



D.M. JAMIL
Vice President

Duke Power
Catawba Nuclear Station
4800 Concord Rd. / CNO1VP
York, SC 29745-9635

803 831 4251
803 831 3221 fax

March 8, 2005

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

Subject: Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
Proposed Technical Specifications Amendments
3.8.4, DC Sources - Operating
3.8.6, Battery Cell Parameters

Reference: 1. Letter from Duke Energy Corporation to NRC,
same subject, dated July 19, 2004
2. Letter from NRC to Duke Energy Corporation,
dated December 7, 2004

Pursuant to 10 CFR 50.4 and 10 CFR 50.90, and in response to the Request for Additional Information provided by the NRC staff via telephone and Reference 2, please find attached Duke Energy Corporation's response. The format of the response is to restate the NRC question, followed by the response.

The original No Significant Hazards Analysis and Environmental Analysis contained in Reference 1 are unchanged as a result of this response.

There are no regulatory commitments contained in this letter or its attachment.

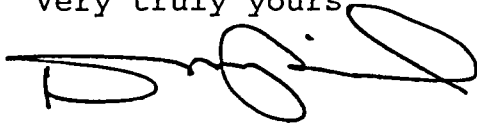
Pursuant to 10 CFR 50.91, a copy of this response is being sent to the appropriate state official.

Inquiries on this matter should be directed to L.J. Rudy at (803) 831-3084.

A001

U.S. Nuclear Regulatory Commission
Page 2
March 8, 2005

Very truly yours


A handwritten signature in black ink, appearing to read 'Dhiam Jamil', with a large, stylized flourish at the end.

Dhiaa M. Jamil

LJR/s

Attachment

Dhiala M. Jamil 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.



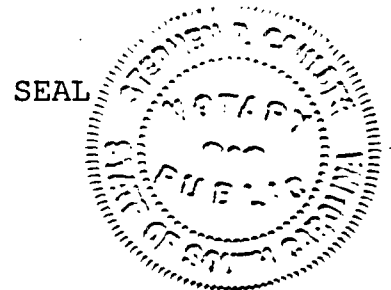
Dhiala M. Jamil, Vice President

Subscribed and sworn to me: MARCH 7TH, 2005
Date



Notary Public

My commission expires: 10/1/2014
Date



U.S. Nuclear Regulatory Commission
Page 4
March 8, 2005

xc (with attachment):

W.D. Travers
U.S. Nuclear Regulatory Commission
Regional Administrator, Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

E.F. Guthrie
Senior Resident Inspector (CNS)
U.S. Nuclear Regulatory Commission
Catawba Nuclear Station

S.E. Peters (addressee only)
NRC Project Manager (CNS)
U.S. Nuclear Regulatory Commission
Mail Stop 0-8 G9
Washington, D.C. 20555-0001

H.J. Porter, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health and Environmental Control
2600 Bull St.
Columbia, SC 29201

ATTACHMENT

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION

REQUEST FOR ADDITIONAL INFORMATION

DUKE POWER COMPANY

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal dated July 19, 2004, regarding the replacement of the existing nickel cadmium diesel generator (DG) batteries with lead acid batteries. The NRC staff has identified the following information that is needed to enable the continuation of its review.

Provide a discussion that shows that the design capacities of the DG battery chargers are capable of supporting the proposed DG batteries that utilize lead acid cells (i.e., show that the current DG battery chargers are capable of supplying the largest combined demands of the various steady state loads and that they have the charging capacity to restore the DG lead acid batteries from the design minimum charge state to the fully charged state, irrespective of plant status during these demand occurrences).

Duke Energy Corporation Response

The sizing of the DG battery chargers to recharge the batteries within an 8 hour interval, as required, is based on the ability of the chargers to replace the ampere-hours of capacity actually removed during a design basis event. The new lead acid batteries will be higher in overall ampere-hour capacity than the existing nickel cadmium cells. However, the battery duty cycle will itself not be significantly affected by the modification. Calculation # CNC-1381.05-00-0050, "125 VDC Diesel Generator Battery and Charger Sizing Calculation", will be revised under the modifications that install these lead acid batteries such that the charger sizing is addressed. This calculation has already been revised as a limited edition calculation in preparation for the modification installation.

