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March 31, 2021 10 CFR 50.90
NRC-21-0001

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Fermi 2 Power Plant
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: License Amendment Request to Revise Technical Specifications to Remove Obsolete Information, Make Minor Corrections, and Make Miscellaneous Editorial Changes

Pursuant to Title 10 of the Code of Federal Regulations Section 50.90 (10 CFR 50.90), DTE Electric Company (DTE) is submitting a request for an amendment to the Technical Specifications (TS) for Fermi Unit 2 (i.e., Appendix A, Technical Specifications of Renewed Facility Operating License NPF-43). The proposed TS changes remove obsolete information, make minor corrections, and make miscellaneous editorial changes.

Enclosure 1 provides a description and assessment of the proposed changes. Enclosure 2 provides the existing TS pages marked to show the proposed changes. Enclosure 3 provides revised (clean) TS pages. There are no associated changes to the TS Bases included with this request.

Approval of the proposed amendment is requested by January 31, 2022. Once approved, the amendment shall be implemented within 60 days.

No new commitments are being made in this submittal.

In accordance with 10 CFR 50.91, a copy of this application, with enclosures, is being provided to the designated Michigan State Official.

Should you have any questions or require additional information, please contact Ms. Margaret M. Offerle, Manager – Nuclear Licensing, at (734) 586-5076.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 31, 2021

Peter Dietrich
Senior Vice President and Chief Nuclear Officer

Enclosures:

1. Description and Assessment
2. Proposed Technical Specification Changes (Mark-Up)
3. Revised Technical Specification Pages

cc: NRC Project Manager
NRC Resident Office
Regional Administrator, Region III
Michigan Department of Environment, Great Lakes, and Energy

Enclosure 1 to
NRC-21-0001

Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43

License Amendment Request to Revise Technical Specifications to Remove Obsolete Information, Make Minor Corrections, and Make Miscellaneous Editorial Changes

Description and Assessment

1.0 SUMMARY DESCRIPTION

Pursuant to Title 10 of the Code of Federal Regulations Section 50.90 (10 CFR 50.90), DTE Electric Company (DTE) is submitting a request for an amendment to the Technical Specifications (TS) for Fermi Unit 2 (i.e., Appendix A, Technical Specifications of Renewed Facility Operating License NPF-43). The proposed TS changes remove obsolete information, make minor corrections, and make miscellaneous editorial changes.

2.0 BACKGROUND

The Fermi 2 TS are utilized by DTE personnel to ensure and maintain compliance with the license. During use of the TS, DTE personnel sometimes identify minor typographical errors, formatting or editorial inconsistencies, or obsolete or otherwise unnecessary information. 10 CFR 50.90 requires licensees to submit requests for amendments in order to modify the TS. As a result, these types of minor changes can be combined with other more significant TS changes being sought by licensees under 10 CFR 50.90, usually when the minor change is in a section or subsection being modified by the more significant change. In other cases, such as this submittal, licensees may combine several unrelated minor changes into a single amendment request for efficiency.

Over the past few years, DTE has identified several minor typographical errors, formatting or editorial inconsistencies, or obsolete or otherwise unnecessary information. DTE has tracked the need for these changes, such as through use of the Corrective Action Program, and sought opportunities to include the changes in other license amendment requests. The proposed changes in this request were not able to be included in other license amendment requests as there were none sufficiently related to the impacted sections or subsections at the appropriate time. DTE has judged that the changes, while minor, will improve the clarity and consistency of the Fermi 2 TS. The changes will also improve consistency with the industry as a whole. DTE is therefore submitting the collection of these otherwise unrelated changes.

The proposed changes are all administrative or editorial in nature. No physical changes to plant equipment are being proposed or requested.

3.0 DETAILED DESCRIPTION

As described above, DTE is proposing TS changes to remove obsolete information, make minor corrections, and make miscellaneous editorial changes, in accordance with 10 CFR 50.90. The specific proposed changes to the Fermi 2 TS are described in the following subsections. Enclosure 2 provides the existing TS pages marked to show the proposed changes. Enclosure 3 provides revised (clean) TS pages. There are no associated changes to the TS Bases included with this request. Note that a single TS page in Enclosures 2 and 3 may contain a change associated with one or more of the following subsections.

3.1 Correction of Line Formatting Inconsistency Throughout the TS

The Fermi 2 TS use both double and single lines to provide visual separation of various sections and subsections. The use of a double line vs. a single line is intended to provide a visual cue that is consistent throughout the TS. Review of the Fermi 2 TS identified cases where one or more of the following line formatting inconsistencies occurred: (1) a single line was used where a double line should have been used, (2) a double line was used where a single line should have been used or (3) a single or double line was used where no line was needed. The line formatting inconsistencies are revised to use the appropriate line format in each case. The proposed change affects TS pages i, 3.0-1, 3.2-1, 3.2-4, 3.3-20a, 3.3-49c, 3.6-50, 3.8-18, and 3.8-18a.

3.2 Correction of Continuation Notation Throughout the TS

The Fermi 2 TS use continuation notation to indicate when a section, subsection, or topic is not completed at the bottom of a page but must be continued onto the next page. The phrase "(continued)" is placed at the bottom of the affected page and then again at the top of the next page. The formatting and location where the "(continued)" is placed depends on where the page break occurs, but the formatting and location is intended to be consistent for those different types of breaks. Review of the Fermi 2 TS identified cases where one or more of the following inconsistent continuation notations occurred: (1) no continuation was provided where one should have been, (2) the continuation was provided but was in the incorrect location, or (3) the format of the continuation notation was incorrect. The continuation notation inconsistencies are revised to use the appropriate location and format in each case. The proposed change affects TS pages 1.1-3a, 3.0-3a, 3.3-41, 3.3-42, 3.3-43, 3.3-44, 3.5-9, 3.5-9a, 3.7-11, 3.8-2, 5.0-8, 5.0-19, 5.0-19a, and 5.0-19b.

3.3 Correction of Typographical Error in TS Section 3.0

The title and header in the continuation of TS Section 3.0 is revised from "LCO Applicability" to "SR Applicability." The proposed change affects TS page 3.0-5.

3.4 Correction of Typographical Error in TS Sections 3.2.1 and 3.2.3

The Frequency columns in TS Surveillance Requirements (SRs) 3.2.1.1 and 3.2.3.1 are revised to correct the power level from "25% RPT" to "25% RTP." The proposed change affects TS pages 3.2-1 and 3.2-4.

3.5 Correction of Missing Completion Time in TS Sections 3.3.7.2 and 3.3.7.3

The Completion Time column in Condition A of TS Sections 3.3.7.2 and 3.3.7.3 is revised to repeat the Completion Time of 12 hours next to both Required Actions A.1 and A.2 rather than only next to Required Action A.1. The proposed change affects TS pages 3.3-70a and 3.3-70d.

3.6 Removal of Excess Detail from TS Section 3.4.5

The description of the low pressure coolant injection (LPCI) inboard injection isolation testable check valves in part c of TS SR 3.4.5.1 is revised to remove the "testable check" phrase portion of the descriptor. The proposed change affects TS page 3.4-12.

3.7 Correction of Logical Connector Formatting Errors Throughout the TS

The Fermi 2 TS use logical connectors to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The formatting and location of logical connectors carry specific meaning. Review of the Fermi 2 TS identified cases where logical connectors were not properly used and require correction. Specifically, the Required Action in Condition D of TS 3.4.6 is revised to correct the indentation of the "OR" logical connector to align to the proper level. In addition, the Required Action in Condition C of TS 3.6.1.6 is revised to correct the formatting of the logical connector from "AND" to "AND" by adding underlining. The Required Action and Frequency in Condition D of TS 3.8.1 is also revised to correct the formatting of the logical connector from "AND" to "AND" by adding underlining. The proposed change affects TS pages 3.4-14, 3.6-20, and 3.8-2a.

3.8 Correction of Typographical Errors in TS Section 3.4 Title

The title of TS Section 3.4 in TS Sections 3.4.7, 3.4.8, 3.4.10, and 3.4.11 is revised to add a closing parenthesis to correct a typographical error in the definition of the acronym RCS (Reactor Coolant System). The proposed change affects TS pages 3.4-16, 3.4-18, 3.4-23 and 3.4-29.

3.9 Correction of Formatting Error of Dashed Lines for Notes in TS Sections 3.4.10 and 3.7.7

The dashed lines used to separate Notes from the remaining text in TS SR 3.4.10.5 and TS 3.7.7 Condition A are corrected to align with the rest of the Note. The proposed change affects TS pages 3.4-26 and 3.7-18.

3.10 Correction of Typographical Error in TS Section 3.5.2

The Applicability of TS 3.5.2 is revised to add a period at the end of the description. The proposed change affects TS page 3.5-8.

3.11 Correction of Formatting Inconsistency in TS Section 3.8.1

The title and header in TS Section 3.8.1 are revised from "AC Sources -- Operating" to "AC Sources - Operating" to remove the extraneous hyphen for consistency. The proposed change affects TS pages 3.8-1, 3.8-2, 3.8-2a, and 3.8-2b.

3.12 Correction of Position Title in TS Section 5.2.1

The position title in part c of TS Section 5.2.1 is corrected from "Senior Vice President – Nuclear Generation" to "Senior Vice President and Chief Nuclear Officer" for consistency with the Fermi 2 Updated Final Safety Analysis Report (UFSAR). The proposed change affects TS page 5.0-2.

3.13 Removal of Obsolete Information from TS Section 5.5.2

The list of systems outside containment that could contain highly radioactive fluids during a serious transient or accident in TS Section 5.5.2 is revised to remove the Hydrogen Recombiners. The proposed change affects TS page 5.0-8.

3.14 Removal of Obsolete Information from TS Section 5.6.5

The list of analytical methods used to determine the core operating limits in part b of TS Section 5.6.5 is revised to remove "NEDE-23785-1-PA, 'The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant-Accident – SAFER/GESTR, Application Methodology,' (the approved version at the time reload analyses are performed)." The proposed change affects TS page 5.0-21.

3.15 Correction of Position Title in TS Sections 5.1.2, 5.2.2, and 5.7.2

The position title in TS Sections 5.1.2, 5.2.2 (part g), and 5.7.2 is corrected from "Nuclear Shift Supervisor" to "Shift Manager" for consistency with the Fermi 2 UFSAR. Likewise, the abbreviation "NSS" for "Nuclear Shift Supervisor" is corrected to "SM" for "Shift Manager." The proposed change affects TS pages 5.0-1, 5.0-3, and 5.0-24.

4.0 TECHNICAL ANALYSIS

Technical analysis and justification of each of the proposed TS changes in Section 3 above (and Enclosures 2 and 3) is provided in the following subsections. The subsection numbering is consistent with Section 3 above (i.e., justification of the change in subsection 3.X is provided in subsection 4.X).

4.1 Correction of Line Formatting Inconsistency Throughout the TS

As discussed in Subsection 3.1 above, the Fermi 2 TS use both double and single lines to provide visual separation of various sections and subsections. The use of a double line vs. a single line is intended to provide a visual cue that is consistent throughout the TS. Review of the Fermi 2 TS identified cases where one or more of the following line formatting inconsistencies occurred: (1) a single line was used where a double line should have been used, (2) a double line was used where a single line should have been used or (3) a single or double line was used where no line was needed. Analysis of each of the line formatting inconsistencies is as follows:

- Page i is the beginning of a new section in the TS, specifically the Table of Contents. High-level section titles are intended to be separated from subsequent text by a double line (i.e., two parallel lines). The use of a single line at the top of page i is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that a double line was correctly used when Fermi 2 TS were converted to Improved Technical Specifications (ITS) in Amendment No. 134 (Reference 7.1). The single line was inadvertently introduced when the page was revised in Amendment No. 211 (Reference 7.2).
- Page 3.0-1 is the beginning of a new section in the TS, specifically "Limiting Condition for Operation (LCO) Applicability." High-level section titles are intended to be separated from subsequent text by a double line. The use of a single line at the top of page 3.0-1 is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that a double line was correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The single line was inadvertently introduced when the page was revised in Amendment No. 172 (Reference 7.3).
- Page 3.2-1 provides the "Actions" section for TS 3.2.1. High-level sections are intended to be separated from subsequent text by a double line. The use of a single line at the end of the "Actions" section on page 3.2-1 is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that a double line was correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The single line was inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).

  [Note: At the end of the "Surveillance Requirements" section on the same page, there is a line to denote the end of the section. In the scanned versions of the NRC-approved page, it is difficult to tell if the line is single or double. Review of the electronic version confirms that the line is double as it should be. Therefore, no change to the line is required. However, when making the other correction for the "Actions" section as previously described, the image quality will be improved to better show the double line at the end of the "Surveillance Requirements" section. This is not actually a change, but is identified in Enclosure 2 for information.]
- Page 3.2-4 provides the "Actions" section for TS 3.2.3. High-level sections are intended to be separated from subsequent text by a double line. The use of a single line at the end of the "Actions" section on page 3.2-4 is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that a double line was correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The single line was inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).

  [Note: At the end of the "Surveillance Requirements" section on the same page, there is a line to denote the end of the section. In the scanned versions of the NRC-approved page, it is difficult to tell if the line is single or double. Review of the electronic version confirms that the line is double as it should be. Therefore, no change to the line is

required. However, when making the other correction for the "Actions" section as previously described, the image quality will be improved to better show the double line at the end of the "Surveillance Requirements" section. This is not actually a change, but is identified in Enclosure 2 for information.]

