

February 1, 1993

Docket No. 50-280

Mr. W. L. Stewart
Senior Vice President,
Nuclear Operations
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Licensing
P.O. Box 219-NA-2I
Crystal River, Florida 34423-0219

Dear Mr. Stewart:

SUBJECT: SURRY POWER STATION, UNIT 1 - REQUEST FOR EXEMPTION FROM
ASME SECTION XI INTERVAL DATES FOR INSERVICE TESTING
PROGRAMS FOR PUMPS AND VALVES (TAC NOS. M85114 AND M85115)

The purpose of this letter is to grant an exemption from Section XI of the ASME Code to extend the Surry, Unit 1 second 10-year inservice test interval for pumps and valves from December 22, 1992 to May 10, 1994.

The NRC staff has reviewed your request for an exemption and determined that continued implementation of the existing second 10-year test program until May 10, 1994, meets the underlying purpose of the regulation and, therefore, "special circumstances" exist as defined in 10 CFR 50.12.

The staff has concluded that the requested exemption is appropriate, and pursuant to 10 CFR 50.12(a)(2)(ii), the exemption is hereby granted. This completes our effort on this issue and we are closing out TAC Nos. M85114 and M85115.

(Original Signed By)
Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II

Enclosure:
Safety Evaluation

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO THE REQUEST FROM EXEMPTION FOR ASME SECTION XI INTERVAL DATES
INSERVICE TESTING PROGRAMS FOR PUMPS AND VALVES
VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNIT 1 & 2
DOCKET NUMBERS 50-280 AND 50-281

1.0 Introduction

The Code of Federal Regulations, 10 CFR 50.55a, requires that inservice testing (IST) of certain ASME Code Class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda.

The Code of Federal Regulations, 10 CFR 50.12 states that:

The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which

- (1) Are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
- (2) Meet the requirement that special circumstances are present.
Special circumstances are present whenever-

...

- (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.

This Safety Evaluation (SE) concerns an exemption request and supporting information that was submitted by Virginia Electric and Power Company (the licensee) in a letter dated November 10, 1992, for the Surry Unit 1 IST Program second interval end date (or third interval start date). The licensee states that the Surry 1 second 10-year test interval ends on October 14, 1993 based on extended outages at Surry Units 1 and 2. However, the NRC staff considers the end date to be December 22, 1992, the original second 10-year

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interval end date, based on the commercial operation date of December 22, 1972. The Surry Unit 1 second interval IST Program was developed to be consistent with the ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition, Winter 1980 Addenda.

The NRC staff's findings with respect to granting or not granting the exemption are contained in this SE.

2.0 Exemption Request

The licensee has requested an exemption from the requirement of 50.55a (f)(4)(ii) [formerly (g)(4)(ii)] which requires that:

Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition of the Code incorporated by reference in paragraph (b) of this section 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed in paragraph (b) of this section.

That is, the licensee requests to extend the the second ten-year test interval from October 14, 1993, to May 10, 1994. Consequently, the licensee will not be using the more recent version of the Code during this period of time.

2.1 Licensee's Basis for the Exemption Request

The licensee states:

Due to extended maintenance outages, both Surry Units 1 and 2 have extended their inservice testing intervals in accordance with the provisions of the Code. However, the interval start dates are different by seven months. Pursuant to 10 CFR 50.12, we are requesting an exemption from the requirements of 10 CFR 50.55a (g)(4)(ii) to postpone the Unit 1 third interval inservice testing start date until May 10, 1994, to coincide with the Unit 2 third interval start date.

Specifically, 10 CFR 50.12 (a)(2)(ii) states in part, that the NRC will consider granting an exemption whenever application of the regulation is not necessary to achieve the underlying purpose of the rule. The Surry Unit 1 second interval inservice testing program will continue to be implemented in accordance with the existing approved program until the start of the third interval. Therefore, the operational readiness of the pumps and valves, whose function is required for safety, will continue to be assured until the third interval commences on May 10, 1994. Continued implementation of the existing second interval program meets the underlying purpose of the regulation.

The following administrative benefits result from the Unit 1 third interval start date being postponed to coincide with the corresponding Unit 2 third interval start date. The Inservice Testing Programs for Unit 1 and 2 would be on and remain on the same interval and require compliance with the same edition of the Code and addenda. Therefore,

the testing requirements would be consistent. This will simplify our program preparation, review and preparation for the third interval, as well as the associated program review by the NRC. Likewise, any relief requests submitted during the third interval would be similarly simplified. A common start date will also reduce the program administration burden by permitting only a single submittal to be made for both units.

2.2 Proposed Alternative

The licensee stated that:

The Surry Unit 1 second interval inservice testing program will continue to be implemented in accordance with the existing approved program until the start of the third interval.

2.3 Evaluation

The licensee indicates that both units will be subject to the same IST requirements as regards Code edition and schedule for future periodic updates and will, thus, be on concurrent inservice testing intervals. The licensee proposes to use the extended interval, rather than the commercial operation date, of Unit 2 for establishing the 120-month interval for both units beginning May 1994. The staff has determined that for facilities which include two similar units, it is advantageous to implement an IST program consistent between units by using the same Code edition for developing the program and for scheduling ten-year updates. Section 50.55a(4)(f)(iv) allows the use of later editions of the Code provided the NRC has indicated approval in § 50.55a (b); and, therefore, allows the licensee to update programs during the 120-month intervals without revising the interval dates. The IST interval need not be consistent with the inservice inspection interval and this approval does not address inservice inspection.

