



A unit of American Electric Power

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June 21, 2013

AEP-NRC-2013-55  
10 CFR 50.90

Docket Nos.: 50-315  
50-316

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

**Donald C. Cook Nuclear Plant Units 1 and 2**

**Response to a Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630) and the Use of Compensatory Measures Associated With the Proposed Modifications.**

This letter provides Indiana Michigan Power Company's (I&M's), licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, response to Requests for Additional Information (RAI) by the U. S. Nuclear Regulatory Commission (NRC) regarding a proposed license amendment to transition CNP, Units 1 and 2, to a new fire protection program based on National Fire Protection Association Standard 805 (NFPA 805).

By References 1 and 2, I&M proposed to amend CNP Units 1 and 2 Facility Operating Licenses DPR-58 and DPR-74 to adopt a new fire protection program based on NFPA 805, in accordance with 10 CFR 50.48(a) and (c). Reference 1, hereafter referred to as the Transition Report, provided information associated with the CNP transition to NFPA 805. By References 3, 4, 8, 9, 11, and 14, the NRC transmitted RAIs regarding the proposed amendment. References 5, 6, 7, 12, 13, 15, 16, and 17 transmitted I&M's responses to the Reference 3, 4, 8, 9, 11, and 14 RAIs. By Reference 18, the NRC transmitted RAIs regarding the Transition Report Attachment M ("Licensing Condition Changes"), of Reference 17. This letter provides I&M's response to Reference 18.

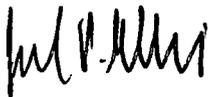
On Page 5 of the Transition Report, the listing of approved Safety Evaluation Reports (SERs) includes an entry of February 1, 1990, for each CNP Unit. This SER date is also in the current license conditions for CNP Units 1 and 2. It has been identified that this SER date is incorrect. The correct SER date is February 8, 1990. This condition has been entered into I&M's corrective action program and will be resolved upon issuance of the NRC's approval of the proposed License Amendment for transition to a new fire protection program based on NFPA 805.

ADDL  
NRR

Enclosure 1 to this letter provides an affirmation statement. Enclosure 2 identifies documents referenced in this letter and its enclosures. Enclosures 3 and 4 provide revisions to Attachments M and S, respectively, of the Transition Report.

Copies of this letter and its enclosures are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91. There are no new regulatory commitments associated with this response. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Manager, at (269) 466-2649.

Sincerely,



Joel P. Gebbie  
Site Vice President

JMT/rdw

Enclosures:

1. Affirmation
2. Identification of Documents Referenced in this Letter and its Enclosures
3. Revision 5 of Attachment M, "License Condition Changes," to the Transition Report Provided in Support of Response to Request for Additional Information Concerning NFPA 805 LAR Supplement Dated 5/1/13
4. Revision 6 of Attachment S, "Plant Modifications and Items to be Completed During Implementation," to the Transition Report, Provided in Support of Response to Request for Additional Information Concerning NFPA 805 LAR Supplement Dated 5/1/13

c: C. A. Casto, NRC Region III  
J. T. King, MPSC  
S. M. Krawec, AEP Ft. Wayne, w/o enclosures  
MDEQ – RMD/RPS  
NRC Resident Inspector  
T. J. Wengert, NRC Washington, DC