- Page 3.3-20a provides the end of the "Surveillance Requirements" section for TS 3.3.2.1. Double lines are intended to be used to separate high-level sections from subsequent text. Single lines are intended to be used for other text separations. Although double lines are used properly at the end of the section, double lines are also used to separate an SR from the heading and between two consecutive SRs. The use of double lines in this manner on page 3.3-20a is an exception to the consistent formatting style. The one double line should be removed entirely, since a single line already exists above it, and the other double line should be corrected to a single line. Historical review of the Fermi 2 TS identified that line formatting was correctly used in this section when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The incorrect double lines were inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).
- Page 3.3-49c provides the start and end of Table 3.3.5.3-1 for TS 3.3.5.3. Tables are intended to be separated from subsequent text by a double line. The use of a single line at the bottom of Table 3.3.5.3-1 on page 3.3-49c is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that the incorrect line formatting was inadvertently introduced when the page was added to the TS in Amendment No. 211 (Reference 7.2).
- Page 3.6-50 provides the start and end of the "Surveillance Requirements" section for TS 3.6.4.3. High-level sections are intended to be separated from subsequent text by a double line. The use of a single thick line at the start of the "Surveillance Requirements" section on page 3.6-50 is an exception to this consistent formatting style and should be corrected to a double line. Historical review of the Fermi 2 TS identified that a double line was correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The single thick line was inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).

  [Note: At the end of the "Surveillance Requirements" section on the same page, there is a line to denote the end of the section. In the scanned versions of the NRC-approved page, it is difficult to tell if the line is single or double. Review of the electronic version confirms that the line is double as it should be. Therefore, no change to the line is required. However, when making the other correction for the "Actions" section as previously described, the image quality will be improved to better show the double line at the end of the "Surveillance Requirements" section. This is not actually a change, but is identified in Enclosure 2 for information.]
- Page 3.8-18 provides continued "Surveillance Requirements" for TS 3.8.4 in a table style format. The individual SRs are intended to be separated from each other and from the table header by a single line. The use of two single lines above SR 3.8.4.6 on page 3.8-18 is an exception to this consistent formatting style. The extra single line should be

removed entirely, since a single line already exists above it. Historical review of the Fermi 2 TS identified that line formatting was correctly used in this section when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The extra single line was inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).

- Page 3.8-18a provides continued "Surveillance Requirements" for TS 3.8.4. Double lines are intended to be used to separate high-level sections from subsequent text. Single lines are intended to be used for other text separations. The use of a double line as part of the continuation of the "Surveillance Requirements" on the top of page 3.18-18a is an exception to this consistent formatting style. The double line should be changed to a single line. Historical review of the Fermi 2 TS identified that the incorrect line format was inadvertently introduced when the page was added to the TS in Amendment No. 201 (Reference 7.4).

A review of the formatting of the Standard Technical Specifications (STS) for BWR/4 plants like Fermi 2 in NUREG-1433 (Reference 7.5) identified that the STS also use a double line (i.e., two parallel lines) to separate high-level section titles from subsequent text and a single line is used for other text separations. [Note that all subsequent references to "STS" in this submittal are to those in NUREG-1433 for BWR/4 plants like Fermi 2.] The changes to the Fermi 2 TS for each of the pages discussed above will restore consistency with the equivalent page/section in the STS. Additionally, the Writer's Guide for Plant-Specific Improved Technical Specifications in TSTF-GG-05-01 (Reference 7.6), Section 2.1.6, provides guidance on the double and single line format. The line formatting in the Fermi 2 TS is generally consistent with the guidance in Section 2.1.6 of TSTF-GG-05-01 with the exception of those errors identified above which are proposed to be corrected. In this respect, the proposed line formatting changes will ensure that the Fermi 2 TS are consistent with the line formatting in the STS and the guidance in TSTF-GG-05-01.

The proposed change to line formatting throughout the TS (pages i, 3.0-1, 3.2-1, 3.2-4, 3.3-20a, 3.3-49c, 3.6-50, 3.8-18, and 3.8-18a) is therefore justified as it is a minor editorial change that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with TSTF-GG-05-01 and the NRC-approved STS.

4.2 Correction of Continuation Notation Throughout the TS

As discussed in Subsection 3.2 above, the Fermi 2 TS use continuation notation to indicate when a section, subsection, or topic is not completed at the bottom of a page but must be continued onto the next page. The phrase "(continued)" is placed at the bottom of the affected page and then again at the top of the next page with specific formatting and placement location depending on the different types of breaks. Review of the Fermi 2 TS identified cases where one or more of the following inconsistent continuation notations occurred: (1) no continuation was provided where one should have been, (2) the continuation was provided but was in the incorrect location, or (3) the format of the continuation notation was incorrect. Analysis of each of the continuation notation inconsistencies is as follows:

- In TS Section 1.1, the definition of "DRAIN TIME" is split across pages 1.1-3 and 1.1-3a. The continuation notation at the bottom of page 1.1-3 is correct. The continuation notation at the top of page 1.1-3a is not correct as it indicates the continuation of Section 1.1, not the continuation of "DRAIN TIME." The continuation notation should be moved below the line and indicate that it continues the "DRAIN TIME" definition. This formatting issue was introduced when the "DRAIN TIME" definition was added to the TS in Amendment No. 211 (Reference 7.2).
- In TS Section 3.0, the "LCO APPLICABILITY" continues from page 3.0-3 onto page 3.0-3a. There is no continuation notation at the top of page 3.0-3a. Since the page begins a new LCO, the continuation notation should be placed above the line to indicate that it continues the "LCO APPLICABILITY" section. This formatting issue was introduced when an additional page was created in TS Section 3.0 as a result of adding LCO 3.0.9 to the TS in Amendment No. 176 (Reference 7.7).
- TS Section 3.3.5.1 includes Table 3.3.5.1-1, which has five pages. Continuation notation is used on the bottom of the first four pages of the table (pages 3.3-41, 3.3-42, 3.4-43, and 3.3-44). In each case, the continuation notation is above the line, indicating continuation of a specific part of the table. However, in each case, the specific table information (i.e., the instrumentation function) is completed on that page and not continued on to the next page. Therefore, the continuation notation should be instead be placed below the line, indicating continuation of the entire table, not the specific instrumentation function. Historical review of the Fermi 2 TS identified that misplacement of the continuation notation first occurred when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1).
- TS Section 3.5.2 has five items in the "ACTIONS" section, split across four pages. The first page of the ACTIONS table uses a continuation at the bottom and the next three pages all have a continuation at the top. However, the middle two pages of the ACTIONS table (pages 3.5-9 and 3.5-9a) do not have continuations indicated at the bottom of the page. The continuation notation should be added below the line to indicate that the ACTIONS table is continued on the next page. This formatting issue was introduced when items and text were added to the ACTIONS table in Amendment No. 211 (Reference 7.2).
- TS Section 3.7.4 has five items in the "ACTIONS" section, split across three pages. The first page of the ACTIONS table (page 3.7-11) does not have a continuation at the bottom. The continuation notation should be added below the line to indicate that the ACTIONS table is continued on the next page. This formatting issue was introduced when items and text were rearranged within the ACTIONS table in Amendment No. 177 (Reference 7.8).
- In TS Section 3.8.1, Condition B is split across two pages. The first page that contains Condition B (page 3.8-2) does not have a continuation at the bottom. The continuation notation should be added above the line to indicate that Condition B is continued on the next page. The continuation for page 3.8-2 was inadvertently omitted when the page was revised in Amendment No. 175 (Reference 7.9).

- When Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1), TS Section 5.5.3 was split across two pages (pages 5.0-8 and 5.0-9). TS Section 5.5.3 was then deleted from the TS in Amendment No. 150 (Reference 7.10). The placeholder for TS Section 5.5.3 now only resides on page 5.0-8. As a result, the continuation notation at the bottom of page 5.0-8 should be moved to below the line to indicate that the higher level TS Section 5.5 continues on the next page, rather than the specific TS Section 5.5.3 itself.
- TS Section 5.5.14 is split across two pages (pages 5.0-19 and 5.0-19a). The continuation notation at the bottom of page 5.0-19 should be moved to above the line to indicate that TS Section 5.5.14 continues on the next page. In addition, the continuation notation at the top of page 5.0-19a should have the underline removed to indicate that it is not part of the title of TS Section 5.5.14. These formatting issues were introduced when the Control Room Envelope Habitability Program was added to the TS as Section 5.5.14 in Amendment No. 198 (Reference 7.11).
- TS Section 5.5.15 is split across two pages (pages 5.0-19a and 5.0-19b). The continuation notation at the bottom of page 5.0-19a should be moved to above the line to indicate that TS Section 5.5.15 continues on the next page. In addition, the continuation notation at the top of page 5.0-19b should have the underline removed to indicate that it is not part of the title of TS Section 5.5.15. These formatting issues were introduced when the Surveillance Frequency Control Program was revised in Amendment No. 218 (Reference 7.26).

A review of the formatting of the STS identified that Revision 4 of the STS does not use continuation notation. When Fermi 2 TS were converted to ITS, the formatting was based on Revision 1 of the STS as identified in the Safety Evaluation for Amendment No. 134 (Reference 7.1). TSTF-GG-05-01 (Reference 7.6) describes that continuation notation is utilized with the Revision 1 format. Specific guidance on continuation notation when using Revision 1 of the STS is found in TSTF-GG-05-01 Sections 2.3.2, 2.5.1, 2.5.7, and 2.6.2. The line formatting in the Fermi 2 TS is generally consistent with the guidance in TSTF-GG-05-01 with the exception of those errors identified above which are proposed to be corrected. In this respect, the proposed continuation notation changes will ensure that the Fermi 2 TS are consistent with the guidance in TSTF-GG-05-01.

The proposed change to continuation notation formatting throughout the TS (pages 1.1-3a, 3.0-3a, 3.3-41, 3.3-42, 3.3-43, 3.3-44, 3.5-9, 3.5-9a, 3.7-11, 3.8-2, 5.0-8, 5.0-19, 5.0-19a, and 5.0-19b) is therefore justified as it is a minor editorial change that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with the guidance in TSTF-GG-05-01.

4.3 Correction of Typographical Error in TS Section 3.0

The Fermi 2 TS have two subsections in Section 3.0: LCO Applicability and SR Applicability. Both subsections are numbered 3.0. The LCO Applicability subsection covers LCOs 3.0.1 through 3.0.9 and is found on pages 3.0-1, 3.0-2, 3.0-3, and 3.0-3a. The SR applicability

subsection covers SRs 3.0.1 through 3.0.4 and is found on pages 3.0-4 and 3.0-5. Each page contains the subsection title at the top and also in the header area. Although page 3.0-5 is clearly in the SR Applicability subsection, as it contains the technical content for SRs 3.0.3 and 3.0.4, the title and header both say "LCO Applicability." The proposed change corrects this typographical error so that page 3.0-5 has the correct title and header (i.e., "SR Applicability").

Historical review of the Fermi 2 TS identified that the title and header were correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The incorrect title and header were inadvertently introduced when the page was revised in Amendment No. 145 (Reference 7.12).

A review of the STS indicates that they also have two subsections in Section 3.0 which are also both numbered 3.0: LCO Applicability and SR Applicability. The SR applicability subsection covers SRs 3.0.1 through 3.0.4 and is found on pages 3.0-4 and 3.0-5. The title and header on both pages are "SR Applicability." In this respect, the proposed typographical error correction will ensure that the Fermi 2 TS are consistent with the STS.

The proposed change to TS Section 3.0 (page 3.0-5) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with the NRC-approved STS.

4.4 Correction of Typographical Error in TS Sections 3.2.1 and 3.2.3

The Fermi 2 TS contain a "Definitions" section (Section 1.1). A definition is provided for RATED THERMAL POWER (RTP) as the total reactor core heat transfer rate to the reactor coolant of 3486 MWt. The acronym RTP is then used throughout the rest of the TS when referring to power level, such as in LCOs 3.2.1, 3.2.3, and several others. SRs 3.2.1.1 and 3.2.3.1 both refer to "RPT." The acronym RPT is defined in TS 3.3.4.1 as part of the acronym ATWS-RPT, which is the anticipated transient without scram recirculation pump trip, but RPT is not used by itself. It is clear from the context of SRs 3.2.1.1 and 3.2.3.1 that power level is intended and therefore RTP is the correct acronym. The proposed change corrects this typographical error in both SRs 3.2.1.1 and 3.2.3.1 so that there is no potential for confusion.

Historical review of the Fermi 2 TS identified that RTP was correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The incorrect acronym RPT was inadvertently introduced when the page was revised in Amendment No. 201 (Reference 7.4).

A review of the STS indicates that they also have a definition of RTP as RATED THERMAL POWER in Section 1.1. The acronym RTP is then used in LCOs 3.2.1 and 3.2.3, including in both SRs 3.2.1.1 and 3.2.3.1. In this respect, the proposed corrections to the typographical errors will ensure that Fermi 2 TS are consistent with the STS.

The proposed change to SRs 3.2.1.1 and 3.2.3.1 (pages 3.2-1 and 3.2-4) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures

consistency with the definitions in Fermi 2 TS Section 1.1, and it is consistent with the NRC-approved STS.

