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January 22, 1998

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 Request for Relief Number 98-01 Relief Request for Inservice Testing (IST) Program Valves in Diesel Generator Fuel Oil and Diesel Generator Starting Air System

Pursuant to 10 CFR 50.55a(f)(5)(iii) and (iv), please find attached Request for Relief 98-01 from the requirements of the ASME Boiler and Pressure Vessel Code. This request is being submitted in order to seek relief from performing relief valve testing for certain valves in the diesel generator fuel oil (FD) system and from performing full stroke valve testing for certain valves in the diesel generator starting air (VG) system.

The attachments to this relief request include all information necessary to ensure timely processing of this request. If you have any questions concerning this material, please call L.J. Rudy at (803) 831-3084.

Very truly yours,

Gary R. Peterson

LJR/s

Attachment

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xc (with attachments): L.A. Reyes, Regional Administrator Region II

D.J. Roberts, Senior Resident Inspector

P.S. Tam, Senior Project Manager ONRR

Attachment 1 Request for Relief 98-01 Relief Keguest from Performing Relief Valve Testing for FD System Valves

I. Identify the component for which relief is requested:

a) Name and number as given in the UFSAR:

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1FD34 (Diesel Generator Engine 1A Return Header Relief Valve) 2FD34 (Diesel Generator Engine 2A Return Header Relief Valve) 1FD74 (Diesel Generator Engine 1B Return Header Relief Valve) 2FD74 (Diesel Generator Engine 2B Return Header Relief Valve)

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b) Description of function of component:

The subject volves perform a dual function of regulating fuel pressure to the diesel generator engine and providing overpressure protection of the fuel oil return line from the main circulation header. Each valve is physically located above its corresponding diesel generator fuel oil day tank. The valves are set to regulate fuel oil pressure at a maximum value of 40 psig. With the diesel generator running, the valve relief pressure setpoint maintains a backpressure of 40 psig on the main circulation header. The valve will lift to relieve pressure in excess of 40 psig, thereby fulfilling both its regulation and overpressure protection functions. They are 1-inch valves manufactured by Fulflo Specialties Company.

c) ASME Section III Code Class or ASME Section XI Code Class:

ASME Section XI Code Class C

d) ASME Section III:

No relief is being sought from any ASME Section III requirements concerning these values.

e) Valve testing:

OM-1 requires that relief values in a plications such as this be periodically removed from service and bench tested using the respective fluid medium for the value (in this case, fuel oil).

II. Specifically identify the ASME Code requirement for which relief is desired:

Catawba is seeking relief from OM-1 paragraph 1.3.4.1, Pressure Relief Valves. This paragraph specifies testing requirements for Class 2 and 3 pressure relief devices. Catawba is requesting relief from the requirement to bench test the subject valves.

III. Provide information to support the determination that relief from the requirement in II above is necessary (i.e., burden):

Catawba does not present v have a test bench to allow testing of the subject valves. Procurement of a separate test bench for these four valves would be impractical and would not provide any additional assurance of the valves' ability to perform their design function. This ability can be successfully demonstrated by alternate testing as discussed below.

IV. Specify the alternate inservice testing/examination that will be performed in lieu of the ASME Code Section XI requirements:

Diesel generator fuel oil pressure will be verified monthly during the diesel generator performance test. The monthly test, conducted according to procedures PT/1&2/A/4350/02A&B, D/G Operability Test, for Units 1 and 2 and diesel generators A and B, respectively, verifies both the pressure regulating and overpressure protection functions of the subject valves. These procedures perform the monthly diesel generator run during which fuel oil recirculation header pressure is monitored. Procedure MP/0/A/7700/21, Diesel Engine Fuel Oil Back Pressure Relief Valve Corrective Maintenance, is performed after outage diesel generator maintenance to adjust the subject valves to the required 40 psig backpressure. V. Provide an explanation as to why the alternate proposed inservice testing/examination will provide an acceptable level of quality and safety and not reduce the level of public health and safety:

Verification of the subject value functions (pressure regulating and overpressure protection) as part of the diesel generator performance test will provide complete assurance of the values' ability to perform as designed. The values will be tested under the actual conditions for which they are expected to operate; hence, their system functions can be directly verified. No adverse impact upon public health and safety will be generated from a radiological or other standpoint.