Section XI of the ASME Boiler and Pressure Vessel Code section IWA 2420 states that "[t]he inspection intervals shall comply with the following, except as modified by IWA-2400(c):

- 1st Inspection Interval* - 10 years following initial start of power unit commercial operation
- 2nd Inspection Interval* - 10 years following the 1st inspection interval
- 3rd Inspection Interval* - 10 years following the 2nd inspection interval
- 4th Inspection Interval* - 10 years following the 3rd inspection interval"

Surry Unit 1 commenced commercial operation on December 22, 1972.

Surry Unit 2 commenced commercial operation on May 1, 1973.

IWA 2400(c) states that "[e]ach inspection interval may be decreased or extended (but not cumulatively) by as much as one year. For power units that are out of service continuously for 6 months or more, the inspection interval during which the outage occurred may be extended for a period equivalent to the outage."

According to the licensee, "Due to extended maintenance outages, both Surry Units 1 and 2 have extended their inservice testing intervals in accordance with the provisions of the Code." That is, the IST interval for Surry Unit 1 has been extended from December 22, 1992, to October 14, 1993, in accordance with the provisions of IWA 2400(c). The licensee now proposes to further extend the 2nd inspection interval end date to May 10, 1994. The licensee is seeking an exemption from 10 CFR 50.55a (f)(4)(ii) because this extension is not in accordance with the provisions of the Code.

10 CFR 50.55a (f)(4)(ii) states:

Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition of the Code incorporated by reference in paragraph (b) of this section 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed in paragraph (b) of this section.

There is no explicit provision in the regulation for extending the 120-month interval as is provided in IWA-2400(c) for power units that are out of service continuously for 6 months or more. However, paragraph (b) of § 50.55a of the regulation has endorsed, by reference, editions of Section XI of the ASME Code that provide for extending the interval by as much as one year. To extend an interval beyond the 120 months, and beyond the 12 months allowed by ASME Section XI, an exemption is necessary for compliance. The staff views the allowance for an extension provided in the Code as a means for licensees to complete inspections during refueling outages which may be scheduled beyond the 120-month interval date. While this allowance is more directly related to inservice inspections (ISI) than IST, it is acceptable, though not imperative, to maintain the ISI and IST intervals coincident. Additionally, specific inspections may be extended under the Code provision without revising the interval dates.

Nevertheless, strict adherence to the 120-month interval is not necessary to achieve the underlying purpose of the rule. That is, the operational readiness of the pumps and valves, whose function is required for safety, will be adequately assured using the existing Code requirements until the third interval commences on the later date, that is, May 10, 1994. Continued implementation of the existing second interval program meets the underlying purpose of the regulation and therefore, "special circumstances" exist as defined in 10 CFR 50.12.

Additionally, the requirements of the 1980 Edition, Winter 1980 Addenda (the licensee's current edition of Section XI for IST), in comparison to the requirements of the 1986 Edition (the edition which the licensee would have used based on the commercial operation date of Surry Unit 1) or the 1989 Edition (the edition the licensee would use based on the extended date of October 1993), are not significantly different. The IST requirements for safety and relief valves, including an expansion of the scope of valves to be tested, changed in the 1986 Edition of Section XI. However, the testing frequency for safety and relief valves is based on a five-year schedule for Class 1 valves and a ten-year schedule for Class 2 and 3 valves. Therefore,

extending the date for updating to a later edition of the Code does not significantly impact implementation of the overall testing program. The remainder of the components will continue to be tested to requirements that have not changed or have been deleted by the later editions of the Code.

Recognizing that there will be administrative advantages and consequent resource savings for both the licensee and the NRC, by having the same IST program for both Surry Units 1 and 2 (i.e., by having concurrent IST intervals), the NRC is inclined to grant a one-time exemption from the requirement that the IST program be updated within 120-months.

Extending the IST program interval for Surry Unit 1 from December 22, 1992, to May 10, 1994 (i.e., 17 months), on a one-time basis, to be concurrent with the Surry Unit 2 interval, is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

2.4 Conclusion

The licensee is hereby granted a one-time exemption from the requirement of 50.55a(f)(4)(ii) [formerly (g)(4)(ii)] to update the IST program for Surry Unit 1 by the end of the current 120-month interval (i.e., December 22, 1992). The required IST program update shall occur on or before May 10, 1994. The 3rd interval IST program for Surry Unit 1 shall comply with the requirements of the latest edition of the Code incorporated by reference in paragraph (b) of 50.55a 12 months prior to the start of the 3rd inspection interval (i.e., referenced in 50.55a as of May 10, 1993), subject to the limitations and modifications listed in paragraph (b) of 50.55a. The end of the 3rd (and subsequent) inspection interval for Surry Unit 1 shall be adjusted consistent with the granting of this exemption request (e.g., May 10, 2004).

Principal Contributor:
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Memorandum Dated February 16, 1993

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