4.5 Correction of Missing Completion Times in TS Sections 3.3.7.2 and 3.3.7.3

The Fermi 2 TS were revised in Amendment No. 212 (Reference 7.13) to add new TS Sections 3.3.7.2 and 3.3.7.3. The two new TS sections were formatted identically. Each contains a Condition A with two possible Required Actions, A.1. and A.2, separated with the "OR" logical connector. In the Completion Time column, only a single time (12 hours) is given, which is aligned with Required Action A.1. A review of the Fermi 2 TS identifies that each Required Action should have its own Completion Time, even for those Required Actions separated with logical connectors. As a result, the Completion Time for Required Action A.2 is not properly indicated.

Review of the DTE submittal associated with Amendment No. 212 (Reference 7.14) confirms that the same Completion Time was intended to be applied to both Required Actions A.1 and A.2. For example, Section 3.0 of Reference 7.14 states that "TS 3.3.7.2 LCO Condition A allows one channel of the Main Steam Line – High Function for the MVP trip to be inoperable for 12 hours before requiring the channel to be restored or placed in the tripped condition." In this context, restoring the channel refers to Required Action A.1 and placing the channel in the tripped condition refers to Required Action A.2, so the 12 hours clearly applies to both. The same statement is made later in Section 3.0 of Reference 7.14 for TS 3.3.7.3 LCO Condition A. In addition, the submittal in Reference 7.14 also included information only copies of the TS Bases associated with the new TS Sections 3.3.7.2 and 3.3.7.3. The TS Bases discussed Required Actions A.1 and A.2 at the same time and referred to the Completion Time as 12 hours. Section 3.5 of the NRC Safety Evaluation (SE) in Reference 7.13 also discusses the single Completion Time of 12 hours as applicable to both Required Actions A.1 and A.2.

There are no equivalent TS requirements in the STS to Fermi 2 TS Sections 3.3.7.2 and 3.3.7.3 for comparison. However, in Section 5.2 of Reference 7.14, DTE provided a list of plants that were utilized as precedent for creation of the new TS Sections 3.3.7.2 and 3.3.7.3. The format for the Fermi 2 TS was most closely based on the Dresden example, which was Reference 7.34 in the Reference 7.14 DTE submittal (repeated in this submittal for convenience as Reference 7.15). Review of the Dresden example confirms that the Completion Time of 12 hours is placed next to both Required Action A.1 and Required Action A.2, rather than just in one place as in the current Fermi 2 TS. The proposed correction of the Fermi 2 TS to also add the Completion Time next to Required Action A.2 will restore consistency with the Dresden precedent in Reference 7.15 cited by Fermi 2 as the basis in Reference 7.14.

The proposed change to TS Sections 3.3.7.2 and 3.3.7.3 (pages 3.3-70a and 3.3-70d) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency with the information previously reviewed and approved by the NRC in Amendment No. 212, and it is consistent with the industry precedent.

4.6 Removal of Excess Detail from TS Section 3.4.5

The Fermi 2 TS contain the requirements for RCS pressure isolation valve (PIV) leakage in Section 3.4.5. As described in the associated TS Bases 3.4.5, the main purpose is to prevent overpressure failure of the low pressure portions of connecting systems. The limits on allowable PIV leakage rates are provided in SR 3.4.5.1. SR 3.4.5.1 is divided into three items for: (a) PIVs other than LPCI loop A and B injection isolation valves, (b) LPCI loop A and B outboard injection isolation valves, and (c) LPCI loop A and B inboard injection isolation testable check valves. These three items each have their own limit on allowable leakage rates for the specified PIVs.

For Item c, the phrase "testable check" is used as part of the descriptive name of the valves. However, this phrase is not required in order to uniquely identify the valves. Item a refers to all PIVs other than the LPCI loop A and B injection isolation valves. Item b then refers to the LPCI loop A and B outboard injection isolation valves. Based on this progression, Item c would then be the only remaining valves, which are the LPCI loop A and B inboard injection isolation valves. Including "testable check" in the descriptive name is unnecessary detail.

The corresponding TS Bases 3.4.5 also uses the phrase "testable check" in the descriptive name for the valves associated with Item c. However, the TS Bases 3.4.5 also provides the Fermi 2 plant identification system (PIS) numbers (i.e., E1100F050A and E1100F050B) which uniquely and precisely identify the valves. The phrase "testable check" and the PIS numbers will be retained in the TS Bases 3.4.5. Therefore, the TS and TS Bases will still adequately specify the appropriate valves without the use of the phrase "testable check" in the descriptive name in the TS.

Prior to the Fermi 2 adoption of ITS in Amendment No. 134 (Reference 7.1), the Fermi 2 Custom Technical Specifications (CTS) included the PIS numbers and descriptive name in the TS. When ITS was adopted, the PIS numbers were removed, but the old descriptive names were retained. In the NRC Safety Evaluation for Amendment No. 134 to adopt ITS, the NRC approved that certain TS information could be relocated to licensee controlled documents, such as the TS Bases and UFSAR, where it could be changed without prior NRC approval, pursuant to 10 CFR 50.59. The TS description of these valves should have also been simplified during the conversion to ITS, with the detailed description being relocated to the TS Bases and UFSAR where it was under licensee control but subject to 10 CFR 50.59.

As described above, the purpose of SR 3.4.5.1 is to verify PIV leakage rates are within limits, with a frequency in accordance with the Inservice Testing (IST) Program. Due to the installed actuator which makes them testable, the LPCI loop A and B inboard injection isolation check valves are also required to be tested for position indication in accordance with the IST Program. The position indication testing is not required by the Fermi 2 TS and is an IST Program requirement that is unrelated to SR 3.4.5.1. Elimination of the phrase "testable check" simplifies the SR and also clarifies that the SR only pertains to the leakage rate requirements. Whether the valve is identified in the TS as a testable check or not has no impact on its requirement or ability

to perform its safety function to prevent overpressure failure of the low pressure portions of connecting systems.

The STS also include PIV leakage rate limits in SR 3.4.5.1, but no detailed valve descriptive names are provided. In addition, TSTF-GG-05-01 (Reference 7.6) includes a discussion on SR Content in Section 4.1.7 which states that SRs "should be as brief as possible but should also fully identify those requirements appropriate to ensure compliance with the LCO." By removing "testable check" from Item c, SR 3.4.5.1 is made more brief and also more clear with regard to the requirements appropriate to meet the LCO. In addition, the Fermi 2 design includes other testable check valves that are leakage rate tested per the TS (e.g., feedwater isolation valves tested under SR 3.6.1.1.1.), but the phrase "testable check" is not used in any other location in the Fermi 2 TS. Elimination of the phrase "testable check" is consistent with the STS, TSTF-GG-05-01, and the Fermi 2 TS.

The proposed change to TS Section 3.4.5 (page 3.4-12) is therefore justified as it eliminates unnecessary information that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with the NRC-approved STS.

4.7 Correction of Logical Connector Formatting Errors Throughout the TS

The Fermi 2 TS contain a "Logical Connectors" section (Section 1.2). The section identifies that AND and OR are the only logical connectors that appear in the TS and their use and physical arrangement has specific meanings. The format used for these logical connectors is all capital letters and underlined. Other uses of these words without this specific formatting would not constitute a logical connector according to Section 1.2. In addition, Section 1.2 provides discussion of how to align logical connectors and how to use indentation when successive levels of logic are utilized. Specific examples are provided to show the intended format of the logical connectors, including when multiple levels of logical connects are used. Review of the Fermi 2 TS identified cases where logical connectors were not properly formatted. Analysis of each of formatting inconsistencies is as follows:

- TS LCO 3.4.6 Condition D has several Required Actions which are connected with logical connectors. The "OR" logical connector between Required Actions D.3.1 and D.3.2 represents a second level of logic relative to that used for Required Actions D.1 and D.2. According to Section 1.2, especially Example 1.2-2, the "OR" logical connector should be indented to the right one level. The proposed change corrects the indentation in TS LCO 3.4.6 Condition D (page 3.4-14) to ensure consistency with Section 1.2.
- TS LCO 3.6.1.6 Condition C has one instance where the word "AND" is in all capital letters, but not underlined. The physical arrangement and capitalization of "and" implies the use of a logical connector and therefore it should be underlined. The proposed change corrects the formatting in TS LCO 3.6.1.6 Condition C (page 3.6-20) to ensure consistency with the definition of logical connectors in Section 1.2.
- TS LCO 3.8.1 Condition D has two instances where the word "AND" is in all capital letters, but not underlined. The physical arrangement and capitalization of "and" in both instances implies the use of a logical connector and therefore they should be underlined.

The proposed change corrects the formatting in TS LCO 3.8.1 Condition D (page 3.8-2a) to ensure consistency with the definition of logical connectors in Section 1.2.

Historical review of the Fermi 2 TS identified that logical connectors were correctly formatted when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The improper formatting of the logical connectors was inadvertently introduced when the TS were revised in Amendment No. 186 (Reference 7.16) for page 3.4-14, in Amendment No. 194 (Reference 7.17) for page 3.6-20, and in Amendment No. 175 (Reference 7.9) for page 3.8-2a.

A review of the STS indicates that they also have guidance for the use of logical connectors in Section 1.2. The logical connectors are underlined and in all capital letters. Examples are also provided to show indentation for successive levels of logical connectors. The changes to the Fermi 2 TS for each of the pages discussed above will restore consistency with the equivalent page/section in the STS, which already contain the proper logical connector formatting. Additionally, TSTF-GG-05-01 (Reference 7.6), Section 2.1.5, describes the formatting of logical connectors as underlined, in all capital letters, and aligned based on levels. The logical connectors in the Fermi 2 TS are generally consistent with the guidance in Section 2.1.5 of TSTF-GG-05-01 with the exception of those errors identified above which are proposed to be corrected. In this respect, the proposed logical connector changes will ensure that the Fermi 2 TS are consistent with the STS and the guidance in TSTF-GG-05-01.

The proposed change to formatting of logical connectors throughout the TS (pages 3.4-14, 3.6-20, and 3.8-2a) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency with the guidance in Fermi 2 TS Section 1.2, and it is consistent with TSTF-GG-05-01 and the NRC-approved STS.

4.8 Correction of Typographical Errors in TS Section 3.4 Title

TS Section 3.4 is titled "REACTOR COOLANT SYSTEM (RCS)." For each of the next lower level subsections in Section 3.4 (i.e., sections numbered 3.4.X), the Section 3.4 title is repeated on the first page, followed by the Section 3.4.X title. In Sections 3.4.7, 3.4.8, 3.4.10, and 3.4.11, the Section 3.4 title is missing the closing (i.e., right) parenthesis in "(RCS)." The proposed change corrects this typographical error so that pages 3.4-16, 3.4-18, 3.4-23, and 3.4-29 have the correct title for Section 3.4, as identified elsewhere in the TS.

Historical review of the Fermi 2 TS identified that the typographical errors did not exist when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The typographical errors were inadvertently introduced when pages 3.4-16 and 3.4-18 were revised in Amendment No. 163 (Reference 7.18) and when pages 3.4-23 and 3.4-29 were revised in Amendments No. 195 (Reference 7.19) and No. 201 (Reference 7.4), respectively.

A review of the STS indicates that the equivalent pages in the STS have the Section 3.4 title as "REACTOR COOLANT SYSTEM (RCS)" with proper usage of parenthesis. In this respect, the proposed correction to the typographical error will ensure that the Fermi 2 TS are consistent with the STS.

The proposed change to TS Section 3.4 (pages 3.4-16, 3.4-18, 3.4-23, and 3.4-29) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with the NRC-approved STS.

4.9 Correction of Formatting Error of Dashed Lines for Notes in TS Sections 3.4.10 and 3.7.7

The Fermi 2 TS contain "Notes" which are utilized in various sections and locations. Notes are separated from surrounding text using dashed lines both above and below the text of the Note, with the word "NOTE" or "NOTES" in the center of the dashed lines above the text. Review of the Fermi 2 TS identified two instances where Notes were not properly formatted. Analysis of each of the formatting inconsistencies is as follows:

- SR 3.4.10.5, on page 3.4-26, has a Note prior to the SR text. The dashed lines below the Note are not properly aligned with the text of the Note. The dashed lines should be indented further to the right so that their width matches the text above. The proposed change corrects the alignment of the Note in SR 3.4.10.5 to ensure consistency with the rest of the TS.
- TS LCO 3.7.7 Required Action A.1, on page 3.7-18, has a Note prior to the action text. The dashed lines above the Note are not properly aligned with the text of the Note. The dashed lines should be indented further to the right so that their width matches the text above, with "NOTE" centered above the Note text. The proposed change corrects the alignment of the Note in TS LCO 3.7.7 Required Action A.1 to ensure consistency with the rest of the TS.

Historical review of the Fermi 2 TS identified that Notes were correctly formatted when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The improper formatting of the Notes was inadvertently introduced when the TS were revised in Amendment No. 195 (Reference 7.19) for page 3.4-26 and Amendment No. 201 (Reference 7.4) for page 3.7-18.

A review of the STS indicates that the equivalent pages in the STS have the proper alignment of the dashed lines for the equivalent Notes. Additionally, TSTF-GG-05-01 (Reference 7.6), Section 2.1.4, describes the formatting of Notes as having a dashed line above and below the Note text, extending the full width of the Note text, with the word "NOTE" or "NOTES" in the center of the dashed lines above the Note text. The Note formatting in the Fermi 2 TS are generally consistent with the guidance in Section 2.1.4 of TSTF-GG-05-01 with the exception of those formatting errors identified above which are proposed to be corrected. In this respect, the proposed Note formatting changes will ensure that the Fermi 2 TS are consistent with the STS and the guidance in TSTF-GG-05-01.

