

cover of a letter dated January 6, 1998, counsel for NYSEG forwarded copies of an order by the Federal Energy Regulatory Commission authorizing the corporate restructuring, subject to certain specified conditions, and finding that the proposed restructuring will not adversely affect competition or have an anticompetitive effect. Similarly, under cover of a letter dated February 9, 1998, counsel for NYSEG forwarded copies of the order, which was issued and effective January 27, 1998, by the State of New York Public Service Commission (NYPSC), adopting the terms of the Settlement Agreement, subject to certain modifications and conditions generally involving retail rate matters, and clarifying that NYSEG will have a reasonable opportunity to recover all prudently incurred NMP2 costs, subject to the duty of the NYPSC to set just and reasonable rates.

According to the application, the outstanding shares of NYSEG's common stock (other than shares for which appraisal rights are properly exercised) would be exchanged on a share-for-share basis for common stock of the holding company, such that the holding company will own all of the outstanding common stock of NYSEG. Under this restructuring, NYSEG would divest its interest in coal-fired power plants but would continue to be an "electric utility" as defined in 10 CFR 50.2 engaged in the transmission, distribution and, in the case of NMP2 and hydroelectric facilities, the generation of electricity. NYSEG would continue to be a licensee of NMP2, and no direct transfer of the operating license or interests in the station would result from the proposed restructuring. The transaction would not involve any change to either the management organization or technical personnel of NMPC, which has exclusive responsibility under the operating license for operating and maintaining NMP2 and which is not involved in the proposed restructuring.

Notice of this application for approval was published in the **Federal Register** on December 5, 1997 (62 FR 64407), and an Environmental Assessment and Finding of No Significant Impact was published in the **Federal Register** on January 16, 1998 (63 FR 2701).

Under 10 CFR 50.80, no license shall be transferred, directly or indirectly, through transfer of control of the license, unless the Commission shall give its consent in writing. Upon review of the information submitted in the application of September 18, 1997, as supplemented by submittals dated October 20 and 27, 1997, and January 6 and February 9, 1998, the NRC staff has

determined that the restructuring of NYSEG by establishment of a holding company will not affect the qualifications of NYSEG as a holder of the license, and that the transfer of control of the license for NMP2, to the extent effected by the restructuring, is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission, subject to the conditions set forth herein. These findings are supported by a safety evaluation dated March 19, 1998.

### III

Accordingly, pursuant to Sections 161b, 161i, 161o, and 184 of the Atomic Energy Act of 1954, as amended, 42 USC §§ 2201(b), 2201(i), 2201(o), and 2234, and 10 CFR 50.80, *it is hereby ordered* that the Commission approves the application regarding the proposed restructuring of NYSEG by the establishment of a holding company, subject to the following: (1) NYSEG shall inform the Director of the Office of Nuclear Reactor Regulation, 60 days prior to a transfer (excluding grants of security interests or liens) during any twelve month period from NYSEG to the holding company, or any direct or indirect subsidiary of the holding company, of facilities for the production, transmission, or distribution of electric energy (other than the transfer of NYSEG's seven coal-fired power plants) having a depreciated book value exceeding 10 percent (10%) of NYSEG's consolidated net utility plant, as recorded on NYSEG's books of account, and (2) should the restructuring of NYSEG not be completed by March 19, 1999, this Order shall become null and void, provided, however, on application and for good cause shown, such date may be extended.

This Order is effective upon issuance.

### IV

By April 29, 1998, any person adversely affected by this Order may file a request for a hearing with respect to issuance of the Order. Any person requesting a hearing shall set forth with particularity how that interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If a hearing is to be held, the Commission will issue an order designating the time and place of the hearing.

The issue to be considered at any such hearing shall be whether this Order should be sustained.

Any request for a hearing must be filed with the Secretary of the

Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, or may be delivered to 11555 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m. Federal workdays, by the above date. Copies should be also sent to the Office of the General Counsel, and to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Mr. Sherwood J. Rafferty, Senior Vice President and Chief Financial Officer, New York State Electric & Gas Corporation, P.O. Box 3287, Ithaca, NY 14852.