VI. Provide a schedule for implementation of the inservice inspection described in IV above:

As indicated in IV above, diesel generator fuel oil pressure will be verified on a monthly basis during scheduled performances of the diesel generator performance test. This will adequately verify the design function of the subject valves.

Attachment 2 Request for Relief 98-01 Relief Request from Performing Full Stroke Valve Testing for VG System Valves

I. Identify the component for which relief is requested:

a) Name and number as given in the UFSAR:

1VG5, 1VG7 (Diesel Generator Starting Air Dryer 1A1 Discharge Check Valves) 1VG6, 1VG8 (Diesel Generator Starting Air Layer 1A2 Discharge Check Valves) 1VG49, 1VG51 (Diesel Generator Starting Air Dryer 1B1 Discharge Check Valves) 1VG50, 1VG52 (Diesel Generator Starting Air Dryer 1B2 Discharge Check Valves) 2VG5, 2VG7 (Diesel Generator Starting Air Dryer 2A1 Discharge Check Valves) 2VG6, 2VG8 (Diesel Generator Starting Air Dryer 2A2 Discharge Check Valves) 2VG49, 2VG51 (Diesel Generator Starting Air Dryer 2B1 Discharge Check Valves) 2VG50, 2VG52 (Diesel Generator Starting Air Dr. 2B2 Discharge Check Valves)

b) Description of function of component:

Each value in the above-listed pair works together with its in-series counterpart to prevent depressurization of the respective normally-charged diesel generator engine starting air tank. Each value opens as necessary during normal operation to recharge the tank when the respective diesel generator is not in operation. Each value must open during diesel generator operation to recharge the tank, if necessary. These values are 1-inch Kerotest soft-reat check values. They are located between their tespective air dryer and the starting air tank.

c) ASME Section III Code Class or ASME Section XI Code Class:

ASME Section XI Code Class C

d) ASME Section III:

No relief is being sought from any ASME Section III requirements concerning these values.

e) Valve testing:

These values are required to be full-stroke exercised every three months to the position required to fulfill their function.

II. Specifically identify the ASME Code requirement for which relief is desired:

ASME Code requirements dictate that each value in the above-described pairs of values be separately tested and be determined capable of fulfilling its design function. ASME/ANSI OM-1987 Edition, Part 10, including OMa-1988, paragraph 4.3.2.2, specifies that each value shall be exercised or examined in a manner which verifies obturator travel to the required position. Due to the series system value arrangement, Catawba has no means to separately verify each value's ability to close. Catawba therefore requests relief from the ASME Code requirement specifying that each value be individually tested.

III. Provide information to support the determination that relief from the requirement in II above is necessary (i.e., burden):

As indicated above, the subject valves are arranged in pairs (in series) to perform their function of preventing depressurization of the starting air tanks. The series system arrangement precludes independent testing of each valve.

IV. Specify the alternate inservice testing/examination that will be performed in lieu of the ASME Code Section XI requirements:

Valve pairs (1/2VG5&7, 1/2VG6&8, 1/2VG49&51, and 1/2VG50&52) will be tested at least quarterly. This test will be conducted according to procedures PT/1&2/A/4200/077, VG Valve Inservice Test, for Units 1 and 2, respectively. The purpose of this test is to check the backleakage through each valve pair with the diesel generator secured. A starting air tank pressure decrease of greater than 5 psig in a 10-minute period would indicate excessive leakage through the valve pair and would require corrective action upon detection of such a condition. Both valves in the affected pair will be inspected for degradation and repaired as appropriate should such a condition be detected.

V. Provide an explanation as to why the alternate proposed inservice testing/examination will provide an acceptable level of quality and safety and not reduce the level of public health and safety:

Testing of the above-described valve pairs as indicated above will verify the ability of the pair to perform its design function. Both valves in each pair are not required to be capable of functioning separately in order for the diesel generator to function properly. No adverse impact upon the health and safety of the public, either from radiological consequences or otherwise, will be created as a result of the proposed alternative testing.

VI. Provide a schedule for implementation of the inservice inspection described in IV above:

As indicated in IV above, the subject valves will be tested at least quarterly.