NRR-DRMAPEm Resource

From: Mahoney, Michael
Sent: Thursday, July 11, 2019 8:55 AM
To: 'Nair, Anuradha'
Subject: State Notification of Amendments to Catawba Nuclear Station, Units 1 and 2 - Extend Completion Time for Diesel Generator
Attachments: 83 FR 8512 (Catawba).pdf

Mrs. Nair,

We are near completion of amendments for the Catawba Nuclear Station (Catawba), Units 1 and 2, to revise their Technical Specifications (TS). Specifically, The amendments revise TS, 3.8.1, "AC [Alternating Current] Sources – Operating," to extend the Completion Time (CT) of Condition B for an inoperable emergency diesel generator (DG) from 72 hours to 14 days. To support this request, Catawba will add a supplemental power source (i.e., two supplemental diesel generators (SDGs)) with the capability to power any emergency bus. The affected SDGs will have the capacity to bring the affected unit to cold shutdown. The supplemental AC power source will be referred to as the Emergency Supplemental Power Source (ESPS).

Additionally, TS 3.8.1 is being revised to reflect two new Limiting Conditions for Operation (LCOs) that are necessary to assure operability of the power sources from the opposite unit, which support necessary shared systems. The first new item reflects a qualified circuit between the offsite transmission network and the opposite unit's Onsite Essential Auxiliary Power System that is necessary to supply power to the Nuclear Service Water System (NSWS), Control Room Area Ventilation System (CRAVS), Control Room Area Chilled Water System (CRACWS) and Auxiliary Building Filtered Ventilation Exhaust System (ABFVES) (i.e., shared systems). The second new item reflects a DG from the opposite unit that is necessary to supply power to the NSWS, CRAVS, CRACWS and ABFVES. Corresponding Conditions, Required Actions, and CTs are also being proposed for these new LCOs.

The application is dated May 2, 2017 as supplemented by letters dated July 20 and November 21, 2017, October 8, 2018, March 7, April 8, and July 10, 2019 (ADAMS Accession Nos. ML17122A116, ML17201Q132, ML17325A588, ML18281A010, ML19066A354, ML19099A046, and ML19191A177, respectively).

The no significant hazards consideration determination was noticed in the Federal Register on February 27, 2017 (82 FR 8521), attached.

Duke Energy combined the Catawba incoming license amendment requests with a similar change for the McGuire Nuclear Station. The NRC issued separated the reviews and the McGuire amendments were issued on June 28, 2019.

Please respond if you have any or no comments.

Thanks

Mike

Michael Mahoney

McGuire and Catawba Project Manager, Division of Operating Reactor Licensing

Office of Nuclear Reactor Regulation

U. S. Nuclear Regulatory Commission

Desk: (301)-415-3867

Email: Michael.Mahoney@NRC.GOV

Hearing Identifier: NRR_DRMA
Email Number: 111

Mail Envelope Properties (DM6PR09MB3034D1E6D44F64736FBD4E6CE5F30)

Subject: State Notification of Amendments to Catawba Nuclear Station, Units 1 and 2 - Extend Completion Time for Diesel Generator
Sent Date: 7/11/2019 8:55:05 AM
Received Date: 7/11/2019 8:55:07 AM
From: Mahoney, Michael

Created By: Michael.Mahoney@nrc.gov

Recipients:
"'Nair, Anuradha'" <naira@dhec.sc.gov>
Tracking Status: None

Post Office: DM6PR09MB3034.namprd09.prod.outlook.com

Files	**Size**	**Date & Time**
MESSAGE	2569	7/11/2019 8:55:07 AM
83 FR 8512 (Catawba).pdf	51470	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Technical Specifications currently allow for operation at greater than 200 °F while imposing MODE 4 requirements in addition to the secondary containment requirements required to be met. Extending the activities that can apply this allowance will not adversely impact the probability or consequences of an accident previously evaluated. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Criterion 2: The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Technical Specifications currently allow for operation at greater than 200 °F while imposing MODE 4 requirements in addition to the secondary containment requirements required to be met. No new operational conditions beyond those currently allowed by LCO 3.10.1 are introduced. The changes do not involve a physical alteration of the plant (*i.e.,* no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the changes do not impose any new or different requirements or eliminate any existing requirements. The changes do not alter assumptions made in the safety analysis. The proposed changes are consistent with the safety analysis assumptions and current plant operating practice. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3: The proposed change does not involve a significant reduction in a margin of safety.

Technical Specifications currently allow for operation at greater than 200 °F while imposing MODE 4 requirements in addition to the secondary containment requirements required to be met. Extending the activities that can apply this allowance will not adversely impact any margin of safety. Allowing completion of inspections and testing and supporting completion of scram time testing initiated in conjunction with an inservice leak or hydrostatic test prior to power operation results in enhanced safe operations by eliminating unnecessary maneuvers to control reactor temperature and pressure. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the above analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: Jon P. Christinidis, DTE Energy, Expert Attorney—Regulatory, 688 WCB, One Energy Plaza, Detroit, MI 48226–1279.

