance with the ACTION requirements of Specification 3.9.9 when Specification 3.9.9 is applicable.

In summary, the proposed change will revise TS governing containment penetrations and the Containment Purge and Exhaust Isolation System, which are applicable during CORE ALTERATIONS and movement of irradiated fuel, such that those Specifications are only applicable during the movement of recently irradiated fuel. The Action which applies when radiation monitors that support the Containment Purge and Exhaust Isolation System are inoperable is revised to reflect the change to the Containment Purge and Exhaust Isolation System applicability. Additionally, I&M proposes format changes to the affected TS pages that improve appearance but do not affect any requirements.

The TS Bases for Specification 3.9.4 and 3.9.9 are revised to reflect the changes to the TS and to define recently irradiated fuel as fuel that has occupied part of a critical reactor core within the previous 100 hours.

3.0 BACKGROUND

TS 3.9.4, "Containment Penetrations," requires that the containment equipment hatch, a minimum of one containment airlock door, as well as other containment penetrations be closed during CORE ALTERATIONS and movement of irradiated fuel within the containment. TS 3.9.4 also contains provisions for both containment airlock doors and some penetrations to be open under certain circumstances. TS 3.9.9, "Containment Purge and Exhaust Isolation System," requires a system which automatically closes the Containment Purge and Exhaust Isolation System valves on receipt of a high radiation signal in containment. TS 3.3.3.1 requires the radiation monitors in containment to be operable when the Containment Purge and Exhaust Isolation System is in operation. These monitors provide input to the Containment Purge and Exhaust Isolation System. If these monitors are inoperable, TS 3.3.3.1 requires the ACTIONS of Specification 3.9.9 to be followed.

The purpose of these TS requirements is to minimize the release of radioactive material following a fuel handling accident (FHA) in the containment. The analysis for an FHA is described in the Updated Final Safety Analysis Report (UFSAR), Section 14.2.1 (Reference 3). An FHA assumes a fuel assembly is dropped, the fuel assembly is damaged, and the radioactive material in the fuel rod gap is released from all fuel rods. The assumption that all fuel rods will fail is highly conservative as analysis has shown that dropping a fuel assembly is unlikely to result in damage to the fuel rods.

The current analysis for offsite doses resulting from an FHA in the containment was approved by the Nuclear Regulatory Commission (NRC) in Amendments 197 and 182 for Units 1 and 2, respectively (Reference 4). The current analysis for Control Room doses resulting from an FHA in the containment was approved by the NRC in Amendments 258 and 241 for Units 1 and 2, respectively (Reference 5). The FHA method of analysis is consistent with Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors." The damaged fuel assembly is assumed to have been part of a critical reactor core

100 hours prior to the accident and to have been in a high power location. It is also assumed that the damaged fuel assembly is covered by at least 23 feet of water. The fuel rod gap inventory is based on NUREG/CR-5009, "Assessment of the Use of Extended Burnup Fuel in Light Water Power Reactors," for the offsite doses and an Alternate Source Term consistent with 10 CFR 50.67, "Accident Source Term," for control room doses. The approved FHA analysis does not assume any holdup of the radioactive material by the containment building, nor does it assume that the containment penetrations are closed or the Containment Purge and Exhaust System is isolated following an FHA. The FHA analysis assumes all of the iodine and noble gases that become airborne in containment escape within a two-hour period and reach the site boundary and low population zone. Similar assumptions are used in determining the dose to the operators in the Control Room.

The FHA analysis demonstrates that after 100 hours sufficient radioactive decay has occurred that the containment is not needed to mitigate the dose consequences of an FHA. Water level above the damaged fuel assembly and decay time are sufficient to mitigate the dose consequences of an FHA and these assumptions are protected by other specifications. TS 3.9.10, "Water Level - Reactor Vessel," requires a minimum of 23 feet of water above the reactor vessel flange and TS 3.9.3, "Decay Time," requires a decay time of at least 100 hours before moving irradiated fuel.

The only accident postulated to occur during CORE ALTERATIONS that results in radioactive release is an FHA. As the proposed applicability, "during movement of recently irradiated fuel," provides sufficient protection for an FHA, the applicability "during CORE ALTERATIONS," is redundant. Therefore, the applicability of "during CORE ALTERATIONS" is removed from Specification 3.9.4 and 3.9.9.

The current TS are more restrictive than required to protect the assumptions of the safety analysis. This results in unnecessary restrictions on the containment personnel airlock, the equipment hatch, and the containment penetrations, as well as on the Containment Purge and Exhaust Isolation System and its attendant instrumentation. These restrictions have a significant adverse impact on the conduct of refueling outages that is not in keeping with their safety significance.

