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November 6, 2013

AEP-NRC-2013-50  
10 CFR 50.90

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

**SUBJECT: Donald C. Cook Nuclear Plant Unit 1 and Unit 2  
Docket Nos.: 50-315 and 50-316  
License Amendment Request Regarding Containment Divider Barrier Seal**

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, proposes to amend the Appendix A Technical Specifications (TS) to Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to change TS 3.6.13, Divider Barrier Integrity, Surveillance Requirement (SR) 3.6.13.5 for the divider barrier seal inspection. I&M has evaluated the proposed changes in accordance with 10 CFR 50.92 and concluded that they involve no significant hazards consideration.

Enclosure 1 to this letter provides an affirmation statement pertaining to the information contained herein. Enclosure 2 provides I&M's evaluation of the proposed TS change. Enclosures 3 and 4 provide Unit 1 and Unit 2 TS pages, respectively, marked to show the proposed changes. Enclosures 5 and 6 provide Unit 1 and Unit 2 TS Bases pages, respectively, marked to show the proposed changes. TS Bases markups are included for information only. New clean Unit 1 and Unit 2 TS pages with proposed changes incorporated will be provided to the Nuclear Regulatory Commission (NRC) Licensing Project Manager when requested.

I&M requests approval of the proposed change in accordance with the NRC's normal review and approval schedule. The proposed change will be implemented within 90 days of NRC approval.

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 made in this letter. 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

A001  
MRR

JMT/kmh

Enclosures:

1. Affirmation
2. Proposed License Amendment Request Regarding Containment Divider Barrier Seal
3. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Pages Marked To Show Proposed Changes
4. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Pages Marked To Show Proposed Changes
5. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Bases Pages Marked To Show Proposed Changes
6. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Bases Pages Marked To Show Proposed Changes

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

Enclosure 1 to AEP-NRC-2013-50

**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 6 DAY OF November, 2013

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

**DANIELLE BURGOYNE**  
Notary Public, State of Michigan  
County of Berrien  
My Commission Expires 04-04-2018  
Acting in the County of Berrien

My Commission Expires 04-04-2018

## **Enclosure 2 to AEP-NRC-2013-50**

### **Proposed License Amendment Request Regarding Containment Divider Barrier Seal**

#### **1.0 SUMMARY DESCRIPTION**

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, proposes to amend the Appendix A Technical Specifications (TS) to Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to change TS 3.6.13, Divider Barrier Integrity, Surveillance Requirement (SR) 3.6.13.5 for the divider barrier seal inspection.

#### **2.0 DETAILED DESCRIPTION**

##### **2.1 Proposed Change**

TS SR 3.6.13.5 requires that 95% of the divider barrier seal be inspected on a twenty-four (24) month frequency to verify that the seal and seal mounting bolts are properly installed. I&M proposes to modify this SR to incorporate two changes. The first change will replace the word "bolts" with the word "connections". This change accommodates the various types of devices (studs, nuts, etc.) that are used to hold the seal in place. For the second change, I&M proposes to substitute the phrase "properly installed" with the phrase "installed such that the total divider barrier bypass area is maintained within design limits."

Enclosures 3 and 4 to this letter provide the Unit 1 and Unit 2 TS pages, respectively, marked to show proposed changes. New text on these pages is marked with a single-line border. New clean Unit 1 and Unit 2 TS pages with proposed changes incorporated will be provided to the Nuclear Regulatory Commission (NRC) Licensing Project Manager when requested. Enclosures 5 and 6 to this letter provide the Unit 1 and Unit 2 TS Bases pages, respectively, marked to show proposed changes. These are provided for informational purposes. The TS Bases changes will be made in accordance with the CNP TS Bases Control Program.

##### **2.2 Background**

The containment is divided into three main compartments. These are:

- a) The lower compartment.
- b) The upper compartment.
- c) The ice condenser compartment.

The lower compartment encloses the reactor system, steam generators, and associated auxiliary systems equipment. The upper compartment contains the refueling cavity, refueling equipment and polar crane used during refueling and maintenance operations. The upper and lower compartments are separated by a divider barrier. The ice condenser compartment contains the ice bed.

