



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF
NUCLEAR REACTOR REGULATION RELATING TO RELIEF
REQUEST NO. 6 OF THE INSERVICE TESTING PROGRAM
VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1&2
DOCKET NOS. 50-338/339

RELIEF REQUEST

The licensee has requested relief from the ASME Code, Section XI, IWP-3100 requirements to:

1. Measure inlet pressure, differential pressure, flow rate and vibrations, and
2. Measure lube oil level or pressure and bearing temperature for pumps 1-RS-P-1A, 1-RS-P-1B, 2-RS-P-1A and 2-RS-P-1B.

LICENSEE'S BASIS FOR REQUESTING RELIEF

Full-flow testing of these pumps would spray water inside the containment building. These pumps were designed to be run dry periodically for a short period of time to verify operability. Proper lube oil level or pressure cannot be observed because pump bearings are in the main flow path. IWP-4310 provides exemption from measuring bearing temperatures for bearings in the main flow path.

LICENSEE'S PROPOSED ALTERNATE TESTING

These pumps will be run dry to verify operability. Each pump is equipped with a sensor to detect pump rotation which alarms in the control room. This alarm will be observed during each pump test. In addition, motor current will be recorded for each pump test. Each pump is equipped with a vibration detector and high vibration alarm in the control room and the alarm will be observed during each pump test.

EVALUATION

The licensee has requested relief from performing the Code-required testing to measure the parameters used to determine the hydraulic and mechanical performance of the pumps. Alternatively, the licensee has proposed that these pumps be tested quarterly with a dry pump run. These pumps are not equipped with a

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means of quarterly testing at power other than a dry pump run. However, these pumps can be flow tested during refueling outages using a recirculation path by building a temporary reservoir inside containment as a source of suction. Testing the containment recirculation pumps 1-RS-P-1A, 1-RS-P-1B, 2-RS-P-1A, and 2-RS-P-1B with flow during refueling outages and quarterly dry pump runs provides a reasonable alternative to the Code requirements. In case of extended intervals between refueling outages, these pumps must be hydraulically tested at least once every 30 months. Verification of lubricant level or pressure of this type of pump is not possible since the pump bearings are in the flow path. Because of the design of this system, compliance with the Code requirements is impractical. Conformance with the Code would only be possible if the containment recirculation system were redesigned, which would be a significant burden for the licensee. Accordingly, pursuant to 10 CFR 50.55a(g)(6)(i), relief may be granted from the Code-required quarterly flow testing and from the Code requirements to verify lubricant level or pressure provided that refueling outage flow testing at least once every 30 months and quarterly dry pump testing are performed as discussed above. The relief granted is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Dated: February 18, 1988

Principal Contributor:

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