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June 11, 2018

AEP-NRC-2018-10
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
Request for Deviation from National Fire Protection Association (NFPA) 805 Requirements

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, Agencywide Documents Access and Management System (ADAMS) Accession No. ML11188A145.
2. Letter from T. J. Wengert, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Unit 1 and Unit 2 – Issuance of Amendments Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance with 10 CFR 50.48(c) (TAC Nos. ME6629 and ME6630)," dated October 24, 2013, ADAMS Accession No. ML13140A398.
3. NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations (10 CFR), Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, is submitting a License Amendment Request (LAR) for Renewed Facility Operating Licenses DPR-58 and DPR-74.

By Reference 1, I&M, proposed to amend Renewed Facility Operating Licenses DPR-58 and DPR-74 to adopt a new fire protection program based on National Fire Protection Association (NFPA) Standard 805, in accordance with 10 CFR 50.48(a) and (c). By Reference 2, the U. S. Nuclear Regulatory Commission (NRC) issued Amendment No. 322 to Renewed Facility Operating License No. DPR-58 and Amendment No. 305 to Renewed Facility Operating License No. DPR-74 for CNP Units 1 and 2, respectively. The amendments revised the fire protection

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license condition in each unit's license, transitioning each unit's fire protection program to a risk-informed performance-based program based on Reference 3.

The proposed amendment would modify the fire protection license condition in each unit's license by incorporation of the resulting Safety Evaluation from this LAR to allow for deviation from NFPA 805 requirements.

Enclosure 1 to this letter provides an affirmation statement. Enclosure 2 provides an evaluation of the proposed change. Enclosures 3 and 4 provide existing Unit 1 and Unit 2 License pages, respectively, marked up to show the proposed changes. New clean Unit 1 and Unit 2 License pages with proposed changes incorporated will be provided to the NRC Licensing Project Manager when requested.

Approval of the proposed amendment is requested in accordance with the normal NRC review schedule for such changes. Once approved, the amendment will be implemented within 90 days. Copies of this letter 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 made in this letter. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Director, at (269) 466-2649.

Sincerely,



Q. Shane Lies
Site Vice President

HLL/mlf

Enclosures:

1. Affirmation
2. Evaluation of Proposed Changes
3. Donald C. Cook Nuclear Plant Unit 1 License Condition Pages Marked To Show Proposed Changes
4. Donald C. Cook Nuclear Plant Unit 2 License Condition Pages Marked To Show Proposed Changes

c: R. J. Ancona – MPSC
A. W. Dietrich, NRC Washington, D.C.
MDEQ – RMD/RPS
NRC Resident Inspector
S. K. West, NRC Region III
A. J. Williamson – AEP Ft. Wayne, w/o enclosures

Enclosure 1 to AEP-NRC-2018-10

AFFIRMATION

I, Q. Shane Lies, being duly sworn, state that I am the Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the U. S. 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

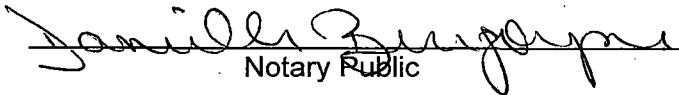


Q. Shane Lies
Site Vice President



SWORN TO AND SUBSCRIBED BEFORE ME

THIS 11 DAY OF June, 2018


Notary Public

My Commission Expires 04-04-2024

DANIELLE BURGOYNE
Notary Public, State of Michigan
County of Berrien
My Commission Expires 04-04-2024
Acting in the County of Berrien

**Enclosure 2 to AEP-NRC-2018-10
Evaluation of Proposed Changes**

Subject: Request for deviation from National Fire Protection Association 805 requirements to allow for currently installed flexible metallic conduit in configurations other than in short lengths to connect components.