**Enclosure 1 to AEP-NRC-2013-55**

**AFFIRMATION**

I, Joel P. Gebbie, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company



Joel P. Gebbie  
Site Vice President

**SWORN TO AND SUBSCRIBED BEFORE ME**

THIS 21<sup>st</sup> DAY OF June, 2013

  
\_\_\_\_\_  
Notary Public

My Commission Expires 1/21/2018

## **Enclosure 2 to AEP-NRC-2013-55**

### **Identification of Documents Referenced in this Letter and Its Enclosures**

#### References:

1. Letter from M. H. Carlson, Indiana Michigan Power Company (I&M), to U. S. Nuclear Regulatory Commission (NRC) Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Docket Nos. 50-315 and 50-316, Request for License Amendment to Adopt National Fire Protection Association (NFPA) 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," AEP-NRC-2011-1, dated July 1, 2011, ADAMS Accession No. ML11188A145.
2. Letter from J. P. Gebbie, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Docket Nos. 50-315 and 50-316, Supplement to Request for License Amendment to Adopt National Fire Protection Association (NFPA) 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," AEP-NRC-2011-62, dated September 2, 2011, ADAMS Accession No. ML 11256A030.
3. Letter from P. S. Tam, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 AND ME6630)," dated January 27, 2012, ADAMS Accession Nos. ML113560709, ML12003A186, and ML12017A251.
4. E-Mail from P. S. Tam, NRC, to H. L. Etheridge, J. R. Waters, M. K. Scarpello, I&M, et al., "D.C. Cook - Draft RAI re. Transition to NFPA 805, Questions in Health Physics (TAC ME6629 and ME6630)," dated March 22, 2012, ADAMS Accession No. ML12082A043.
5. Letter from M. H. Carlson, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Response to Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805, (TAC Nos. ME6629 AND ME6630)," AEP-NRC-2012-29, dated April 27, 2012, ADAMS Accession No. ML12132A390.
6. Letter from J. P. Gebbie, I&M, to NRC Document Control Desk, "Response to Second Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 AND ME6630)," AEP-NRC-2012-47, dated June 29, 2012, ADAMS Accession No. ML12195A013.
7. Letter from M. H. Carlson, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Response to Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805, (TAC Nos. ME6629 AND ME6630)," AEP-NRC-2012-58, dated August 9, 2012, ADAMS Accession No. ML12242A246.

8. Letter from T. J. Wengert, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," dated February 1, 2013, ADAMS Accession Nos. ML13014A549.
9. E-Mail from T. Wengert, NRC, to H. L. Etheridge, J. M. Tanko, M. K. Scarpello, I&M, et al., "D.C. Cook - Draft RAI re. Transition to NFPA 805, UFSAR Description as a Result of Implementing NFPA 805 and (FAQ) 12-0062 Closure Memo, ADAMS Accession No. ML12082A043," dated March 20, 2013, (Identified as RAI-62 in this letter AEP-NRC-2013-17).
10. I&M NFPA 805 LAR Revisions Action Request 2012-12753, dated October 12, 2012.
11. Letter from T. J. Wengert, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," dated October 11, 2012, ADAMS Accession Nos. ML12276A300 and ML12285A179.
12. Letter from M. H. Carlson, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Response to Second Round Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Associations Standard 805 (TAC Nos. ME6629 and ME6630)," AEP-NRC-2012-92, dated October 15, 2012, ADAMS Accession No. ML12297A213.
13. Letter from M. H. Carlson, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Response to Second-Round Request for Additional Information Item 54.b, and Submittal of Revised Tables Regarding the Application for Amendment to Transition to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," AEP-NRC-2012-101, dated November 9, 2012, ADAMS Accession No. ML123261084.
14. Letter from T. J. Wengert, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," dated December 13, 2012, ADAMS Accession No. ML12345A327.
15. Letter from Q. S. Lies, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Response to Third Round Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," AEP-NRC-2013-1, dated January 14, 2013, ADAMS Accession No. ML13028A113.

16. Letter from J. P. Gebbie, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant, Units 1 and 2, Revised Response to a First Round Request for Additional Information Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," AEP-NRC-2013-09, dated February 1, 2013, ADAMS Accession No. ML13045A432.
17. Letter from J. P. Gebbie, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant, Units 1 and 2, Response to a Request for Additional Information (RAI 29.01, 61, and 62) Regarding the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," AEP-NRC-2013-17, dated May 1, 2013, ADAMS Accession No. ML13123A298.
18. E-Mail from T. J. Wengert, NRC, to H. L. Etheridge, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Application for Amendment to Transition the Fire Protection Program to National Fire Protection Association Standard 805 (TAC Nos. ME6629 and ME6630)," dated June 14, 2013.

**Enclosure 3 to AEP-NRC-2013-55**

**Revision 5 of Attachment M, "License Condition Changes," to the Transition Report  
Provided in Support of Response to Request for Additional Information Concerning  
NFPA 805 LAR Supplement Dated 5/1/13**

Changes are indicated by revision bars in the right margin.

