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M. S. Tuckman
Executive Vice President
Nuclear Generation

August 29, 2002

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Corporation

Catawba Nuclear Station, Units 1 and 2
License NPF No. 35 and NPF No. 52
Docket Numbers 50-413 and 50-414

McGuire Nuclear Station, Units 1 and 2
License NPF No. 9 and NPF No. 17
Docket Numbers 50-369 and 50-370

Proposed Amendment Technical Specifications
Surveillance Requirement 3.8.4.8, DC Sources-Operating
(Catawba) and 3.8.4.7 (McGuire)

In accordance with the provisions of 10 CFR 50.90, Duke Energy Corporation proposes to revise the Catawba Nuclear Station (CNS) and McGuire Nuclear Station (MNS) Facility Operating Licenses and Technical Specifications (TS) for Surveillance Requirement (SR) 3.8.4.8 and SR 3.8.4.7, respectively. The proposed change will modify the note to eliminate the "once per 60 month" restriction on replacing the battery service test with the battery modified performance discharge test.

The proposed change will allow the use of a consistent battery testing technique in order to provide consistent data for trending battery performance. The proposed change is applicable to the DC Channel Batteries (Catawba and McGuire) and the Diesel Generator Batteries (Catawba only). The proposed change is endorsed by Institute of Electrical and Electronics Engineers (IEEE) Standards 450-1995 and 1106-1995. The DC Channel Batteries are lead-acid batteries and the Diesel Generator Batteries are nickel-cadmium batteries.

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The proposed change to the CNS and MNS Technical Specifications is incorporated within the changes listed in Technical Specifications Task Force (TSTF) 360, Revision 1. The TSTF-360 Revision 1 was approved by the NRC on December 18, 2000. A similar change was approved for the Clinton Power Station on February 15, 2002 in the NRC Issuance of Amendment Number 142, Accession Number 02030003.

Duke Energy Corporation requests approval of the proposed change prior to March 1, 2003 in order to support the next refueling outage for CNS. Duke Energy Corporation will implement the proposed change at each station within 30 days following NRC approval.

The contents of this amendment request package are as follows:

1. Attachment 1 provides marked copies of the affected TS and Bases pages for CNS, showing the proposed changes.
2. Attachment 2 contains reprinted pages of the affected TS and Bases for CNS.
3. Attachment 3 provides marked copies of the affected TS and Bases pages for MNS, showing the proposed changes.
4. Attachment 4 contains reprinted pages of the affected TS and Bases for MNS.
5. Attachment 5 provides a description of the proposed change and technical justification.
6. Pursuant to 10 CFR 50.92, Attachment 6 documents the determination that the amendment contains No Significant Hazards Considerations.
7. Pursuant to 10 CFR 51.22(c)(9), Attachment 7 provides the basis for the categorical exclusion from performing an Environmental Assessment/Impact Statement.

Implementation of this amendment to the CNS and MNS Facility Operating Licenses and TSS will not impact the CNS or MNS Updated Final Safety Analysis Reports (UFSAR).

This letter and attachments do not contain any regulatory commitments.

In accordance with Duke Energy Corporation administrative procedures and the Quality Assurance Program Topical Report, this proposed amendment has been previously reviewed and approved by

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the CNS and MNS Plant Operations Review Committees and the Corporate Nuclear Safety Review Board.

Pursuant to 10 CFR 50.91, a copy of this proposed amendment is being sent to the appropriate state official.

Inquiries on this matter should be directed to G.K. Strickland at (803) 831-3585.

Very truly yours,

M. S. Tuckman

M.S. Tuckman

Attachments

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M. S. Tuckman, affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

M. S. Tuckman

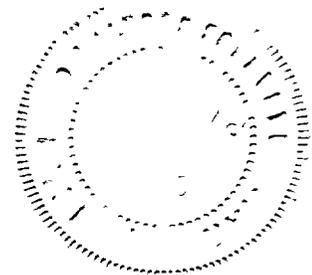
M. S. Tuckman, Executive Vice President
Duke Energy Corporation

