Duke Power
A Duke Energy Company

D.M. JAMIL
Vice President

Duke Power
Catawba Nuclear Station
4800 Concord Rd. / CN01VP
York, SC 29745-9635

803 831 4251
803 831 3221 fax

July 30, 2003

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 (TS) Amendments
Revision to Steam Generator TS
TAC Nos. MB7842 and MB7843

References:

1. Letter from Duke Energy Corporation to NRC, same subject, dated February 25, 2003

2. Letter from Duke Energy Corporation to NRC, same subject, dated June 9, 2003

3. Letter from NRC to Duke Energy Corporation, Further Request for Additional Information, dated July 21, 2003

References 1 and 2 provided Duke Energy Corporation's initial submittal and response to additional information, respectively, concerning requested amendments to the Operating Licenses and TS. The requested amendments incorporate changes to a number of TS and Bases sections for Catawba Units 1 and 2 in response to the industry initiative known as the NEI Generic License Change Package (GLCP).

During recent discussions among Duke Energy Corporation, the NRC, and industry representatives, the NRC indicated that the major issue to be resolved in support of approval of the requested amendments is the Structural Integrity Performance Criterion (SIPC) for steam generator tubes. Specifically, the unresolved item involves the magnitude of the safety factor to be applied when evaluating the effect of loads that significantly contribute to burst. The NRC documented

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this discussion in Reference 3. The most recent version of the proposed SIPC was submitted in Reference 2. Subsequent to the submittal of Reference 2, Duke Energy Corporation and the industry have held additional discussions regarding the SIPC. These discussions concluded that in lieu of specifying a numerical safety factor for contributing loads in the SIPC, the SIPC could be revised to simply state that during the assessment of tube integrity, loads that significantly affect burst shall be determined and assessed in combination with the loads due to primary-to-secondary pressure differential using a safety factor that is consistent with each plant's licensing basis design criteria. Duke Energy Corporation and the industry maintain that this approach satisfies the NRC position that all applicable design and licensing basis requirements be satisfied, without the need for inclusion of this level of detail in the TS.

Additionally, pursuant to Reference 3, Duke Energy Corporation previously indicated to the NRC in a telephone conversation that the proposed TS governing the submission of a steam generator tube inspection report would be revised to remove a reference to the threshold for submission of the report. The TS as proposed in Reference 2 only required the report to be submitted if the results of the steam generator inspection indicated greater than 1% of the inspected tubes in any steam generator satisfied the applicable tube repair criteria. The TS will be revised to require the submission of the report without regard to the number of tubes satisfying the tube repair criteria.

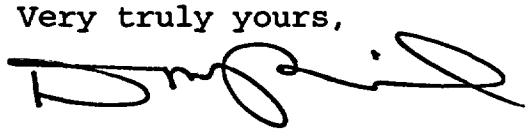
Attachment 1 to this letter contains the revised proposed TS pages in conjunction with the above discussion. These include INSERT A for TS 5.5.9, Steam Generator (SG) Program and INSERT B for TS 5.6.8, Steam Generator (SG) Tube Inspection Report.

Duke Energy Corporation has concluded that the original No Significant Hazards Consideration Analysis and Environmental Analysis transmitted via Reference 1 continue to remain valid as a result of this response.

Pursuant to 10 CFR 50.91, a copy of this letter is being sent to the appropriate State of South Carolina official.

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

Very truly yours,



Dhiaa M. Jamil

LJR/s

Attachment

Dhiaa 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.

Dhiaa M. Jamil, Vice President

Subscribed and sworn to me: 7-30-2003
Date

Notary Public

My commission expires: 7-10-2012
Date

SEAL

xc (with attachment):

L.A. Reyes
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

R.E. Martin (addressee only)
NRC Senior Project Manager (CNS)
U.S. Nuclear Regulatory Commission
Mail Stop O8-H12
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 1

REVISED MARKED-UP TS PAGES FOR CATAWBA

INSERT A for TS 5.5.9, Steam Generator (SG) Program:

A Steam Generator Program shall be established and implemented to ensure that SG tube integrity is maintained. In addition, the Steam Generator Program shall include the following provisions:

a. Provisions for condition monitoring assessments. Condition monitoring assessment means an evaluation of the "as found" condition of the tubing with respect to the performance criteria for structural integrity and accident induced leakage. The "as found" condition refers to the condition of the tubing during a SG inspection outage, as determined from the inservice inspection results or by other means, prior to the plugging of tubes. Condition monitoring assessments shall be conducted during each outage during which the SG tubes are inspected or plugged to confirm that the performance criteria are being met.

b. Performance criteria for SG tube integrity. SG tube integrity shall be maintained by meeting the performance criteria for tube structural integrity, accident induced leakage, and operational LEAKAGE.