**M. License Condition Changes**

**5 Pages**

I&M proposes to replace the current CNP fire protection license conditions 2.C.(4) for Unit 1 and 2.C.(3)(o) for Unit 2 with the standard license condition in Regulatory Position C.3.1 of Regulatory Guide 1.205, Revision 1, as shown below. In support of this change, I&M has developed a Fire PRA which has been reviewed and been found acceptable by a Fire PRA WOG peer review conducted during October 12-16, 2009. Outstanding high level findings from the peer review are included in Attachment V of this TR. Any future changes to the Fire PRA will be subject to peer review in accordance with the guidance provided in NEI 07-12 and applicable ASME/ANS PRA standards.

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### Fire Protection Program

Indiana Michigan Power Company shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee's amendment request dated July 1, 2011, as supplemented by letters dated September 2, 2011, April 27, 2012, June 29, 2012, August 9, 2012, October 15, 2012, November 9, 2012, January 14, 2013, February 1, 2013, May 1, 2013, and June 21, 2013, and as approved in the safety evaluation dated \_\_\_\_\_. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

### Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed Fire PRA (FPRA) model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

Other Changes that May Be Made Without Prior NRC Approval

## (1) Changes to NFP 805, Chapter 3, Fundamental Fire Protection Program and Design Elements

Prior NRC review and approval are not required for changes to the NFP 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFP 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFP 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFP 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFP 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and,
- "Passive Fire Protection Features" (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFP 805.

## (2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated \_\_\_\_\_, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- (1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (2) above.
- (2) The licensee shall implement the modifications to its facility, as described in Enclosure 4, Attachment S, Table S-2, "Plant Modifications Committed," of I&M letter AEP-NRC-2013-55, dated June 21, 2013, to complete the transition to full compliance with 10 CFR 50.48(c) by [12 months following issuance of amendment/safety evaluation]. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
- (3) The licensee shall implement the items listed in Enclosure 4, Attachment S, Table S-3, "Implementation Items," of I&M letter AEP-NRC-2013-55, dated June 21, 2013, by [12 months following issuance of amendment/safety evaluation].
- (4) The licensee shall complete an FPRA, focused scope peer review and resolve findings associated with the revised FPRA LERF values, prior to self-approval of changes that result in more than a minimal increase in risk.
- (5) The Licensee shall complete an FPRA focused scope peer review and resolve findings associated with FPRA modeling of the installation of the new Reactor Coolant Pump low-leakage safe shutdown seals, prior to self-approval of changes that result in more than a minimal increase in risk.
- (6) The licensee shall complete a focused scope peer review and resolve findings of the PRA upgrade related to reduced mission times for cutsets containing a test and maintenance event combined with a running failure, prior to self-approval of changes that result in more than a minimal increase in risk.

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The license conditions to be replaced are restated below.

License condition 2.C(4) for Unit 1:

Indiana Michigan Power Company shall implement and maintain, in effect, all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SERs dated December 12, 1977, July 31, 1979, January 30, 1981, February 7, 1983, November 22, 1983, December 23, 1983, March 16, 1984, August 27, 1985, June 30, 1986, January 28, 1987, May 26, 1987, June 16, 1988, June 17, 1988, June 7, 1989, February 1, 1990, February 9, 1990, March 26, 1990, April 26, 1990, March 31, 1993, April 8, 1993, December 14, 1994, January

24, 1995, April 19, 1995, June 8, 1995, and March 11, 1996, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

License condition 2.C(3)(o) for Unit 2:

Indiana Michigan Power Company shall implement and maintain, in effect, all provisions of the approved Fire Protection Program as described in the Updated Final Safety Analysis Report for the facility and as approved in the SERs dated December 12, 1977, July 31, 1979, January 30, 1981, February 7, 1983, November 22, 1983, December 23, 1983, March 16, 1984, August 27, 1985, June 30, 1986, January 28, 1987, May 26, 1987, June 16, 1988, June 17, 1988, June 7, 1989, February 1, 1990, February 9, 1990, March 26, 1990, April 26, 1990, March 31, 1993, April 8, 1993, December 14, 1994, January 24, 1995, April 19, 1995, June 8, 1995, and March 11, 1996, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if these changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

It is I&M's understanding that, implicit in the replacement of these license conditions, all prior fire protection program SERs and commitments will be superseded in their entirety by the revised license condition.