Subscribed and sworn to me: Aug 29, 2002
Date

Mary P. Nelms

Notary Public

My commission expires: JAN 22, 2006
Date



SEAL

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NCMPA-1

NCEMC

PMPA

SREC

Catawba Document Control File 813.20

Catawba RGC Date File

MNS Master File: 1.3.2.9

ELL-EC050

ATTACHMENT 1

**MARKED-UP TECHNICAL SPECIFICATION AND BASES PAGES
FOR
CATAWBA NUCLEAR STATION**

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.4.4 Verify DC channel and DG battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could degrade battery performance.	18 months
SR 3.8.4.5 Remove visible terminal corrosion, verify DC channel and DG battery cell to cell and terminal connections are clean and tight, and are coated with anti-corrosion material.	18 months
SR 3.8.4.6 Verify DC channel battery connection resistance is $\leq 1.5 \text{ E-4 ohm}$.	18 months
SR 3.8.4.7 Verify each DC channel battery charger supplies ≥ 200 amps and the DG battery charger supplies ≥ 75 amps with each charger at $\geq 125 \text{ V}$ for ≥ 8 hours.	18 months
SR 3.8.4.8 -----NOTES----- 1. The modified performance discharge test in SR 3.8.4.9 may be performed in lieu of the service test in SR 3.8.4.8 once per 60 months. 2. This Surveillance shall not be performed for the DG batteries in MODE 1, 2, 3, or 4. ----- Verify DC channel and DG battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	18 months 

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

exceed 18 months.

This SR is modified by two Notes. Note 1 allows the performance of a ~~modified performance discharge test in lieu of a service test once per 60 months.~~

The modified performance discharge test is a performance discharge test that is augmented to include the high-rate, short duration discharge loads (during the first minute and 11-to-12 minute discharge periods) of the service test. The duty cycle of the modified performance test must fully envelope the duty cycle of the service test if the modified performance discharge test is to be used in lieu of the service test. Since the ampere-hours removed by the high-rate, short duration discharge periods of the service test represents a very small portion of the battery capacity, the test rate can be changed to that for the modified performance discharge test without compromising the results of the performance discharge test. The battery terminal voltage for the modified performance discharge test should remain above the minimum battery terminal voltage specified in the battery service test for the duration of time equal to that of the service test.

A modified discharge test is a test of the battery capacity and its ability to provide a high rate, short duration load (usually the highest rates of the duty cycle). This will often confirm the battery's ability to meet the critical periods of the load duty cycle, in addition to determining its percentage of rated capacity. Initial conditions for the modified performance discharge test should be identical to those specified for a service test. The reason for Note 2 is that performing the Surveillance would perturb the electrical distribution system and challenge safety systems.

SR 3.8.4.9

A battery performance discharge test is a test of constant current capacity of a battery, normally done in the as found condition, after having been in service, to detect any change in the capacity determined by the acceptance test. The test is intended to determine overall battery degradation due to age and usage.

A battery modified performance discharge test is described in the Bases for SR 3.8.4.8. Either the battery performance discharge test or the modified performance discharge test is acceptable for satisfying SR 3.8.4.9; however, only the modified performance discharge test may be used to satisfy SR 3.8.4.9 while satisfying the requirements of SR 3.8.4.8 at the same time.

ATTACHMENT 2

**REPRINTED PAGES OF AFFECTED TECHNICAL
SPECIFICATION AND BASES
FOR
CATAWBA NUCLEAR STATION**

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.8.4.4 Verify DC channel and DG battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could degrade battery performance.	18 months
SR 3.8.4.5 Remove visible terminal corrosion, verify DC channel and DG battery cell to cell and terminal connections are clean and tight, and are coated with anti-corrosion material.	18 months
SR 3.8.4.6 Verify DC channel battery connection resistance is $\leq 1.5 \text{ E-4 ohm}$.	18 months
SR 3.8.4.7 Verify each DC channel battery charger supplies ≥ 200 amps and the DG battery charger supplies ≥ 75 amps with each charger at $\geq 125 \text{ V}$ for ≥ 8 hours.	18 months
SR 3.8.4.8 -----NOTES----- 1. The modified performance discharge test in SR 3.8.4.9 may be performed in lieu of the service test in SR 3.8.4.8. 2. This Surveillance shall not be performed for the DG batteries in MODE 1, 2, 3, or 4. ----- Verify DC channel and DG battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	18 months

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

exceed 18 months.

This SR is modified by two Notes. Note 1 allows the performance of a modified performance discharge test in lieu of a service test.

The modified performance discharge test is a performance discharge test that is augmented to include the high-rate, short duration discharge loads (during the first minute and 11-to-12 minute discharge periods) of the service test. The duty cycle of the modified performance test must fully envelope the duty cycle of the service test if the modified performance discharge test is to be used in lieu of the service test. Since the ampere-hours removed by the high-rate, short duration discharge periods of the service test represents a very small portion of the battery capacity, the test rate can be changed to that for the modified performance discharge test without compromising the results of the performance discharge test. The battery terminal voltage for the modified performance discharge test should remain above the minimum battery terminal voltage specified in the battery service test for the duration of time equal to that of the service test.