   1. Structural integrity performance criterion: All inservice SG tubes shall retain structural integrity over the full range of normal operating conditions (including startup, operation in the power range, hot standby, and cooldown, and all anticipated transients included in the design specification) and design basis accidents. This includes retaining a safety factor of 3.0 against burst under normal steady state full power operation primary to secondary pressure differential and a safety factor of 1.4 against burst applied to the design basis accident primary to secondary pressure differentials. Apart from the above requirements, additional loading conditions associated with the design basis accidents, or combination of accidents in accordance with the design and licensing basis, shall also be evaluated to determine if the associated loads contribute significantly to burst. In the assessment of tube integrity, those loads that do significantly affect burst shall be determined and assessed in combination with the loads due to primary to secondary pressure differential using safety factors that are consistent with the licensing basis design criteria.

   2. Accident induced leakage performance criterion: The primary to secondary accident induced leakage rate for any design basis accident, other than a SG tube rupture, shall not exceed the leakage rate assumed in the accident analysis in terms of total leakage rate for all SGs and leakage rate for an individual SG. Leakage is not to exceed 150 gallons per day through each SG for a total of 600 gallons per day through all SGs.

   3. The operational LEAKAGE performance criterion is specified in LCO 3.4.13, "RCS Operational LEAKAGE."

c. Provisions for SG tube repair criteria. Tubes found by inservice inspection to contain flaws with a depth equal to or exceeding 40% of the nominal tube wall thickness shall be plugged.

d. Provisions for SG tube inspections. Periodic SG tube inspections shall be performed. The number and portions of the tubes inspected and method of inspection shall be performed with the objective of detecting flaws of any type (for example, volumetric flaws, axial and circumferential cracks) that may be present along the length of the tube, from the tube-to-tubesheet weld at the tube inlet to the tube-to-tubesheet weld at the tube outlet, and that may satisfy the applicable tube repair criteria. The tube-to-tubesheet weld is not part of the tube. In addition to meeting requirements d.1, d.2, d.3, and d.4 below, the inspection scope, inspection methods, and inspection intervals shall be such as to ensure that SG tube integrity is maintained until the next SG inspection. An assessment of degradation shall be performed to determine the type and location of flaws to which the tubes may be susceptible and, based on this assessment, to determine which inspection methods need to be employed and at what locations.

1. Inspect 100% of the tubes in each SG during the first refueling outage following SG replacement.

2. For Unit 1, inspect 100% of the tubes at sequential periods of 144, 108, 72, and, thereafter, 60 Effective Full Power Months (EFPM). The first sequential period shall be considered to begin after the first inservice inspection of the SGs. In addition, inspect 50% of the tubes by the refueling outage nearest the midpoint of the period and the remaining 50% by the refueling outage nearest the end of the period. No SG shall operate for more than 72 EFPM or three refueling outages (whichever is less) without being inspected.

3. For Unit 2, inspect 100% of the tubes at sequential periods of 120, 90, and, thereafter, 60 EFPM. The first sequential period shall be considered to begin after the first inservice inspection of the SGs. In addition, inspect 50% of the tubes by the refueling outage nearest the midpoint of the period and the remaining 50% by the refueling outage nearest the end of the period. No SG shall operate for more than 48 EFPM or two refueling outages (whichever is less) without being inspected.

4. If crack indications are found in any SG tube, then the next inspection for each SG for the degradation mechanism that caused the crack indication shall not exceed 24 EFPM or one refueling outage (whichever is less). If definitive information, such as from examination of a pulled tube, diagnostic non-destructive testing, or engineering evaluation indicates that a crack like indication is not associated with crack(s), then the indication need not be treated as a crack.

e. Provisions for monitoring operational primary to secondary LEAKAGE.

INSERT B for TS 5.6.8, Steam Generator (SG) Tube Inspection Report:

A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of the inspection. The report shall include:

a. The scope of inspections performed on each SG,

b. Active degradation mechanisms found,

c. Non-destructive examination techniques utilized for each degradation mechanism,

d. Location, orientation (if linear), and measured sizes (if available) of service induced indications,

e. Number of tubes plugged during the inspection outage for each active degradation mechanism,

f. Total number and percentage of tubes plugged to date, and

g. The results of condition monitoring, including the results of tube pulls and in-situ testing.