TSTF-51, Revision 2, which has been incorporated into NUREG-1431, Revision 2, removes the requirement for the containment and the Containment Purge and Exhaust Isolation System (and other TS systems that are not proposed as part of this request) to be OPERABLE when handling fuel assemblies that have decayed a sufficient period of time. This change is based on calculations which demonstrate that the dose consequences for a postulated FHA remain below the limits given in 10 CFR 100, and within the limits given in the NRC Standard Review Plan with no mitigation provided by these TS systems.

In addition to TS changes discussed above, TSTF-51 allows deletion of OPERABILITY requirements during CORE ALTERATIONS and restriction of applicability to during movement

of recently irradiated fuel for Engineered Safety Features mitigation equipment such as the Control Room Emergency Ventilation System (CREVS) and Emergency Diesel Generator. The CNP current analysis (Reference 5) for Control Room dose resulting from an FHA assumes operator action to manually actuate CREVS within 30 minutes. Therefore, the current TS requirements for CREVS (TS 3.7.5.1) and Alternating Current sources (e.g. TS 3.8.1.2 and 3.8.2.2) are consistent with CNP accident analysis and are not revised by this license amendment request. I&M is not requesting other TS changes (TS 3.9.12) within the scope of TSTF-51 due to the limited benefit gained in changing the applicability in support of the Fall 2004 refueling outage. The approach I&M has taken in requesting partial incorporation of TSTF-51 is consistent with other ice condenser plants. This approach is acceptable because the proposed changes remove TS restrictions that do not protect the assumptions of the safety analysis.

As described in TSTF-51, Revision 2, I&M commits to maintaining a single normal or contingency method to promptly close containment penetrations following an FHA as described in NUMARC 93-01, Section 11.3.6.5. These prompt methods need not completely block the penetrations nor be capable of resisting pressure, but are to enable the ventilation systems to draw the release from the postulated FHA such that it can be treated and monitored.

4.0 TECHNICAL ANALYSIS

I&M has previously submitted an FHA analysis for NRC review. On March 31, 1995, I&M requested a license amendment to revise TS 3.9.4 to allow both containment personnel airlocks to be open under certain circumstances (Reference 6). This license amendment request was applicable to Units 1 and 2 and described the FHA analysis documented in the CNP UFSAR. The design basis FHA is the complete rupture of the highest rated irradiated fuel assembly. No reduction in the potential thyroid dose was assumed since charcoal filtration was not considered and no credit was taken for containment structure or isolation. The analyzed case was assumed to occur 100 hours after shutdown. The dose results as approved by the NRC are given below.

	<u>Thyroid</u>	<u>Whole Body</u>
10 CFR 100 Limit	300 Rem	25 Rem
0-2 Hour Site Boundary Dose	82.3 Rem	1.3 Rem

The NRC approved the license amendment request as Amendments 197 and 182 to Units 1 and 2, respectively (Reference 4) and accepted that the radiological consequences of a fuel handling accident with the containment personnel airlock open confirms that the design-basis dose acceptance criteria for the analyzed FHA are met. The proposed change does not change the radiological consequences from those approved in Amendments 197 and 182.

On June 12, 2000, I&M requested a license amendment to use the methodology and the alternative source term in 10 CFR 50.67 and described in NUREG-1465, "Accident Source Terms for Light-Water Nuclear Power Plants" for Control Room dose. The submitted analysis for an FHA within containment assumes the fuel has decayed 100 hours and does not credit any

filtration, other than the water above the fuel assembly, and no credit is taken for containment structure or isolation. Implementing the Alternate Source Term of 10 CFR 50.67 results in a new acceptance criterion for 10 CFR 50, Appendix A, General Design Criteria 19, of 5 Rem total effective dose equivalent (TEDE). The dose results are given below:

	<u>30-day Control Room Dose</u>
10 CFR 50.67 Limit	5 Rem TEDE
Calculated Dose	1.7 Rem TEDE

The NRC approved the license amendment request as Amendments 258 and 241 to Units 1 and 2, respectively (Reference 5) and accepted the radiological consequences in the Control Room resulting from an FHA. The proposed change does not change the radiological consequences from those approved in Amendments 258 and 241.