1.0 SUMMARY DESCRIPTION

2.0 DETAILED DESCRIPTION

2.1 Request to use currently installed flexible metallic conduit in applications other than to connect components

2.2 Request to use currently installed flexible metallic conduit and allow future use of flexible metallic conduit in lengths greater than short lengths

3.0 TECHNICAL EVALUATION

3.1 Basis for the approval of request for this deviation for allowance to use currently installed flexible metallic conduit in configurations other than to connect components

3.2 Basis for the approval of request for this deviation for allowance to use currently installed flexible metallic conduit and allow future use of flexible metallic conduit in lengths greater than short lengths

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

4.2 Precedent

4.3 No Significant Hazards Consideration

4.4 Conclusions

5.0 ENVIRONMENTAL CONSIDERATION

6.0 REFERENCES

1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Renewed Facility Operating License Nos. DPR-58 and DPR-74 for Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, respectively.

Indiana Michigan Power Company (I&M), the licensee for CNP Units 1 and 2, proposes to modify the fire protection license condition in each unit's license by incorporation of the resulting Safety Evaluation from approval of this License Amendment Request.

The change in the fire protection license conditions would allow for deviation from National Fire Protection Association (NFPA) 805 requirements to allow for currently installed flexible metallic conduit in configurations other than to connect components. It would also allow for deviation from NFPA 805 (Reference 3) requirements to allow for currently installed flexible metallic conduit, and future installation of flexible metallic conduit, in configurations other than in short lengths.

2.0 DETAILED DESCRIPTION

2.1 Request to use currently installed flexible metallic conduit in configuration other than to connect components

NFPA 805, Section 3.3.5.2, states:

"Only metal tray and metal conduits shall be used for electrical raceways. Thin wall metallic tubing shall not be used for power, instrumentation, or control cables. Flexible metallic conduits shall only be used in short lengths to connect components."

The CNP NFPA 805 Fire Protection Program Manual (NFPPM) Compliance Statement and Compliance Basis statements for this section of NFPA 805 currently reflect the following:

Compliance Statement:

Complies with clarification

Compliance Basis:

By Reference 1, Attachment A, Page A-28, I&M requested transition to NFPA 805, Section 3.3.5.2, based on CNP complies with clarification.

"All exposed electrical raceways are metal tray or metal conduit. In general, all cable is run through conduits or trays, with the exception of short cable air drops. The approximately 3 foot air drops align with the guidance of Section K.4 to NEI-04-02 (FAQ 06-0021) and are therefore acceptable."

Reference 1 addresses how CNP complies with the last sentence in NFPA 805, Section 3.3.5.2, regarding the use of flexible metallic conduit by reference to CNP's Engineering Specification for cable installation.

By Reference 2, Page 30, Section 3.1.1.2, the Nuclear Regulatory Commission (NRC) approved I&M's clarification as acceptable.

"For certain NFPA 805, Chapter 3, requirements, the licensee provided additional clarification when describing its means of compliance with the fundamental FPP element. In these instances, the NRC staff reviewed the additional clarifications and concluded that the licensee will meet the underlying requirement for the FPP element as clarified."

Contrary to NFPA 805 requirement to limit use to connect components, I&M has used flexible metallic conduit in other applications. Most of these other applications are original to plant construction. Flexible metallic conduit has been used at building transitions, building expansion joints, as raceway expansion joints, and in congested areas in place of complex rigid conduit or Electrical Metallic Tubing bends.

The CNP Engineering Specification for cable installation that was listed as a reference for the compliance statement above, did not originally contain any requirements limiting the use of flexible conduit to connect components. This Specification has subsequently been revised to only allow for the use of flexible metallic conduit to connect components. This was done to align with NFPA 805 and pertains to new installations. Some existing installed equipment deviates from these requirements.

In accordance with the Fire Protection License Condition, I&M requests NRC approval for the use of currently installed flexible metallic conduit, including future direct replacements, used in applications other than for the connection of components as an acceptable deviation from the requirements of NFPA 805, Chapter 3.

2.2 Request to use currently installed flexible metallic conduit and allow future use of flexible metallic conduit in lengths greater than short lengths

NFPA 805, Section 3.3.5.2, states:

"Only metal tray and metal conduits shall be used for electrical raceways. Thin wall metallic tubing shall not be used for power, instrumentation, or control cables. Flexible metallic conduits shall only be used in short lengths to connect components."