It is an essential requirement of an ice condenser containment that the steam and air flowing from the lower containment compartment in the event of a failure of a pipe in the Reactor

Coolant System be routed to the upper compartment via the ice condenser. To accomplish this, a structural barrier within the containment vessel separates the lower and upper containment compartments. This divider barrier includes the walls of the ice compartment, the upper compartment deck, the compartments enclosing the upper portion of the steam generators and pressurizer, the bulkhead separating the reactor cavity from the refueling canal, and portions of the walls of the refueling canal.

The divider barrier between the upper and lower containment compartment is designed to carry the differential pressure between the lower and upper compartments during the postulated loss-of-coolant accident. It is assumed in the post LOCA containment pressure analysis that there will be minimal steam bypass of the ice condenser, limited by the divider barrier structure and its flexible seals.

The divider barrier seal provides a pressure boundary between the lower and upper containment compartments of the containment structure and is located on the boundary of these compartments. The divider barrier seal is a structurally mounted flexible seal backed up by a steel plate that prevents the flow of steam and air from bypassing the ice condenser. The backing plate and supporting steel seal assembly are designed to withstand a peak pressure loading created by a Design Basis Accident.

### **3.0 TECHNICAL EVALUATION**

#### **3.1 Technical Basis for Change**

The proposed change to the wording of SR 3.6.13.5 involves two changes. The first change will encompass the various types of connections used to install the divider barrier seal rather than the wording of "bolts," which has a specific definition. The second change addresses installation discrepancies that may be discovered during the divider barrier seal inspection. Due to the restrictive wording of the existing SR, if a divider barrier seal installation discrepancy, such as one loose nut, is discovered during seal inspection, I&M evaluates the SR as not met and considers the divider barrier seal inoperable. The SR currently reflects the divider barrier design installation requirements and not the actual safety function requirement of the seal. Normally SR's reflect the requirements necessary to ensure the safety function is met and therefore, the LCO is met. With the revised SR, an engineering evaluation of the deficiency is performed to determine if the total seal bypass area is below the design limit. If the total seal bypass area is below the design limit, the SR would be considered met and the divider barrier seal would be considered operable. If the design limit is found to be exceeded, the divider barrier seal would be considered inoperable and LCO 3.6.13, Condition B would be applicable. In the event that a divider barrier seal installation discrepancy is found during power operation, the ability to consider the divider barrier seal operable based upon a satisfactory engineering evaluation would preclude the need to take action to shut down the reactor unnecessarily if repair cannot be completed within the LCO Completion Time. In this instance, the risk associated with a unit shutdown would be greater than continued operation with the divider barrier seal installation discrepancy that does not affect safety function.

If installation discrepancies are identified they are entered into the Corrective Action program where operability is determined. Structural engineering evaluations are performed to determine

if the discrepancy would provide additional seal bypass by means of deflection from its normal configuration. In addition, the structural evaluation normally includes a stress analysis. An additional evaluation confirms that the total bypass area remains below design limits. If discrepancies are found, they are entered into the Corrective Action program and repaired in accordance with the CNP Maintenance and Work Control program with appropriate risk consideration. Additionally, all identified seal bypasses are formally tracked in a controlled document and each additional evaluated bypass value is added to a total bypass value to ensure total bypass remains below the design limit. The proposed change continues to ensure that quality is maintained and that seal performance is within the design limits, such that safety function continues to be met.

Recent instances of bolt / seal configuration problems were evaluated for their impact on divider barrier bypass. The results of the evaluations concluded each time that the total divider barrier bypass area would remain below design limits.

### **3.2 Previous Surveillance Failures**

Previous instances of a failed surveillance for divider barrier integrity were primarily the result of improperly installed bolts and seal configurations. During performance of the surveillance during refueling outages, if an improper installation was identified, such as a loose or missing nut, it was concluded that the SR was not met and the divider barrier was inoperable for the entire length of the previous operating cycle. This conclusion was based on the as-found condition of the seal and mounting bolts and the fact that no maintenance is performed on the divider barrier seal during the operating cycle. Consequently, Licensee Event Reports (LER) were submitted to the NRC as required by 10 CFR 50.73. One instance of the surveillance not being met occurred as a result of improper maintenance activities during a refueling outage causing the SR to not be met. Subsequently, the Unit changed from Mode 5 to Mode 4 creating a violation of Technical Specification requirements resulting in a LER. Each instance of bolt installation and seal configuration problems was evaluated for its impact on divider barrier bypass. The results of the evaluations concluded each time that the total divider barrier bypass area would remain below design limits and that safety function was not adversely affected.