As the proposed change does not alter the assumptions or radiological consequences of an FHA as previously reviewed and approved by the NRC, I&M has concluded that the proposed change is acceptable.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

Indiana Michigan Power Company (I&M) has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

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

Response: No

The proposed changes incorporate line item improvements that are based on assumptions in the postulated fuel handling accident (FHA) analysis. These proposed changes remove the applicability of the Technical Specifications (TS) governing containment penetrations and the Containment Purge and Exhaust Isolation System when handling fuel assemblies that have decayed for a sufficient period of time. The containment penetration and Containment Purge and Exhaust Isolation System are not initiators to any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased. The only previously analyzed accident affected by the proposed change is an FHA. The current, Nuclear Regulatory Commission (NRC)-approved analysis of an FHA does not assume any holdup of the postulated radioactivity release by the containment building nor does it assume the operation of the Containment Purge and Exhaust Isolation

System. As a result, the proposed change does not affect the assumed mitigation or consequences of that event.

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

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

Response: No

The proposed changes incorporate line item improvements that are based on assumptions in the postulated FHA analysis. These proposed changes remove the applicability of the TS governing containment penetrations and the Containment Purge and Exhaust Isolation System when handling fuel assemblies that have decayed for a sufficient period of time. The proposed changes do not involve the addition or modification of equipment nor do they alter the design of the plant. The revised operations are consistent with the FHA analysis and do not require any new or different ways of operating the plant equipment.

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

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

Response: No

The proposed changes incorporate line item improvements that are based on assumptions in the postulated FHA analysis. These proposed changes remove the applicability of the TS governing containment penetrations and the Containment Purge and Exhaust Isolation System when handling fuel assemblies that have decayed for a sufficient period of time. The calculated offsite and Control Room doses resulting from an FHA are not affected by this change as the proposed TS changes are revised to be consistent with the assumptions used in these analyses. As a further measure, I&M has committed to maintaining a single normal or contingency method to promptly close containment penetrations following an FHA. These prompt methods will enable the ventilation systems to draw the release from a postulated FHA such that it can be treated and monitored. This will provide a further margin of safety beyond that assumed in the accident analysis.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of “no significant hazards consideration” is justified.

5.2 Applicable Regulatory Requirements/Criteria

NUREG-0800, Standard Review Plan, Section 15.7.4, Radiological Consequences of Fuel Handling Accidents, describes the acceptance criteria for this event as, “the calculated doses at the exclusion boundary are well within the exposure guidelines of 10 CFR Part 100...well within shall mean 25% or less of 10 CFR Part 100, i.e., 75 Rem to the thyroid and 6 Rem for the whole-body doses.” The existing FHA analysis does not credit the containment building barriers or the Containment Purge and Exhaust Isolation System. The results of the calculations performed show that the offsite dose consequences of a fuel assembly dropped inside containment are within 10 CFR Part 100 limits.

Regulatory Guide 1.25 is the NRC guidance that describes a method acceptable to the NRC staff for licensee evaluation of the potential radiological consequences of an FHA. The parameters of concern and the acceptance criteria applied are based on the requirements of 10 CFR 100 with respect to the calculated radiological consequences of an FHA and General Design Criteria 61 with respect to appropriate containment, confinement, and filtering systems. The current FHA analysis follows the guidance in Regulatory Guide 1.25.

NUREG/CR-5009, Assessment of the Use of Extended Burnup Fuel in Light Water Power Reactors, relates to the expected release fraction for the radioactive iodine. According to this report, the calculated release fraction for extended burnup fuel may be up to 20% higher than that assumed in Regulatory Guide 1.25 for iodine-I 31. The FHA offsite dose calculations utilize the guidance in NUREG/CR-5009.

The calculation of Control Room dose meets the requirements of 10 CFR 50.67, “Alternate Source Term.”

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health or safety of the public.

6.0 ENVIRONMENTAL CONSIDERATIONS

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in

the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. NUREG-1431, Revision 2, "Standard Technical Specifications for Westinghouse Plants," April 2001.
2. Technical Specification Task Force (TSTF) generic change TSTF-51, Revision 2, "Revise Containment Requirements During Handling Irradiated Fuel and Core Alterations," submitted October 8, 1999.
3. D. C. Cook Updated Final Safety Analysis Report, Section 14.2.1 (Unit 1).
4. Letter from J. B. Hickman (NRC) to E. E. Fitzpatrick (I&M), "Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 - Issuance of Amendments re: Containment Personnel Airlock Requirements (TAC Nos. M91960 and M91961)," dated July 12, 1995.
5. Letter from J. F. Stang (NRC) to R. P. Powers (I&M), "Donald C. Cook Nuclear Plant, Units 1 and 2 - Issuance of Amendments (TAC Nos. MA9394 and MA9395)," dated November 13, 2001.
6. Letter from E. E. Fitzpatrick (I&M) to U.S. NRC Document Control Desk, "Proposed Amendment to Technical Specification Section 3/4.9.4 for Containment Personnel Airlock Requirements," dated March 31, 1995.
7. Letter from R. P. Powers (I&M) to U.S. NRC Document Control Desk, "License Amendment Request for Control Room Habitability and Generic Letter 99-02 Requirements," dated June 12, 2000.

