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November 7, 2007,

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC
Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Technical Specification Bases Changes

Pursuant to 10CFR 50.4, please find attached changes to the Catawba Nuclear Station Technical Specification Bases. These Bases changes were made according to the provisions of 10CFR 50.59 and submitted on a frequency consistent with 10 CFR 50.71(e).

Any questions regarding this information should be directed to Larry Rudy, Regulatory Compliance, at (803) 831-3084.

I certify that I am a duly authorized officer of Duke Energy Corporation and that the information contained herein accurately represents changes made to the Technical Specification Bases since the previous submittal.

James R. Morris

Attachment

A001

NRR

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bxc: w/o attachment
NCMPA-1
NCEMC
SREC
PMPA

w/attachment

Electronic Licensing Library	EC050
RGC File	CN01RC
Master File CN-801.01	CN04DM

DUKE ENERGY CORPORATION
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November 7, 2007

Re: Catawba Nuclear Station
Technical Specifications Bases

Please replace the corresponding pages in your copy of the Catawba Technical Specifications Manual as follows:

REMOVE THESE PAGES	INSERT THESE PAGES
LIST OF EFFECTIVE PAGES	
Page 30	Page 30
TAB 3.8.1	
B 3.8.1-3 Revision 0	**B** 3.8.1-3 Revision 1
B 3.8.1-4 Revision 1	**B** 3.8.1-4 Revision 2
B 3.8.1-18 Revision 0	**B** 3.8.1-18 Revision 1
B 3.8.1-19 Revision 0	**B** 3.8.1-19 Revision 1

If you have any questions concerning the contents of this Technical Specification update, contact Betty Aldridge at (803)831-3758.

Randall D. Hart
Manager, Regulatory Compliance

Page Number	Amendment	Revision Date
B 3.7.15-4	Revision 0	9/27/06
B 3.7.16-1	Revision 2	9/27/06
B 3.7.16-2	Revision 2	9/27/06
B 3.7.16-3	Revision 2	9/27/06
B 3.7.16-4	Revision 0	9/27/06
B 3.7.17-1	Revision 0	9/30/98
B 3.7.17-2	Revision 0	9/30/98
B 3.7.17-3	Revision 0	9/30/98
B 3.8.1-1	Revision 1	2/26/01
B 3.8.1-2	Revision 0	9/30/98
B 3.8.1-3	Revision 1	11/5/07 |
B 3.8.1-4	Revision 2	11/5/07 |
B 3.8.1-5	Revision 2	5/10/05
B 3.8.1-6	Revision 2	5/10/05
B 3.8.1-7	Revision 2	5/10/05
B 3.8.1-8	Revision 1	5/10/05
B 3.8.1-9	Revision 1	5/10/05
B 3.8.1-10	Revision 1	5/10/05
B 3.8.1-11	Revision 0	9/30/98
B 3.8.1-12	Revision 0	9/30/98
B 3.8.1-13	Revision 0	9/30/98
B 3.8.1-14	Revision 0	9/30/98
B 3.8.1-15	Revision 0	9/30/98
B 3.8.1-16	Revision 0	9/30/98
B 3.8.1-17	Revision 0	9/30/98
B 3.8.1-18	Revision 1	11/5/07 |
B 3.8.1-19	Revision 1	11/5/07 |
B 3.8.1-20	Revision 0	9/30/98
B 3.8.1-21	Revision 0	9/30/98
B 3.8.1-22	Revision 2	6/25/07
B 3.8.1-23	Revision 1	3/16/00
B 3.8.1-24	Revision 0	9/30/98

APPLICABLE SAFETY ANALYSES (continued)

The OPERABILITY of the AC electrical power sources is consistent with the initial assumptions of the Accident analyses and is based upon meeting the design basis of the unit. This results in maintaining at least one train of the onsite or offsite AC sources OPERABLE during Accident conditions in the event of:

a. An assumed loss of all offsite power or all onsite AC power; and

b. A worst case single failure.

The AC sources satisfy Criterion 3 of 10 CFR 50.36 (Ref. 6).

LCO

Two qualified circuits between the offsite transmission network and the onsite Essential Auxiliary Power System and separate and independent DGs for each train ensure availability of the required power to shut down the reactor and maintain it in a safe shutdown condition after an anticipated operational occurrence (AOO) or a postulated DBA.

Qualified offsite circuits are those that are described in the UFSAR and are part of the licensing basis for the unit.

In addition, one required automatic load sequencer per train must be OPERABLE.

Each offsite circuit must be capable of maintaining rated frequency and voltage, and accepting required loads during an accident, while connected to the ESF buses.

The 4.16 kV essential system is divided into two completely redundant and independent trains designated A and B, each consisting of one 4.16 kV switchgear assembly, three 4.16 kV/600 V transformers, two 600 V load centers, and associated loads.

Normally, each Class 1E 4.16 kV switchgear is powered from its associated non-Class 1E train of the 6.9 kV Normal Auxiliary Power System as discussed in "6.9 kV Normal Auxiliary Power System" in Chapter 8 of the UFSAR (Ref. 2). Additionally, a standby source of power to each 4.16 kV essential switchgear, not required by General Design Criterion 17, is provided from the 6.9 kV system via two separate and independent 6.9/4.16 kV transformers. These transformers are shared between units and provide the capability to supply a standby

BASES

LCO (continued)

source of preferred power to each unit's 4.16 kV essential switchgear from either unit's 6.9 kV system. A key interlock scheme is provided to preclude the possibility of connecting the two units together at either the 6.9 or 4.16 kV level.

