

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

September 22, 1997

**NRC INFORMATION NOTICE 97-71: INAPPROPRIATE USE OF 10 CFR 50.59  
REGARDING REDUCED SEISMIC CRITERIA FOR  
TEMPORARY CONDITIONS**

Addressees

All holders of operating licenses for nuclear power reactors 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 information notice to inform addressees of a licensee's inappropriate use of 10 CFR 50.59 regarding use of reduced seismic criteria for temporary conditions. 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

In 1994, at LaSalle County Station, Units 1 and 2, the licensee, Commonwealth Edison Company (ComEd), instituted a program for seismic loading for temporary conditions (SLTC). The licensee's SLTC program allowed the application of seismic criteria that are less stringent than those described in the updated final safety analysis reports for these facilities, which are part of the licensing bases for these facilities. The licensee applied the SLTC to determine operability of Unit 1 recirculation piping with a failed snubber removed, under the provisions of 10 CFR 50.59, "Changes, Tests and Experiments." This regulation allows the licensee to change the facility or facility procedures, as described in the safety analysis report, without prior NRC approval provided that the change does not involve an unreviewed safety question or a change to the facility technical specifications. During an inspection, the NRC identified an unresolved item related to a licensee procedure invoking this program (Reference 1).

The NRC staff met with the licensee and reviewed this matter (References 2-4). The staff determined that the ComEd methodology for reduced seismic criteria does not conform to its licensing basis, involves a change to the facility as described in the safety analysis report, introduces a potential reduction in the facility capability to withstand design-basis seismic events, and the change thus constitutes an unreviewed safety question. Consequently, licensee implementation of the SLTC program could not be done without NRC review and approval, such as provided in 10 CFR 50.90 (Reference 5).

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Updated on  
9/21/02

PDR I+E NOTICE 97-071 970922



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Discussion

ComEd implemented a quantitative procedure for using seismic hazard curves to determine reduced acceleration levels for evaluating seismic resistance for safety-related structures, systems, and components (SSCs) for temporary conditions of estimated short durations ranging from several days to months. The procedure utilizes the facility design-basis safe-shutdown earthquake (SSE) to determine corresponding reduced accelerations for temporary conditions of estimated short durations. ComEd also used a method for calculating a No Seismic Limit Duration (NSLD) corresponding to each hazard curve such that for durations less than the NSLD, seismic effects do not have to be considered as a load case. As a part of this method, ComEd used an acceleration threshold of 0.02 g as one that is acceptably small so as not to require a specific seismic evaluation.

The facility safety analysis report states that if the SSE occurs, SSCs will remain functional. Application of the ComEd SLTC program could result in loss of safety functions of temporary-condition SSCs. In particular, the safety analysis report states that SSCs are designed for safe shutdown due to maximum horizontal ground acceleration at the building foundation of 0.2 g. Adoption of the ComEd program may result in some temporary-condition SSCs not being designed for a minimum of 0.2 g SSE acceleration.

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 Office of Nuclear Reactor Regulation (NRR) project manager.

*for*   
Jack W. Roe, Acting Director  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Technical contact: David Jeng, NRR  
301-415-2727  
E-mail: dcj@nrc.gov

References

1. NRC Inspection Report 50-373/94-05 (NUDOCS Accession Number 9405130227)
2. Letter from J. Johnson, Commonwealth Edison Company, to W. T. Russell, NRC, "Reduced Seismic Criteria at Commonwealth Edison Nuclear Facilities," dated March 23, 1994 (NUDOCS Accession Number 9403310205)
3. Notification of NRC meeting with Commonwealth Edison Company on April 28, 1994, in Rockville, MD to discuss an alternate seismic loading method (NUDOCS Accession Number 9404190047)
4. Letter from G. G. Benes, Commonwealth Edison Company, to W. T. Russell, NRC, "Reduced Seismic Criteria at Commonwealth Edison Nuclear Facilities," dated August 8, 1994 (NUDOCS Accession Number 9408150288)
5. Letter from Jack W. Roe, NRC, to D. L. Farrar, Commonwealth Edison Company, "Reduced Seismic Criteria for Temporary Conditions," dated September 15, 1995 (NUDOCS Accession Number 9509200179)
6. Memorandum from S. L. Magruder, NRC, to D. B. Matthews, NRC, "Summary of March 12, 1997, Meeting with the Nuclear Energy Institute (NEI) Reduced Seismic Criteria Under Temporary Conditions," dated April 18, 1997 (NUDOCS Accession Number 9704230269)

Attachment: List of Recently Issued NRC Information Notices

*Attachment filed in Jacket.*

LIST OF RECENTLY ISSUED  
NRC INFORMATION NOTICES

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Information Notice No.	Subject	Date of Issuance	Issued to
97-70	Potential Problems with Fire Barrier Penetration Seals	09/19/97	All holders of OLs for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
97-69	Reactor Trip Breakers and Surveillance Testing of Auxiliary Contacts	09/19/97	All holders of OLs for pressurized water reactors except those who have per- manently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
97-68	Loss of Control of Diver in a Spent Fuel Storage Pool	09/03/97	Holders of a facility or construction permit issued for a power reactor pursuant to 10 CFR Part 50
97-67	Failure to Satisfy Requirements for Significant Manipula- tions of the Controls for Power Reactor Operator Licensing	08/21/97	All holders of OLs for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel

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OL = Operating License  
CP = Construction Permit

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original signed by D.B. Matthews for  
 Jack W. Roe, Acting Director  
 Division of Reactor Program Management  
 Office of Nuclear Reactor Regulation

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 301-415-2727  
 E-mail: dcj@nrc.gov

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 Tech Editor has reviewed and concurred on 6/26/97  
 \*See previous concurrence

DOCUMENT NAME: 97-71.IN

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DATE	07/2/97	07/09/97	08/19/97	08/13/97	09/02/97	08/29/97

(A)D:DRRM  
 JRoe  
 09/16/97

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Jack W. Roe, Acting Director  
 Division of Reactor Program Management  
 Office of Nuclear Reactor Regulation

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(A)D:DRPM	
JRoe	
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*DW*  
 9/12/97

*mkw* 9/3/97

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Jack W. Roe, Acting Director  
 Division of Reactor Program Management  
 Office of Nuclear Reactor Regulation

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 E-mail: dcj@nrc.gov

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**From:** Raji Tripathi  
**To:** WND2.WNP4.CVH, WND2.WNP4.AEC1  
**Date:** 8/13/97 8:26am  
**Subject:** IN - DENIAL OF USE OF 50.59 RE. REDUCED SEISMIC CRITERIA UNDER  
TEMPORARY CONDITIONS -Forwarded

**TO:** Al Chaffee/Vern Hodge

In response to an informal staff request, the CRGR staff reviewed the subject IN, and had also invited comments from the CRGR members. From the CRGR perspective, the Committee has no major problems with this proposed IN.

Raji Tripathi (415-7584)

**cc:** CRGR Members

**CC:** TWD2.TWP0.DFR, WND2.WNP4.FJM, WND1.WNP2.DCD, TWD2....



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 Office of Nuclear Reactor Regulation (NRR) project manager.

Marylee M. Slosson, Acting Director  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Technical contact: David Jeng, NRR  
(301) 415-2727  
E-mail: dcj@nrc.gov

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