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September 14, 1998

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Duke Energy Corporation

Catawba Nuclear Station - Units 1 & 2
Docket Nos. 50-413 and 50-414

Request for Relief Number 98-03
Relief Request for the Inservice Testing Program
for Valves in the Diesel Generator Fuel Oil System

Pursuant to 10 CFR 50.55a(f)(5)(iii) and (iv), attached is Catawba Request for Relief 98-03. This request seeks relief from testing requirements of the ASME Boiler and Pressure Vessel Code applicable to identified relief valves in the Diesel Generator Fuel Oil System (FD) for Catawba Units 1 and 2.

The attachment to this letter contains the detailed description and supporting information necessary for the timely processing of this request.

Questions regarding this request should be directed to L.J. Rudy at (803) 831-3084.

Very truly yours,

G.R. Peterson

Attachment

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D. J. Roberts, NRC Senior Resident Inspector (CNS)

Attachment 1
Request for Relief 98-03
Relief Request 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:

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)

b) Description of function of component:

The subject valves 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 valves.

e) Valve testing:

ASME/ASNI OM-1 Code (Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices) requires that relief valves in applications such as this have:

- 1) visual examination
- 2) seat tightness determination
- 3) set pressure determination
- 4) determination of Compliance with Owner's seat tightness criteria, and
- 5) verification of the integrity of the balancing device on balanced valves. The code also requires the number of valve openings at set pressure shall be sufficient to demonstrate satisfactory repeatability with a minimum of two consecutive openings within Code tolerance.

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

Catawba is seeking relief from OM-1 paragraphs 7.3.2.2 and 8.1.3.8. Both of these paragraphs are applicable to pressure relief valves. These paragraphs specify testing requirements for Class 2 and 3 pressure relief devices. Catawba is requesting relief from the requirement to conduct set pressure testing and the requirement for a minimum two consecutive openings within Code tolerance. Because these valves lift to regulate pressure, seat tightness is not applicable. Also, these valves do not have balancing devices, therefore items 2, 4, and 5 from Section I, Item e of this request for relief (stated above), do not apply to these valves.

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

Catawba's current method for set pressure determination for relief valves is to remove the valves and perform bench testing. Removal for testing is not a code requirement, however this is the method Catawba relies on for set point determination. An alternate method is the application of "skid mounted" criteria as discussed in Section 3.4 of NUREG 1482. By this method, successful demonstration of valve

function is performed each month during the diesel generator operability test.

- 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 valve functions (pressure regulating and overpressure protection) as part of the diesel generator performance test will provide complete assurance of the valves' ability to perform as designed. The valves 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.