

August 12, 1986

Docket No. 50-280

Mr. W. L. Stewart
Vice President - Nuclear Operations
Virginia Electric and Power Company
Post Office Box 26666
Richmond, Virginia 23261

Dear Mr. Stewart:

By letter dated June 6, 1986, you requested relief regarding the hydrostatic testing of main steam system piping in Surry Unit No. 1. Your request has been granted. The enclosed Safety Evaluation provides the details and conclusions of our review.

For the relief that has been granted, we have determined that the code requirement is impractical and that the granting of the relief 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 requirement was imposed on the facility.

The request for relief complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I.

Sincerely,

/s/

Lester S. Rubenstein, Project Director
PWR Project Directorate #2
Division of Licensing-A

Enclosure:
As stated

cc w/enclosure

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Mr. W. L. Stewart
Virginia Electric and Power Company

Surry Power Station

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Enclosure

SAFETY EVALUATION SURRY POWER STATION UNIT 1, DOCKET NUMBER 50-280 REQUEST FOR RELIEF FROM ASME SECTION XI HYDROSTATIC TEST REQUIREMENT FOR VALVE REPLACEMENT

Introduction

This report provides a safety evaluation of a request for relief from a specific hydrostatic testing requirement applicable to a repair on the Surry Unit 1 main steam system piping. The request was submitted by Virginia Electric and Power Company (the licensee) in a letter dated June 6, 1986.

The bases for the requirement from which relief has been requested and for granting the relief are derived from the Code of Federal Regulations, 10 CFR 50.55a(g). The subject regulations specify that inservice examinations and tests be performed on nuclear power facilities, such as Surry Unit 1, in accordance with the requirements of Section XI of the ASME Boiler and Pressure Vessel Code (ASME Section XI), 1980 Edition, Winter 1980 Addenda. ASME Section XI provides requirements for hydrostatic testing of piping after repairs or replacements. 10 CFR 50.55a(g)(6)(i) states that the Commission may grant relief from the ASME Section XI requirements when they are determined impractical for a facility, provided the Commission determines that the granting of the relief is authorized by law, 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. The specific ASME Section XI requirement from which relief has been requested, the relief requested, the basis for the relief request, and the NRC staff's evaluation and conclusions are described below.

ASME Section XI Requirements

ASME Section XI requires hydrostatic testing of ASME Class 2 piping following repair or replacement. Subsection IWC-5000 provides criteria for determining the required test pressure for performing the post repair hydrostatic tests on the piping. For testing the recently replaced ASME Class 2 valve, 1-MS-268, in Surry Unit 1 main steam system piping, the IWC-5000 criteria specify a test pressure of 1.25 times system pressure. The system pressure for the piping containing this valve is 1085 psig and, thus, the test pressure is required to be 1356 psig.

Discussion

The licensee has requested a relief from hydrostatic testing of one 1½-inch socket welded drain valve (1-MS-268) just upstream of the main steam trip valve for the Steam Generator B. Replacement of this valve is necessary due to the harsh environment which causes erosion/corrosion on the valve seat surface. The valve's external pressure boundary remains unaffected.

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The hydrostatic test required by ASME Section XI would require including the B Steam Generator and a considerable portion of attached main steam piping within the test boundary as no intermediate isolation exists. The licensee stated that this test is impractical, when compared to the actual integrity assurance gained from the inspection.

The licensee has proposed to conduct an alternative inspection of this valve by performing a surface examination (MT or PT), and a visual (VT-2) examination in conjunction with a system inservice pressure test (IWC-5221) during the start up following the refueling outage.

NRC Staff Evaluation and Conclusions

In evaluating the licensee's request, the staff has taken into consideration the location, size and function of the involved piping, the alternate testing proposed by the licensee, and the measures that would be necessary to achieve the full specified test pressure. Based on its evaluation of these factors, the staff finds that the hydrostatic test requirement is impractical for the given situation and that granting of the requested relief is authorized by law, will not endanger life or property or the common defense and that it is otherwise in the public interest. The relief requested is hereby granted.

Principal Contributor:

Chandu Patel