The CNP NFPA 805 NFPPM Compliance Statement and Compliance Basis statements for this section of NFPA 805 currently reflect the following:

Compliance Statement:

Complies with clarification

Compliance Basis:

By Reference 1, Attachment A, Page A-28, I&M requested transition to NFPA 805, Section 3.3.5.2 based on CNP complies with clarification as follows:

"All exposed electrical raceways are metal tray or metal conduit. In general, all cable is run through conduits or trays, with the exception of short cable air drops. The approximately 3 foot air drops align with the guidance of Section K.4 to NEI-04-02 (FAQ 06-0021) and are therefore acceptable."

Reference 1 addresses how CNP complies with the last sentence in NFPA 805, Section 3.3.5.2, regarding the use of flexible metallic conduit by reference to CNP's Engineering Specification for cable installation.

By Reference 2, Page 30, Section 3.1.1.2, the NRC approved I&M's clarification as acceptable as follows:

"For certain NFPA 805, Chapter 3, requirements, the licensee provided additional clarification when describing its means of compliance with the fundamental FPP element. In these instances, the NRC staff reviewed the additional clarifications and concluded that the licensee will meet the underlying requirement for the FPP element as clarified."

Contrary to the above established requirements, I&M has used flexible metallic conduits in lengths greater than short lengths extensively throughout the CNP power block. Prior to transition to NFPA 805 the CNP Engineering Specification for cables allowed the use of flexible metallic conduits up to 5 feet in length, and allowed for longer lengths when approved in accordance with the CNP configuration change process. This CNP Engineering Specification for cable installation was listed as a reference for the compliance statement above.

In accordance with the Fire Protection License Condition, I&M requests NRC approval for the use of flexible metallic conduit in lengths greater than short lengths as an acceptable deviation from the requirements of NFPA 805, Chapter 3.

3.0 TECHNICAL EVALUATION

3.1 Basis for the approval of request for this deviation for allowance to use currently installed flexible metallic conduit in configurations other than to connect components

Flexible metallic conduit has been a basic conduit type used historically at CNP. Although flexible metallic conduit is noncombustible, it is not credited to prevent or delay fire damage or circuit failures. Liquidtight Flexible Metallic Conduit (LFMC) is also used at CNP and is generically called flexible metallic conduit. LFMC is provided with a combustible jacket, but provides essentially the same protection as standard flexible metallic conduit. Based on a review within the CNP corrective action program, the presence of flexible metallic conduit has not adversely affected nuclear safety performance criteria, radiological release performance criteria, safety margin, or defense-in-depth. Its use in applications, other than to connect components, is the limited use of flexible metallic conduit to mitigate vibration, expansion, differential building movement, or complex installations. This use is reasonable and meets the intent of providing a robust, totally enclosed, metallic raceway.

The subsequent revision to the NFPA 805 Code (Reference 6) removed the restriction for use of flexible metallic conduit in its entirety, in order to be consistent with the National Electric Code (NEC) (Reference 7). Although CNP is excluded from the scope of the NEC, as the NEC is typically more conservative than standards appropriate for industrial applications, CNP staff does occasionally reference it as a source of conservative design inputs for plant design changes. Therefore, this serves as a reasonable benchmark for the design consideration of systems using flexible metallic conduit. The NEC allows for the use of flexible metallic conduit provided that it is adequately supported. The plant configuration change process ensures that any flexible metallic conduits in excess of 5 feet are structurally reviewed for adequacy. This requirement is accordingly met.