For further details with respect to this Order, see the application for approval dated September 18, 1997, as supplemented by letters dated October 20 and 27, 1997, and January 6 and February 9, 1998, which are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Reference and Documents Department, Penfield Library, State University of New York, Oswego, New York 13126.

Dated at Rockville, Maryland, this 19th day of March 1998.

For the Nuclear Regulatory Commission.

**Samuel J. Collins,**

*Director, Office of Nuclear Reactor Regulation.*

[FR Doc. 98-8187 Filed 3-27-98; 8:45 am]

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## NUCLEAR REGULATORY COMMISSION

### Proposed Generic Communication; Augmented Inspection of Pressurized-Water Reactor Class 1 High Pressure Safety Injection Piping (M99226)

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of opportunity for public comment.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is proposing to issue a generic letter to all holders of operating licenses for pressurized-water reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel, to (1) identify a discrepancy in the American Society of Mechanical Engineers (ASME) Code inspection requirements regarding the inservice inspection of those portions of the high-pressure safety injection system piping designated as ASME Code Class 1 with

nominal pipe sizes between 4 inches and 1½ inches, inclusive, (2) emphasize the need for addressees to maintain the integrity of this reactor coolant pressure boundary piping in accordance with the provisions of their current facility licensing bases, and (3) request that addressees report to the NRC their previous actions for verifying the integrity of the subject piping and their plans regarding future inspections.

The proposed generic letter has been endorsed by the Committee to Review Generic Requirements (CRGR). Relevant information that was sent to the CRGR will be placed in the NRC Public Document Room.

The NRC is seeking comment from interested parties regarding both the technical and regulatory aspects of the proposed generic letter presented under the Supplementary Information heading. The NRC will consider comments received from interested parties in the final evaluation of the proposed generic letter. The NRC's final evaluation will include a review of the technical position and, as appropriate, an analysis of the value/impact on licensees. Should this generic letter be issued by the NRC, it will become available for public inspection in the NRC Public Document Room.

**DATES:** Comment period expires April 29, 1998. Comments submitted after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except for comments received on or before this date.

**ADDRESSEES:** Submit written comments to Chief, Rules and Directives Branch, Division of Administrative Services, U.S. Nuclear Regulatory Commission, Mail Stop T6-D59, Washington, DC 20555-0001. Written comments may also be delivered to 11545 Rockville Pike, Rockville, Maryland, between 7:45 am to 4:15 pm, Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, 2120 L Street, N.W. (Lower Level), Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Matthew Mitchell, (301) 415-3303.

**SUPPLEMENTARY INFORMATION:**

**NRC Generic Letter 98-XX: Augmented Inspection of Pressurized-Water Reactor Class 1 High-Pressure Safety Injection Piping**

*Addressees*

All holders of operating licenses for pressurized-water reactors (PWRs), except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

*Purpose*

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to:

(1) identify a discrepancy in the American Society of Mechanical Engineers (ASME) Code inspection requirements regarding the inservice inspection (ISI) of those portions of the high-pressure safety injection (HPSI) system piping designated as ASME Code Class 1 with nominal pipe sizes (NPS) between 4 inches and 1½ inches, inclusive. Current ASME Code Section XI requirements only mandate a surface examination for the subject piping while similarly sized sections in the Class 2 portion of the HPSI system are required to have both surface and volumetric examinations.

(2) emphasize the need for addressees to maintain the integrity of this reactor coolant pressure boundary piping in accordance with the provisions of their current licensing basis, particularly given known thermal fatigue degradation mechanisms, and

(3) request addressees report to the NRC their previous actions for verifying the integrity of the subject piping and their plans regarding future inspections.

*Background*

This generic letter addresses concerns which have arisen based on recent domestic and foreign reactor experience with thermal fatigue degradation in reactor coolant system piping. On April 22, 1997, an event occurred at Oconee 2, a Babcock and Wilcox-designed PWR, which involved the unit being shut down due to cracking and leakage from a weld location in the 2½-inch (NPS 2½), Class 1 portion of a combination makeup and high-pressure injection line (equivalent to a portion of the HPSI system as designated in the ASME Code). Upon metallurgical examination of the weld, the licensee determined that the crack consisted of a 360° inside surface flaw with minimum depth of 30 percent through-wall, with the cracking having penetrated completely through-wall over an arc length of 77°. The licensee attributed the cracking to thermal cycling and flow-induced vibration. Also, recent experience at the Dampierre 1 facility in France has indicated that thermal fatigue degradation (in a safety injection line) may, under certain conditions, initiate and propagate through-wall in a time period less than one ASME Code inspection interval. Additional details on these events are found in NRC Information Notice 97-46.

