



December 22, 1999

C1299-12
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
TECHNICAL SPECIFICATION CHANGE REQUEST
REMOVAL OF REACTOR COOLANT SYSTEM VOLUME INFORMATION

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 delete T/S 5.4.2, "Reactor Coolant System Volume." I&M has determined that the information regarding reactor coolant system (RCS) volume is not required in T/S Section 5.0, "Design Features," for compliance with 10 CFR 50.36(c)(4). Comprehensive RCS volume information is already included in the CNP Updated Final Safety Analysis Report (UFSAR), and changes to RCS volume information in the CNP UFSAR are controlled in accordance with 10 CFR 50.59. Therefore, continued maintenance of this information in the T/S is an unnecessary regulatory burden. In addition, several administrative format changes that do not affect the technical content of the T/S are proposed for the affected T/S pages.

Attachment 1 provides a detailed description and safety analysis to support the proposed changes. 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.

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I&M requests approval by February 17, 2000, with a 30 day implementation period to support CNP restart schedules.

No previous submittals affect T/S pages that are submitted in this request. If any future submittals affect these T/S pages, then 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 approved. There are no commitments made in this submittal.

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. Robert C. Godley, Director of Regulatory Affairs, at (616) 466-2698.

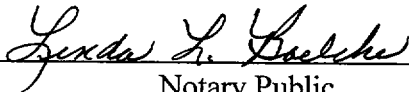
Sincerely,



R. P. Powers
Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 22nd DAY OF DECEMBER, 1999



Notary Public

My Commission Expires 1-21-2001

\dms

Attachments

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

ATTACHMENT 1 TO C1299-12

DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGES

A. Summary of Proposed Changes

Indiana Michigan Power Company (I&M) proposes to delete Technical Specification (T/S) 5.4.2, "Reactor Coolant System Volume." I&M has determined that the information regarding reactor coolant system (RCS) volume is not required in T/S Section 5.0, "Design Features," for compliance with 10 CFR 50.36(c)(4). Comprehensive RCS volume information is already included in the Donald C. Cook Nuclear Plant (CNP) Updated Final Safety Analysis Report (UFSAR), and changes to RCS volume information in the CNP UFSAR are controlled in accordance with 10 CFR 50.59. Therefore, continued maintenance of this information in the T/S is an unnecessary regulatory burden. In addition, several administrative format changes that do not affect the technical content of the T/S are proposed for the affected T/S pages.

The proposed changes are described in detail in Section E 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 Requirement

Unit 1 and Unit 2 T/S 5.4.2 lists the approximate, total combined RCS volume at a nominal T_{avg} of 70°F. Unit 1 T/S 5.4.2 also includes an adjustment to account for previously evaluated steam generator tube plugging limits.

C. Bases for the Current Requirement

Total RCS volume information is used as a design input to several of the accident analyses described in Chapter 14 of the CNP Unit 1 and Unit 2 UFSAR.

D. Need for Revision of the Requirement

The nominal RCS volumes currently contained in Unit 1 and Unit 2 T/S 5.4.2 do not reflect the actual RCS volumes that will exist when the CNP units are restarted. For Unit 1, replacement of the steam generators during the current outage will result in a small change (less than 2 percent) to total RCS volume. For Unit 2, T/S 5.4.2 was not updated to reflect similar small changes to

actual RCS volume after replacement of steam generators in 1988. Therefore, the TS 5.4.2 values for RCS volume need to be either revised or deleted from the T/S.

The CNP UFSAR already includes values for total RCS volume and RCS component and piping volumes that are more detailed and complete than the approximate RCS volumes listed in Unit 1 and Unit 2 T/S 5.4.2. These more detailed values are used as design inputs to the actual UFSAR Chapter 14 accident analyses, and include values for RCS volume at previously evaluated steam generator tube plugging limits. Therefore, T/S 5.4.2 is redundant to the CNP UFSAR. Maintenance of this information in both the T/S and the CNP UFSAR creates an unnecessary regulatory burden.

E. Description of the Proposed Changes

I&M proposes to delete Unit 1 T/S Section 5.4.2 and the title "VOLUME" immediately before T/S Section 5.4.2.