Additionally, the NEC requires that the flexible metallic conduit be protected from physical damage, which must be considered further. Most areas inside the power block are not subject to a potential for physical damage due to heavy equipment movement. Safety-significant systems, including flexible metallic conduits, are ruggedly designed to survive seismic events and the associated forces. Administrative controls, including human performance and equipment protection procedures, further limit the potential for flexible metallic conduit damage during work evolutions. Lastly, in the unlikely event damage does occur, the condition would be documented in CNP's corrective action program (CAP) upon discovery and would be evaluated immediately to determine impact on the plant. Damage to flexible metallic conduit is not likely to result in an unrecognized or immediate fire hazard. Because flexible metallic conduits are both adequately supported and protected from physical damage, they perform similarly to rigid metallic conduit. The protection provided by the use of flexible metallic conduit is, therefore, similar to that from rigid metallic conduit.

Acceptance Criteria Evaluation:

Nuclear Safety and Radioactive Release Performance Criteria:

The use of flexible metallic conduit does not affect NFPA 805 credited success paths, as conduit type is not credited to prevent cable damage during a fire. Therefore, there is no impact on the nuclear safety performance criteria.

The use of flexible metallic conduit does not have any impact on the radiological release performance criteria. The radiological release review was performed based on the manual fire suppression activities in areas containing, or potentially containing, radioactive materials and is not dependent on the type of conduit material. The conduit material does not change the radiological release evaluation which concludes that potentially contaminated water is contained and smoke is monitored. The conduits do not add additional radiological materials to the area or challenge systems boundaries.

Safety Margin and Defense-in-Depth:

Flexible metallic conduit is noncombustible. LFMC contains a combustible jacket, but this jacket is outside of a flexible metal core. The cables routed in flexible metallic conduits and LFMCs are fully enclosed by conduit and; therefore, are not susceptible to in-conduit self-ignition. Precautions and limitations on use and installation ensure that these materials do not impact the

analysis of the fire event. Therefore, the inherent safety margin and conservatisms in these analysis methods remain unchanged.

The three elements of defense-in-depth are 1) prevent fires from starting, 2) rapidly detect, control and extinguish fires that do occur, thereby limiting damage, and 3) provide adequate level of fire protection for systems and structures so that a fire will not prevent essential safety functions from being performed.

1) Prevent Fires from Starting:

The use of flexible metallic conduit does not create ignition sources and does not impact fire prevention. Flexible metallic conduit has been in use since original plant construction and is not expected to increase the potential for a fire to start. It should be noted that the subsequent revision to the NFPA 805 Code (Reference 6) removed the restriction for use of flexible metallic conduit in its entirety to be consistent with the NEC (Reference 7).

2) Rapidly Detect, Control and Extinguish Fires that Do Occur Thereby Limiting Damage:

The use of flexible metallic conduit has no impact on the ability of the automatic suppression or detection systems to perform their functions. Portable fire extinguishers and hose reel stations are available for manual firefighting activities by the site fire brigade and are unaffected by the presence of flexible metallic conduit.

3) Provide Adequate Level of Fire Protection for Systems and Structures so that a Fire Will Not Prevent Essential Safety Functions from Being Performed:

The use of flexible metallic conduit to connect components does not result in compromising automatic fire suppression functions, manual fire suppression functions, or post-fire safe shutdown capability and will not prevent essential safety functions from being performed, due to being adequately supported and protected from physical damage.

Conclusion:

NRC approval is requested for the existence of flexible metallic conduit used in applications other than to connect components as an acceptable deviation from the requirements of Section 3.3.5.2 of NFPA 805 (Reference 3).

I&M determined that the performance based approach satisfies the following criteria:

- A. Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;
- B. Maintains safety margins; and
- C. Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire nuclear safety success paths).

3.2 Basis for the approval of request for this deviation for allowance to use currently installed flexible metallic conduit and allow future use of flexible metallic conduit in lengths greater than short lengths

Flexible metallic conduit has been a basic conduit type used historically at CNP. Flexible metallic conduit is not credited to prevent or delay fire damage or circuit failures and is noncombustible; therefore, is similar to rigid metallic conduit. LFMC is also used at CNP and is generically called flexible metallic conduit. LFMC is provided with a combustible jacket, but provides essentially the same protection as standard flexible metallic conduit. Based on a review within the CNP CAP, the presence of flexible metallic conduit has not adversely affected nuclear safety performance criteria, radiological release performance criteria, safety margin, or defense-in-depth. Its use in short lengths was not prohibited by original plant design guidelines, which allowed for the use of longer lengths when approved within the plant configuration process.