Similar piping failures have also been recorded at other facilities in the United

States (Crystal River 3, Farley 2) and detailed information on these events is available in the references to this GL. The cracking observed at Crystal River 3 (a Babcock and Wilcox-designed PWR) also occurred in a 2½-inch, Class 1 makeup/HPSI line and was attributed to thermal fatigue, much like the Oconee event. The piping failure at Farley 2 (a Westinghouse-designed PWR) also occurred in a small-diameter high-pressure injection line, but was attributed to thermal fatigue caused by relatively cold water leaking through a closed globe valve in a boron injection tank bypass line. Additional foreign experience has also found active degradation in small-diameter Class 1 lines.

As a result of the Oconee 2 event and license renewal issues, the staff reexamined the requirements given in Section XI of the ASME Code for ISI of HPSI piping, using the 1989 Edition and the 1995 Edition for reference. The staff examined the requirements given in both Subsection IWB (for Class 1 piping) and Subsection IWC (for Class 2 piping). The requirements for the Class 2 portions of the HPSI system are delineated in Table IWC-2500-1, Examination Category C-F-1, "Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping," as amended by the exemption criteria of IWC-1221. In combination, these provisions require that Class 2 HPSI piping down to NPS 1½ receive both a volumetric and a surface examination as part of a facility ISI program.

The requirements for the Class 1 portions of the HPSI system are delineated in Table IWB-2500-1, Examination Category B-J, "Pressure Retaining Welds in Piping," as amended by the exemption criteria of IWB-1220. Table IWB-2500-1 requires only that a surface examination be performed for Class 1 piping less than NPS 4, with the one exemption provision applicable to the subject of this generic letter excluding piping of NPS 1 and smaller from examination.

Therefore, for the HPSI system, the inspection criteria for Class 2 piping between NPS 4 and NPS 1½, inclusive, are more comprehensive than those for Class 1 piping of the same size range.

As a result of these findings, the staff published in the **Federal Register** a proposed rule with the intent of amending the requirements of 10 CFR 50.55a (see 62 FR 63892). In proposed 10 CFR 50.55a(b)(2)(xv), the staff reconciled the differences between Class 1 and Class 2 inspection requirements noted above by requiring volumetric examination of the Class 1 HPSI piping welds. The Rule change would require

licensees to implement these volumetric examinations on a schedule consistent with their current ISI program requirements.

#### *Discussion*

The NRC is issuing this generic letter to alert addressees to the discrepancy noted above between Class 1 and Class 2 HPSI ISI requirements and to request that addressees report to the NRC their previous actions for verifying the integrity of the subject piping and their plans regarding future inspection activities. Requirements to ensure the integrity of the reactor coolant pressure boundary are broadly incorporated in the current licensing basis of each reactor facility and General Design Criterion 14 of Appendix A to 10 CFR Part 50, which explicitly states that the reactor coolant pressure boundary must be "designed, fabricated, erected, and tested to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture." Effective inservice inspection activities to monitor known degradation mechanisms and to identify potential new sources of degradation are an integral element in maintaining an extremely low probability of failure.

The staff's concern regarding the implementation of an effective ISI program stems from the nature of the degradation previously observed in some sections of small-diameter, Class 1 HPSI system piping. The initiation and propagation of cracking due to thermal fatigue is directly related to the magnitude of the cyclic thermal stress range. Since thermal stress cycling in these lines is due to changes in the temperature of the fluid in contact with the pipe wall, the magnitude of the thermal stress cycles may be largest at the inside diameter (ID) of the pipe. Therefore an effective ISI program should include a volumetric (ultrasonic) evaluation to be able to detect cracking at the ID before the cracking propagates through-wall. This indicates that the current ASME Code ISI requirements (surface examination only) for the Class 1 portion of this piping are insufficient. In addition, after considering the experience at Dampierre 1 in France (see Information Notice 97-46), requiring volumetric inspections (consistent with the quality standards of Appendix VIII to Section XI) to be conducted on a frequency consistent with the facility's normal ASME Code Section XI ISI program may not be sufficient to ensure reactor coolant pressure boundary integrity, especially if no effective volumetric examination

has been conducted within the last ten years.

