

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

September 7, 1979

IE Bulletin No. 79-14
Supplement 2

SEISMIC ANALYSIS FOR AS-BUILT SAFETY-RELATED PIPING SYSTEMS

Description of Circumstances:

IE Bulletin No. 79-14 was issued on July 2, revised on July 18, and first supplemented on August 15, 1979. The bulletin requested licensees to take certain actions to verify that seismic analyses are applicable to as-built plants. Supplement 2 provides the following additional guidance with regard to implementation of the bulletin requirements:

Nonconformances

One way of satisfying the requirements of the bulletin is to inspect safety-related piping systems against the specific revisions of drawings which were used as input to the seismic analysis. Some architect-engineers (A-E) however, are recommending that their customers inspect these systems against the latest revisions of the drawings and mark them as necessary to define the as-built configuration of the systems. These drawings are then returned to the AE's offices for comparison by the analyst to the seismic analysis input. For licensees taking this approach, the seismic analyst will be the person who will identify nonconformances.

The first supplement to the bulletin provided guidance with regard to evaluation of nonconformances. That guidance is appropriate for licensees inspecting against later drawings. The licensee should assure that he is promptly notified when the AE identifies a nonconformance, that the initial engineering judgment is completed in two days and that the analytical engineering evaluation is completed in 30 days. If either the engineering judgement or the analytical engineering evaluation indicates that system operability is in jeopardy, the licensee is expected to meet the applicable technical specification action statement.

Visual Approximations

Some licensees are visually estimating pipe lengths and other inspection elements, and have not documented which data have been obtained in that way. Visual estimation of dimensions is not encouraged for most measurements; however, where visual estimates are used, the accuracy of estimation must be within tolerance requirements. Further, in documenting the data, the licensee must specifically identify those data that were visually estimated.

Thermal Insulation

In many areas, thermal insulation interferes with inspection of pipe support details, i.e. attachment welds, saddles, support configuration, etc. In some areas, the presence of thermal insulation may result in unacceptably large uncertainties for determination of the location of pipe supports.

Where thermal insulation obstructs inspection of support details, the insulation should be removed for inspection of a minimum of 10% of the obstructed pipe supports in both Item 2 and 3 inspections. In the Item 3 response, the licensee should include a schedule for inspecting the remaining supports.

Where necessary to determine the location of pipe supports to an accuracy within design tolerances, thermal insulation must be removed.

Clearances

For exposed attachments and penetrations, licensees are expected to measure or estimate clearances between piping and supports, integral piping attachments (e.g. lugs and gussets) and supports, and piping and penetrations. Licensees are not expected to do any disassembly to measure clearances.

Loose Bolts

Loose anchor bolts are not covered by this bulletin, but are covered by IE Bulletin No. 79-02. Any loose anchor bolts identified during actions taken for this bulletin should be dispositioned under the requirements of Bulletin No. 79-02.

Other loose bolts are to be treated as nonconformances if they invalidate the seismic analysis; however, torquing of bolts is not required.

Difficult Access

Areas where inspections are required by the Bulletin but are considered impractical even with the reactor shutdown, should be addressed on a case by case basis. Information concerning the burden of performing the inspection and the safety consequence of not performing the inspection should be documented by the licensee and forwarded for staff review.

Schedule

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

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-22	Possible Leakage of Tubes of Tritium Gas Used in Timepieces for Luminosity	9/5/79	Each Licensee who Receives Tubes of Tritium Gas in Timepieces for Luminosity
79-21	Temperature Effects on Level Measurements	8/13/79	All PWRs with an operating license
79-20	Packaging Low-Level Radioactive Waste for Transport and Burial	8/10/79	All Materials Licensees who did not receive Bulletin No. 79-19
79-19	Packaging Low-Level Radioactive Waste for Transport and Burial	8/10/79	All Power and Research Reactors with OLs, fuel facilities except uranium mills, and certain materials licensees
79-18	Audibility Problems Encountered on Evacuation of Personnel from High-Noise Areas	8/7/79	All OL's for action All CP's for information
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 (Supp. 1)	Deep Draft Pump Deficiencies	7/18/79	All Power Reactor Licensees with a CP and/or OL
79-15	Deep Draft Pump Deficiencies	7/11/79	All Power Reactor Licensees with a CP and/or OL
79-14 (Correc- tion)	Seismic Analyses for As-Built Safety-Related Piping System	7/27/79	All Power Reactor Facilities with an OL or a CP

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-14 (Supp. 2)	Seismic Analyses for As-Built Safety-Related Piping System	9/7/79	All Power Reactor facilities with an OL or a CP
79-14 (Rev. 1)	Seismic Analyses for As-Built Safety-Related Piping System	7/18/79	All Power Reactor Facilities with an OL or a CP
79-14	Seismic Analyses for As-Built Safety-Related Piping System	7/2/79	All Power Reactor facilities with an OL or a CP
79-13 (Rev. 1)	Cracking in Feedwater System Piping	8/30/79	All PWR's with an operating license
79-13	Cracking in Feedwater System Piping	6/25/79	All PWRs with an OL for action. All BWRs with a CP for information
79-12	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
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
79-06C	Nuclear Incident at Three Mile Island - Supplement	7/26/79	To all PWR Power Reactor Facilities with an OL

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
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
79-05C	Nuclear Incident at Three Mile Island - Supplement	7/26/79	To all PWR Power Reactor Facilities with an OL
79-05B	Nuclear Incident at Three Mile Island	4/21/79	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	4/1/79	All Power Reactor Facilities with an OL and CP

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
79-02 (Rev. 1) (Supp. 1)	Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts	8/20/79	All Power Reactor Facilities with an OL or a CP
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
79-01A	Environmental Qualification of Class 1E Equipment (Deficiencies in the Envi- ronmental Qualification of ASCO Solenoid Valves)	6/6/79	All Power Reactor Facilities with an OL or CP