



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

October 5, 2016

LICENSEE: Duke Energy

FACILITIES: Catawba Nuclear Station, Units 1 and 2, and McGuire Nuclear Station, Units 1 and 2

SUBJECT: SUMMARY OF AUGUST 30, 2016, PRE-LICENSING MEETING WITH DUKE ENERGY ON PROPOSED LICENSE AMENDMENT REQUEST TO EXTEND THE COMPLETION TIME FOR AN INOPERABLE DIESEL GENERATOR (CAC NOS. MF8102, MF8103, MF8104, AND MF8105)

On August 30, 2016, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Duke Energy (the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of this meeting was to discuss Duke Energy's plans to submit a license amendment request to extend the completion time (CT) of Technical Specification (TS) 3.8.1, "AC [Alternating Current] Sources – Operating," Required Action B.4, for an inoperable diesel generator (DG) for the Catawba Nuclear Station, Units 1 and 2 (CNS), and McGuire Nuclear Station, Units 1 and 2 (MNS). The proposed amendment would extend the CT from 72 hours to 14 days. The meeting notice and agenda, dated July 21, 2016, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML16242A305. A list of attendees is enclosed.

Duke Energy presented slides (ADAMS Accession No. ML16242A238) showing the proposed changes to TS 3.8.1 to aid in the NRC staff's review.

During the meeting, the licensee presented the following topics:

1. Introductions/Opening Remarks
  2. Emergency Supplemental Power Supply (ESPS) Project Overview
  3. License Amendment Request Overview
  4. Probabilistic Risk Assessment (PRA)
  5. Overview of Submission Timeline
- The licensee briefed staff on the risk benefit of installing the emergency supplemental power source modifications and how CNS and MNS would operate much safer as a result of adding a supplemental non-class 1E power source at each station.
  - The licensee gave an overview of its ESPS modification, including the location where the ESPS would be installed at each site, and the project scope and details about the design criteria of the system. The licensee went on to discuss how the ESPS would tie in to the station via the 6.9 kilovolt (kV) switchgear and how the existing plant infrastructure would be used to feed the essential buses. The licensee discussed how a load bank will be

provided to allow testing without the added complexity of synchronizing the ESPS to the 6.9 kV bus energized from offsite power.

- The NRC staff questioned whether Duke Energy would prohibit maintenance on DGs utilizing the ESPS during periods of severe weather. The licensee assured the staff this would not happen and noted that it was a stipulation in NRC Branch Technical Position (BTP) 8-8 to not perform maintenance during severe weather.
- The NRC staff requested Duke Energy to highlight any deviations from BTP 8-8. The licensee stated that it intends to be fully compliant with BTP 8-8.
- The licensee showed the details such as the electrical capacity of the ESPS diesel gensets for each station and how the ESPS system will be operated. The staff requested that the licensee clarify in the submittal that CNS and MNS are capable of achieving cold shutdown on both units if only one DG is available on one unit and the other unit experiences a loss of offsite power. The NRC staff asked the licensee to fully describe how safe shutdown can be achieved with the shared systems at CNS and MNS.
- The NRC staff suggested that the licensee describe the ESPS controls and location in its submittal and describe how NUREG-0711, Revision 3, "Human Factors Engineering Program Review Model," is included in the submittal. The NRC staff asked the licensee to articulate actions to align ESPS within 1 hour and the basis for an assertion that these actions have been validated.
- The NRC staff suggested the level of detail in the LAR should include describing the ESPS system, testing, defense-in-depth aspects, and the operating experience. The NRC staff suggested that the licensee address requests for additional information (RAIs) that had been asked of other licensees. The licensee stated it is considering other submittals currently under review (e.g., Watts Bar Nuclear Plant) as well as the relevant precedent (e.g., Brunswick Steam Electric Plant).
- The NRC staff questioned why CNS and MNS would be requesting a 14-day limiting condition for operation and noted that typical major maintenance activities require only 7 days. The licensee indicated that several maintenance activities planned for the stations could require more than 7 days.
- The licensee provided an overview of the proposed licensing basis changes. The licensee stated that the current power requirements for shared components would bound CNS and MNS to a 72-hour CT, even with approval of a 14-day CT for a DG. The licensee presented an example, if Catawba or McGuire Operations were to declare the 1A diesel generator inoperable, then the "A" train shared components would also be declared inoperable (one of which is the 1A Nuclear Service Water train that has a 72-hour Completion Time) because they don't have an emergency power source. The requirement at Catawba and McGuire is to have normal and emergency power to shared components. Therefore, if the 1A diesel generator were to be in a 14-day Completion Time, Catawba and McGuire would still be limited by the 72-hour Completion Time of the

Nuclear Service Water train because of the requirement to have both normal and emergency power.