Each train of the 4.16 kV Essential Auxiliary Power System is also provided with a separate and independent emergency diesel generator to supply the Class 1E loads required to safely shut down the unit following a design basis accident. Additionally, each diesel generator is capable of supplying its associated 4.16 kV blackout switchgear through a connection with the 4.16 kV essential switchgear.

Each DG must be capable of starting, accelerating to rated speed and voltage, and connecting to its respective ESF bus on detection of bus undervoltage. This will be accomplished within 11 seconds. Each DG must also be capable of accepting required loads within the assumed loading sequence intervals, and continue to operate until offsite power can be restored to the ESF buses. These capabilities are required to be met from a variety of initial conditions such as DG in standby with the engine hot and DG in standby with the engine at ambient conditions. Additional DG capabilities must be demonstrated to meet required Surveillance, e.g., capability of the DG to revert to standby status on an ECCS signal while operating in parallel test mode.

Proper sequencing of loads, including tripping of nonessential loads, is a required function for DG OPERABILITY.

The AC sources in one train must be separate and independent (to the extent possible) of the AC sources in the other train. For the DGs, separation and independence are complete.

For the offsite AC sources, separation and independence are provided to the extent practical.

APPLICABILITY

The AC sources and sequencers are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:

a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOOs or abnormal transients; and

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.1.6

This Surveillance demonstrates that each required fuel oil system operates and transfers fuel oil from its associated storage tanks to its associated day tank. This is required to support continuous operation of standby power sources. This Surveillance provides assurance that the fuel oil valve is OPERABLE, and allows gravity feed of fuel oil to the day tank from underground storage tanks, to ensure the fuel oil piping system is intact, the fuel delivery piping is not obstructed, and the controls and control systems for fuel transfer systems are OPERABLE.

The design of fuel transfer systems is such that the transfer valve operates automatically or the transfer valve bypass valve may be opened manually in order to maintain an adequate volume of fuel oil in the day tanks during or following DG testing. Therefore, a 31 day Frequency is appropriate.

SR 3.8.1.7

See SR 3.8.1.2.

SR 3.8.1.8

Transfer of each 4.16 kV ESF bus power supply from the normal offsite circuit to the alternate offsite circuit demonstrates the capability of the alternate circuit distribution network to power the shutdown loads. The alternate circuit distribution network consists of an offsite power source through a 6.9 kV bus incoming breaker, its associated 6.9 kV bus tie breaker and the aligned 6.9/4.16 kV transformer to the essential bus. The requirement of this SR is the transfer from the normal offsite circuit to the alternate offsite circuit via the automatic and manual actuation of the 6.9 kV bus tie breaker and 6.9 kV bus incoming breakers upon loss of the normal offsite source that is being credited. Capability of manually swapping to a standby transformer is not required to satisfy this SR. The 18 month Frequency of the Surveillance is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle lengths. Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.1.9

Each DG is provided with an engine overspeed trip to prevent damage to the engine. Recovery from the transient caused by the loss of a large load could cause diesel engine overspeed, which, if excessive, might result in a trip of the engine. This Surveillance demonstrates the DG load response characteristics and capability to reject the largest single load without exceeding predetermined voltage and frequency and while maintaining a specified margin to the overspeed trip. For this unit, the single load for each DG and its horsepower rating is as follows: Nuclear Service Water pump which is a 1000 H.P. motor. This Surveillance may be accomplished by:

a. Tripping the DG output breaker with the DG carrying greater than or equal to its associated single largest post-accident load while paralleled to offsite power, or while solely supplying the bus; or

b. Tripping its associated single largest post-accident load with the DG solely supplying the bus.

As required by Regulatory Guide 1.9 (Ref. 3), the load rejection test is acceptable if the increase in diesel speed does not exceed 75% of the difference between synchronous speed and the overspeed trip setpoint. The value of 63 Hz has been selected for the frequency limit for the load rejection and it is a more conservative limit than required by Reference 3.

The time, voltage, and frequency tolerances specified in this SR are derived from Regulatory Guide 1.9 (Ref. 3) recommendations for response during load sequence intervals. The 3 seconds specified is equal to 60% of a typical 5 second load sequence interval associated with sequencing of the largest load. The voltage and frequency specified are consistent with the design range of the equipment powered by the DG. SR 3.8.1.9.a corresponds to the maximum frequency excursion, while SR 3.8.1.9.b and SR 3.8.1.9.c are steady state voltage and frequency values to which the system must recover following load rejection. The 18 month Frequency is consistent with the recommendation of Regulatory Guide 1.108 (Ref. 10).

This SR is modified by a Note. In order to ensure that the DG is tested under load conditions that are as close to design basis conditions as possible, the Note requires that, if synchronized to offsite power, testing must be performed using a power factor ≤ 0.9. This power factor is chosen to be representative of the actual design basis inductive loading that the DG would experience.