The required charger sizes, as determined and documented in the referenced limited edition calculation, are:

Charger	Required Size
1DGBA	56.27 Amperes
1DGBB	40.86 Amperes
2DGBA	60.37 Amperes
2DGBB	52.57 Amperes

These charger sizes are based on the current battery duty cycles. The calculation goes on to consider future load growth. Assuming a 15% future load growth, the largest required charger size would be $1.15 \times (60.37 \text{ Amperes}) = 69.43 \text{ Amperes}$. Since the chargers are rated at 75 Amperes, they are adequately sized.

In addition to this response, on March 3, 2005, a telephone discussion was conducted between Duke Energy Corporation and the NRC staff concerning the use of the terminology "and/or" in some of the TS and Bases markup pages. The NRC indicated that use of this terminology was unacceptable. Therefore, as agreed to in this telephone conversation, Duke Energy Corporation is revising the affected TS and Bases markup pages to utilize alternate terminology. The affected pages directly follow. Note that the final reprinted TS and Bases pages will be provided to the NRC Project Manager just prior to NRC issuance of the proposed amendments.

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Cell Parameters

LCO 3.8.6

Battery cell parameters for the channels of DC batteries shall be within the limits of Table 3.8.6-1 and the Diesel Generator (DG) Train A and Train B batteries shall be within the limits of temperature and level.

Replace with
INSERT 2

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

NOTE

Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more channel(s) of DC batteries with one or more battery cell parameters not within Category A or B limits.</p> <p>One or more batteries (channel(s) of DC batteries, DG batteries utilizing lead acid cells, or both)</p>	<p>A.1 Verify pilot cells electrolyte level and float voltage meet Table 3.8.6-1 Category C limits.</p> <p><u>AND</u></p>	<p>1 hour</p>
	<p>A.2 Verify battery cell parameters meet Table 3.8.6-1 Category C limits.</p> <p><u>AND</u></p>	<p>24 hours</p> <p>Once per 7 days thereafter</p>
	<p>A.3 Restore battery cell parameters to Category A and B limits of Table 3.8.6-1.</p>	<p>31 days</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. Required Action and associated Completion Time of Condition A not met.</p> <p><u>OR</u></p> <p>One or more channel(s) of DC batteries with average electrolyte temperature of the representative cells < 60°F.</p> <p><u>OR</u></p> <p>One or more channel(s) of DC batteries with one or more battery cell parameters not within Category C values.</p> <p><i>One or more batteries (channel(s) of DC batteries, DG batteries, or both)</i></p> <p><i>One or more batteries (channel(s) of DC batteries, DG batteries utilizing lead acid cells, or both)</i></p>	<p>B.1 Declare associated battery inoperable.</p> <p><u>AMD</u></p> <p>B.2 <u>NOTE</u> Only applicable for inoperable DG batteries.</p> <p>Enter applicable Condition(s) and Required Action(s) of LCO 3.8.1, "AC sources - Operating", or LCO 3.8.2, "AC sources - Shutdown" for the associated DG made inoperable.</p>	<p>Immediately</p> <p><i>Immediately</i></p>
<p>C. One or more DG batteries with electrolyte level not at or above the low mark and not at or below the high mark.</p> <p><u>OR</u></p> <p>One or more DG batteries with average electrolyte temperature of the representative cells < 60°F.</p> <p><i>utilizing nickel cadmium cells</i></p>	<p>C.1 Enter applicable Condition(s) and Required Action(s) of LCO 3.8.1, "AC Sources - Operating", or LCO 3.8.2, "AC Sources - Shutdown" for the associated DG made inoperable.</p>	<p>Immediately</p>

BASES

APPLICABILITY The battery cell parameters are required solely for the support of the associated DC electrical power subsystems. Therefore, battery electrolyte is only required when the DC power source is required to be OPERABLE. Refer to the Applicability discussion in Bases for LCO 3.8.4 and LCO 3.8.5.