8.0 PRECEDENT

The NRC has approved similar submittals at ice condenser plants involving TSTF-51, Revision 2.

Duke Power	Catawba	Accession No. ML021140431
Tennessee Valley Authority	Watts Bar	Accession No. ML020100062
Tennessee Valley Authority	Sequoyah	Accession No. ML033030206

The NRC has approved similar submittals for other plants involving TSTF-51, Revision 2. The following is not an all-inclusive list of amendments providing partial implementation of TSTF-51 but is intended to provide examples:

Progress Energy	Robinson 2	Accession No. ML022790010
Florida Power & Light	St. Lucie	Accession No. ML022420403
Virginia Electric and Power	North Anna	Accession No. ML021200265
Progress Energy	Brunswick	Accession No. ML020790479
Entergy	River Bend 1	Accession No. ML012480416

Attachment 1A to AEP:NRC:4051

**CNP UNIT 1 TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES**

3/4 3-37

3/4 9-4

3/4 9-10

TABLE 3.3-6 (Continued)

TABLE NOTATION

- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirements, comply with the ACTION requirements of Specification 3.9.9 when the requirements of Specification 3.9.9 are applicable. This ACTION is not required during the performance of containment integrated leak rate test.
- ACTION 22A- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements:
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.
- ACTION 22B- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements.
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. In the event of an accident involving radiological releases initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours.
 4. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.

3/4 **LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS**
3/4.9 **REFUELING OPERATIONS**

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

- a. The equipment door closed and held in place by a minimum of four bolts,
- b. The airlock doors are controlled in the following manner:
 1. A minimum of one door in each airlock is closed, or
 2. Both airlock doors may be open provided:
 - a. One door in each airlock is OPERABLE*,
 - b. Refueling cavity level is greater than 23 feet above the fuel, and
 - c. A designated individual is available at all times to close the airlock if required.
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 1. Closed by an isolation valve, blind flange, manual valve, or equivalent, or
 2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

-----NOTE-----

Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

APPLICABILITY: During ~~CORE ALTERATIONS~~ or movement of ~~recently~~ irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving ~~CORE ALTERATIONS~~ or movement of ~~recently~~ irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during ~~CORE ALTERATIONS~~ or movement of ~~recently~~ irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS
3/4.9 REFUELING OPERATIONS

CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: During Core Alterations or movement of ~~recently~~ irradiated fuel within the containment.

ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during ~~CORE ALTERATIONS~~ movement of ~~recently irradiated fuel~~ by verifying that containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation signal from each of the containment radiation instrumentation monitors.

Attachment 1B to AEP:NRC:4051

**CNP UNIT 2 TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES**

3/4 3-36

3/4 9-4

3/4 9-9

TABLE 3.3-6 (Continued)

TABLE NOTATION

- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.9.9, when the requirements of Specification 3.9.9 are applicable. This ACTION is not required during the performance of containment integrated leak rate test.
- ACTION 22A- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements:
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.
- ACTION 22B- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements.
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. In the event of an accident involving radiological releases initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours.
 4. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

- a. The equipment door closed and held in place by a minimum of four bolts,
- b. The airlock doors are controlled in the following manner:
 1. A minimum of one door in each airlock is closed, or
 2. Both airlock doors may be open provided:
 - a. One door in each airlock is OPERABLE*,
 - b. Refueling cavity level is greater than 23 feet above the fuel, and
 - c. A designated individual is available at all times to close the airlock if required.
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 1. Closed by an isolation valve, blind flange, manual valve, or equivalent, or
 2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

-----NOTE-----
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

APPLICABILITY: During ~~CORE ALTERATIONS~~ or movement of recently irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving ~~CORE ALTERATIONS~~ or movement of recently irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during ~~CORE ALTERATIONS~~ or movement of recently irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: During Core Alterations or movement of ~~recently~~ irradiated fuel within the containment.

ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during ~~CORE ALTERATIONS~~ movement of recently irradiated fuel by verifying that containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation test signal from each of the containment radiation monitoring instrumentation channels.