In addition, I&M proposes several format changes on Unit 1 T/S Page 5-5 that differ from previously submitted pages because of inadvertent format errors introduced in Amendment 214 to the Unit 1 T/S. These include deletion of the additional word "(Continued)" in the T/S Section 5.4 title, addition of the missing title "DESIGN PRESSURE AND TEMPERATURE" immediately before T/S Section 5.4.1, addition of the missing T/S Section 5.4.1 number and first sentence "The reactor coolant system is designed and shall be maintained:," deletion of the additional number "1." in T/S Section 5.6.1.1.c, and addition of the missing amendment number "213" in the footer.

I&M proposes to delete Unit 2 T/S Section 5.4.2 and the title "VOLUME" immediately before T/S Section 5.4.2.

In addition, I&M proposes several format changes on Unit 2 T/S Page 5-5 that differ from previously submitted pages. These include addition of "5.0 DESIGN FEATURES" to the header, addition of "Page" to the footer, deletion of "NO." from the footer, addition of separating lines at the bottom of the header and the top of the footer, and continuous underlining for the titles of T/S Sections 5.5 and 5.6.

F. Bases for the Proposed Change

The proposed deletion of the Unit 1 and Unit 2 T/S 5.4.2 requirements has no effect on the safe operation of CNP. The RCS volume information in T/S 5.4.2 is redundant to, and less detailed than, the more comprehensive RCS component and piping volume information maintained in the CNP UFSAR. This more detailed and complete RCS volume information is used as design

inputs to the CNP UFSAR Chapter 14 accident analyses. RCS volume information in the CNP UFSAR is controlled in accordance with 10 CFR 50.59.

The original T/S were developed prior to the most recent guidance provided in NUREG-1431, "Standard Technical Specifications – Westinghouse Plants." NUREG-1431 does not include RCS volume information in T/S Section 4, "Design Features," as this information does not meet the criteria for inclusion in the T/S, and is not considered necessary for compliance with 10 CFR 50.36(c)(4).

Based on the above, the RCS volume information in the T/S is not required and may be deleted with no adverse consequences.

The proposed administrative format changes are editorial in nature, and do not affect the technical content of the T/S.

G. Impact on Previous Submittals

No previous submittals affect the technical basis for this submittal, or require approval to support this submittal. If any future submittals affect the T/S pages provided in this submittal, then 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 approved.

ATTACHMENT 2A TO C1299-12

TECHNICAL SPECIFICATIONS PAGE
MARKED TO SHOW PROPOSED CHANGE

REVISED PAGE
UNIT 1

5-5

5.0 DESIGN FEATURES

5.4 REACTOR COOLANT SYSTEM ~~(Continued)~~

DESIGN PRESSURE AND TEMPERATURE

5.4.1 ~~The reactor coolant system is designed and shall be maintained:~~

- a. In accordance with the code requirements specified in Section 4.1.6 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
- b. For a pressure of 2485 psig, and
- c. For a temperature of 650°F, except for the pressurizer which is 680°F.

VOLUME

5.4.2 ~~The total contained volume of the reactor coolant system is approximately 12,466 cubic feet at 0% steam generator tube plugging and 11,551 cubic feet at 30% steam generator tube plugging at a nominal T_{avg} of 70°F.~~

5.5 EMERGENCY CORE COOLING SYSTEMS

5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.2 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements, with one exception. This exception is the CVCS boron makeup system and the BIT.

5.6 FUEL STORAGE

CRITICALITY - SPENT FUEL

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} equivalent to less than 0.95 when flooded with unborated water.
- b. A nominal 8.97 inch center-to-center distance between fuel assemblies placed in the storage racks.
- c. ~~1.~~ The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly average burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2, and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:

ATTACHMENT 2B TO C1299-12

TECHNICAL SPECIFICATIONS PAGE
MARKED TO SHOW PROPOSED CHANGE

REVISED PAGE
UNIT 2

5-5

5.0 DESIGN FEATURES

VOLUME

5.4.2 ~~The total water and steam volume of the reactor coolant system is 12,612 plus or minus 100 cubic feet at a nominal T_{avg} of 70°F.~~

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-3.

5.6 FUEL STORAGE

CRITICALITY - SPENT FUEL

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A K_{eff} equivalent to less than 0.95 when flooded with unborated water,
- b. A nominal 8.97-inch center-to-center distance between fuel assemblies, placed in the storage racks.
- c. The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2, and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:
 1. Region 1 is designed to accommodate new fuel with a maximum nominal enrichment of 4.95 wt% U-235, or spent fuel regardless of the discharge fuel burnup.
 2. Region 2 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 50,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.
 3. Region 3 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 38,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.