The proposed change to formatting of Notes in TS Sections 3.4.10 and 3.7.7 (pages 3.4-26 and 3.7-18) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with TSTF-GG-05-01 and the NRC-approved STS.

4.10 Correction of Typographical Error in TS Section 3.5.2

For each TS LCO in the Fermi 2 TS, an Applicability is provided. Even though the Applicability may be a short phrase, periods are used at the end. Review of the Fermi 2 TS identified that no period was used at the end of the Applicability for TS LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control." The proposed change to add a period to the end of the Applicability on page 3.5-8 ensures consistency with the rest of the TS.

Historical review of the Fermi 2 TS identified that the Applicability of TS LCO 3.5.2 did have a period when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The period was inadvertently removed when the text of the Applicability was revised in Amendment No. 211 (Reference 7.2). Amendment No. 211 involved a complete revision of TS LCO 3.5.2 based on Technical Specifications Task Force (TSTF) Traveler TSTF-542.

A review of the STS indicates that the equivalent page in the STS has a period at the end of the Applicability. However, the STS do not yet reflect the incorporation of TSTF-542. Review of TSTF-542 identifies that no period was used at the end of the Applicability for the new TS LCO 3.5.2. The current Fermi 2 TS LCO 3.5.2 Applicability, even without the period, is therefore consistent with the TSTF-542 template upon which it is based. Due to this potential formatting inconsistency between TSTF-542 and the STS, TSTF-GG-05-01 (Reference 7.6) was reviewed for further guidance in formatting. Section 2.5.4 discusses the Applicability format. For the cases where the Applicability involves more than one statement, Section 2.5.4 clearly identifies that a period should be used at the end. For the cases where the Applicability is only a single statement or phrase, as is the case in this instance, Section 2.5.4 does not indicate whether a period should be used or not. As a result of these reviews, either Applicability ending (i.e., period or not) appears to be acceptable. Therefore, to ensure consistency with the rest of the Fermi 2 TS, it is proposed to add a period.

The proposed change to a period to the Applicability in TS LCO 3.5.2 (page 3.5-8) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is not inconsistent with TSTF-GG-05-01 and the NRC-approved STS.

4.11 Correction of Formatting Inconsistency in TS Section 3.8.1

A review of the pages associated with Fermi 2 TS 3.8.1 identified that there is inconsistent formatting associated with the use of hyphens in the title. The majority of TS 3.8.1 pages, as well as cross references to TS 3.8.1 from elsewhere in the TS, use a single hyphen in the title "AC Sources - Operating." A few pages (3.8-1, 3.8-2, 3.8-2a, and 3.8-2b) use double hyphens in the title in between "AC Sources" and "Operating." Double hyphens are not used in this way elsewhere in the Fermi 2 TS. Eliminating the double hyphens and replacing with a single hyphen eliminates a format inconsistency.

Historical review of the Fermi 2 TS identified that single hyphens were correctly used when Fermi 2 TS were converted to ITS in Amendment No. 134 (Reference 7.1). The double hyphens

were inadvertently introduced when the pages were revised in Amendments No. 170 and 175 (References 7.20 and 7.9).

A review of the formatting of the STS identified that the STS only uses a single hyphen in the title "AC Sources – Operating" for TS 3.8.1 and its associated cross references. In this respect, the proposed formatting corrections will ensure that the Fermi 2 TS are consistent with the formatting in the STS.

The proposed change to TS Section 3.8.1 (pages 3.8-1, 3.8-2, 3.8-2a, and 3.8-2b) is therefore justified as it is a minor editorial change that does not affect the technical content of the TS, it ensures consistency throughout the Fermi 2 TS, and it is consistent with the NRC-approved STS.

4.12 Correction of Position Title in TS Section 5.2.1

The Fermi 2 TS contain a description of the Onsite and Offsite Organizations (Section 5.2.1). Item c of Section 5.2.1 states that "The Senior Vice President-Nuclear Generation shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety." Item a of Section 5.2.1 identifies that descriptions of key personnel positions shall be documented in the UFSAR. The Fermi 2 UFSAR (Reference 7.21) documents the organizational structure, responsibilities, authorities, and functions of the nuclear organization (Nuclear Generation) in Sections 13.1 and 17.2.1. Both of these UFSAR sections identify the Senior Vice President and Chief Nuclear Officer (CNO) as having responsibility for the overall administration of Nuclear Generation. The title used in TS Section 5.2.1, Item c" of "Senior Vice President-Nuclear Generation" is synonymous with the title "Senior Vice President and Chief Nuclear Officer" used in the UFSAR. Minor updates to the position title in the UFSAR have occurred over the years. The title Senior Vice President and Chief Nuclear Officer is the normal title that has been used at Fermi 2 for several years. Corresponding TS changes have not been required previously as the title documented in the UFSAR is synonymous with the TS title. The revision to the TS to utilize the title identical to the UFSAR title is pursued as an enhancement that eliminates any potential confusion or perceived inconsistency.

A review of the STS indicates that they also have a description of the Onsite and Offsite Organizations in Section 5.2.1. Rather than use a specific position title, Item c of the STS indicates "[a] specific corporate officer" has the identical responsibilities as identified in Item c of the Fermi 2 TS Section 5.2.1. Item a of the STS provides the necessary connection to the UFSAR by stating that "the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications shall be documented in the [FSAR/QA Plan]." The strategy used in the STS eliminates the need to use specific position titles, which are subject to change, by relying on the definitions of the UFSAR. Since Item a of the Fermi 2 TS Section 5.2.1 does not contain the statement regarding plant-specific titles being documented in the UFSAR, it is necessary for Item c of the Fermi 2 TS to use a plant-specific position title. Although the Fermi 2 TS are structured slightly different than the STS, the Fermi 2 TS are consistent with the STS in that the position title comes from the UFSAR.

Correction of the title in the Fermi 2 TS to match the UFSAR title is therefore consistent with the intent of the STS.

The proposed change to Section 5.2.1 (page 5.0-2) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency with the Fermi 2 UFSAR, and it is consistent with the intent of the NRC-approved STS in using the Fermi 2 UFSAR as the source for position-specific title in the TS.

4.13 Removal of Obsolete Information from TS Section 5.5.2

The Fermi 2 TS Section 5.5, "Programs and Manuals," contains a program for Primary Coolant Sources Outside Containment (TS Section 5.5.2). The program provides controls to minimize leakage from those portions of systems outside containment could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. A list of relevant systems which could include highly radioactive fluids is provided in TS Section 5.5.2 and includes hydrogen recombiners. The NRC amended 10 CFR 50.44, "Standards for combustible gas control system in lightwater-cooled power reactors" on October 16, 2003 to eliminate the requirements for hydrogen recombiners. Prior to that time, the Fermi 2 TS contained several requirements related to the hydrogen recombiners. Based on the amended 10 CFR 50.44, DTE requested a license amendment to remove all references to the hydrogen recombiners from TS, with the exception of Section 5.5.2. The license amendment request was approved by the NRC as Amendment No. 159 on March 15, 2004 (Reference 7.22).

The Fermi 2 license amendment request was based on a Technical Specification Task Force Improved Standard Technical Specifications Change Traveler, TSTF-447 (Reference 7.23). The original version of TSTF-447 had proposed to delete all references to hydrogen combiners, including the reference in the list of relevant systems in Section 5.5.2. The NRC-approved TSTF-447 (Revision 1) retained the hydrogen recombiners in the list in Section 5.5.2 based on the following comment from the NRC:

> "TSTF-447 proposes to revise TS 5.5.2 from all NUREGs to remove the reference to Hydrogen Recombiner as a system outside of containment that could contain highly radioactive fluids during a serious transient or accident. The purpose of the program is to minimize leakage from these systems to levels as low as practicable. The hydrogen recombiner appears in a bracketed list of systems for this program. The staff believes that the program as described in the STS should remained unchanged since the hydrogen recombiner is in brackets and since portions of the hydrogen recombiner system could meet the threshold as a portion of systems outside of containment that could contain highly radioactive fluids."

The meaning of the phrase "bracketed list of systems" is that the list of systems is plant-specific information that may be unique for each plant. The current STS continue to maintain hydrogen recombiners in the bracketed list of systems. For plants that do not have hydrogen recombiners, or where hydrogen recombiners are otherwise prevented from containing highly radioactive fluids during a serious transient or accident, it would not be necessary to include hydrogen

recombiners in the TS Section 5.5.2 list of plant-specific systems. This intent is consistent with the statement in Section 2.0 of TSTF-447, Revision 1, which states that "[l]icensees that intend to remove the hydrogen recombiners from the plant should determine if Specification 5.5.2, "Primary Coolant Sources Outside Containment" needs to be revised to eliminate any reference to the hydrogen recombiners."

Subsequent to Fermi 2 Amendment No. 159, Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment" (Reference 7.24), was revised in March 2007 to reflect the amended 10 CFR 50.44 that hydrogen recombiners are not required. Since that time, Fermi 2 has taken action to retire the hydrogen recombiners in place by de-energizing the electrical circuits and isolating the fluid process piping from primary containment with redundant locked-closed isolation valves. Fermi 2 operating procedures have been updated to reflect that the hydrogen recombiner system is retired and isolated. Changes to the Fermi 2 UFSAR to reflect the updated design and licensing basis of the hydrogen recombiners have been incorporated and are included in the most recent revision of the UFSAR submitted in accordance with 10 CFR 50.71(e) (Reference 7.21).

As a result of the current design and licensing basis, the hydrogen recombiners are no longer a system outside containment that could contain highly radioactive fluids during a serious transient or accident. The only means by which highly radioactive fluids could enter the system involve failures of multiple valves and/or multiple operator errors. The redundant locked-closed isolation valves are regularly leak tested according to Fermi 2 TS 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)." Inclusion of the hydrogen recombiners in the plant-specific list of systems in TS Section 5.5.2 is no longer required. The reference to hydrogen recombiners is now obsolete and is proposed to be deleted.

The proposed change to Section 5.5.2 (page 5.0-8) is therefore justified as it removes obsolete information, is consistent with the NRC-approved STS in that hydrogen recombiners are bracketed as plant-specific information and not required to be included, and is consistent with TSTF-447, Revision 1.

4.14 Removal of Obsolete Information from TS Section 5.6.5

The Fermi 2 TS Section 5.6, "Reporting Requirements" contains requirements related to the Core Operating Limits Report (COLR) (TS Section 5.6.5). Item b of TS Section 5.6.5 identifies the analytical methods used to determine the core operating limits. Review of the Fermi 2 TS identifies two methods currently listed: NEDE-24011-P-A and NEDE-23785-1-PA. The second of the two methods, NEDE-23785-1-PA, is for the GESTR-LOCA and SAFER models for evaluation of loss of coolant accidents (LOCAs), also referred to as SAFER/GESTR. In Cycle 21, which began in August 2020, Fermi 2 began operating with GNF3 fuel assemblies. As part of the introduction of GNF3, LOCA reanalysis was performed using the TRACG-LOCA method rather than SAFER/GESTR (Reference 7.25). The TRACG-LOCA method is NRC-approved and is documented in NEDE-24011-P-A (i.e., the first method in Item b of TS Section 5.6.5). As a result, the reference to NEDE-23785-1-PA in TS Section 5.6.5 is now obsolete. In addition, DTE has verified that all of the analytical methods used to determine the core operating limits for

Fermi 2 are now documented in NEDE-24011-P-A. Therefore, this is the only method required to be included in Item b of TS Section 5.6.5.

The STS identifies COLR requirements in Section 5.6.3. Item b of STS Section 5.6.3 does not provide a list of methods, but rather includes a note in brackets to identify the relevant methods for the plant. Therefore, it is expected that the list will only include those methods that are utilized by the plant. Continued inclusion of redundant or obsolete references would be inconsistent with the intent of the note in the STS.

The proposed change to Section 5.6.5 (page 5.0-21) is therefore justified as it removes obsolete information and is consistent with the NRC-approved STS in that only the currently used methods are retained.

4.15 Correction of Position Title in TS Sections 5.1.2, 5.2.2, and 5.7.2

The Fermi 2 TS designate the Nuclear Shift Supervisor as the person responsible for control room command function (Section 5.1.2). This position title, and/or its corresponding abbreviation of NSS, are then used elsewhere in the TS (Section 5.2.2 part g and Section 5.7.2). The Fermi 2 UFSAR (Reference 7.21) documents that the title of Nuclear Shift Supervisor (NSS) has the same functional responsibilities as the title Shift Manager (SM) in a Note in Section 13.1.2.6. The title used in TS Sections 5.1.2, 5.2.2, and 5.7.2 of "Nuclear Shift Supervisor (NSS)" is synonymous with the title "Shift Manager (SM)" used in the UFSAR. Outside of the Note in UFSAR Section 13.1.2.6, the rest of UFSAR has been updated over the years to almost exclusively use the title Shift Manager. The title Shift Manager is the normal title that has been used at Fermi 2 for several years. Corresponding TS changes have not been required previously as the title documented in the UFSAR is synonymous with the TS title. The revision to the TS to utilize the title identical to the UFSAR title is pursued as an enhancement that eliminates any potential confusion or perceived inconsistency.