ACTIONS

A.1, A.2, and A.3

(DC batteries, DG batteries utilizing lead acid cells, or both)

With one or more cells in one or more batteries not within limits (i.e., Category A limits not met, Category B limits not met, or Category A and B limits not met) but within the Category C limits specified in Table 3.8.6-1 in the accompanying LCO, the battery is degraded but there is still sufficient capacity to perform the intended function. Therefore, the affected battery is not required to be considered inoperable solely as a result of Category A or B limits not met and operation is permitted for a limited period.

The pilot cell electrolyte level and float voltage are required to be verified to meet the Category C limits within 1 hour (Required Action A.1). This check will provide a quick indication of the status of the remainder of the battery cells. One hour provides time to inspect the electrolyte level and to confirm the float voltage of the pilot cells. One hour is considered a reasonable amount of time to perform the required verification.

Verification that the Category C limits are met (Required Action A.2) provides assurance that during the time needed to restore the parameters to the Category A and B limits, the battery is still capable of performing its intended function. A period of 24 hours is allowed to complete the initial verification because specific gravity measurements must be obtained for each connected cell. Taking into consideration both the time required to perform the required verification and the assurance that the battery cell parameters are not severely degraded, this time is considered reasonable. The verification is repeated at 7 day intervals until the parameters are restored to Category A or B limits. This periodic verification is consistent with the normal Frequency of pilot cell Surveillances.

Continued operation is only permitted for 31 days before battery cell parameters must be restored to within Category A and B limits. With the consideration that, while battery capacity is degraded, sufficient capacity exists to perform the intended function and to allow time to fully restore the battery cell parameters to normal limits, this time is acceptable prior to declaring the battery inoperable.

BASES

ACTIONS (continued)

B.1 and B.2

(DC batteries, DG batteries utilizing lead acid cells, or both)

With one or more batteries with one or more battery cell parameters outside the Category C limit for any connected cell, sufficient capacity to supply the maximum expected load requirement is not assured and the corresponding DC electrical power subsystem must be declared inoperable. Additionally, other potentially extreme conditions, such as not completing the Required Actions of Condition A within the required Completion Time or average electrolyte temperature of representative cells falling below 60°F, are also cause for immediately declaring the associated DC electrical power subsystem inoperable.

(Applicable to DC batteries and both types of DG batteries)

INSERT 3

C.1

utilizing nickel cadmium cells

per Required Action B.1

With one or more DG batteries with one or more battery cell(s) not within the limits of level or temperature, sufficient capacity to supply the required load for the DG is not assumed and the corresponding DC electrical power subsystem must be declared inoperable immediately. Appropriate LCO(s) must then be entered for the DG supported by the inoperable DC subsystem. If the plant is in MODES 1 through 4, LCO 3.8.1, "AC Sources—Operating" is required to be entered.

If the DG is required to support equipment during MODES 5 or 6 or movement of irradiated fuel assemblies, regardless of operating mode, LCO 3.8.2, "AC Sources—Shutdown," is the appropriate LCO.

SURVEILLANCE REQUIREMENTS

SR 3.8.6.1

This SR verifies that Category A battery cell parameters are consistent with IEEE-450 (Ref. 4), which recommends regular battery inspections (at least one per month) including voltage, specific gravity, and electrolyte temperature of pilot cells.

This SR is applicable to both DC batteries and DG batteries utilizing lead acid cells.

SR 3.8.6.2

Nickel cadmium

This SR verifies the DG battery cell parameter of level via regular battery inspection (at least once every 7 days). The electrolyte level is monitored in order to maintain battery performance and effectiveness. The 7 day Frequency has been shown acceptable through operating experience.