## **4.0 REGULATORY EVALUATION**

### **4.1 Applicable Regulatory Requirements/Criteria**

#### Regulatory Requirements

##### TS SR 3.6.13.5

Title 10 Code of Federal Regulations (CFR) 50.36, "Technical specifications" states:

(c) Technical specifications will include items in the following categories:

3) *Surveillance requirements.* Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and

components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The proposed change will modify SR 3.6.13.5, for the divider barrier seal inspection. The current SR directs that 95% of the divider barrier seal and bolts be visually inspected and found to be "properly installed." This phrase is overly restrictive as it allows no tolerance for minor installation discrepancies that do not cause the seal to be unable to fulfill its safety function. The proposed modification to the SR provides an acceptance criterion for the surveillance that is based upon its design function and is appropriately bounded by analysis. This allows engineering evaluation of discrepancies to determine if the surveillance has been met. The proposed change continues to ensure that quality is maintained and that seal performance is within appropriate safety limits.

Therefore, the requirements of Title 10 CFR 50.36 continue to be met with the changes proposed in this license amendment request for TS SR 3.6.13.5.

#### General Design Criteria

The construction permits for CNP were issued and the majority of construction was completed prior to issuance of 10 CFR 50, Appendix A, General Design Criteria, in 1971 by the Atomic Energy Commission (AEC). CNP was designed and constructed to comply with the AEC General Design Criteria (GDC) as proposed on July 10, 1967. The application of the AEC proposed General Design Criteria to the CNP is contained in the CNP Updated Final Safety Analysis Report (UFSAR) as the Plant Specific Design Criteria (PSDC). Appendix A of 10 CFR Part 50 GDC differs both in numbering and content from the PSDC for CNP.

The impact of the SR changes proposed in this submittal on the PSDC applicable to this license amendment request are discussed below:

#### PSDC 10 Reactor Containment

The CNP UFSAR states:

"The containment structure shall be designed (a) to sustain without undue risk to the health and safety of the public the initial effects of gross equipment failures, such as a large reactor coolant pipe break, without loss of required integrity, and (b) together with other engineered safety features as may be necessary, to retain for as long as the situation requires the functional capability of the containment to the extent necessary to avoid undue risk to the health and safety of the public.

The reactor containment is a reinforced concrete structure consisting of a vertical cylinder, a hemispherical dome and a flat base. The interior is divided into three volumes, a lower volume which houses the reactor and Reactor Coolant System, an intermediate volume housing the energy absorbing ice bed in which steam is condensed and an upper volume which accommodates the air displaced from the other two volumes during a loss-of-coolant accident.

The condensation of steam in the ice bed limits the containment pressure to values substantially below those for a comparable dry-type containment under the same conditions. The ice condenser containment, together with the containment spray system, provides the functional capability of containment for as long as necessary following an accident. The design pressure of the containment exceeds the peak pressure occurring as the result of the complete blowdown of the reactor coolant through any rupture of the Reactor Coolant System up to and including the hypothetical double-ended severance of a reactor coolant pipe. The design pressure is not exceeded during subsequent long-term pressure transients resulting from the combined effects of heat sources such as residual heat and metal-water reaction with operation of one train of the emergency core cooling and containment spray systems. All piping systems which penetrate the containment are anchored at the containment wall. The penetrations for the main steam, feedwater, blowdown and samples lines are designed so that the containment is not breached due to a hypothesized pipe rupture.”

In the event of a failure of a pipe in the Reactor Coolant System, the steam and air flowing from the lower containment compartment is routed to the upper compartment via the ice bed in the ice condenser. To accomplish this, the divider barrier functions as a structural barrier, separating the lower and upper containment compartments. The proposed change does not affect the divider barrier function.

#### PSDC 49 Reactor Containment Design Basis

The CNP UFSAR states:

“The reactor containment structure, including openings and penetrations, and any necessary containment heat removal systems, shall be designed so that the leakage of radioactive materials from the containment structure under conditions of pressure and temperature resulting from the largest credible energy release following a loss-of-coolant accident, including the calculated energy from metal-water or other chemical reactions that could occur as a consequence of failure of any single active component in the emergency core cooling system will not result in undue risk to the health and safety of the public.