No other license conditions need to be replaced or revised.

I&M implemented the following process for determining that these are the only license conditions required to be either revised or superseded to implement the new fire protection program which meets the requirements in 10 CFR 50.48(a) and 50.48(c):

- A review was conducted of the I&M Unit 1 Renewed License Number DPR-58, through Amendment No. 313 and Unit 2 Renewed License Number DPR-74, through Amendment No. 297, by the I&M licensing and NFPA 805 Transition Team. Outstanding LARs that have been submitted to the NRC but not yet approved were also reviewed for potential impact on the license conditions.

**Enclosure 4 to AEP-NRC-2013-55**

Revision 6 of Attachment S, "Plant Modifications and Items to be Completed During Implementation," to the Transition Report  
**Provided in Support of Response to Request for Additional Information Concerning  
NFPA 805 LAR Supplement Dated 5/1/13.**

Changes are indicated by revision bars in the right margin.

**S. Plant Modifications and Items to be Completed during Implementation**

14 Pages

Tables S-1 and S-2, Plant Modifications, include a description of the modifications along with the following information:

- A problem statement,
- Risk ranking of the modification,
- An indication if the modification is currently included in the Fire PRA,
- Compensatory Measure in place, and
- A risk-informed characterization of the modification and compensatory measure.

The following legend applies to the risk ranking indicated in Tables S-1 and S-2:

- High = Modification would have an appreciable impact on reducing overall fire CDF.
- Medium = Modification would have a measurable impact on reducing overall fire CDF.
- Low = Modification would have either an insignificant or no impact on reducing overall fire CDF.

**Attachment S - Table S-1 Plant Modifications Completed**

<b>Item</b>	<b>Rank</b>	<b>Unit</b>	<b>Problem Statement</b>	<b>Proposed Modification</b>	<b>In FPRA</b>	<b>Comp Measure</b>	<b>Risk Informed Characterization</b>
S-1.1	High	1, 2	Cable in conduit associated with the credited train of dc electrical power for Fire Area AA39A and AA45A is unprotected and routed through the area	Provide 1-hour ERFBS with automatic suppression & detection for cable of concern in Fire Area AA39A and AA45A	Y	N	Fire PRA credits this modification for electrical power redundancy <u>Compensatory measure:</u> None; modification installed.
S-1.2	Low	1, 2	Actions identified in safe shutdown procedure for transferring 600 volt Bus to alternate source in Fire Areas AA14, AA23, AA39B and AA45B were not accurately identified.	Revised safe shutdown procedures to reflect correct actions.	N	N	Fire PRA does not credit these actions <u>Compensatory measure:</u> None; Procedures updated.

**Attachment S - Table S-2 Plant Modifications Committed**

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S-2.1	Medium	1, 2	Short circuits can occur in the control circuit for motor operated valves between control wiring and power sources leading to spurious operation of the valve. The same postulated short circuit may bypass the torque/limit switches which, combined with the absence or bypass of thermal overload contacts, results in continuous energization of the valve motor and potential mechanical damage to the valve such that manual operation via handwheel would be inhibited. This potential condition was described in Information Notice (IN) 92-18	Modify the following ten (10) valves to resolve 92-18 issue: 1(2)-FMO-212 1(2)-FMO-222 1(2)-FMO-232 1(2)-FMO-242 1(2)-ICM-250	Y	N	<p>Circuit failures which result in the inability of operators to perform a recovery action are significant contributors to both fire risk as well as internal events risk. The proposed modification will improve the ability of plant operators to manually align certain motor operated valves if required in order to maintain the plant in a safe and stable condition.</p> <p><u>Compensatory measure for NFPA 805:</u> Appropriate Compensatory Measures will be established when the NFPA 805 fire protection program is approved by the NRC and remain in place until this modification is complete.</p> <p><u>Compensatory measure for 10 CFR 50 Appendix R:</u> None; IN 92-18 concerns were addressed by the current licensing basis, which credits the "double break" circuit design, as described in NRC SE dated November 22, 1983.</p>