NRC Branch Chief: David J. Wrona.

Duke Energy Carolinas, LLC, Docket Nos. 50–413 and 50–414, Catawba Nuclear Station, Units 1 and 2 (CNS), York County, South Carolina

Date of amendment request: May 2, 2017, as supplemented by letters dated July 20 and November 21, 2017. Publicly-available versions are in ADAMS under Accession Nos. ML17122A116, ML17201Q132, and ML17325A588, respectively.

Description of amendment request: The amendments would modify CNS Technical Specifications (TSs) to extend the Completion Time (CT) of TS 3.8.1, ''AC [Alternating Current] Sources—Operating,'' Required Action B.6 (existing Required Action B.4, numbered as B.6) for an inoperable emergency diesel generator (DG) from 72 hours to 14 days. A conforming change is also proposed to extend the maximum CT of TS 3.8.1 Required Actions A.3 and B.4. To support this request, the licensee will add a supplemental power source (*i.e.,* two supplemental diesel generators (SDGs) per station) with the capability to power any emergency bus. The SDGs will have the capacity to bring the affected unit to cold shutdown. Additionally, the amendments would modify TS 3.8.1 to add new two limiting conditions for operation (LCOs), TS LCO 3.8.1.c and TS LCO 3.8.1.d, to ensure that at least one train of shared components has an operable emergency power supply.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

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

Response: No.

The proposed change involves extending the TS CT for an inoperable DG at CNS [. . .]. The proposed change also involves adding a new Required Action to TSs to ensure that at least one train of shared components at CNS [. . .] has an operable emergency power supply whenever one DG is inoperable. The DGs at both stations are safety related components which provide a backup electrical power supply to the onsite emergency power distribution system. The proposed change does not affect the design of the DGs, the operational characteristics or function of the DGs, the interfaces between the DGs and other plant systems or the reliability of the DGs. The DGs are not accident initiators; the DGs are designed to mitigate the consequences of previously evaluated accidents including a loss of offsite power. Extending the CT for a single DG would not affect the previously evaluated accidents since the remaining DGs supporting the redundant engineered safety feature systems would continue to be available to perform the accident mitigation functions. Thus, allowing a DG to be inoperable for an additional 11 days for performance of maintenance or testing does not increase the probability of a previously evaluated accident.

Deterministic and probabilistic risk assessment techniques evaluated the effect of the proposed TS change to extend the CT for an inoperable DG on the availability of an electrical power supply to the plant emergency safeguards feature systems. These assessments concluded that the proposed CNS [. . .] TS change does not involve a significant increase in the risk of power supply unavailability.

There is a small incremental risk associated with continued operation for an additional 11 days with one DG inoperable; however, the calculated impact provides risk metrics consistent with the acceptance guidelines contained in Regulatory Guides 1.177 and 1.174. The remaining operable DGs and paths are adequate to supply electrical power to the onsite emergency power distribution system. A DG is required to operate only if both offsite power sources fail and there is an event which requires operation of the plant engineered safety features such as a design basis accident. The probability of a design basis accident occurring during this period is low.

The consequences of previously evaluated accidents will remain the same during the proposed 14 day CT as during the current CNS [. . .] 72 hour CT. The ability of the remaining TS required DGs to mitigate the consequences of an accident will not be affected since no additional failures are postulated while equipment is inoperable within the TS CT.

Regarding the proposed change to add Required Action to ensure that at least one train of shared components has an operable emergency power supply, there is no change to how or under what conditions offsite circuits or DGs are operated nor are there any changes to acceptable operating parameters. Power source operability requirements for shared components are being moved from the TS Bases to TS with the proposed change. The proposed change will ensure that at least one train of shared components has an operable emergency power supply whenever a DG is inoperable.

Therefore, the proposed change does 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 change involves extending the TS CT for an inoperable DG at CNS [. . .]. The proposed change also involves adding a new Required Action to TSs to ensure that at least one train of shared components at CNS [. . .] has an operable emergency power supply whenever one DG is inoperable.

The proposed change does not involve a change in the CNS [. . .] plant design, plant

configuration, system operation or procedures involved with the DGs. The proposed change allows a DG to be inoperable for additional time. Equipment will be operated in the same configuration and manner that is currently allowed and designed for. The functional demands on credited equipment is unchanged. There are no new failure modes or mechanisms created due to plant operation for an extended period to perform DG maintenance or testing. Extended operation with an inoperable DG does not involve any modification to the operational limits or physical design of plant systems. There are no new accident precursors generated due to the extended CT.

Regarding the proposed change to add Required Action to ensure that at least one train of shared components has an operable emergency power supply, there is no change to how or under what conditions offsite circuits or DGs are operated nor are there any changes to acceptable operating parameters. Power source operability requirements for shared components are being moved from the TS Bases to TS with the proposed change. The proposed change will ensure that at least one train of shared components has an operable emergency power supply whenever a DG is inoperable. This change does not alter the nature of events postulated in the Updated Final Safety Analysis Report nor does it introduce any unique precursor mechanisms.

Therefore, the proposed change does 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 the margin of safety?