Attachment 2A to AEP:NRC:4051

**CNP UNIT 1 TECHNICAL SPECIFICATION PAGES
RETYPED WITH CHANGES**

3/4 3-37

3/4 9-4

3/4 9-10

TABLE 3.3-6 (Continued)

TABLE NOTATION

- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirements, comply with the ACTION requirements of Specification 3.9.9 when the requirements of Specification 3.9.9 are applicable. This ACTION is not required during the performance of containment integrated leak rate test.
- ACTION 22A- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements:
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.
- ACTION 22B- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements.
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. In the event of an accident involving radiological releases initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours.
 4. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

- 3.9.4 The containment building penetrations shall be in the following status:
- a. The equipment door closed and held in place by a minimum of four bolts,
 - b. The airlock doors are controlled in the following manner:
 - 1. A minimum of one door in each airlock is closed, or
 - 2. Both airlock doors may be open provided:
 - a. One door in each airlock is OPERABLE*,
 - b. Refueling cavity level is greater than 23 feet above the fuel, and
 - c. A designated individual is available at all times to close the airlock if required.
 - c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 - 1. Closed by an isolation valve, blind flange, manual valve, or equivalent, or
 - 2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

-----NOTE-----
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

APPLICABILITY: During movement of recently irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving movement of recently irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during movement of recently irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS
3/4.9 REFUELING OPERATIONS

CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: During movement of recently irradiated fuel within the containment.

ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during movement of recently irradiated fuel by verifying that containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation signal from each of the containment radiation instrumentation monitors.

Attachment 2B to AEP:NRC:4051

**CNP UNIT 2 TECHNICAL SPECIFICATION PAGES
RETYPED WITH CHANGES**

3/4 3-36

3/4 9-4

3/4 9-9

TABLE 3.3-6 (Continued)

TABLE NOTATION

- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.9.9 when the requirements of Specification 3.9.9 are applicable. This ACTION is not required during the performance of containment integrated leak rate test.
- ACTION 22A- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements:
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.
- ACTION 22B- With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirements.
1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
 3. In the event of an accident involving radiological releases initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours.
 4. Technical Specification Sections 3.0.3 and 3.0.4 Not Applicable.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

- 3.9.4 The containment building penetrations shall be in the following status:
- a. The equipment door closed and held in place by a minimum of four bolts,
 - b. The airlock doors are controlled in the following manner:
 - 1. A minimum of one door in each airlock is closed, or
 - 2. Both airlock doors may be open provided:
 - a. One door in each airlock is OPERABLE*,
 - b. Refueling cavity level is greater than 23 feet above the fuel, and
 - c. A designated individual is available at all times to close the airlock if required.
 - c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 - 1. Closed by an isolation valve, blind flange, manual valve, or equivalent, or
 - 2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

-----NOTE-----
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

APPLICABILITY: During movement of recently irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving movement of recently irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during movement of recently irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: During movement of recently irradiated fuel within the containment.

ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during movement of recently irradiated fuel by verifying that containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation test signal from each of the containment radiation monitoring instrumentation channels.

Attachment 3 to AEP:NRC:4051

List of Regulatory Commitments

The following table identifies those actions committed to by Indiana Michigan Power Company (I&M) in this document. Any other statements in this submittal are provided for information only and are not considered regulatory commitments. Please direct questions regarding these commitments to the contact identified in the transmittal letter for this submittal.

REGULATORY COMMITMENT	DUE DATE
I&M commits to implement the guidelines for pressurized water reactors in NUMARC 93-01, Revision 3, Section 11.2.6.5, "Safety Assessment for Removal of Equipment from Service During Shutdown Conditions," subheading, "Containment – Primary (PWR) / Secondary (BWR)" as described in the Reviewer's Note in NUREG-1431, Revision 2, Specification 3.9.4 Applicability Bases, and in TSTF-51, Revision 2.	This commitment is to be implemented prior to implementing this requested Technical Specification change.

Attachment 4 to AEP:NRC:4051

**CNP TECHNICAL SPECIFICATION BASES PAGES
MARKED TO ILLUSTRATE CHANGES TO BE MADE UNDER THE
TECHNICAL SPECIFICATION BASES CONTROL PROGRAM**

INSERT 1

The requirements on containment building penetrations during movement of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 100 hours) ensure that radioactive doses due to a fuel handling accident within the containment will not exceed the limits of 10 CFR 100 and 10 CFR 50.67. Due to radioactive decay, the requirements of the Specification are not required to mitigate a fuel handling accident involving fuel that is not recently irradiated.

INSERT 2

During the movement of recently irradiated fuel. Recently irradiated fuel is fuel that has occupied part of a critical reactor core within the previous 100 hours.