A review of the STS indicates that the equivalent position title in Section 5.1.2 is the "Shift Supervisor (SS)." However, the position title is placed in brackets, which is an indication that the text is a placeholder for plant-specific information. At Fermi 2, "Shift Manager (SM)" is the most appropriate plant-specific information to use to replace the brackets based on the Fermi 2 UFSAR and common site usage. In TS Section 5.2.2, part e of the STS is equivalent to part g of the Fermi 2 TS. The wording of STS Section 5.2.2 part e is such that no specific position title is needed to provide the necessary information. Since the Fermi 2 TS wording of Section 5.2.2 part g uses the same position title as Section 5.1.2, replacement of the position title in Section 5.2.2 part g is consistent with the intent of the STS even if the exact wording is different. STS Section 5.7.2 is consistent with STS Section 5.1.2 in the use of the position title of shift supervisor, but it is not placed in brackets in STS Section 5.7.2. This appears to be an inconsistency within the STS, since use of the same position title in both sections is clearly the intent. Therefore, replacing the position title in Fermi 2 TS Section 5.7.2 with the same title used in Section 5.1.2 is consistent with the intent of the STS.

The proposed change to Section 5.1.2, 5.2.2 (part g), and 5.7.2 (pages 5.0-1, 5.0-3, and 5.0-24) is therefore justified as it is a minor editorial correction that does not affect the technical content of the TS, it ensures consistency with the Fermi 2 UFSAR, and it is consistent with the intent of the NRC-approved STS in using a plant-specific position title in the TS.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration Analysis

DTE Electric Company (DTE) requests an amendment to the Technical Specifications (TS) for Fermi Unit 2 (i.e., Appendix A, Technical Specifications of Renewed Facility Operating License NPF-43). The proposed TS changes remove obsolete information, make minor corrections, and make miscellaneous editorial changes.

DTE has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

   Response: No.

   The proposed changes are administrative or editorial in nature and do not impact the physical configuration or function of plant structures, systems, or components (SSCs) or the manner in which SSCs are operated. As a result, the proposed changes do not impact the initiators of any accident previous evaluated such that the probability of an accident is not affected by the proposed changes. Since there are no changes to SSCs, there is also no impact on any mitigating functions assumed in the accident analysis such that the consequences of an accident are not affected by the proposed changes.

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

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

   Response: No.

   The proposed changes are administrative or editorial in nature and do not alter plant configuration. The design function or operation of components are not affected and there is no physical alteration of the plant (i.e., no new or different type of equipment will be installed). No credible new failure mechanisms, malfunctions, or accident initiators not considered in the design and licensing bases are introduced. The changes do not alter

assumptions made in the safety analysis. The proposed changes are consistent with the safety analysis assumptions.

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 amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed changes are administrative or editorial in nature. The TS will continue to assure sufficient safety margins are maintained, and that design, operation, surveillance methods, and acceptance criteria specified in applicable codes and standards (or alternatives approved for use by the NRC) will continue to be met as described in the plant's licensing basis. The proposed changes do not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analysis. As such, there are no changes being made to safety analysis assumptions, safety limits, or limiting safety system settings that would adversely affect plant safety as a result of the proposed changes. Margins of safety are unaffected.

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

Based on the above, DTE concludes that the proposed change presents 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 Conclusion

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 and safety of the public.

6.0 ENVIRONMENTAL EVALUATION

The proposed changes would not change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, nor would it change an inspection or surveillance requirement. In addition, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed changes.

7.0 REFERENCES

7.1 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Conversion of Current Technical Specifications to Improved Standard Technical Specifications (TAC No. MA1465)," dated September 30, 1999 (ADAMS Accession number not available).
7.2 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Revision to Technical Specifications to Adopt Technical Specifications Task Force (TSTF) Traveler TSTF-542, Revision 2, 'Reactor Pressure Vessel Water Inventory Control' (CAC No. MG0208; EPID L-2017-LLA-0282)," dated September 17, 2018 (ML18247A452).
7.3 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Consolidated Line Item Improvement for Snubbers (TAC No. MC8820)," dated February 15, 2006 (ML053460125).
7.4 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Revise Technical Specifications by Relocating Surveillance Frequencies to Licensee Control in Accordance with Technical Specification Task Force Traveler 425, Revision 3 (TAC No. MF4859)," dated July 14, 2015 (ML15155B416).
7.5 Standard Technical Specifications, General Electric BWR/4 Plants, NUREG-1433, Revision 4.0, Volume 1, Specifications, dated April 2012 (ML12104A192).
7.6 TSTF-GG-05-01, Revision 1, "Writer's Guide for Plant-Specific Improved Technical Specifications," dated August 2010 (ML12046A089).
7.7 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Consolidated Line Item Improvement Process (CLIIP) Application for Technical Specification Change (TSTF-427) to Add Limiting Condition for Operation (LCO) 3.09 Regarding the Unavailability of Barriers (TAC No. MD4434)," dated August 1, 2007 (ML071490025).
7.8 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Technical Specification (TS) Change (TSTF-477) to Add an Action Statement for Two Inoperable Control Center Air Conditioning Subsystems to TS 3.7.4. (TAC No. MD5769)," dated December 18, 2007 (ML073240489).
7.9 NRC Letter to DTE, "Fermi, Unit 2 - Issuance of Amendment Re: Extend the Completion Time for Technical Specification 3.8.1 for an Inoperable Diesel Generator (TAC No. MD2618)," dated August 1, 2007 (ML071830114).
7.10 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Elimination of Requirements for Post Accident Sampling System (TAC No. MB5169)," dated September 5, 2002 (ML022520010 and ML022530234).
7.11 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Regarding Control Room Habitability Technical Specification Task Force (TSTF) Traveler TSTF-448 (TAC No. MF1467)," dated April 18, 2014 (ML14098A062).
7.12 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Missed Surveillance Consolidated Line Item Improvement (TAC No. MB3377)," dated January 25, 2002 (ML020240360).
7.13 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Elimination of Main Steam Line Radiation Monitor Trip and Isolation Function (CAC No. MG0228; EPID L-2017-LLA-0274)," dated September 20, 2018 (ML18250A163).

7.14 DTE Letter to NRC, "License Amendment Request to Revise Technical Specifications to Eliminate Main Steam Line Radiation Monitor Reactor Trip and Primary Containment Isolation System Group 1 Isolation Functions," NRC-17-0012, dated August 24, 2017 (ML17237A176).
7.15 Letter from Commonwealth Edison Company [Dresden Units 2 and 3] to U. S. Nuclear Regulatory Commission, "Request for Technical Specifications Change Main Steam Line Radiation Monitor Trip of the Mechanical Vacuum Pump," dated September 1, 2000 (ML003748957).
7.16 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Reactor Coolant System Leakage (TAC No. ME6015)," dated August 26, 2011 (ML112210931).
7.17 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment to Adopt TSTF-423, Revision 1, 'Technical Specifications End States, NEDC-32988-A' (TAC No. MF0498)," dated January 17, 2014 (ML13309A594).
7.18 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Technical Specification Change Regarding Increased Flexibility in Mode Changes (TAC No. MC3089)" dated November 29, 2004 (ML043350248 & ML043220338).
7.19 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Relocation of Pressure and Temperature Curves to a Pressure Temperature Limits Report (TAC No. MF0446)," dated February 4, 2014 (ML13346B067).
7.20 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Actions Concerning Alternating Current Sources (TAC No. MC7017)," dated January 31, 2006 (ML053260019).
7.21 Fermi 2 Updated Final Safety Analysis Report (UFSAR), Revision 22, dated April 2019 (ML19128A089). [Note that UFSAR Revision 23, dated February 2021, was submitted to the NRC by DTE Letter NRC-21-0002, dated February 2, 2021, but is not yet publicly available in ADAMS.]
7.22 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment Re: Elimination of Requirements for Hydrogen Recombiners and Hydrogen/Oxygen Monitors (TAC No. MC1140)," dated March 15, 2004 (ML040690258).
7.23 Technical Specification Task Force Improved Standard Technical Specifications Change Traveler, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors," TSTF-447, Revision 1, dated May 2003 (ML032020007).
7.24 Regulatory Guide (RG) 1.7, "Control of Combustible Gas Concentrations in Containment," Revision 3, dated March 2007 (ML070290080).
7.25 DTE Letter to NRC, "Submittal of Plant Specific Emergency Core Cooling System (ECCS) Evaluation Model Reanalysis," NRC-20-0010, dated April 8, 2020 (ML20100B567 & ML20100B573).
7.26 NRC Letter to DTE, "Fermi 2 - Issuance of Amendment No. 218 – Revision to Technical Specifications to Change Certain Surveillance Intervals to Accommodate a 24-Month Fuel Cycle (EPID L-2019-LLA-0249)," dated February 24, 2021 (ML20358A155).

Enclosure 2 to
NRC-21-0001

Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43

License Amendment Request to Revise Technical Specifications to Remove Obsolete Information, Make Minor Corrections, and Make Miscellaneous Editorial Changes

Proposed Technical Specification Changes (Mark-Up)

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TABLE OF CONTENTS

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1.1 Definitions ~~(continued)~~

add text:
DRAIN TIME
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2. Penetration flow paths capable of being isolated by valves that will close automatically without offsite power prior to the RPV water level being equal to the TAF when actuated by RPV water level isolation instrumentation; or

3. Penetration flow paths with isolation devices that can be closed prior to the RPV water level being equal to the TAF by a dedicated operator trained in the task, who in continuous communication with the control room, is stationed at the controls, and is capable of closing the penetration flow path isolation device without offsite power.

c) The penetration flow paths required to be evaluated per paragraph b) are assumed to open instantaneously and are not subsequently isolated, and no water is assumed to be subsequently added to the RPV water inventory;

d) No additional draining events occur; and

e) Realistic cross-sectional areas and drain rates are used.

A bounding DRAIN TIME may be used in lieu of a calculated value.

EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME

The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

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3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

a. MODE 2 within 7 hours;

b. MODE 3 within 13 hours; and

c. MODE 4 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, and 3.

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3.0 LCO APPLICABILITY

LCO 3.0.9 When one or more required barriers are unable to perform their related support function(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one division or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one division or subsystem of a multiple division or subsystem supported system provided at least one division or subsystem of the supported system is OPERABLE and the barriers supporting each of these divisions or subsystems provide their related support function(s) for different categories of initiating events.

For the purposes of this specification, the High Pressure Coolant Injection (HPCI) system, the Reactor Core Isolation Cooling (RCIC) system, and the Automatic Depressurization System (ADS) are considered independent subsystems of a single system.

If the required OPERABLE division or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the divisions or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

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3.0 ~~LCO~~ APPLICABILITY (continued)

SR 3.0.3	If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed. If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered. When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.
SR 3.0.4	Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4. This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3.2 POWER DISTRIBUTION LIMITS

3.2.1 AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)

LCO 3.2.1 All APLHGRs shall be less than or equal to the limits specified in the COLR.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any APLHGR not within limits.	A.1 Restore APLHGR(s) to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.1.1 Verify all APLHGRs are less than or equal to the limits specified in the COLR.	Once within 12 hours after ≥ 25% ~~RPT~~ AND In accordance with the Surveillance Frequency Control Program

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3.2 POWER DISTRIBUTION LIMITS

3.2.3 LINEAR HEAT GENERATION RATE (LHGR)

LCO 3.2.3 All LHGRs shall be less than or equal to the limits specified in the COLR.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any LHGR not within limits.	A.1 Restore LHGR(s) to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.3.1 Verify all LHGRs are less than or equal to the limits specified in the COLR.	Once within 12 hours after ≥ 25% ~~RPT~~ AND In accordance with the Surveillance Frequency Control Program

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.1.6	----------NOTE---------- Neutron detectors are excluded. ---------- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.1.7	Verify control rod sequences input to the RWM are in conformance with the prescribed withdrawal sequence.	Prior to declaring RWM OPERABLE following loading of sequence into RWM

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Table 3.3.5.1-1 (page 1 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1,2,3	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 441 psig
d. Manual Initiation	1,2,3	2(c)	C	SR 3.3.5.1.6	NA

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(a) Not Used.

(b) Also required to initiate the associated emergency diesel generator (EDG).

(c) Individual component controls.

Table 3.3.5.1-1 (page 2 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 441 psig
d. Reactor Vessel Water Level – Low Low, Level 2 (Loop Select Logic)	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 103.8 inches
e. Reactor Steam Dome Pressure – Low (Break Detection Logic)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 886 psig
f. Riser Differential Pressure – High (Break Detection)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 0.927 psid
g. Recirculation Pump Differential Pressure – High (Break Detection)	1,2,3	4 per pump	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.927 psid
h. Manual Initiation	1,2,3	2(c)	C	SR 3.3.5.1.6	NA

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(c) Individual component controls.

Table 3.3.5.1-1 (page 3 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Coolant Injection (HPCI) System					
a. Reactor Vessel Water Level – Low Low, Level 2	1, 2(d), 3(d)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 103.8 inches
b. Drywell Pressure – High	1, 2(e), 3(e)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Vessel Water Level – High, Level 8	1, 2(d), 3(d)	2	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 219 inches
d. Condensate Storage Tank Level – Low	1, 2(d), 3(d)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 0 inches
e. Suppression Pool Water Level – High	1, 2(d), 3(d)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 5.0 inches
f. Manual Initiation	1, 2(e), 3(e)	1(c)	C	SR 3.3.5.1.6	NA

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(c) Individual component controls.

(d) With reactor steam dome pressure > 150 psig.

