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Waterford 3

W3F1-2000-0175
A4.05
PR

December 19, 2000

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

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Alternative to ASME Code Requirements
Inservice Test Program Relief Request VRR-07

Gentlemen:

In accordance with 10CFR50.55a (f)(6)(i), Entergy Operations, Inc. (EOI) is requesting relief from and proposes alternatives to the requirements of ASME/ANSI OM Standard Part 1-1987 (OM-1), "Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices," Articles 1.3.4.3(a) and 7.3.2.4(a). Article 1.3.4.3(a) requires primary containment vacuum relief devices be tested on a six-month frequency unless historical data indicates a requirement for more frequent testing. Article 7.3.2.4(a) requires valve actuation to verify open and close capability, set pressure verification, and performance check of any pressure and position sensing accessories. Some of these requirements are impractical due to the location of the containment vacuum relief valves as detailed in the attachment.

There are no commitments contained in this submittal.

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Should you have any questions or comments concerning this request, please contact
D. Bryan Miller at (504) 739-6692.

Very truly yours,

A handwritten signature in black ink that reads "Everett P. Perkins, Jr." with a stylized flourish at the end.

E.P. Perkins, Jr.
Director
Nuclear Safety Assurance

EPP/DBM/ssf
Attachment: Relief Request VVR-007

cc: E.W. Merschoff, NRC Region IV
N. Kalyanam, NRC-NRR
J. Smith
N.S. Reynolds
NRC Resident Inspectors Office

Relief Request VRR-07

Component Identification:

System: Containment Vacuum Relief

Code Class: 2

Valve Category: AC

Component Identification: CVR-101, CVR-102, CVR-201, and CVR-202

Component Function: Open on pressure differential between the annulus and containment (inadvertent containment spray) to equalize pressure to negate potential containment failure. Perform containment isolation in the closed direction.

Test Requirement:

OM-1-1987 Article 1.3.4.3(a) requires that primary containment vacuum relief devices be tested on a six-month frequency unless historical data indicates a requirement for more frequent testing.

Periodic testing requirements for Pressurized Water Reactor Class 2 Vacuum Relief Valves, as defined in OM-1 Article 7.3.2.4(a) include actuation to verify open and closed capability, set pressure verification, and the performance check of any pressure and position sensing accessories.

Relief Requested

For valves CVR-102 and CVR-202 relief is requested, in accordance with 10CFR50.55a (f)(6)(i), from the six-month frequency to actuate the valves to verify open and closed capability, set pressure verification, and the performance check of any pressure and position sensing accessories.

For valves CVR-101 and CVR-201 relief is requested, in accordance with 10CFR50.55a (f)(6)(i), from the six-month frequency to verify the position sensing accessories.

Basis of Relief:

Manual disc cycling (actuation) to verify open and closed capability and set pressure verification can only be performed locally for containment vacuum relief valves CVR-102 and CVR-202. The location of these valves in containment makes it impractical to perform this testing at power for ALARA reasons. (Recent at power surveys indicated 900 mrem/hr neutron / 350 mrem/hr gamma in the vicinity of CVR-102 and 200 mrem/hr neutron / 15 mrem/hr gamma in the vicinity of CVR-202.) Testing at the currently required OM-1 six-month frequency would require at power testing. These check valves do not have pressure or position sensing accessories. The valves are self actuated, magnetically held closed, and of the free swinging disc type for quick opening against small pressure differentials. These check valves constitute the inner isolation valve for their respective containment penetration. The valve setpoint is

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(continued)

Basis of Relief (continued):

magnetically adjusted and a function of the distance between the magnet and a metal plate attached to the valve disc. This design configuration is less susceptible to setpoint drift than other Class 2 relief devices for which OM-1 would allow much longer test frequencies. Therefore, an extended test interval is appropriate. The proposed test frequency is consistent with the test frequency used during the first ten year interval. (Set pressure verification was not required during the first ten year interval.)

Verification of the position sensing accessories for containment vacuum relief valves CVR-101 and CVR-201 can only be performed by local observation. The location of these valves in the annulus between the plant containment and shield building makes this testing impractical due to personnel safety concerns. The annulus is considered to be a confined space requiring special monitoring and safety precautions be taken prior to and during entry into the annulus. Access to this confined space is limited during plant operations due to personnel safety concerns and technical specification requirements to maintain a negative pressure in the annulus. CVR-101 and CVR-201 are air-operated butterfly valves that are actuated by a differential pressure switch. The proposed test frequency is consistent with the test frequency used during the first ten year interval.

This relief became necessary when new test requirements were identified following the upgrade of the IST Program for the second ten year interval as required by 10 CFR 50.55(a). Reference Waterford 3 Licensee Event Report 1999-003-00 for further background information.

Alternate Testing:

Testing required by OM-1-1987 Article 7.3.2.4(a), applicable to inside containment isolation valves CVR-102 and CVR-202, will be performed during refueling outages when the valves are accessible for manual exercising to the open and closed position and set pressure verification.

The position sensing accessory check of OM-1-1987 Article 7.3.2.4(a) for containment isolation valves CVR-101 and CVR-201 will be performed in accordance with OM-10, Article 4.1, consistent with the requirements applicable to valves with remote position indicators.

References:

1. FSAR Table 3.9-9, Non-NSSS Supplied Active Valves and Pumps
2. FSAR Table 6.2-32, Containment Penetration and Isolation Valves
3. Technical Specification 3.6.5, Vacuum Relief Valves
4. Technical Specification 3.6.6.2, Shield Building Integrity
5. Licensee Event Report 1999-003-00