- The licensee concluded its presentation with the PRA overview associated with the ESPS modifications and DG CT extension request. The NRC staff questioned whether the target reliability for the ESPS diesels would be roughly the same as that of the existing DGs.
- The NRC staff questioned whether the licensee would incorporate operating experience from the vendor Caterpillar into the risk assessments for CNS and MNS.
- The NRC staff requested the licensee to include in the submittal all facts and observations (F&Os) from a PRA peer review that are applicable to the requested change and the disposition for those F&Os.
- The licensee stated that CNS and MNS is in the process of getting NRC approval of National Fire Protection Association (NFPA) 805. The staff questioned whether the licensee had considered the new guidance regarding NFPA 805 reviews by the NRC. The licensee stated that before submitting the LAR, it would review any new guidance that has come out on fire and incorporate it, as necessary.
- The NRC staff asked the licensee to discuss, in the submittal, what cables the licensee is using at CNS and MNS for the ESPS modifications and the acceptance testing for those cables.
- The NRC staff asked the licensee to clarify what impact, if any, the proposed modification would have on the human-system interface (HSI) including, but not limited to, displays and controls in the main control room (MCR), auxiliary control room, and local control stations, as well as any impact on procedures and training. The licensee stated that changes to the HSI in the MCR will be limited to adding one new annunciator tile window, which will be used to display a trouble alarm for the new ESPS diesels. Startup and control of the Catawba and McGuire ESPS system will be from a local emergency control panel located centrally in a shared electrical switchgear room between the Unit 1 and Unit 2 Turbine Buildings. The licensee further stated that it expects that the modification will require a revision to one or more Emergency Operating Procedures, but the scope of such revisions has not yet been determined. Operator training will also be updated, as necessary.
- The NRC staff further asked the licensee to clarify whether it plans to perform the integrated system validation (ISV), as described in NUREG-0711, Revision 3, to demonstrate that actions to start and align the ESPS system can be accomplished within 1 hour. The licensee noted that it would consider performing the ISV and the guidance provided in NUREG-0711.

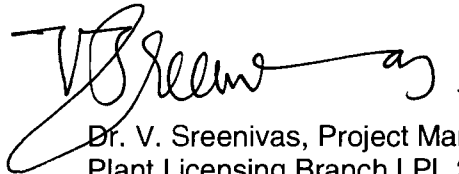
No members of the public were in attendance. One member of another licensed plant was in attendance by teleconference. Members had the opportunity to communicate with the NRC staff before the meeting ended.

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Public meeting feedback forms were made available to the public but none were received. No regulatory decisions were made during this meeting.

Please direct any inquiries to me at 301-415-2597 or [V.Sreenivas@nrc.gov](mailto:V.Sreenivas@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "V. Sreenivas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Dr. V. Sreenivas, Project Manager  
Plant Licensing Branch LPL 2-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-413, 50-414, 50-369, and  
50-370

Enclosure:  
List of Attendees

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LIST OF ATTENDEES

AUGUST 30, 2016, MEETING WITH DUKE ENERGY

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

PROPOSED LICENSE AMENDMENT REQUEST REGARDING CHANGES TO TS 3.8.1

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\*by telephone

Enclosure

Public meeting feedback forms were made available to the public but none were received. No regulatory decisions were made during this meeting.

Please direct any inquiries to me at 301-415-2597 or [V.Sreenivas@nrc.gov](mailto:V.Sreenivas@nrc.gov).

Sincerely,

*/RA/*

Dr. V. Sreenivas, Project Manager  
Plant Licensing Branch LPL 2-1  
Division of Operating Reactor Licensing  
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Docket Nos. 50-413, 50-414, 50-369, and  
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**ADAMS Accession No.: ML16264A102**

\*by e-mail

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