



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 2, 2017

MEMORANDUM TO: Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Stacey L. Rosenberg, Chief */RA/*
Probabilistic Risk Assessment Licensing Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

SUBJECT: RECOMMENDATION FOR NON-ACCEPTANCE WITH
OPPORTUNITY TO SUPPLEMENT OF MCGUIRE NUCLEAR
STATION UNITS 1 AND 2 TECHNICAL SPECIFICATION
COMPLETION TIME EXTENSION REQUEST FOR FAILURE TO
SUPPLY INFORMATION (CACs MF9673, MF9674)

By letter dated May 2, 2017 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML17122A116), Duke Energy Carolinas, LLC (Duke Energy) submitted a license amendment request (LAR) to revise Technical Specification (TS) 3.8.1, "AC Sources – Operating," to revise the Required Actions (RA) and diesel generator Completion Time (CT) extension for an inoperable diesel generator for Catawba Nuclear Station (CNS), Units 1 and 2 and McGuire Nuclear Station (MNS), Units 1 and 2.

Review of the proposed LAR is performed in accordance with Regulatory Guide (RG) 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications," and RG 1.174, Revision 2, "An Approach for using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis." Review of the technical acceptability of the PRA is performed in accordance with RG 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," issued in March 2009. Regulatory Issue Summary 2007-06, "Regulatory Guide 1.200 Implementation," issued March 22, 2007, clarifies how the NRC staff will incorporate successive revisions to RG 1.200 that might change the process of, or the basis for, the NRC staff's review of the technical acceptability of a PRA.

CONTACT: Zeechung Gary Wang, NRR/DRA
(301) 415-1686

Enclosure:
Basis for non-acceptance

The purpose of this letter is to provide the results of the NRC staff's acceptance review of this amendment request. The purpose of the acceptance review is to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. In addition, the acceptance review is intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

The Probabilistic Risk Assessment Licensing Branch (APLA) reviewed the proposed TS change and has concluded that the information contained in the licensee's application is not sufficient for review. The basis for the staff's decision is enclosed.

The NRC staff has included in the enclosure to this letter information it deems is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment.

SUBJECT: RECOMMENDATION FOR NON-ACCEPTANCE WITH OPPORTUNITY TO SUPPLEMENT OF MCGUIRE NUCLEAR STATION UNITS 1 AND 2 TECHNICAL SPECIFICATION COMPLETION TIME EXTENSION REQUEST FOR FAILURE TO SUPPLY INFORMATION (CACs MF9673, MF9674) DATED JUNE 2, 2017

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ADAMS Accession No.: ML17151A337

OFFICE	NRR/DRA/APLB	NRR/DRA/APLA	NRR/DRA/APLA
NAME	GWang	THilsmeier	SRosenberg
DATE	5/25/2017	5/31/2017	6/2/2017

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RECOMMENDATION FOR NON-ACCEPTANCE WITH OPPORTUNITY
TO SUPPLEMENT OF MCGUIRE NUCLEAR STATION UNITS 1 AND 2 TECHNICAL
SPECIFICATION COMPLETION TIME EXTENSION REQUEST FOR FAILURE TO SUPPLY
INFORMATION (CACs MF9673, MF9674)

As stated in Office Instruction LIC-109, "Acceptance Review Procedures", it is the policy of the Office of Nuclear Reactor Regulation (NRR) to review an application to amend a license for completeness and acceptability for docketing. The quality of a requested licensing action (RLA) has a significant impact on the amount of NRC staff's resources expended in the review process. When an application lacks critical information necessary for the NRC staff to complete its review, an excessive amount of NRC staff time is spent gathering this information. As a result, time spent on RLAs that are unacceptable for review results in longer review periods for the RLA and adversely impacts the resources and schedules of other acceptable RLAs. In accordance with LIC-109, and in conjunction with Regulatory Guide (RG) 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," and RG 1.174, Revision 2, "An Approach for using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis," the Probabilistic Risk Assessment (PRA) Licensing Branch (APLA) has completed the acceptance review of the license amendment request (LAR), and has concluded that the McGuire internal events risk analysis that supports the requested change does not include sufficient information to enable the NRC staff to make an independent assessment regarding PRA quality in a timely and efficient manner.