**Attachment S - Table S-2 Plant Modifications Committed**

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S-2.2	High	1, 2	Electrical cabinet fire scenarios in fire areas AA40 and AA43 contribute significantly to fire CDF and LERF and warrant additional mitigation	Modify the CO <sub>2</sub> system from manual to automatic actuation in the following fire areas: a) AA40 b) AA43	Y	N	<p>This proposed modification will limit the extent of damage predicted to occur for fire scenarios within the subject fire areas.</p> <p><u>Compensatory measure for NFPA 805:</u> Appropriate Compensatory Measures will be established when the NFPA 805 fire protection program is approved by the NRC and remain in place until this modification is complete.</p> <p><u>Compensatory measure for 10 CFR 50 Appendix R:</u> None; fire areas AA40 and AA43 are deterministically compliant with 10 CFR 50 Appendix R.</p>

**Attachment S - Table S-2 Plant Modifications Committed**

Item	Rank	Unit	Problem Statement	Proposed Modification	In FPRA	Comp Measure	Risk Informed Characterization
S-2.3	High	1,2	Additional risk reduction modifications are necessary to comply with Regulatory Guide 1.174 acceptance guidelines	Modify the Unit 1 and 2 Reactor Coolant Pump seals with the low-leakage seal design	Y	N	<p>This proposed modification will provide an FPRA risk reduction within the acceptance guidelines of Regulatory Guide 1.174</p> <p><u>Compensatory measure for NFWA 805:</u> Appropriate Compensatory Measures will be established when the NFWA 805 fire protection program is approved by the NRC and remain in place until this modification is complete.</p> <p><u>Compensatory measure for 10 CFR 50 Appendix R:</u> None; fire areas AA56 and AA58 are deterministically compliant with 10 CFR 50 Appendix R.</p>

Table S-3, identifies those implementation items (procedure changes, process updates, and training to affected plant personnel) that will be completed by I&M prior to the implementation of new NFWA 805 FP program. These items will be completed within twelve (12) months after NRC issuance of the NFWA 805 SE.

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**Attachment S - Table S-3 Implementation Items**

<b>Item</b>	<b>Unit</b>	<b>Description</b>	<b>LAR Section / Source</b>
S-3.1	1, 2	Initial General Employee Training (GET) will be verified and / or updated to include the minimum fire protection program elements as discussed in Section K to NEI-04-02 (FAQ 06-0028).	4.1.2 and Attachment A
S-3.2	1, 2	The monitoring program required by NFWA 805 Section 2.6 will be developed in accordance with NFWA 805 FAQ 10-0059, and will include a process that reviews the FPP performance and trends in performance and implemented after the LAR approval as part of the FPP transition to NFWA 805.	4.1.2, 4.6, and Attachment A
S-3.3	1, 2	Transient Combustible Free Zones will be established in high risk Fire Areas AA40, AA43, AA48, AA50, AA51, and AA52.	4.5 and Attachments A and W
S-3.4	1, 2	Hot Work Restriction Zones will be established in high risk Fire Areas AA40, AA43, AA48, AA50, AA51, and AA52.	4.5 and Attachments A and W
S-3.5	1, 2	Post-fire operating procedures will be updated to reflect new NSCA strategies and training performed as necessary.	4.2.1.3 and Attachment G
S-3.6	1, 2	Technical and administrative procedures and documents that relate to non-power modes of plant operating states will be revised as needed for implementation of NFWA 805.	4.3.2 and Attachment D

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**Attachment S - Table S-3 Implementation Items**