The reactor containment structure and penetrations, with the aid of containment heat removal systems including the ice bed, are designed to limit below 10 CFR 100 values the leakage of radioactive fission products from the containment under those conditions that would result from the largest credible energy release following a loss-of-coolant accident, including a margin to cover the effects of metal-water reaction or other undefined energy sources.”

In the event of a loss-of-coolant accident, the steam and air flowing from the lower containment compartment is routed to the upper compartment via the ice bed in the ice condenser. To accomplish this, the divider barrier functions as a structural barrier, separating the lower and upper containment compartments. The proposed change does not affect the divider barrier function.

With the changes proposed in this license amendment request, the requirements of PSDC 10 and 49 continue to be met and the plant TS will continue to provide the basis for safe plant operation.

#### **4.2 Precedent**

No precedents were identified where a licensee requested a change to a Surveillance Requirement from hardware installation verification to an evaluation that safety analysis assumptions are met.

#### **4.3 No Significant Hazards Consideration Determination**

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, proposes to amend the Appendix A Technical Specifications (TS) to Facility Operating Licenses DPR-58 and DPR-74. I&M proposes a change to TS 3.6.13, Divider Barrier Integrity, Surveillance Requirement (SR) 3.6.13.5 for the divider barrier seal inspection. I&M has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No

The proposed changes do not involve changes to the installed structures, systems or components of the facility. The affected component (divider barrier seal) is not an accident initiator and therefore, this change does not involve a significant increase in the probability of an accident. The proposed change is considered adequate to ensure continued operability of the divider barrier. Since the divider barrier will continue to be available to perform its accident mitigation function, the consequences of accidents previously evaluated are not increased.

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

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

Response: No

The proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change does not introduce new accident initiators or impact assumptions made in the safety analysis. Testing requirements continue to demonstrate that the Limiting Conditions for Operation are met and the system components are functional.

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

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

Response: No

The proposed change does not exceed or alter a design basis or safety limit, so there is no significant reduction in the margin of safety.

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

Based on the above, I&M concludes that the proposed amendment 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.

#### **4.4 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 adverse to the common defense and security or to the health and safety of the public.

#### **5.0 ENVIRONMENTAL CONSIDERATION**

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(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 amendment.

#### **6.0 REFERENCES**

Donald C Cook Nuclear Plant Updated Final Safety Analysis Report

**Enclosure 3 to AEP-NRC-2013-50**

**DONALD C. COOK NUCLEAR PLANT UNIT 1 TECHNICAL SPECIFICATION PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.6.13.1	Verify, by visual inspection, all personnel access doors and equipment hatches between upper and lower containment compartments are closed.	Prior to entering MODE 4 from MODE 5
SR 3.6.13.2	Verify, by visual inspection, that the seals and sealing surfaces of each personnel access door and equipment hatch have: <ul style="list-style-type: none"> <li>a. No detrimental misalignments;</li> <li>b. No cracks or defects in the sealing surfaces; and</li> <li>c. No apparent deterioration of the seal material.</li> </ul>	Prior to final closure after each opening  <u>AND</u>  -----NOTE----- Only required for seals made of resilient materials -----  10 years
SR 3.6.13.3	Verify, by visual inspection, each personnel access door or equipment hatch that has been opened for personnel transit entry is closed.	After each opening
SR 3.6.13.4	Remove two divider barrier seal test coupons and verify: <ul style="list-style-type: none"> <li>a. Both test coupons' tensile strength is <math>\geq</math> 120 psi; and</li> <li>b. Both test coupons' elongation is <math>\geq</math> 100%.</li> </ul>	24 months
SR 3.6.13.5	Visually inspect $\geq$ 95% of the divider barrier seal length, and verify: <ul style="list-style-type: none"> <li>a. <del>Seal and seal mounting bolts are properly installed; and</del> ← <span style="border: 1px solid black; padding: 2px;">INSERT A</span></li> <li>b. Seal material shows no evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearance.</li> </ul>	24 months

Insert for SR 3.6.13.5

INSERT A: Seal and seal mounting connections are installed such that the total divider barrier bypass area is maintained within design limits; and