When a licensee requests an amendment to its license that involves a risk-informed change to technical specifications, RG 1.177 states that when the risk associated with a particular hazard group or operating mode would affect the decision being made, it is the Commission's policy that, if a staff-endorsed PRA standard exists for that hazard group or operating mode, then the risk will be assessed using a PRA that meets that standard. Regulatory Guide 1.174 adds that a qualitative treatment of the missing modes and hazard groups may be sufficient when the licensee can demonstrate that those risk contributions will not affect the decision; that is, they do not alter the results of the comparison with the acceptance guidelines. In March of 2009, the NRC issued Revision 2 of RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," which endorsed industry standards for PRAs for internal events, internal floods, fires, and external events (i.e., seismic, external flooding, high winds, etc.). The NRC staff position provided in RIS 2007-06 allows one year before revisions to RG 1.200 are expected to be implemented in a licensee's PRA model that is used as a basis for risk-informed LARs.

Regulatory Basis

Section 2.3.1, "Technical Adequacy of the PRA," of RG 1.177, Revision 1, states:

The technical adequacy of the PRA must be compatible with the safety implications of the TS [technical specification] change being requested and the role that the PRA plays in justifying that change.

ENCLOSURE

That is, the more the potential change in risk or the greater the uncertainty in that risk from the requested TS change, or both, the more rigor that must go into ensuring the technical adequacy of the PRA.

The licensee may address the technical adequacy of the PRA by conforming to the peer review and self-assessment processes in RG 1.200, Revision 2. This regulatory guide provides one approach acceptable to the NRC for determining the technical adequacy of the PRA model. Regulatory Guide 1.200 endorses, with certain clarifications and qualifications, Addendum A to the American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) RA-Sa 2009, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications" ("PRA Standard").

Section 4.2, "Licensee Submittal Documentation," of RG 1.200 states, in part, that the application should discuss the resolution of the peer review facts and observations (F&Os) that are applicable to the parts of the PRA required for the application. This should include: (1) a discussion of how the PRA model has been changed, and (2) justification in the form of a sensitivity study that demonstrates the accident sequences or contributors significant to the application decision were not adversely impacted (remained the same) by the particular issue. One acceptable approach for closing F&Os so that they need not be provided in submissions of risk-informed licensing applications is to implement the process accepted by NRC's letter to Nuclear Energy Institute dated May 3, 2017 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML17079A427). Following this process will reinforce the NRC staff's confidence in the F&O closure process and potentially obviate the need for a more in-depth review.

Issue Discussion

In Attachment 6, Section 6.1.3 of the LAR, "PRA Quality/Technical Adequacy," the licensee indicates that most of the F&Os found during the June 2015 peer review of the internal events PRA (excluding large early release frequency, LERF) were assessed by an independent review team in January 2016 to be adequately resolved based on the updated internal events PRA. Therefore, these F&Os were not submitted in the LAR. However, as discussed with the licensee on May 17, 2017 concerning the submission of these F&Os for the McGuire LAR for Integrated Leakage Rate Test, the close-out of these F&Os occurred well before the guidance on this process was finalized and accepted by NRC letter dated May 3, 2017 (ADAMS Accession No. ML17079A427). Therefore, it is uncertain whether the licensee closed these F&Os consistent with NRC-accepted guidance, and that these F&Os should have been submitted as part of the LAR.

Request for Supplemental Information

The NRC staff finds that the part of the LAR pertaining to McGuire Nuclear Station, Units 1 and 2, does not meet the acceptability standards as outlined in LIC-109 and other guidelines. The application lacks critical information in this area necessary for the NRC staff to complete its review without an excessive amount of NRC staff time and resources. Therefore, the staff concludes that to be consistent with Section 4.2 of RG 1.200, Revision 2, and to demonstrate the technical adequacy of the McGuire internal events PRA (excluding LERF) against RG 1.200 at Capability Category II, the licensee provide (a) or (b) below for acceptability of this application:

- (a) Provide all F&Os characterized as findings from the June 2015 peer review of the internal events PRA (excluding LERF). For each F&O, include details of its disposition or why not meeting the corresponding Capability Category II requirements has no impact on the application.
- (b) Alternatively, discuss the close out of the F&Os by the January 2016 independent review of the internal events PRA (excluding LERF), which evaluated the technical adequacy of the additional analysis performed to address the F&Os from the 2015 peer review. This discussion should be consistent with that of the "Final Report" developed in accordance with Section X.1.3, "Close Out F&Os by Independent Assessment," of the Nuclear Energy Institute letter dated February 21, 2017 (ADAMS Accession No. ML17086A431).