<b>Item</b>	<b>Unit</b>	<b>Description</b>	<b>LAR Section / Source</b>
S-3.7	1, 2	Pre-fire plans and fire brigade training materials will be revised to reflect changes required to meet the NFWA 805 radioactive release performance criteria.	4.4.2 and Attachments A and E
S-3.8	1, 2	<p>A confirmatory demonstration (field verification walk-through) of the feasibility for the credited NFWA 805 recovery actions will be performed. This will include field verification of:</p> <ol style="list-style-type: none"> <li>(1) Transit times (i.e., travel times to/from recovery action manipulated plant equipment).</li> <li>(2) Execution times (i.e., time required to physically perform the action, such as handwheel a valve open, open a breaker, etc.).</li> <li>(3) Communications for adequacy between the controlling location and recovery action locations for areas which involve actions.</li> <li>(4) Adequate lighting (either fixed or portable) for access/egress and local lights are provided for the component to be operated.</li> </ol>	4.2.1.3 and Attachment G
S-3.9	1, 2	CNP calculation Probabilistic Risk Assessment (PRA)-FIRE-17663-012-LAR, "Post-Fire Human Reliability Analysis" and Technical Evaluation R1900-0026-001, "Recovery Action Transition for NFWA 805" will be reviewed and updated based on the results of the field walkdowns of the recovery actions (Item S-3.8) and procedure changes (Items S-3.5, S-3.11 and S-3.14).	4.2.1.3 and Attachment G

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**Attachment S - Table S-3 Implementation Items**

<b>Item</b>	<b>Unit</b>	<b>Description</b>	<b>LAR Section / Source</b>
S-3.10	1, 2	Technical documents and procedures that relate to new Fire Protection (FP) design and licensing basis (e.g., Fire Protection Program Manual (FPPM), Technical Requirements Manual, Design Basis Document, maintenance and surveillance, configuration control, training and qualification guidelines, Quality Assurance Program Document (QAPD), etc.) will be revised as needed for implementation of NFPA 805.	4.7.1, 4.7.2, 4.7.3, and Attachment W
S-3.11	1, 2	A new restoration procedure (1/2-OHP-4025-R-XX series) will be developed to address re-powering the hydrogen igniters following a fire in Fire Areas AA40, AA43, AA46, AA47, AA48, AA50, AA51 and AA52	Attachment W
S-3.12	1, 2	The current transformer evaluation (Technical Evaluation 12.6) will be updated to address those CTs that currently have not screened out as sufficient CT data becomes available.	4.2.1.1/Attachment B
S-3.13	1, 2	Update the UFSAR following the guidance provided in Frequently Asked Question (FAQ) 12-0062 (ADAMS Accession No. ML121430035).	4.7.1/ Response to RAI-62 documented in I&M Letter dated May 1, 2013

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**Attachment S - Table S-3 Implementation Items**

Item	Unit	Description	LAR Section / Source
S-3.14	1, 2	Applicable operating procedures will be revised to include the treatment of Fire PRA Actions added to the 'base fire PRA model' that mitigate 'fire induced failures – but are not associated with the NSCA success path. This includes isolation of containment purge line isolation valves, and procedure changes for Turbine Driven Auxiliary Feed Water (TDAFW) pump battery charger re-alignment to address uncertainty considerations. This includes procedure changes associated with the NSCA (item S-3.5), field verification walk-throughs (item S-3.8), hydrogen igniters (item S-3.11) and temporary ventilation (item S-3.17).	Response to RAI-61 documented in I&M Letter dated May 1, 2013
S-3.15	1, 2	Revise procedure PMP-2270-WBG-001, "Welding, Burning and Grinding Activities," and procedure 12-FPP-2270-066-011, "Fire Watch Activities," and conduct training on discontinuing the use of (1) video cameras for fire watch and (2) use of a single fire watch for multiple hot work activities.	Response to RAI-09.01 documented in I&M Letter dated October 15, 2012, and Attachment A.
S-3.16	1, 2	Revise Procedure PMP-2270-CCM-001, "Control of Combustible Materials," and conduct training on the requirements of NFPA 805 Section 3.3.1.2(1).	Response to RAI-10.01 documented in I&M Letter dated October 15, 2012, and Attachment A.
S-3.17	1, 2	Revise Technical Evaluation R1900-0026-001, Revision 1, "Recovery Action Transition in Support of NFPA 805," and applicable procedures, to establish temporary MCR ventilation for Recovery Actions associated with VFDRs for AA3-004, AA3-009, AA36/42.42-026, AA57A-001 and AA57B-001. The Implementation Item will also require that training be conducted.	Response to RAI-18.01 documented in I&M Letter dated October 15, 2012, and Attachment A.