(e) The injection functions of Drywell Pressure – High and Manual Initiation are not required to be OPERABLE with reactor steam dome pressure less than 550 psig.

Table 3.3.5.1-1 (page 4 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. Automatic Depressurization System (ADS) Trip System A					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1, 2(d), 3(d)	2	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1, 2(d), 3(d)	2	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Automatic Depressurization System Initiation Timer	1, 2(d), 3(d)	1	F	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 117 seconds
d. Reactor Vessel Water Level – Low, Level 3 (Confirmatory)	1, 2(d), 3(d)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 171.9 inches
e. Core Spray Pump Discharge Pressure – High	1, 2(d), 3(d)	1 per pump	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 125 psig
f. Low Pressure Coolant Injection Pump Discharge Pressure – High	1, 2(d), 3(d)	2 per pump	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 115 psig
g. Drywell Pressure – High Bypass	1, 2(d), 3(d)	2	F	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 450 seconds
h. Manual Inhibit	1, 2(d), 3(d)	1	F	SR 3.3.5.1.5	NA
i. Manual Initiation	1, 2(d), 3(d)	1 per valve	F	SR 3.3.5.1.6	NA

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(d) With reactor steam dome pressure > 150 psig.

Table 3.3.5.3-1 (page 1 of 1)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Steam Dome Pressure – Low (Injection Permissive)	4,5	4(a)	C	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 441 psig
b. Manual Initiation	4,5	1 per subsystem (a), (c)	D	SR 3.3.5.3.3	NA
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Steam Dome Pressure – Low (Injection Permissive)	4,5	4(a)	C	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 441 psig
b. Manual Initiation	4,5	1 per subsystem (a), (c)	D	SR 3.3.5.3.3	NA
3. RHR System Isolation					
a. Reactor Vessel Water Level – Low, Level 3	(b)	2 in one trip system	B	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 171.9 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level – Low Low, Level 2	(b)	2 in one trip system	B	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 103.8 inches

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel Water Inventory Control."

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Individual component controls.

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3.3 INSTRUMENTATION

3.3.7.2 Mechanical Vacuum Pump (MVP) Trip Instrumentation

LCO 3.3.7.2 Four channels of Main Steam Line Radiation – High Function for the MVP trip shall be OPERABLE.

APPLICABILITY: MODES 1 and 2 with any MVP in service, any main steam line not isolated, and THERMAL POWER ≤ 10% RTP.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Restore channel to OPERABLE status. OR A.2 --------NOTE-------- Not applicable if inoperable channel is the result of a non-functional MVP breaker. ---------- Place channel in trip.	12 hours add text: 12 hours
B. MVP trip capability not maintained.	B.1 Restore trip capability.	1 hour

(continued)

3.3 INSTRUMENTATION

3.3.7.3 Gland Seal Exhauster (GSE) Trip Instrumentation

LCO 3.3.7.3 Four channels of Main Steam Line Radiation – High Function for the main turbine GSE trip shall be OPERABLE.

APPLICABILITY: MODES 1 and 2 with any GSE in service, any main steam line not isolated, and THERMAL POWER ≤ 10% RTP.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Restore channel to OPERABLE status. OR A.2 --------NOTE-------- Not applicable if inoperable channel is the result of a non-functional GSE breaker. ---------- Place channel in trip.	12 hours *add text*: 12 hours
B. GSE trip capability not maintained.	B.1 Restore trip capability.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	----------NOTE---------- Not required to be performed in MODE 3. ---------- Verify equivalent leakage of each RCS PIV, at an RCS pressure ≥ 1035 and ≤ 1055 psig: a. For PIVs other than LPCI loop A and B injection isolation valves is ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm; b. For LPCI loop A and B outboard injection isolation valves is ≤ 0.4 gpm through-seat, and ≤ 5 ml/min external leakage; and c. For LPCI loop A and B inboard injection isolation ~~testable check~~ valves is ≤ 10 gpm.	In accordance with the INSERVICE TESTING PROGRAM

delete text

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
-------- NOTE ---------- Only applicable when the primary containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. ----------	D.1 Analyze grab samples of the primary containment atmosphere.	Once per 12 hours
	AND	
	D.2 Monitor RCS LEAKAGE by administrative means.	Once per 12 hours
D. Drywell floor drain sump flow monitoring system inoperable.	AND	
AND	D.3.1 Restore drywell floor drain sump flow monitoring system to OPERABLE status.	7 days
Drywell floor drain sump level monitoring system inoperable.	OR	
	D.3.2 Restore drywell floor drain sump level monitoring system to OPERABLE status	7 days
E. Primary containment atmosphere gaseous radioactivity monitoring system inoperable.	E.1 Restore primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status.	30 days
AND	OR	
Drywell floor drain sump level monitoring system inoperable.	E.2 Restore drywell floor drain sump level monitoring system to OPERABLE status.	30 days

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3.4 REACTOR COOLANT SYSTEM (RCS

3.4.7 RCS Specific Activity

LCO 3.4.7 The specific activity of the reactor coolant shall be limited to DOSE EQUIVALENT I-131 specific activity ≤ 0.2 μCi/gm.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor coolant specific activity > 0.2 μCi/gm and ≤ 4.0 μCi/gm DOSE EQUIVALENT I-131.	----------NOTE---------- LCO 3.0.4.c is applicable. ----------	
	A.1 Determine DOSE EQUIVALENT I-131.	Once per 4 hours
	AND	
	A.2 Restore DOSE EQUIVALENT I-131 to within limits.	48 hours

(continued)

add closing parenthesis

3.4 REACTOR COOLANT SYSTEM (RCS

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System– Hot Shutdown

LCO 3.4.8 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

NOTES

1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.

2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

NOTE

Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status. AND	Immediately (continued)

add closing parenthesis

3.4 REACTOR COOLANT SYSTEM (RCS

3.4.10 RCS Pressure and Temperature (P/T) Limits

LCO 3.4.10 RCS pressure, RCS temperature, RCS heatup and cooldown rates, and the recirculation pump starting temperature requirements shall be maintained within the limits specified in the PTLR.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---------NOTE--------- Required Action A.2 shall be completed if this Condition is entered. ---------- Requirements of the LCO not met in MODES 1, 2, and 3.	A.1 Restore parameter(s) to within limits. AND A.2 Determine RCS is acceptable for continued operation.	30 minutes 72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.4.10.5 ----------NOTE---------- Only required to be met during a THERMAL POWER increase or recirculation flow increase in MODES 1 and 2 with one idle recirculation loop when THERMAL POWER is ≤ 30% RTP or when operating loop flow is ≤ 50% rated loop flow. ---------- Verify the difference between the bottom head coolant temperature and the RPV steam space coolant temperature is within the limits specified in the PTLR.	Once within 15 minutes prior to a THERMAL POWER increase or recirculation flow increase
SR 3.4.10.6 ----------NOTE---------- Only required to be met during a THERMAL POWER increase or recirculation flow increase in MODES 1 and 2 with one non-isolated idle recirculation loop when THERMAL POWER is ≤ 30% RTP or when operating loop flow is ≤ 50% rated loop flow. ---------- Verify the difference between the reactor coolant temperature in the idle recirculation loop and the RPV coolant temperature is within the limits specified in the PTLR.	Once within 15 minutes prior to a THERMAL POWER increase or recirculation flow increase

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3.4 REACTOR COOLANT SYSTEM (RCS

3.4.11 Reactor Steam Dome Pressure

LCO 3.4.11 The reactor steam dome pressure shall be ≤ 1045 psig.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor steam dome pressure not within limit.	A.1 Restore reactor steam dome pressure to within limit.	15 minutes
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.11.1 Verify reactor steam dome pressure is ≤ 1045 psig.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS), RPV WATER INVENTORY CONTROL, AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.2 Reactor Pressure Vessel (RPV) Water Inventory Control

LCO 3.5.2 DRAIN TIME of RPV water inventory to the top of active fuel (TAF) shall be ≥ 36 hours.

AND

One low pressure ECCS injection/spray subsystem shall be OPERABLE.

----------NOTE----------
A Low Pressure Coolant Injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal if capable of being manually realigned and not otherwise inoperable.

APPLICABILITY: MODES 4 and 5 add a period

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS injection/spray subsystem inoperable.	A.1 Restore required ECCS injection/spray subsystem to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to establish a method of water injection capable of operating without offsite electrical power.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. DRAIN TIME < 36 hours and ≥ 8 hours.	C.1 Verify secondary containment boundary is capable of being established in less than the DRAIN TIME. AND C.2 Verify each secondary containment penetration flow path is capable of being isolated in less than the DRAIN TIME. AND C.3 Verify one standby gas treatment subsystem is capable of being placed in operation in less than the DRAIN TIME.	4 hours 4 hours 4 hours

add text:
(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. DRAIN TIME < 8 hours.	D.1	--------NOTE-------- Required ECCS injection/spray subsystem or additional method of water injection shall be capable of operating without offsite electrical power. ---------- Initiate action to establish an additional method of water injection with water sources capable of maintaining RPV water level > TAF for ≥ 36 hours.	Immediately
	AND		
	D.2	Initiate action to establish secondary containment boundary.	Immediately
	AND		
	D.3	Initiate action to isolate secondary containment penetration flow path or verify it can be manually isolated from the control room.	Immediately
	AND		
	D.4	Initiate action to verify one standby gas treatment subsystem is capable of being placed in operation.	Immediately

add text: (continued)

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Low-Low Set (LLS) Valves

LCO 3.6.1.6 The LLS function of two safety/relief valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LLS valve inoperable.	A.1	Restore LLS valve to OPERABLE status.	14 days
B. Required Action and associated Completion Time of Condition A not met.	B.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
C. Both LLS valves inoperable.	C.1	Be in MODE 3.	12 hours
	AND		
	C.2	Be in MODE 4.	36 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT subsystem for ≥ 15 continuous minutes with heaters operating.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.4	Verify each SGT filter cooler bypass damper can be opened and the fan started.	In accordance with the Surveillance Frequency Control Program

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3.7 PLANT SYSTEMS

3.7.4 Control Center Air Conditioning (AC) System

LCO 3.7.4 Two control center AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.
During movement of recently irradiated fuel assemblies in the secondary containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One control center AC subsystem inoperable.	A.1 Restore control center AC subsystem to OPERABLE status.	30 days
B. Two control center AC subsystems inoperable.	B.1 Verify control room area temperature <90°F. AND B.2 Restore one control center AC subsystem to OPERABLE status.	Once per 4 hours 72 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1 --------NOTE------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours

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(continued)

3.7 PLANT SYSTEMS

3.7.7 Spent Fuel Storage Pool Water Level

LCO 3.7.7 The spent fuel storage pool water level shall be ≥ 22 ft over the top of irradiated fuel assemblies seated in the spent fuel storage pool racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel storage pool water level not within limit.	A.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the spent fuel storage pool.	Immediately

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	Verify the spent fuel storage pool water level is ≥ 22 ft over the top of irradiated fuel assemblies seated in the spent fuel storage pool racks.	In accordance with the Surveillance Frequency Control Program

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3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources--Operating

LCO 3.8.1 The following AC electrical power sources shall be OPERABLE:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and

b. Two emergency diesel generators (EDGs) per division.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

NOTE

LCO 3.0.4.b is not applicable to EDGs.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One EDG inoperable.	A.1	Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND		
	A.2	Declare required feature(s), supported by the inoperable EDG, inoperable when the redundant required feature(s) are inoperable.	4 hours from discovery of an inoperable EDG concurrent with inoperability of redundant required feature(s)
	AND		
	A.3	Verify the status of CTG 11-1.	Once per 8 hours
	AND		

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ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.4.1	Determine OPERABLE EDG(s) are not inoperable due to common cause failure.	24 hours
	OR		
	A.4.2	Perform SR 3.8.1.2 for OPERABLE EDG(s).	24 hours
	AND		
	A.5	Restore availability of CTG 11-1.	72 hours from discovery of Condition A concurrent with CTG 11-1 not available
	AND		
	A.6	Restore EDG to OPERABLE status.	14 days
B. Both EDGs in one division inoperable.	B.1	Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND		

add text: (continued)

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Declare required feature(s), supported by the inoperable EDGs, inoperable when the redundant required feature(s) are inoperable. AND	4 hours from discovery of the inoperable EDGs concurrent with inoperability of redundant required feature(s)
	B.3.1 Determine OPERABLE EDG(s) are not inoperable due to common cause failure. OR	24 hours
	B.3.2 Perform SR 3.8.1.2 for OPERABLE EDG(s). AND	24 hours
	B.4 Restore one EDG in the division to OPERABLE status.	72 hours
C. One or both EDGs in both divisions inoperable.	C.1 Restore both EDGs in one division to OPERABLE status.	2 hours
D. One offsite circuit inoperable.	D.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit. AND	1 hour AND Once per 8 hours thereafter (continued)

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable.	24 hours from discovery of no offsite power to one division concurrent with inoperability of redundant required feature(s)
	AND	
	D.3 Restore offsite circuit to OPERABLE status.	72 hours
E. Two offsite circuits inoperable.	E.1 Declare required feature(s) inoperable when the redundant required feature(s) are inoperable.	12 hours from discovery of Condition E concurrent with inoperability of redundant required feature(s)
	AND	
	E.2 Restore one offsite circuit to OPERABLE status.	24 hours

(continued)

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.6	Verify each required battery charger supplies ≥ 100 amps at ≥ 124.7 V for ≥ 4 hours.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.7	----------NOTE---------- The performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the actual or simulated emergency loads for the design duty cycle when subjected to a battery service test.	In accordance with the Surveillance Frequency Control Program

(continued)

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.8	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is ≥ 80% of the manufacturer's rating when subjected to a performance discharge test.	In accordance with the Surveillance Frequency Control Program AND 12 months when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached 85% of the expected life with capacity ≥ 100% of manufacturer's rating

5.0 ADMINISTRATIVE CONTROLS

NOTE

Plant specific titles are designated in the UFSAR for each organizational position listed or described in this Section.