The staff notes that allowing for the potential failure of the Class 1 portion of a HPSI line, while within a facility's design basis, would unnecessarily challenge the facility's ability to mitigate such an accident. Failure of an unisolable portion of the Class 1 HPSI line could result in a small-break loss-of-coolant accident (SBLOCA) while directly affecting the HPSI system, which is designed to mitigate a SBLOCA. For these reasons, it is the staff's conclusion that volumetric examination of the Class 1 portions of PWR HPSI systems should be performed, at a minimum, consistent with the ASME Code's ISI requirements for components of equivalent significance to reactor safety.

The staff has also formally identified the issue of this discrepancy between Class 1 and Class 2 ISI requirements to the ASME Code via a letter to the Chairman of the ASME Section XI Subcommittee, dated July 18, 1997.

#### *Regulatory Analysis*

Under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), this generic letter transmits an information request for the purpose of verifying compliance with the applicable existing regulatory requirements. Specifically, the requested information will enable the staff to determine whether or not the Class 1 sections of PWR HPSI systems are being maintained in accordance with 10 CFR Part 50, Appendix A, Criterion 14, or similar requirements in the licensing bases for these facilities.

#### *Required Information*

Within 90 days of the date of this generic letter, each addressee is required to provide a written report that includes the following information for its facility:

(1) A discussion of the program, if any, in place at the facility to perform effective volumetric examinations on those Class 1 portions of the HPSI system which would be subject to the inspection scope of ASME Code Section XI. This discussion should include information on the qualification of the inspection procedure, the frequency of inspection, the date of the last inspection, and the scope of the locations inspected. In addition, the same information should be provided for any inspection that has been (or will be) performed on the subject piping but not as part of a defined inspection program.

(2) If the addressee currently has no program in place to volumetrically

inspect these portions of the HPSI system, given the potential for the existence of an active degradation mechanism, a discussion of any plans for establishing such a program.

Addressees shall submit the required written reports, pursuant to 10 CFR 50.4, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, signed under oath or affirmation under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). In addition, addressees should submit a copy of their respective report to the appropriate regional administrator.

#### *Backfit Discussion*

This generic letter has been promulgated only as a request for information. No backfit is either intended or approved in the context of issuance of the generic letter. Therefore, the staff has not performed a backfit analysis.

#### *Related Generic Communications*

NRC Information Notice 82-09, "Cracking in Piping of Makeup Coolant Lines at B&W Plants," dated March 31, 1982.

NRC Generic Letter 85-20, "Resolution of Generic Issue 69: High Pressure Injection/Makeup Nozzle Cracking in Babcock and Wilcox Plants," dated November 11, 1985.

NRC Bulletin No. 88-08, "Thermal Stresses in Piping Connected to Reactor Coolant Systems," dated June 22, 1988.

NRC Bulletin No. 88-08, Supplement 1, "Thermal Stresses in Piping Connected to Reactor Coolant Systems," dated June 24, 1988.

NRC Bulletin No. 88-08, Supplement 2, "Thermal Stresses in Piping Connected to Reactor Coolant Systems," dated August 4, 1988.

NRC Bulletin No. 88-08, Supplement 3, "Thermal Stresses in Piping Connected to Reactor Coolant Systems," dated April 11, 1989.

NRC Information Notice 97-46, "Unisolable Crack in High-Pressure Injection Piping," dated July 9, 1997.

Dated at Rockville, Maryland, this 25th day of March 1998.

For the Nuclear Regulatory Commission.

**Jack W. Roe,**

*Acting Director, Division of Reactor Program Management, Office of Nuclear Reactor Regulation*

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