The subsequent revision to the NFPA 805 Code (Reference 6) removed the restriction for use of flexible metallic conduit in its entirety, in order to be consistent with the NEC (Reference 7). Although CNP is excluded from the scope of the NEC, CNP staff does reference it as a source of design inputs for plant design changes. The NEC (Reference 7) serves as a reasonable benchmark for the design considerations of systems with flexible metallic conduit. The NEC allows for the use of flexible metallic conduit provided that it is adequately supported. The plant configuration change process ensures that any flexible metallic conduits in excess of 5 feet are structurally reviewed for adequacy. Therefore, this requirement is met.

Additionally, the NEC requires that the flexible metallic conduit be protected from physical damage, which must be considered further. Most areas inside the power block are not subject to a potential for physical damage due to heavy equipment movement. Safety-significant systems, including flexible metallic conduits, are ruggedly designed to survive seismic events and the associated forces. Administrative controls, including human performance and equipment protection procedures, further limit the potential for flexible metallic conduit damage during work evolutions. Lastly, in the unlikely event damage does occur, the condition would be documented in CNP's CAP upon discovery and would be evaluated immediately to determine impact on the plant. Damage to flexible metallic conduit is not likely to cause an unrecognized or immediate fire hazard. As flexible metallic conduits are both adequately supported and protected from physical damage, they perform similarly to rigid metallic conduit. The protection provided by the use of flexible metallic conduit is therefore similar to that from rigid metallic conduit.

No performance based evaluations (i.e., use of fire modeling) were performed on Variances from Deterministic Requirements (VFDRs) associated with flexible metallic conduits during the CNP transition to NFPA 805.

Acceptance Criteria Evaluation:

Nuclear Safety and Radioactive Release Performance Criteria:

The use of flexible metallic conduit does not affect NFPA 805 credited success paths, as conduit type is not credited to prevent cable damage during a fire. Therefore, there is no impact on the nuclear safety performance criteria.

The use of flexible metallic conduit does not have any impact on the radiological release performance criteria. The radiological release review was performed based on the manual fire

suppression activities in areas containing, or potentially containing, radioactive materials and is not dependent on the type of conduit material. The conduit material does not change the radiological release evaluation which concludes that potentially contaminated water is contained and smoke is monitored. The conduits do not add additional radiological materials to the area or challenge systems boundaries.

Safety Margin and Defense-in-Depth:

Flexible metallic conduit is noncombustible. LFMC contains a combustible jacket, but this jacket is outside of a flexible metal core. The conductors routed in flexible metallic conduits and LFMCs are fully enclosed by conduit; therefore, are not susceptible to in-conduit self-ignition. Precautions and limitations on use and installation ensure that these materials do not impact the analysis of the fire event. Therefore, the inherent safety margin and conservatism in these analysis methods remain unchanged.

The three elements of defense-in-depth are 1) prevent fires from starting, 2) rapidly detect, control and extinguish fires that do occur, thereby limiting damage, and 3) provide adequate level of fire protection for systems and structures so that a fire will not prevent essential safety functions from being performed.

1) Prevent Fires from Starting:

The use of flexible metallic conduit does not create ignition sources and does not impact fire prevention. Flexible metallic conduit has been in use since original plant construction and is not expected to increase the potential for a fire to start. The use of flexible metallic conduit is allowed by the NEC and the CNP Engineering Specification for cables. Additionally, it should be noted that the subsequent revision to the NFPA 805 Code (Reference 6) removed the requirement for use of flexible metallic conduit in its entirety to be consistent with the NEC.

2) Rapidly Detect, Control and Extinguish Fires that Do Occur Thereby Limiting Damage:

The use of flexible metallic conduit has no impact on the ability of the automatic suppression or detection systems to perform their functions. Portable fire extinguishers and hose reel stations are available for manual firefighting activities by the site fire brigade and are unaffected by the presence of flexible metallic conduit.