Response: No.

The proposed change involves extending the TS CT for an inoperable DG at CNS [. . .]. The proposed change also involves adding a new Required Action to TSs to ensure that at least one train of shared components at CNS [. . .] has an operable emergency power supply whenever one DG is inoperable.

Currently, if an inoperable DG is not restored to operable status within 72 hours at CNS [. . .], TS 3.8.1, requires the units to be in Mode 3 (*i.e.,* Hot Standby) within a CT of 6 hours, and to be in Mode 5 (*i.e.,* Cold Shutdown) within a CT of 36 hours. The proposed TS changes will allow steady state plant operation at 100 percent power for an additional 11 days for performance of DG planned reliability improvements and preventive and corrective maintenance.

Deterministic and probabilistic risk assessment techniques evaluated the effect of the proposed TS change to extend the CT for an inoperable DG on the availability of an electrical power supply to the plant emergency safeguards feature systems. These assessments concluded that the proposed CNS [. . .] TS change does not involve a significant increase in the risk of power supply unavailability.

The DGs continue to meet their design requirements; there is no reduction in capability or change in design configuration. The DG response to loss of offsite power, loss of coolant accident, station blackout or fire scenarios is not changed by this proposed amendment; there is no change to the DG operating parameters. In the extended CT, as in the existing CT, the remaining operable DGs and paths are adequate to supply electrical power to the onsite emergency power distribution system. The proposed change to extend the CT for an inoperable DG does not alter a design basis safety limit; therefore, it does not significantly reduce the margin of safety. The DGs will continue to operate per the existing design and regulatory requirements.

The proposed TS changes (*i.e.,* the inoperable DG CT extension request and proposed change to add Required Action to ensure that at least one train of shared components has an operable emergency power supply) do not alter the plant design nor do they change the assumptions contained in the safety analyses. The standby AC power system is designed with sufficient redundancy such that a DG may be removed from service for maintenance or testing. The remaining DGs are capable of carrying sufficient electrical loads to satisfy the Updated Final Safety Analysis Report requirements for accident mitigation or unit safe shutdown. The proposed change does not impact the redundancy or availability requirements of offsite power circuits or change the ability of the plant to cope with a station blackout. Therefore, based on the considerations given above, the proposed changes do not involve a significant reduction in the margin of safety.

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

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: Kate B. Nolan, Deputy General Counsel, Duke Energy Carolinas, LLC, 550 South Tryon Street—DEC45A, Charlotte, NC 28202–1802.

NRC Branch Chief: Michael T. Markley.

Duke Energy Carolinas, LLC, Docket Nos. 50–369 and 50–370, McGuire Nuclear Station, Units 1 and 2 (MNS), Mecklenburg County, North Carolina

Date of amendment request: May 2, 2017, as supplemented by letters dated July 20 and November 21, 2017. Publicly-available versions are in ADAMS under Accession Nos. ML17122A116, ML17201Q132, and ML17325A588, respectively.

Description of amendment request: The amendments would modify MNS Technical Specifications (TSs) to extend the Completion Time (CT) of TS 3.8.1, ''AC [Alternating Current] Sources—Operating,'' Required Action B.6 (existing Required Action B.4, numbered as B.6) for an inoperable emergency diesel generator (DG) from 72 hours to 14 days. A conforming change is also proposed to extend the maximum CT of TS 3.8.1 Required Actions A.3 and B.4. To support this request, the licensee will add a supplemental power source (*i.e.,* two supplemental diesel generators (SDGs) per station) with the capability to power any emergency bus. The SDGs will have the capacity to bring the affected unit to cold shutdown. Additionally, the amendments would modify TS 3.8.1 to add new two limiting conditions for operation (LCOs), TS LCO 3.8.1.c and TS LCO 3.8.1.d, to ensure that at least one train of shared components has an operable emergency power supply.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

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

Response: No.

The proposed change involves extending the TS CT for an inoperable DG at [. . .] MNS. The proposed change also involves adding a new Required Action to TSs to ensure that at least one train of shared components at [. . .] MNS has an operable emergency power supply whenever one DG is inoperable. The DGs at both stations are safety related components which provide a backup electrical power supply to the onsite emergency power distribution system. The proposed change does not affect the design of the DGs, the operational characteristics or function of the DGs, the interfaces between the DGs and other plant systems or the reliability of the DGs. The DGs are not accident initiators; the DGs are designed to mitigate the consequences of previously evaluated accidents including a loss of offsite power. Extending the CT for a single DG would not affect the previously evaluated accidents since the remaining DGs supporting the redundant engineered safety feature systems would continue to be available to perform the accident mitigation functions. Thus, allowing a DG to be inoperable for an additional 11 days for performance of maintenance or testing does not increase the probability of a previously evaluated accident.

Deterministic and probabilistic risk assessment techniques evaluated the effect of the proposed TS change to extend the [completion time] CT for an inoperable DG on the availability of an electrical power supply to the plant emergency safeguards feature systems. These assessments concluded that the proposed [. . .] MNS TS change does not involve a significant increase in the risk of power supply unavailability.