**Enclosure 4 to AEP-NRC-2013-50**

**DONALD C. COOK NUCLEAR PLANT UNIT 2 TECHNICAL SPECIFICATION PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.6.13.1	Verify, by visual inspection, all personnel access doors and equipment hatches between upper and lower containment compartments are closed.	Prior to entering MODE 4 from MODE 5
SR 3.6.13.2	Verify, by visual inspection, that the seals and sealing surfaces of each personnel access door and equipment hatch have: <ul style="list-style-type: none"> <li>a. No detrimental misalignments;</li> <li>b. No cracks or defects in the sealing surfaces; and</li> <li>c. No apparent deterioration of the seal material.</li> </ul>	Prior to final closure after each opening  <u>AND</u>  -----NOTE----- Only required for seals made of resilient materials -----  10 years
SR 3.6.13.3	Verify, by visual inspection, each personnel access door or equipment hatch that has been opened for personnel transit entry is closed.	After each opening
SR 3.6.13.4	Remove two divider barrier seal test coupons and verify: <ul style="list-style-type: none"> <li>a. Both test coupons' tensile strength is <math>\geq 120</math> psi; and</li> <li>b. Both test coupons' elongation is <math>\geq 100\%</math>.</li> </ul>	24 months
SR 3.6.13.5	Visually inspect $\geq 95\%$ of the divider barrier seal length, and verify: <ul style="list-style-type: none"> <li>a. <del>Seal and seal mounting bolts are properly installed; and</del> ← <span style="border: 1px solid black; padding: 2px;">INSERT A</span></li> <li>b. Seal material shows no evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearance.</li> </ul>	24 months

Insert for SR 3.6.13.5

INSERT A: Seal and seal mounting connections are installed such that the total divider barrier bypass area is maintained within design limits; and

**Enclosure 5 to AEP-NRC-2013-50**

**DONALD C. COOK NUCLEAR PLANT UNIT 1 TECHNICAL SPECIFICATION BASES PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**(INFORMATIONAL)**

BASES

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SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.13.4

Conducting periodic physical property tests on divider barrier seal test coupons provides assurance that the seal material has not degraded in the containment environment, including the effects of irradiation with the reactor at power. The required tests include a tensile strength test and a test for elongation. The Frequency of 24 months was developed considering such factors as the known resiliency of the seal material used, the inaccessibility of the seals and absence of traffic in their vicinity, and the unit conditions needed to perform the SR. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.13.5

Visual inspection of the seal around the perimeter provides assurance that the seal is properly secured in place, such that the total divider barrier bypass area is less than or equal to the design basis limit of 7 square feet. The Frequency of 24 months was developed considering such factors as the inaccessibility of the seals and absence of traffic in their vicinity, the strength of the bolts connections and mechanisms used to secure the seal, and the unit conditions needed to perform the SR. Examples of acceptable connections include bolts, studs, pins, screws, nuts, welds, and rivets. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

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REFERENCES

1. UFSAR, Section 14.3.4.1.3.1.3.
  2. UFSAR, Section 14.3.4.1.3.1.1.e
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**Enclosure 6 to AEP-NRC-2013-50**

**DONALD C. COOK NUCLEAR PLANT UNIT 2 TECHNICAL SPECIFICATION BASES PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**(INFORMATIONAL)**

BASES

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SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.13.4

Conducting periodic physical property tests on divider barrier seal test coupons provides assurance that the seal material has not degraded in the containment environment, including the effects of irradiation with the reactor at power. The required tests include a tensile strength test and a test for elongation. The Frequency of 24 months was developed considering such factors as the known resiliency of the seal material used, the inaccessibility of the seals and absence of traffic in their vicinity, and the unit conditions needed to perform the SR. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.13.5

Visual inspection of the seal around the perimeter provides assurance that the seal is properly secured in place, such that the total divider barrier bypass area is less than or equal to the design basis limit of 7 square feet. The Frequency of 24 months was developed considering such factors as the inaccessibility of the seals and absence of traffic in their vicinity, the strength of the bolts connections and mechanisms used to secure the seal, and the unit conditions needed to perform the SR. Examples of acceptable connections include bolts, studs, pins, screws, nuts, welds, and rivets. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

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REFERENCES

1. UFSAR, Section 14.3.4.1.3.1.3.
  2. UFSAR, Section 14.3.4.1.3.1.1.e
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