UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

January 31, 1995

NRC INFORMATION NOTICE 95-09: USE OF INAPPROPRIATE GUIDELINES AND CRITERIA FOR NUCLEAR PIPING AND PIPE SUPPORT EVALUATION AND DESIGN

Addressees

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to the use of guidelines and criteria for nuclear piping and pipe support evaluation and design in a manner inconsistent with published NRC staff guidance. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances

By letter dated March 28, 1994, the Nuclear Energy Institute (NEI) submitted several documents prepared by the Electric Power Research Institute (EPRI) regarding piping and pipe support operability evaluations. These guidance documents were intended to clarify the guidance in NRC Generic Letter (GL) 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability." Although NEI submitted these documents for information only, a cursory review by NRC staff indicated that the proposed operability criteria are inconsistent with the guidance for the NRC staff contained in GL 91-18. The EPRI documents recommend the use of criteria that are different than the current endorsed editions of the American Society of Mechanical Engineers (ASME) Code or other guidance endorsed by the NRC staff.

Discussion

On November 7, 1991, the NRC issued GL 91-18 to all nuclear power reactor licensees and applicants to inform them of guidance issued to ensure consistency by the NRC staff during the review of licensee operability determinations and resolution of degraded and nonconforming conditions. Section 6.13, "Piping and Pipe Support Requirements," of the enclosure to GL 91-18 gives guidance on operability determinations for piping and pipe supports. This section references the criteria in NRC Inspection and Enforcement (IE) Bulletins 79-02, "Pipe Support Base Plate Designs Using

Concrete Expansion Anchor Bolts," and 79-14, "Seismic Analysis for As-Built Safety-Related Piping Systems," and the applicable revisions and supplements.

To further clarify the guidance in GL 91-18, EPRI prepared documents for member utilities to use when evaluating piping and pipe support operability. These documents include:

1. "Piping System Short-Term Operability Criteria," a report of detailed technical criteria and methods for evaluating the short-term operability of piping systems;

2. "Guideline for Operability Evaluations of Piping Systems," the related implementation procedure guideline;

3. "Technical Criteria Report Commentary Short-Term Operability Criteria for Piping Systems," the companion commentary explaining the rationale for the detailed criteria; and

4. EPRI Report TR-101968, "Guidelines and Criteria for Nuclear Piping and Support Evaluation and Design."

These documents were not submitted for a formal NRC staff review and endorsement. However, the staff performed a cursory review and concluded that they contain operability criteria that are inconsistent with the guidance to the NRC staff in GL 91-18. For example, EPRI Report TR-101968, Section 5.2.1., "Piping," recommends the use of the higher allowable stresses for seismic designs included in a draft ASME Section XI Code Case. These higher allowable stresses are also contained in a revision to the criteria in Section III of the ASME Code. These increased allowable stresses have not been endorsed by the staff. The EPRI report recommends the use of criteria in Welding Research Council Bulletin 352, which also has not been endorsed by the staff. Because the staff has not reviewed the EPRI documents in detail, they may contain other guidance that is inconsistent with GL 91-18, the ASME Code, or other staff guidance. The staff does not discourage the industry from developing operability criteria and guidelines for situations that may not be addressed by GL 91-18. However, the staff cannot, without formally reviewing the documents, verify that such guidance, methods, and criteria are consistent with those previously endorsed by the staff. Therefore, NRC inspectors will continue to review operability evaluations according to practices, methods and criteria consistent with GL 91-18 and the current NRC staff-endorsed ASME Code provisions.

The staff has learned that some EPRI member utilities are applying the EPRI guidance discussed above. However, these operability criteria may be inconsistent with previously issued guidance to resolve degraded and nonconforming conditions. In GL 91-18, the staff discussed the use of the criteria in Appendix F of Section III of the ASME Code for operability determinations. Title 10 of the *Code of Federal Regulations* specifies editions and addenda of the ASME Code that are formally endorsed by the NRC.

Section 50.55a also incorporates by reference NRC Regulatory Guide 1.84, "Design and Code Case Acceptability-ASME Section III Division 1," NRC Regulatory Guide 1.85, "Materials Code Case Acceptability-ASME Section III Division 1," and NRC Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability-ASME Section XI Division 1." These regulatory guides list the ASME Code Cases that have been determined suitable and are endorsed by the staff for use by licensees. The Director of the Office of Nuclear Reactor Regulation (NRR) may authorize the use of other ASME Code Cases upon request pursuant to 10 CFR 50.55a(a)(3).

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate NRR project manager.

Brian K. Grimes, Director
Division of Project Support
Office of Nuclear Reactor Regulation

Technical contact: Howard J. Rathbun, NRR
(301) 504-2787

Attachment:
List of Recently Issued NRC Information Notices

Attachments filed in Jacket

LIST OF RECENTLY ISSUED NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
95-08	Inaccurate Data Obtained with Clamp-On Ultrasonic Flow Measurement Instruments	01/30/95	All holders of OLs or CPs for nuclear power reactors.
95-07	Radiopharmaceutical Vial Breakage during Preparation	01/27/95	All USNRC medical licensees authorized to use byproduct material for diagnostic procedures.
95-06	Potential Blockage of Safety-Related Strainers by Material Brought Inside Containment	01/25/95	All holders of OLs or CPs for nuclear power reactors.
95-05	Undervoltage Protection Relay Settings Out of Tolerance Due to Test Equipment Harmonics	01/20/95	All holders of Construction Permits for nuclear power reactors.
95-04	Excessive Cooldown and Depressurization of the Reactor Coolant System Following a Loss of Offsite Power	01/19/95	All holders of OLs or CPs for nuclear power reactors.
95-03	Loss of Reactor Coolant Inventory and Potential Loss of Emergency Mitigation Functions While in a Shutdown Condition	01/18/95	All holders of Ols or CPs for nuclear power reactors.
95-02	Problems with General Electric CR2940 Contact Blocks in Medium-Voltage Circuit Breakers	01/17/95	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
CP = Construction Permit

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Original signed by
Brian K. Grimes

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Office of Nuclear Reactor Regulation

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1/3/95 E-MAIL FROM JHCONRAN INDICATED THE IN'S WORDING IS ACCEPTABLE TO HIM.

*See previous concurrence

OFFICE	EMEB:DE	EMEB:DE	EMEB:DE	DD:DE	D/DE
NAME	HJRathbun*	TLChan*	RHWessman*	GLainas*	BWSheron*
DATE	12/13/94	12/13/94	12/13/94	12/15/94	12/16/94

TECH:ED*	OECB:DOPS*	OECB:DOPS	OECB:DOPS	OECB:DOPS	D:DOPS
JMain JM	JBirmingham	RLDennig*	RJKiessel*	AEChaffee*	BKGrimes
12/02/94	12/06/94	12/19/94	01/05/95	01/06/95	01/26/95

OFFICIAL DOCUMENT NAME: 95-09.IN
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Division 1," and NRC Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability-ASME Section XI Division 1." These regulatory guides list the ASME Code cases that have been determined suitable for use by the NRC. The Director of the Office of Nuclear Reactor Regulation (NRR) may authorize the use of other ASME Code cases upon request pursuant to 10 CFR 50.55a(a)(3).

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1/3/95 e-mail from THCheman indicated the the IN's wording is acceptable to him.

*See previous concurrence

GNK, 3/6/

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