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10 CFR 74.7

February 04, 2016  
Serial: MNS-16-009

U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

ATTENTION: Document Control Desk

Duke Energy Carolinas, LLC (Duke Energy)  
McGuire Nuclear Station, Units 1 and 2  
Docket Nos. 50-369 and 50-370  
Renewed License Nos. NPF-9 and NPF-17

Subject: Response to NRC letter dated December 9, 2015, "McGuire Nuclear Station, Units 1 AND 2: Request for Additional Information Regarding Request for Exemption from Title 10 of the Code of Federal Regulations (10 CFR) Part 74.19(c) (TAC Nos. MF6693 and MF6694)

By letter dated August 17, 2015, as supplemented by letter dated October 6, 2015, McGuire submitted a request for exemption from 10 CFR Part 74.19(c). The exemption would allow an alternative to the physical inventory requirements for movable incore detectors.

The regulations in 10 CFR 74.19 specify recordkeeping requirements applicable to Special Nuclear Material (SNM). The regulatory requirement in 10 CFR 74.19(c) stipulates that licensees must conduct a physical inventory of all SNM in their possession under license at intervals not to exceed 12 months.

The NRC staff reviewed the exemption request and determined that additional information was necessary to enable the staff to disposition the request.

Attachment 1 provides the requested information.

Attachment 2 identifies two regulatory commitments in support of the exemption.

A001  
NRR

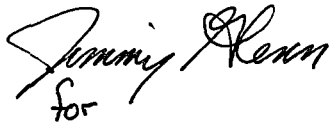
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Questions regarding this submittal should be directed to George Murphy, McGuire Regulatory Affairs at (980) 875-5715.

Sincerely,

A handwritten signature in black ink that reads "Jimmy Kern". The signature is written in a cursive style. Below the signature, the word "for" is written in a smaller, simpler font.

Steven D. Capps

Attachment:

1. Response to Request for Additional Information
2. Regulatory Commitments

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cc w/ Attachment:

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U.S. Nuclear Regulatory Commission  
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**ATTACHMENT 1**

**Response to Request for Additional Information**

**REQUEST FOR ADDITIONAL INFORMATION**  
**OFFICE OF NUCLEAR REACTOR REGULATION**  
**RELATED TO REQUEST FOR EXEMPTION FROM**  
**TITLE 10 OF THE CODE OF FEDERAL REGULATIONS PART 74.19(c)**  
**.DUKE ENERGY CAROLINAS, LLC**  
**MCGUIRE NUCLEAR STATION, UNITS 1 AND 2**  
**DOCKET NOS. 50-369 AND 50-376**

By letter dated August 17, 2015, as supplemented by letter dated October 6, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML152398240 and ML15300A282, respectively), Duke Energy Carolinas, LLC (Duke) requested the U.S. Nuclear Regulatory Commission (NRC) to authorize exemption from the requirements of Title 10 of the Code of Federal Regulations (10 CFR) Part 74.19(c) for the McGuire Nuclear Station, Units 1 and 2. The exemption would allow an alternative to the physical inventory requirements for movable incore detectors.

The regulations in 10 CFR 74.19 specify recordkeeping requirements applicable to special nuclear material (SNM). In addition, the regulatory requirement in 10 CFR 74.19(c) stipulates that the licensee must conduct a physical inventory of all SNM in its possession under license at intervals not to exceed 12 months. The NRC staff has reviewed the request and has determined that the following additional information is necessary to enable the NRC staff to make an independent assessment regarding its technical review.

**RAI 1**

Provide a completion date for modifications to the incore storage sleeves to make the incore detectors within the storage sleeves inaccessible.

**RAI 2**

Provide an implementation date for modifications to ensure the incore detectors meet the requirements of inaccessibility.

**RAI 3**

*Provide administrative procedures and controls to be established so that verification of the storage pipes shall be performed during refueling outages and that records concerning the location and unique identity of incore detectors are accurate.*

**RAI 4**

Confirm that the acronym "2EOC23" used in the exemption request means Unit 2, end of cycle 23 and the acronym "1EOC24" means Unit 1, end of cycle 24.

**RAI #1**

Provide a completion date for modifications to the incore storage sleeves to make the incore detectors within the storage sleeves inaccessible.

**McGuire Response:**

The Unit 2 hardware modification making the incore detectors within the storage sleeves inaccessible was completed September 12, 2015. The Unit 1 modification is planned to be completed before unit startup from 1EOC24 which is currently scheduled for April 18, 2016.

**RAI #2**

Provide an implementation date for modifications to ensure the incore detectors meet the requirements of inaccessibility.

**McGuire Response:**

The Unit 2 hardware modification was fully implemented as of September 12, 2015. The Unit 1 modification will be implemented during 1EOC24 and completed prior to unit startup which is currently scheduled for April 18, 2016.

**RAI #3**

Provide administrative procedures and controls to be established so that verification of the storage pipes shall be performed during refueling outages and that records concerning the location and unique identity of the incore detectors are accurate.

**McGuire Response:**

The modification includes cover plates to block access to the storage sleeves. The cover plates are anchored to the containment concrete wall with bolts and tamper proof wire cable running through the bolts. The wire cable will be secured by a padlock and Tamper Indicating Device (TID) with a unique identification number. The Radiation Protection (RP) Group will control keys for the locks. RP procedures HP/1/B/1006/024 and HP/2/B/1006/024, Outage Controls and Surveillances, will be revised to incorporate the administrative guidance in a new enclosure for the RP Group to verify the integrity of the TID and record the unique identification number of each TID.

The RP TID verification enclosure will be forwarded to the Reactor Engineering (RE) Group after completion of the verification. Reactor Engineering procedure PT/0/A/4550/003, Physical Inventory of Reportable Special Nuclear Material, will be revised to incorporate the new detector storage sleeve cover plates as an item that needs to be addressed in the inventory.

Reactor Engineering procedure PT/0/A/4150/032, Audit of Movable Incore Detector Records provides the guidance for documentation and record keeping for the incore detectors. This procedure ensures that records concerning the location and unique identity of the incore detectors are accurate.

**RAI #4**

Confirm that the acronym "2EOC23" used in the exemption request means Unit 2, end of cycle 23 and the acronym "1EOC24" means Unit 1, end of cycle 24.

**McGuire Response:**

"2EOC23" means Unit 2, End-of-Cycle 23

"1EOC24" means Unit 1, End-of-Cycle 24

## ATTACHMENT 2

### Regulatory Commitments

#	Regulatory Commitments	Due Date
1	Complete the modifications that make access to the incore detector sleeves inaccessible. Unit 2 is complete. Complete Unit 1 modification before unit startup from 1EOC24.	Before startup from 1EOC24
2	Revise the procedures that establish the controls so that verification of the storage pipes shall be performed during refueling outages and that records concerning the location and unique identity of the incore detectors are accurate.	Before startup from 1EOC24