A modified discharge test is a test of the battery capacity and its ability to provide a high rate, short duration load (usually the highest rates of the duty cycle). This will often confirm the battery's ability to meet the critical periods of the load duty cycle, in addition to determining its percentage of rated capacity. Initial conditions for the modified performance discharge test should be identical to those specified for a service test. The reason for Note 2 is that performing the Surveillance would perturb the electrical distribution system and challenge safety systems.

SR 3.8.4.9

A battery performance discharge test is a test of constant current capacity of a battery, normally done in the as found condition, after having been in service, to detect any change in the capacity determined by the acceptance test. The test is intended to determine overall battery degradation due to age and usage.

A battery modified performance discharge test is described in the Bases for SR 3.8.4.8. Either the battery performance discharge test or the modified performance discharge test is acceptable for satisfying SR 3.8.4.9; however, only the modified performance discharge test may be used to satisfy SR 3.8.4.9 while satisfying the requirements of SR 3.8.4.8 at the same time.

ATTACHMENT 3

**MARKED-UP TECHNICAL SPECIFICATION AND BASES PAGES
FOR
McGUIRE NUCLEAR STATION**

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.7 -----NOTE----- The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7 once per 60 months.</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	<p>18 months</p>
<p>SR 3.8.4.8 Verify battery capacity is $\geq 80\%$ of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.</p>	<p>60 months</p> <p><u>AND</u></p> <p>12 months when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating</p> <p><u>AND</u></p> <p>24 months when battery has reached 85% of the expected life with capacity \geq 100% of manufacturer's rating</p>

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.4.6

This SR requires that each battery charger be capable of supplying 400 amps and 125 V for ≥ 1 hour. These requirements are based on the design requirements of the chargers (Ref. 4). According to Regulatory Guide 1.32 (Ref. 11), the battery charger supply is required to be based on the largest combined demands of the various steady state loads and the charging capacity to restore the battery from the design minimum charge state to the fully charged state, irrespective of the status of the unit during these demand occurrences. The minimum required amperes and duration ensures that these requirements can be satisfied.

The Surveillance Frequency is acceptable, given the unit conditions required to perform the test and the other administrative controls existing to ensure adequate charger performance during these 18 month intervals. In addition, this Frequency is intended to be consistent with expected fuel cycle lengths.

SR 3.8.4.7

A battery service test is a special test of battery capability, as found, to satisfy the design requirements (battery duty cycle) of the DC electrical power system. The discharge rate and test length of 1 hour should correspond to the design duty cycle requirements as specified in Reference 4.

The Surveillance Frequency of 18 months is consistent with the recommendations of Regulatory Guide 1.32 (Ref. 11) with the exception that it is allowable to perform the battery service test with a unit in any Mode.

This SR is modified by a Note. The Note allows the performance of a modified performance discharge test in lieu of a service test once per 60 months.

The modified performance discharge test, as defined by IEEE-450 (Ref. 12) is a simulated duty cycle consisting of just two rates; the one minute rate published for the battery or the largest current load of the duty cycle, followed by the test rate employed for the performance test, both of which envelope the duty cycle of the service test. Since the ampere-hours removed by a rated one minute discharge represents a very small portion of the battery capacity, the test rate can be changed to that for the performance test without compromising the results of the performance

ATTACHMENT 4

**REPRINTED PAGES OF AFFECTED TECHNICAL
SPECIFICATION AND BASES
FOR
McGUIRE NUCLEAR STATION**

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.7 -----NOTE----- The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7. -----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	<p>18 months</p>
<p>SR 3.8.4.8 Verify battery capacity is $\geq 80\%$ of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.</p>	<p>60 months</p> <p><u>AND</u></p> <p>12 months when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating</p> <p><u>AND</u></p> <p>24 months when battery has reached 85% of the expected life with capacity $\geq 100\%$ of manufacturer's rating</p>

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.4.6

This SR requires that each battery charger be capable of supplying 400 amps and 125 V for ≥ 1 hour. These requirements are based on the design requirements of the chargers (Ref. 4). According to Regulatory Guide 1.32 (Ref. 11), the battery charger supply is required to be based on the largest combined demands of the various steady state loads and the charging capacity to restore the battery from the design minimum charge state to the fully charged state, irrespective of the status of the unit during these demand occurrences. The minimum required amperes and duration ensures that these requirements can be satisfied.

The Surveillance Frequency is acceptable, given the unit conditions required to perform the test and the other administrative controls existing to ensure adequate charger performance during these 18 month intervals. In addition, this Frequency is intended to be consistent with expected fuel cycle lengths.

SR 3.8.4.7

A battery service test is a special test of battery capability, as found, to satisfy the design requirements (battery duty cycle) of the DC electrical power system. The discharge rate and test length of 1 hour should correspond to the design duty cycle requirements as specified in Reference 4.