ATTACHMENT 3A TO C1299-12

PROPOSED TECHNICAL SPECIFICATIONS PAGE

REVISED PAGE
UNIT 1

5-5

5.0 DESIGN FEATURES

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

- 5.4.1 The reactor coolant system is designed and shall be maintained:
- a. In accordance with the code requirements specified in Section 4.1.6 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
 - b. For a pressure of 2485 psig, and
 - c. For a temperature of 650°F, except for the pressurizer which is 680°F.

5.5 EMERGENCY CORE COOLING SYSTEMS

- 5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.2 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements, with one exception. This exception is the CVCS boron makeup system and the BIT.

5.6 FUEL STORAGE

CRITICALITY - SPENT FUEL

- 5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:
- a. A k_{eff} equivalent to less than 0.95 when flooded with unborated water.
 - b. A nominal 8.97 inch center-to-center distance between fuel assemblies placed in the storage racks.
 - c. The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly average burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2, and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:

ATTACHMENT 3B TO C1299-12

PROPOSED TECHNICAL SPECIFICATIONS PAGE

REVISED PAGE
UNIT 2

5-5

5.0 DESIGN FEATURES

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-3.

5.6 FUEL STORAGE

CRITICALITY - SPENT FUEL

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A K_{eff} equivalent to less than 0.95 when flooded with unborated water,
- b. A nominal 8.97-inch center-to-center distance between fuel assemblies, placed in the storage racks.
- c. The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2, and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:
 1. Region 1 is designed to accommodate new fuel with a maximum nominal enrichment of 4.95 wt% U-235, or spent fuel regardless of the discharge fuel burnup.
 2. Region 2 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 50,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.
 3. Region 3 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 38,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.

ATTACHMENT 4 TO C1299-12

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 analyzed; or
3. involve a significant reduction in a margin of safety.

I&M proposes to delete Technical Specification (T/S) 5.4.2, "Reactor Coolant System Volume." I&M has determined that the information regarding reactor coolant system (RCS) volume is not required in T/S Section 5.0, "Design Features," for compliance with 10 CFR 50.36(c)(4). Comprehensive RCS volume information is already included in the Donald C. Cook Nuclear Plant (CNP) Updated Final Safety Analysis Report (UFSAR), and changes to RCS volume information in the CNP UFSAR are controlled in accordance with 10 CFR 50.59. Therefore, continued maintenance of this information in the T/S is an unnecessary regulatory burden. In addition, several administrative format changes that do not affect the technical content of the T/S are proposed for the affected T/S pages.

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 proposed change to remove this information from T/S does not affect any accident initiators or precursors. Elimination of the RCS volume information from the T/S does not change the methods for plant operation or actions to be taken in the event of an accident. The quantity of radioactive material available for release in the event of an accident is not increased. Barriers to release of radioactive material are not eliminated or otherwise changed. More detailed and complete RCS component and piping volume information is included in the CNP UFSAR, and changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59. In addition, the proposed administrative format changes do not affect any of the technical content of the T/S.

Therefore, there is no 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 deletion of the RCS volume information from the T/S does not change the methods of plant operation or modify plant systems, structures, or components. No new methods of plant operation are created. As such, the proposed change does not affect any accident initiators or precursors or create new accident initiators or precursors. More detailed and complete RCS component and piping volume information is included in the CNP UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59. In addition, the proposed administrative format changes do not affect any of the technical content of the T/S.

Therefore, the proposed 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 deletion of the RCS volume information from the T/S does not affect safety limits or limiting safety system settings. Plant operational parameters are not affected. The proposed change does not modify the quantity of radioactive material available for release in the event of an accident. As such, the change will not affect any previous safety margin assumptions or conditions. The actual volume of the RCS is not affected by the change, only the location of the text describing the volume. More detailed and complete RCS component and piping volume information is included in the CNP UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59. In addition, the proposed administrative format changes do not affect any of the technical content of the T/S.

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 C1299-12

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 amendment involves deletion of reactor coolant system volume information from the Technical Specifications (T/S). The proposed T/S change does not result in the generation of any additional radioactive or nonradioactive effluents. In addition, the proposed change to the T/S has no impact on any of the radioactive and nonradioactive effluent processing and control systems. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents released offsite.

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

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