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**Attachment S - Table S-3 Implementation Items**

Item	Unit	Description	LAR Section / Source
S-3.18	1, 2	Verify MOV circuit changes (Table S-2, Item S-2.1) have been accomplished as credited in Attachment W and verify the associated valves are not credited in other areas where spurious operation could occur.	Response to RAI-44 documented in I&M Letter dated October 15, 2012.
S-3.19	1, 2	Update the associated Fire PRA task and revise the Fire PRA ignition frequency and/or fire modeling to include re-evaluation of procedural actions/controls associated with control of automatic CO <sub>2</sub> actuation in certain areas (Table S-2, item S-2.2), Transient Combustible Fee Zones (Table S-3, Item S-3.3), establishing certain areas as Hot Work Restriction Zones (Table S-3, Item S-3.4).	Response to RAI-44 documented in I&M Letter dated October 15, 2012.
S-3.20	1, 2	<p>Upon completion of all Fire PRA credited implementation items in Transition report Tables S-2 and S-3, verify the validity of the change-in-risk provided in Attachment W. This includes procedure changes affecting the fire PRA (item S-3.14), electrical circuit modifications (item S-3.18), fire ignition and suppression (item S-3.19) and PRA methods (item S-3.21).</p> <p>If this verification determines that the risk metrics have changed such that the RG 1.205 acceptance guidelines are not met, additional analytical efforts, and/or procedure changes, and/or plant modifications will be implemented to assure the RG 1.205 acceptance criteria are met.</p>	<p>Response to RAI-44 documented in I&amp;M Letter dated October 15, 2012.</p> <p>Response to RAI-61 documented in I&amp;M Letter dated May 1, 2013.</p>
S-3.21	1, 2	<del>Conduct a Focused Scope Peer Review of the PRA upgrade item related to Reduced Mission Times for cutsets containing a Test and Maintenance event combined with a running failure.</del>	This implementation item has been deleted and included as a License Condition in Attachment M

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**Attachment S - Table S-3 Implementation Items**

<b>Item</b>	<b>Unit</b>	<b>Description</b>	<b>LAR Section / Source</b>
S-3.22	1, 2	Revise program documents and procedures, and conduct associated training, as necessary to implement specific requirements from NFPA 805 Section 2.7.3 as described in Transition Report Section 4.7.3.	Response to RAI-60 documented in I&M Letter dated October 15, 2012.

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S-3.23	1, 2	Revise Technical Evaluation 12.5 and update the following documentation to reflect the revised response to RAI-15(b) documented in I&M Letter dated January 14, 2013:	Revised response to RAI-15(b) documented in I&M Letter dated February 1, 2013.
		<ol style="list-style-type: none"><li data-bbox="583 348 1325 571">1. <u>Revise Unit 1 and Unit 2 250 Volt DC calculations 1-E-N-ELCP-250-001, "Unit 1 250VDC System Coordination Study," and 2-E-N-ELCP-250-001, "Unit 2 250VDC System Coordination Study."</u> These will be non-technical revisions to provide clarity regarding the CNP Licensing Basis and Design Requirements (specifically, the SSCA and NEI 00-01).</li><li data-bbox="583 607 1325 794">2. <u>Revise 600 Volt AC calculation 1-E-N-PROT-BKR-007, "Unit 1 600V Switchgear Breaker 11A6, 11A7, 11B3, 11C3, 11C9, 11C18, 11D9 and OB2-1 Settings."</u> This will be a non-technical revision to provide clarity regarding the NFWA 805 requirements in the case of a potentially overloaded cable.</li><li data-bbox="583 830 1325 1120">3. <u>Create new Unit 1 and Unit 2 120 Volt AC calculations.</u> A representative sample of cable data from buses identified in Technical Evaluation 12.5 was evaluated for adequate cable protection and coordination. Results of the survey revealed that all cables were acceptable with significant margin to preclude cable damage and secondary fires. The new calculations will document the assembled data for each 120 Volt AC cable and protective device and be complete by March 28, 2013.</li><li data-bbox="583 1172 1325 1295">4. <u>Update Technical Evaluation 12.5.</u> This update will provide justification for resolution of conditions currently identified as deficiencies with 250 Volt DC, 600 Volt AC and 120 Volt AC calculations.</li></ol>	

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