The Surveillance Frequency of 18 months is consistent with the recommendations of Regulatory Guide 1.32 (Ref. 11) with the exception that it is allowable to perform the battery service test with a unit in any Mode.

This SR is modified by a Note. The Note allows the performance of a modified performance discharge test in lieu of a service test.

The modified performance discharge test, as defined by IEEE-450 (Ref. 12) is a simulated duty cycle consisting of just two rates; the one minute rate published for the battery or the largest current load of the duty cycle, followed by the test rate employed for the performance test, both of which envelope the duty cycle of the service test. Since the ampere-hours removed by a rated one minute discharge represents a very small portion of the battery capacity, the test rate can be changed to that for the performance test without compromising the results of the performance

ATTACHMENT 5

DESCRIPTION OF PROPOSED CHANGE AND TECHNICAL JUSTIFICATION

Description of Proposed Change

Change the note for Catawba Nuclear Station (CNS) Surveillance Requirement (SR) 3.8.4.8 and McGuire Nuclear Station (MNS) SR 3.8.4.7 and associated bases to delete the "once per 60 months" restriction on replacing the battery service test with the battery modified performance discharge test.

Technical Justification

IEEE Standards 450-1995 and 1106-1995 state that it is permissible to perform a modified performance test if the battery discharge rate envelopes the duty cycle of the service test. Both standards state, "A modified performance test can be used in lieu of a service test at any time."

The service test is a special test of the battery capability, as found, to satisfy the design requirements of the DC electrical power system. The discharge rate and test length corresponds to the design duty cycle requirements as specified in the Updated Final Safety Analysis Report.

The modified performance discharge test is a performance discharge test that is augmented to include the high-rate, short duration discharge loads of the service test. The duty cycle of the modified performance test fully envelopes the duty cycle of the service test. The modified discharge test confirms the battery's ability to meet the critical periods of the load duty cycle, in addition to determining its percentage of rated capacity. Initial conditions for the modified performance discharge test are identical to those specified for the service test.

The battery performance discharge test is a test of constant current capacity of the battery to determine overall battery degradation due to age and usage.

The proposed change will allow the use of a consistent battery testing technique in order to provide consistent data for trending battery performance. The proposed change is applicable to the DC Channel Batteries (Catawba and McGuire) and the Diesel Generator Batteries (Catawba only). The proposed change is endorsed by IEEE Standards 450-1995 and 1106-1995. The DC Channel Batteries are lead-acid batteries and the Diesel Generator Batteries are nickel-cadmium batteries.

This change has been found acceptable to the NRC in TSTF-360 Revision 1. This change was approved for the Clinton Power Station on February 15, 2002 in the NRC Issuance of Amendment Number 142, Accession Number 02030003.

ATTACHMENT 6

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

No Significant Hazards Consideration Determination

The following discussion is a summary of the evaluation of the change contained in this proposed amendment against the 10 CFR 50.92 (c) requirements to demonstrate that all three standards are satisfied. A no significant hazards consideration is indicated if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated, or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated, or
3. Involve a significant reduction in a margin of safety.

First Standard

Operation of the facilities in accordance with this amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated. The Class 1E DC power system is not an initiator to any accident sequence analyzed in the Updated Final Safety Analysis Report. The safety features of the batteries will continue to function as designed and in accordance with all applicable TS. The design and operation of the system is not being modified by this proposed amendment. This amendment only revised the requirements for testing the batteries. Therefore, there will be no impact on any accident probabilities or consequences.

Second Standard

Operation of the facilities in accordance with this amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated. No new accident causal mechanisms are created as a result of this proposed amendment. No changes are being made to any structure, system, or component which will introduce any new accident causal mechanisms. This amendment request does not impact any plant systems that are accident initiators and does not impact any safety analysis.

Third Standard

Operation of the facilities in accordance with this amendment would not involve a significant reduction in a margin of safety. The change to the battery surveillance will ensure each station's batteries are maintained in a highly reliable manner. The batteries will continue to be tested every 18 months with the modified performance test enveloping the service test. The equipment powered by the batteries will continue to provide adequate power to safety related loads in accordance with analysis assumptions.

Based on the preceding discussion, Duke Energy has concluded that the proposed amendment does not involve a significant hazard consideration.

ATTACHMENT 7

ENVIRONMENTAL ANALYSIS

Environmental Analysis

The proposed amendment has been reviewed against the criteria of 10 CFR 51.22 for environmental considerations. The proposed amendment does not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor increase individual or cumulative occupational radiation exposures. Therefore, the proposed amendment meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.