3) Provide Adequate Level of Fire Protection for Systems and Structures so that a Fire Will Not Prevent Essential Safety Functions from Being Performed:

The use of flexible metallic conduit in greater than short lengths does not result in compromising automatic fire suppression functions, manual fire suppression functions, or post-fire safe shutdown capability and will not prevent essential safety functions from being performed, due to being adequately supported and protected from physical damage.

Conclusion:

NRC approval is requested to allow for the use of flexible metallic conduit (including LFMC) in configuration other than in short lengths as an acceptable variance from the requirements of Section 3.3.5.2 of NFPA 805 (Reference 3).

This evaluation determined that the performance-based approach utilized to evaluate a variance from the requirements of NFPA 805 Chapter 3:

- A. Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;
- B. Maintains safety margins; and
- C. Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire nuclear safety success paths).

4.0 REGULATORY EVALUATION**4.1 Applicable Regulatory Requirements/Criteria****Regulatory Requirements**

On July 16, 2004, the NRC amended 10 CFR 50.48, Fire Protection, to add a new subsection, 10 CFR 50.48(c); which establishes alternative fire protection requirements. 10 CFR 50.48 endorses, with exceptions, NFPA 805 (2001), as a voluntary alternative for demonstrating compliance with 10 CFR 50.48 Section (b), Appendix R, and Section (f), Decommissioning.

The voluntary adoption of 10 CFR 50.48(c) by I&M does not eliminate the need to comply with 10 CFR 50.48(a) and to the Plant Specific Design Criteria (PSDC) listed below.

As described in Updated Final Safety Analysis Report, Section 1.4, the PSDC define the principal criteria and safety objectives for the CNP design. The following PSDC are relevant to the proposed amendment:

PSDC CRITERION 3 Fire Protection

A reactor facility shall be designed to ensure that the probability of events such as fires and explosions and the potential consequences of such events will not result in undue risk to the health and safety of the public. Noncombustible and fire resistant materials shall be used throughout the facility wherever necessary to preclude such risk, particularly in areas containing critical portions of the facility such as containment, control room, and components of engineered safety features.

Primary emphasis is directed at minimizing the risk of fire by use of thermal insulation and adhesives which do not support combustion, flame retardant wiring, adequate overload and short circuit protection, and the elimination of combustible trim and furnishings. The facility is equipped with protection systems for controlling fires, which might originate in plant equipment.

The containment and auxiliary building ventilation systems can be operated from the control room of the corresponding unit as required to limit the potential consequences of fire. Critical areas of the containment, the control room and the areas containing components of engineered safety features, have detectors to alert the control room of the possibility of fire so that prompt action may be taken to prevent significant damage.

The proposed changes to allow for the deviation do not allow for any physical changes in the plant. The deviations being requested are for currently installed and future installations of equipment in the plant which will have already been evaluated and which continue to meet all of the PSDC requirements. The proposed changes are consistent with the above regulatory requirements and criteria. Therefore, the proposed changes will assure safe operation by continuing to meet applicable regulations and requirements.

4.2 Precedent

The NRC has approved a similar license amendment request to allow for deviations from NFPA 805 requirements to allow for use of flexible metallic conduit in lengths greater than short lengths as follows:

Letter from F. E. Saba (NRC) to J. W. Shea (Tennessee Valley Authority), "Browns Ferry Nuclear Plant, Units 1, 2, and 3 - Issuance of Amendments to Revise NFPA 805 Performance-Based Standard For Fire Protection For Light Water Reactor Electric Generating Plants - Revision to Table S-2 and Table S-3 (CAC NOS. MF9814, M9815, AND M9816; EPID L-2017-LLA-0234)," dated December 19, 2017, (Agencywide Documents Access and Management System Accession Number ML17317A422).

