

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

August 15, 1979

Supplement IE Bulletin No. 79-14

SEISMIC ANALYSIS FOR AS-BUILT SAFETY-RELATED PIPING SYSTEMS

Description of Circumstances:

IE Bulletin No. 79-14 was issued on July 2, 1979 and revised on July 18, 1979. The bulletin requested licensees to take certain actions to verify that seismic analyses are applicable to as-built plants. This supplement to the bulletin provides additional guidance and definition of Action Items 2, 3, and 4.

To comply with the requests in IE Bulletin 79-14, it will be necessary for licensees to do the following:

2. Inspect Part of the Accessible Piping

For each system selected by the licensee in accordance with Item 2 of the Bulletin, the licensee is expected to verify by physical inspection, to the extent practicable, that the inspection elements meet the acceptance criteria. In performing these inspections, the licensee is expected to use measuring techniques of sufficient accuracy to demonstrate that acceptance criteria are met. Where inspection elements important to the seismic analysis cannot be viewed because of thermal insulation or location of the piping, the licensee is expected to remove thermal insulation or provide access. Where physical inspection is not practicable, e.g., for valve weights and materials of construction, the licensee is expected to verify conformance by inspection of quality assurance records. If a nonconformance is found, the licensee is expected in accordance with Item 4 of the Bulletin to perform an evaluation of the significance of the nonconformance as rapidly as possible to determine whether or not the operability of the system might be jeopardized during a safe shutdown earthquake as defined in the Regulations. This evaluation is expected to be done in two phases involving an initial engineering judgement (within 2 days), followed by an analytical engineering evaluation (within 30 days). Where either phase of the evaluation shows that system operability is in jeopardy, the licensee is expected to meet the applicable technical specification action statement and complete the inspections required by Item 2 and 3 of the Bulletin as soon as possible. The licensee must report the results of these inspections in accordance with the requirements for content and schedule as given in Item 2 and 3 of the Bulletin.

3. Inspect Remaining Piping

The licensee is expected to inspect, as in Item 2 above, the remaining safety-related piping systems which were seismically analyzed and to report the results in accordance with the requirements for content and schedule as given in Item 3 of the Bulletin.

4A. Evaluate Nonconformances

With regard to Item 3A for the Bulletin, the licensee is expected to include in the initial engineering judgement his justification for continued reactor operation. For the analytical engineering evaluation, the licensee is expected to perform the evaluation by using the same analytical technique used in the seismic analysis or by an alternate, less complex technique provided that the licensee can show that it is conservative.

If either part of the evaluation shows that the system may not perform its intended function during a design basis earthquake, the licensee must promptly comply with applicable action statements and reporting requirements in the Technical Specifications.

4B. Submit Nonconformance Evaluations

The licensee is expected to submit evaluations of all nonconformances and, where the licensee concludes that the seismic analysis may not be conservative, submit schedules for reanalysis in accordance with Item 4B of the Bulletin or correct the nonconformances.

4C. Correct Nonconformances

If the licensee elects to correct nonconformances, the licensee is expected to submit schedules and work descriptions in accordance with Item 4C of the Bulletin.

4D. Improve Quality Assurance

If nonconformances are identified, the licensee is expected to evaluate and improve quality assurance procedures to assure that future modifications are handled efficiently. In accordance with Item 4D of the Bulletin, the licensee is expected to revise design documents and seismic analyses in a timely manner.

The schedule for the action and reporting requirements given in the Bulletin as originally issued remains unchanged.

Approved by GAO, B180225 (R0072), clearance expires July 31, 1980. Approval was given under a blanket clearance specifically for identified generic problems.

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-18	Audibility Problems Encountered on Evaluation of Personnel From High Noise Areas	8/7/79	All Power Reactor facilities with an OL
79-17	Pipe Cracks in Stagnant Borated Water Systems at PWR Plants	7/26/79	All PWR's with operating license
79-16	Vital Area Access Controls	7/26/79	All Holders of and applicants for Power Reactor Operating Licenses who anticipate loading fuel prior to 1981
79-15	Deep Draft Pump Deficiencies	7/11/79	All Power Reactor Licensees with a CP and/or OL
79-14	Seismic Analyses for As-Built Safety-Related Piping System	6/2/79	All Power Reactor facilities with an OL or a CP
79-13	Cracking In Feedwater System Piping	6/25/79	All PWRs with an OL for action. All BWRs with a CP for information.
79-02 (Rev. 1)	Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts	6/21/79	All Power Reactor Facilities with an OL or a CP
79-12	Short Period Scrams at BWR Facilities	5/31/79	All GE BWR Facilities with an OL
79-11	Faulty Overcurrent Trip Device in Circuit Breakers for Engineered Safety Systems	5/22/79	All Power Reactor Facilities with an OL or a CP
79-10	Requalification Training Program Statistics	5/11/79	All Power Reactor Facilities with an OL

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ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-09	Failures of GE Type AK-2 Circuit Breaker in Safety Related Systems	4/17/79	All Power Reactor Facilities with an OL or CP
79-08	Events Relevant to BWR Reactors Identified During Three Mile Island Incident	4/14/79	All BWR Power Reactor Facilities with an OL
79-07	Seismic Stress Analysis of Safety-Related Piping	4/14/79	All Power Reactor Facilities with an OL or CP
79-05C&06C	Nuclear Incident at Three Mile Island - Supplement	7/26/79	To all PWR Power Reactor Facilities with an OL
79-06B	Review of Operational Errors and System Misalignments Identified During the Three Mile Island Incident	4/14/79	All Combustion Engineering Designed Pressurized Water Power Reactor Facilities with an Operating License
79-06A (Rev 1)	Review of Operational Errors and System Misalignments Identified During the Three Mile Island Incident	4/18/79	All Pressurized Water Power Reactor Facilities of Westinghouse Design with an OL
79-06A	Review of Operational Errors and System Misalignments Identified During the Three Mile Island Incident	4/14/79	All Pressurized Water Power Reactor Facilities of Westinghouse Design with an OL
79-06	Review of Operational Errors and System Misalignments Identified During the Three Mile Island Incident	4/11/79	All Pressurized Water Power Reactors with an OL except B&W facilities

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ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-05B	Nuclear Incident at Three Mile Island	5/21/79	All B&W Power Reactor Facilities with an OL
79-05A	Nuclear Incident at Three Mile Island	4/5/79	All B&W Power Reactor Facilities with an OL
79-05	Nuclear Incident at Three Mile Island	4/2/79	All Power Reactor Facilities with an OL and CP
79-04	Incorrect Weights for Swing Check Valves Manufactured by Velan Engineering Corporation	3/30/79	All Power Reactor Facilities with an OL or CP
78-12B	Atypical Weld Material in Reactor Pressure Vessel Welds	3/19/79	All Power Reactor Facilities with an OL or CP
79-03	Longitudinal Welds Defects In ASME SA-312 Type 304 Stainless Steel Pipe Spools Manufactured by Youngstown Welding and Engineering Co.	3/12/79	All Power Reactor Facilities with an OL or CP
79-01A	Environmental Qualification of Class 1E Equipment (Deficiencies in the Environmental Qualification of ASCO Solenoid Valves)	6/6/79	All Power Reactor Facilities with an OL or CP