5.1 Responsibility

5.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during any absence.

The Plant Manager or designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

replace text with: Shift Manager (SM)

5.1.2 The ~~Nuclear Shift Supervisor (NSS)~~ shall be responsible for the control room command function. During any absence of the ~~NSS~~ from the control room while the unit is in MODE 1, 2, or 3, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the ~~NSS~~ from the control room while the unit is in MODE 4 or 5, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

replace text with: SM

replace text with: SM

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the UFSAR;

b. The Plant Manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;

c. The Senior Vice President-~~Nuclear Generation~~ shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety; and

d. The individuals who train the operating staff, carry out radiation protection, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

replace text with:
and Chief Nuclear Officer

(continued)

5.2 Organization (continued)

5.2.2 Unit Staff

The unit staff organization shall include the following:

a. At least two non-licensed operators shall be assigned while operating in MODE 1, 2, or 3 and at least one non-licensed operator shall be assigned whenever the reactor contains fuel.

b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, or 3, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.

c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

d. A Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

e. Deleted.

f. The Superintendent-Operations, Assistant Superintendent-Operations, or the Operations Engineer shall hold an SRO license.

g. An STA shall be assigned whenever the reactor is operating in MODES 1, 2, and 3. The Shift Technical Advisor (STA) shall provide advisory technical support to the ~~Nuclear Shift Supervisor (NSS)~~ in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

replace text with:
Shift Manager (SM)

5.5 Programs and Manuals

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made.

   Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include Core Spray, High Pressure Coolant Injection, Residual Heat Removal, Reactor Core Isolation Cooling, reactor water sampling, Post Accident Sampling, reactor water cleanup, ~~Hydrogen Recombiners~~, Primary Containment Monitoring, control rod drive discharge headers, and Standby Gas Treatment. The program shall include the following:

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a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.3 Not Used

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(continued)

5.5 Programs and Manuals

5.5.12 Primary Containment Leakage Rate Testing Program (continued)

e. The provisions of SR 3.0.2 do not apply to the test frequencies in the Primary Containment Leakage Rate Testing Program.

f. The provisions of SR 3.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

5.5.13 High Density Spent Fuel Racks

A program shall be provided, for the high density storage racks containing Boraflex as the neutron absorber, which will ensure that any unanticipated degradation of the Boraflex will be detected and will not compromise the integrity of the racks.

5.5.14 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filtration (CREF) System, CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

(continued)

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5.5 Programs and Manuals

5.5.14 Control Room Envelope Habitability Program (continued)

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one subsystem of the CREF System, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and assessed every 24 months.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

5.5.15 Surveillance Frequency Control Program

This program provides controls for the Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.

b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with the NEI 04-10, “Risk-Informed Method for Control of Surveillance Frequencies,” Revision 1.

The one-time 24 Month Fuel Cycle related Surveillance Requirement Frequency changes approved by the NRC in License Amendment 218 are not subject to this provision. Subsequent changes are subject to the Surveillance Frequency Control Program.

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5.5 Programs and Manuals

5.5.15 Surveillance Frequency Control Program (continued)

c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

5.6 Reporting Requirements (continued)

5.6.4 Deleted

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following;

LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)";
LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)";
LCO 3.2.3, "LINEAR HEAT GENERATION RATE (LHGR)"; and
LCO 3.3.2.1, "Control Rod Block Instrumentation."

The $MCPR_{99.9\%}$ value used to calculate the LCO 3.2.2, "MCPR," limit shall be specified in the COLR.

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

1. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," (latest approved version)~~; and~~

~~2. NEDE-23785-1-PA, "The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant-Accident - SAFER/GESTR, Application Methodology," (the approved version at the time reload analyses are performed).~~

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

delete text

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(continued)

5.7 High Radiation Area (continued)

5.7.2 In addition to the requirements of Specification 5.7.1, areas accessible to individuals with radiation levels such that an individual could receive in 1 hour a dose equivalent > 1000 mrems but < 500 rads at one meter from sources of radioactivity shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the ~~Nuclear Shift Supervisor~~ on duty and/or the radiation protection supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

replace text with:
Shift Manager (SM)

5.7.3 For individual areas accessible to individuals with radiation levels such that a major portion of the individual's body could receive in 1 hour a dose > 1000 mrems with measurement made at 30 centimeters from the source of radioactivity, but < 500 rads at one meter from sources of radioactivity that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be roped off and conspicuously posted, and a flashing light shall be activated as a warning device.

Enclosure 3 to
NRC-21-0001

Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43

License Amendment Request to Revise Technical Specifications to Remove Obsolete Information, Make Minor Corrections, and Make Miscellaneous Editorial Changes

Revised Technical Specification Pages

(continued)

1.1 Definitions

DRAIN TIME (continued)

2. Penetration flow paths capable of being isolated by valves that will close automatically without offsite power prior to the RPV water level being equal to the TAF when actuated by RPV water level isolation instrumentation; or

3. Penetration flow paths with isolation devices that can be closed prior to the RPV water level being equal to the TAF by a dedicated operator trained in the task, who in continuous communication with the control room, is stationed at the controls, and is capable of closing the penetration flow path isolation device without offsite power.

c) The penetration flow paths required to be evaluated per paragraph b) are assumed to open instantaneously and are not subsequently isolated, and no water is assumed to be subsequently added to the RPV water inventory;

d) No additional draining events occur; and

e) Realistic cross-sectional areas and drain rates are used.

A bounding DRAIN TIME may be used in lieu of a calculated value.

EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME

The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

(continued)

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, LCO 3.0.8, and LCO 3.0.9.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

a. MODE 2 within 7 hours;

b. MODE 3 within 13 hours; and

c. MODE 4 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, and 3.

(continued)

3.0 LCO APPLICABILITY (continued)

LCO 3.0.9 When one or more required barriers are unable to perform their related support function(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one division or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one division or subsystem of a multiple division or subsystem supported system provided at least one division or subsystem of the supported system is OPERABLE and the barriers supporting each of these divisions or subsystems provide their related support function(s) for different categories of initiating events.

For the purposes of this specification, the High Pressure Coolant Injection (HPCI) system, the Reactor Core Isolation Cooling (RCIC) system, and the Automatic Depressurization System (ADS) are considered independent subsystems of a single system.

If the required OPERABLE division or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the divisions or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

3.0 SR APPLICABILITY (continued)

SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3.2 POWER DISTRIBUTION LIMITS

3.2.1 AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)

LCO 3.2.1 All APLHGRs shall be less than or equal to the limits specified in the COLR.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any APLHGR not within limits.	A.1 Restore APLHGR(s) to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.1.1 Verify all APLHGRs are less than or equal to the limits specified in the COLR.	Once within 12 hours after ≥ 25% RTP AND In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.3 LINEAR HEAT GENERATION RATE (LHGR)

LCO 3.2.3 All LHGRs shall be less than or equal to the limits specified in the COLR.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any LHGR not within limits.	A.1 Restore LHGR(s) to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.3.1 Verify all LHGRs are less than or equal to the limits specified in the COLR.	Once within 12 hours after ≥ 25% RTP AND In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.1.6	----------NOTE---------- Neutron detectors are excluded. ---------- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.1.7	Verify control rod sequences input to the RWM are in conformance with the prescribed withdrawal sequence.	Prior to declaring RWM OPERABLE following loading of sequence into RWM

Table 3.3.5.1-1 (page 1 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3	4[b]	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1,2,3	4[b]	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 441 psig
d. Manual Initiation	1,2,3	2[c]	C	SR 3.3.5.1.6	NA

(continued)

(a) Not Used.

(b) Also required to initiate the associated emergency diesel generator (EDG).

(c) Individual component controls.

Table 3.3.5.1-1 (page 2 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 441 psig
d. Reactor Vessel Water Level – Low Low, Level 2 (Loop Select Logic)	1,2,3	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 103.8 inches
e. Reactor Steam Dome Pressure – Low (Break Detection Logic)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 886 psig
f. Riser Differential Pressure – High (Break Detection)	1,2,3	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 0.927 psid
g. Recirculation Pump Differential Pressure – High (Break Detection)	1,2,3	4 per pump	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.927 psid
h. Manual Initiation	1,2,3	2(c)	C	SR 3.3.5.1.6	NA

(continued)

(c) Individual component controls.

Table 3.3.5.1-1 (page 3 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Coolant Injection (HPCI) System					
a. Reactor Vessel Water Level – Low Low, Level 2	1, 2(d), 3(d)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 103.8 inches
b. Drywell Pressure – High	1, 2(e), 3(e)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Reactor Vessel Water Level – High, Level 8	1, 2(d), 3(d)	2	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 219 inches
d. Condensate Storage Tank Level – Low	1, 2(d), 3(d)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 0 inches
e. Suppression Pool Water Level – High	1, 2(d), 3(d)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 5.0 inches
f. Manual Initiation	1, 2(e), 3(e)	1(c)	C	SR 3.3.5.1.6	NA

(continued)

(c) Individual component controls.

(d) With reactor steam dome pressure > 150 psig.

(e) The injection functions of Drywell Pressure – High and Manual Initiation are not required to be OPERABLE with reactor steam dome pressure less than 550 psig.

Table 3.3.5.1-1 (page 4 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. Automatic Depressurization System (ADS) Trip System A					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1, 2(d), 3(d)	2	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 24.8 inches
b. Drywell Pressure – High	1, 2(d), 3(d)	2	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 1.88 psig
c. Automatic Depressurization System Initiation Timer	1, 2(d), 3(d)	1	F	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 117 seconds
d. Reactor Vessel Water Level – Low, Level 3 (Confirmatory)	1, 2(d), 3(d)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 171.9 inches
e. Core Spray Pump Discharge Pressure – High	1, 2(d), 3(d)	1 per pump	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 125 psig
f. Low Pressure Coolant Injection Pump Discharge Pressure – High	1, 2(d), 3(d)	2 per pump	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ 115 psig
g. Drywell Pressure – High Bypass	1, 2(d), 3(d)	2	F	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 450 seconds
h. Manual Inhibit	1, 2(d), 3(d)	1	F	SR 3.3.5.1.5	NA
i. Manual Initiation	1, 2(d), 3(d)	1 per valve	F	SR 3.3.5.1.6	NA

(continued)

(d) With reactor steam dome pressure > 150 psig.

Table 3.3.5.3-1 (page 1 of 1)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Steam Dome Pressure – Low (Injection Permissive)	4,5	4[(a)]	C	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 441 psig
b. Manual Initiation	4,5	1 per subsystem (a), (c)	D	SR 3.3.5.3.3	NA
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Steam Dome Pressure – Low (Injection Permissive)	4,5	4[(a)]	C	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 441 psig
b. Manual Initiation	4,5	1 per subsystem (a), (c)	D	SR 3.3.5.3.3	NA
3. RHR System Isolation					
a. Reactor Vessel Water Level – Low, Level 3	(b)	2 in one trip system	B	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 171.9 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level – Low Low, Level 2	(b)	2 in one trip system	B	SR 3.3.5.3.1 SR 3.3.5.3.2	≥ 103.8 inches

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, “Reactor Pressure Vessel Water Inventory Control.”

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Individual component controls.

3.3 INSTRUMENTATION

3.3.7.2 Mechanical Vacuum Pump (MVP) Trip Instrumentation

LCO 3.3.7.2 Four channels of Main Steam Line Radiation – High Function for the MVP trip shall be OPERABLE.

APPLICABILITY: MODES 1 and 2 with any MVP in service, any main steam line not isolated, and THERMAL POWER ≤ 10% RTP.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Restore channel to OPERABLE status. OR A.2 --------NOTE-------- Not applicable if inoperable channel is the result of a non-functional MVP breaker. ---------- Place channel in trip.	12 hours 12 hours
B. MVP trip capability not maintained.	B.1 Restore trip capability.	1 hour

(continued)

3.3 INSTRUMENTATION

3.3.7.3 Gland Seal Exhauster (GSE) Trip Instrumentation

LCO 3.3.7.3 Four channels of Main Steam Line Radiation – High Function for the main turbine GSE trip shall be OPERABLE.