4.3 No Significant Hazards Consideration

In accordance with 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, is requesting amendments to Facility Operating License Nos. DPR-58 and DPR-74 for CNP, Units 1 and 2, respectively.

The proposed changes will modify the fire protection license condition in each unit's license, to incorporate the resulting Safety Evaluation that approves this License Amendment Request. The change in the fire protection license conditions would allow for deviation from National Fire Protection Association (NFPA) 805 requirements to allow for currently installed flexible metallic conduit to be used other than to connect components and to allow for currently installed and future installation of flexible metallic conduit that is greater than short lengths.

I&M has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92(c), "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 use of flexible metallic conduit to be used other than to connect components or to be used in greater than short lengths does not impact fire prevention. Flexible metallic conduit has been in use since original plant construction, is allowed by the National Electrical Code and is not expected to increase the potential for a fire to start.

The introduction of flexible metallic conduit does not create ignition sources and does not impact fire prevention. Cable installation procedures are utilized to ensure that the use of flexible metallic conduit is in accordance with the CNP design change process. Also, the use of flexible metallic conduit does not result in compromising automatic fire suppression functions, manual fire suppression functions, fire protection for systems and structures, or post-fire safe shutdown capability.

Therefore, the proposed changes do 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 do allow future physical changes to the facility that deviate from NFPA 805 requirements. However, the proposed changes do not alter any assumptions made in the safety analyses, nor do they involve any changes to plant procedures for ensuring that the plant is operated within analyzed limits. As such, no new failure modes or mechanisms that could cause a new or different kind of accident from any previously evaluated are being introduced.

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

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

Response: No.

The proposed changes do not alter the manner in which safety limits or limiting safety system settings are determined. No changes to instrument/system actuation setpoints are involved. The safety analysis acceptance criteria are not affected by this change and the proposed changes will not permit plant operation in a configuration outside the design basis.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, I&M concludes that the proposed amendments do not involve a 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.

4.4 Conclusions

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.

5.0 ENVIRONMENTAL CONSIDERATION

I&M has evaluated the proposed amendments for environmental considerations. The review has resulted in the determination that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20. However, the proposed amendments do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendments meet 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 amendments.

6.0 REFERENCES

1. Letter from M. H. Carlson, Indiana Michigan Power Company, I&M, to Nuclear Regulatory Commission (NRC) Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1 and Unit 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, Agencywide Documents Access and Management System (ADAMS) Accession No. ML11188A145.
2. Letter from T. J. Wengert, NRC, to L. J. Weber, I&M, "Donald C. Cook Nuclear Plant, Units 1 And 2 – Issuance of Amendments Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance with 10 CFR 50.48(c) (TAC Nos. ME6629 and ME6630)," dated October 24, 2013, ADAMS Accession No. ML13140A398.
3. NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.
4. NUREG/CR-6850, EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities – Final Report.
5. Nuclear Energy Institute 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program under 10 CFR 50.48(c), Rev. 2, ADAMS Accession No. ML060880050.

6. NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2006 Edition.
7. NFPA 70, "National Electric Code," 2017 Edition.

Enclosure 3 to AEP-NRC-2018-10

**Donald C. Cook Nuclear Plant Unit 1 License Condition
Pages Marked To Show Proposed Changes**

Enclosure 3 to AEP-NRC-2018-10

Unit 1 License Condition 2.C.(4) is proposed to read as follows (added text is outlined):

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, June 21, 2013, and September 16, 2013; and license amendment request dated June 11, 2018, and as approved in the Safety Evaluation^s dated October 24, 2013, and May xx, 2019. 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.

Enclosure 4 to AEP-NRC-2018-10

**Donald C. Cook Nuclear Plant Unit 2 License Condition
Pages Marked To Show Proposed Changes**

Enclosure 4 to AEP-NRC-2018-10

Unit 2 License Condition 2.C.(3)(o) is proposed to read as follows (added text is outlined):

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, June 21, 2013, and September 16, 2013; and license amendment request dated June 11, 2018, and as approved in the Safety Evaluations dated October 24, 2013, and May xx, 2019. 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