APPLICABILITY: MODES 1 and 2 with any GSE in service, any main steam line not isolated, and THERMAL POWER ≤ 10% RTP.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more required channels inoperable.	A.1	Restore channel to OPERABLE status.	12 hours
	OR		
	A.2	--------NOTE-------- Not applicable if inoperable channel is the result of a non-functional GSE breaker. --- Place channel in trip.	12 hours
B. GSE trip capability not maintained.	B.1	Restore trip capability.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	----------NOTE---------- Not required to be performed in MODE 3. ---------- Verify equivalent leakage of each RCS PIV, at an RCS pressure ≥ 1035 and ≤ 1055 psig: a. For PIVs other than LPCI loop A and B injection isolation valves is ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm; b. For LPCI loop A and B outboard injection isolation valves is ≤ 0.4 gpm through-seat, and ≤ 5 ml/min external leakage; and c. For LPCI loop A and B inboard injection isolation valves is ≤ 10 gpm.	In accordance with the INSERVICE TESTING PROGRAM

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
-------- NOTE ---------- Only applicable when the primary containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. ----------	D.1 Analyze grab samples of the primary containment atmosphere.	Once per 12 hours
	AND	
D. Drywell floor drain sump flow monitoring system inoperable.	D.2 Monitor RCS LEAKAGE by administrative means.	Once per 12 hours
	AND	
AND	D.3.1 Restore drywell floor drain sump flow monitoring system to OPERABLE status.	7 days
Drywell floor drain sump level monitoring system inoperable.	OR	
	D.3.2 Restore drywell floor drain sump level monitoring system to OPERABLE status	7 days
E. Primary containment atmosphere gaseous radioactivity monitoring system inoperable.	E.1 Restore primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status.	30 days
AND	OR	
Drywell floor drain sump level monitoring system inoperable.	E.2 Restore drywell floor drain sump level monitoring system to OPERABLE status.	30 days

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Specific Activity

LCO 3.4.7 The specific activity of the reactor coolant shall be limited to DOSE EQUIVALENT I-131 specific activity ≤ 0.2 μCi/gm.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor coolant specific activity > 0.2 μCi/gm and ≤ 4.0 μCi/gm DOSE EQUIVALENT I-131.	----------NOTE---------- LCO 3.0.4.c is applicable. ---------- A.1 Determine DOSE EQUIVALENT I-131. AND A.2 Restore DOSE EQUIVALENT I-131 to within limits.	 Once per 4 hours 48 hours

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LCO 3.4.8 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

----------NOTES----------
1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.

2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status. AND	Immediately (continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.10 RCS Pressure and Temperature (P/T) Limits

LCO 3.4.10 RCS pressure, RCS temperature, RCS heatup and cooldown rates, and the recirculation pump starting temperature requirements shall be maintained within the limits specified in the PTLR.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ---------NOTE--------- Required Action A.2 shall be completed if this Condition is entered. ---------- Requirements of the LCO not met in MODES 1, 2, and 3.	A.1	Restore parameter(s) to within limits.	30 minutes
	AND		
	A.2	Determine RCS is acceptable for continued operation.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.10.5	----------NOTE---------- Only required to be met during a THERMAL POWER increase or recirculation flow increase in MODES 1 and 2 with one idle recirculation loop when THERMAL POWER is ≤ 30% RTP or when operating loop flow is ≤ 50% rated loop flow. ---------- Verify the difference between the bottom head coolant temperature and the RPV steam space coolant temperature is within the limits specified in the PTLR.	Once within 15 minutes prior to a THERMAL POWER increase or recirculation flow increase
SR 3.4.10.6	----------NOTE---------- Only required to be met during a THERMAL POWER increase or recirculation flow increase in MODES 1 and 2 with one non-isolated idle recirculation loop when THERMAL POWER is ≤ 30% RTP or when operating loop flow is ≤ 50% rated loop flow. ---------- Verify the difference between the reactor coolant temperature in the idle recirculation loop and the RPV coolant temperature is within the limits specified in the PTLR.	Once within 15 minutes prior to a THERMAL POWER increase or recirculation flow increase

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Reactor Steam Dome Pressure

LCO 3.4.11 The reactor steam dome pressure shall be ≤ 1045 psig.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor steam dome pressure not within limit.	A.1 Restore reactor steam dome pressure to within limit.	15 minutes
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.11.1 Verify reactor steam dome pressure is ≤ 1045 psig.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS), RPV WATER INVENTORY CONTROL, AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.2 Reactor Pressure Vessel (RPV) Water Inventory Control

LCO 3.5.2 DRAIN TIME of RPV water inventory to the top of active fuel (TAF) shall be ≥ 36 hours.

AND

One low pressure ECCS injection/spray subsystem shall be OPERABLE.

----------NOTE----------
A Low Pressure Coolant Injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal if capable of being manually realigned and not otherwise inoperable.

APPLICABILITY: MODES 4 and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS injection/spray subsystem inoperable.	A.1 Restore required ECCS injection/spray subsystem to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to establish a method of water injection capable of operating without offsite electrical power.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. DRAIN TIME < 36 hours and ≥ 8 hours.	C.1	Verify secondary containment boundary is capable of being established in less than the DRAIN TIME.	4 hours
	AND		
	C.2	Verify each secondary containment penetration flow path is capable of being isolated in less than the DRAIN TIME.	4 hours
	AND		
	C.3	Verify one standby gas treatment subsystem is capable of being placed in operation in less than the DRAIN TIME.	4 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. DRAIN TIME < 8 hours.	D.1	--------NOTE-------- Required ECCS injection/spray subsystem or additional method of water injection shall be capable of operating without offsite electrical power. ---------- Initiate action to establish an additional method of water injection with water sources capable of maintaining RPV water level > TAF for ≥ 36 hours.	Immediately
	AND		
	D.2	Initiate action to establish secondary containment boundary.	Immediately
	AND		
	D.3	Initiate action to isolate secondary containment penetration flow path or verify it can be manually isolated from the control room.	Immediately
	AND		
	D.4	Initiate action to verify one standby gas treatment subsystem is capable of being placed in operation.	Immediately

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Low-Low Set (LLS) Valves

LCO 3.6.1.6 The LLS function of two safety/relief valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LLS valve inoperable.	A.1	Restore LLS valve to OPERABLE status.	14 days
B. Required Action and associated Completion Time of Condition A not met.	B.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
C. Both LLS valves inoperable.	C.1	Be in MODE 3.	12 hours
	AND		
	C.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT subsystem for ≥ 15 continuous minutes with heaters operating.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.4	Verify each SGT filter cooler bypass damper can be opened and the fan started.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.4 Control Center Air Conditioning (AC) System

LCO 3.7.4 Two control center AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.
During movement of recently irradiated fuel assemblies in the secondary containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One control center AC subsystem inoperable.	A.1 Restore control center AC subsystem to OPERABLE status.	30 days
B. Two control center AC subsystems inoperable.	B.1 Verify control room area temperature <90°F. AND B.2 Restore one control center AC subsystem to OPERABLE status.	Once per 4 hours 72 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1 --------NOTE------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours

(continued)

3.7 PLANT SYSTEMS

3.7.7 Spent Fuel Storage Pool Water Level

LCO 3.7.7 The spent fuel storage pool water level shall be ≥ 22 ft over the top of irradiated fuel assemblies seated in the spent fuel storage pool racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent fuel storage pool water level not within limit.	A.1 --------NOTE--------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the spent fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	Verify the spent fuel storage pool water level is ≥ 22 ft over the top of irradiated fuel assemblies seated in the spent fuel storage pool racks.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources—Operating

LCO 3.8.1 The following AC electrical power sources shall be OPERABLE:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and

b. Two emergency diesel generators (EDGs) per division.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

NOTE
LCO 3.0.4.b is not applicable to EDGs.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One EDG inoperable.	A.1	Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND		
	A.2	Declare required feature(s), supported by the inoperable EDG, inoperable when the redundant required feature(s) are inoperable.	4 hours from discovery of an inoperable EDG concurrent with inoperability of redundant required feature(s)
	AND		
	A.3	Verify the status of CTG 11-1.	Once per 8 hours
	AND		
			(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.4.1 Determine OPERABLE EDG(s) are not inoperable due to common cause failure. OR	24 hours
	A.4.2 Perform SR 3.8.1.2 for OPERABLE EDG(s). AND	24 hours
	A.5 Restore availability of CTG 11-1. AND	72 hours from discovery of Condition A concurrent with CTG 11-1 not available
	A.6 Restore EDG to OPERABLE status.	14 days
B. Both EDGs in one division inoperable.	B.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s). AND	1 hour AND Once per 8 hours thereafter
		(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. (continued)	B.2	Declare required feature(s), supported by the inoperable EDGs, inoperable when the redundant required feature(s) are inoperable.	4 hours from discovery of the inoperable EDGs concurrent with inoperability of redundant required feature(s)
	AND		
	B.3.1	Determine OPERABLE EDG(s) are not inoperable due to common cause failure.	24 hours
	OR		
	B.3.2	Perform SR 3.8.1.2 for OPERABLE EDG(s).	24 hours
	AND		
	B.4	Restore one EDG in the division to OPERABLE status.	72 hours
C. One or both EDGs in both divisions inoperable.	C.1	Restore both EDGs in one division to OPERABLE status.	2 hours
D. One offsite circuit inoperable.	D.1	Perform SR 3.8.1.1 for OPERABLE offsite circuit.	1 hour AND Once per 8 hours thereafter
	AND		(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable. AND	24 hours from discovery of no offsite power to one division concurrent with inoperability of redundant required feature(s)
	D.3 Restore offsite circuit to OPERABLE status.	72 hours
E. Two offsite circuits inoperable.	E.1 Declare required feature(s) inoperable when the redundant required feature(s) are inoperable. AND	12 hours from discovery of Condition E concurrent with inoperability of redundant required feature(s)
	E.2 Restore one offsite circuit to OPERABLE status.	24 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.4.6	Verify each required battery charger supplies ≥ 100 amps at ≥ 124.7 V for ≥ 4 hours.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.7	----------NOTE---------- The performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the actual or simulated emergency loads for the design duty cycle when subjected to a battery service test.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.8	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is ≥ 80% of the manufacturer's rating when subjected to a performance discharge test.	In accordance with the Surveillance Frequency Control Program AND 12 months when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached 85% of the expected life with capacity ≥ 100% of manufacturer's rating

5.0 ADMINISTRATIVE CONTROLS

----------NOTE----------
Plant specific titles are designated in the UFSAR for each organizational position listed or described in this Section.

5.1 Responsibility

5.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during any absence.

The Plant Manager or designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.

5.1.2 The Shift Manager (SM) shall be responsible for the control room command function. During any absence of the SM from the control room while the unit is in MODE 1, 2, or 3, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SM from the control room while the unit is in MODE 4 or 5, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the UFSAR;

b. The Plant Manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;

c. The Senior Vice President and Chief Nuclear Officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety; and

d. The individuals who train the operating staff, carry out radiation protection, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

(continued)

5.2 Organization (continued)

5.2.2 Unit Staff

The unit staff organization shall include the following:

a. At least two non-licensed operators shall be assigned while operating in MODE 1, 2, or 3 and at least one non-licensed operator shall be assigned whenever the reactor contains fuel.

b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, or 3, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.

c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

d. A Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

e. Deleted.

f. The Superintendent-Operations, Assistant Superintendent-Operations, or the Operations Engineer shall hold an SRO license.

g. An STA shall be assigned whenever the reactor is operating in MODES 1, 2, and 3. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Manager (SM) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

5.5 Programs and Manuals

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made.

   Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include Core Spray, High Pressure Coolant Injection, Residual Heat Removal, Reactor Core Isolation Cooling, reactor water sampling, Post Accident Sampling, reactor water cleanup, Primary Containment Monitoring, control rod drive discharge headers, and Standby Gas Treatment. The program shall include the following:

a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.3 Not Used

(continued)

5.5 Programs and Manuals

5.5.12 Primary Containment Leakage Rate Testing Program (continued)

e. The provisions of SR 3.0.2 do not apply to the test frequencies in the Primary Containment Leakage Rate Testing Program.

f. The provisions of SR 3.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

5.5.13 High Density Spent Fuel Racks

A program shall be provided, for the high density storage racks containing Boraflex as the neutron absorber, which will ensure that any unanticipated degradation of the Boraflex will be detected and will not compromise the integrity of the racks.

5.5.14 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filtration (CREF) System, CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

(continued)

5.5 Programs and Manuals

5.5.14 Control Room Envelope Habitability Program (continued)

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one subsystem of the CREF System, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and assessed every 24 months.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

5.5.15 Surveillance Frequency Control Program

This program provides controls for the Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.

b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with the NEI 04-10, “Risk-Informed Method for Control of Surveillance Frequencies,” Revision 1.

The one-time 24 Month Fuel Cycle related Surveillance Requirement Frequency changes approved by the NRC in License Amendment 218 are not subject to this provision. Subsequent changes are subject to the Surveillance Frequency Control Program.

(continued)

5.5 Programs and Manuals

5.5.15 Surveillance Frequency Control Program (continued)

c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

5.6 Reporting Requirements (continued)

5.6.4 Deleted

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following;

LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)";
LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)";
LCO 3.2.3, "LINEAR HEAT GENERATION RATE (LHGR)"; and
LCO 3.3.2.1, "Control Rod Block Instrumentation."

The $MCPR_{99.9\%}$ value used to calculate the LCO 3.2.2, "MCPR," limit shall be specified in the COLR.

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following document:

1. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," (latest approved version).

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

(continued)

5.7 High Radiation Area (continued)

5.7.2 In addition to the requirements of Specification 5.7.1, areas accessible to individuals with radiation levels such that an individual could receive in 1 hour a dose equivalent > 1000 mrems but < 500 rads at one meter from sources of radioactivity shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Manager (SM) on duty and/or the radiation protection supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

5.7.3 For individual areas accessible to individuals with radiation levels such that a major portion of the individual's body could receive in 1 hour a dose > 1000 mrems with measurement made at 30 centimeters from the source of radioactivity, but < 500 rads at one meter form sources of radioactivity that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be roped off and conspicuously posted, and a flashing light shall be activated as a warning device.