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IE Bulletin No. 79-02
Revision No. 1
(Supplement No. 1)

PIPE SUPPORT BASE PLATE DESIGNS USING CONCRETE EXPANSION ANCHOR BOLTS

Description of Circumstances:

The supplement to IE Bulletin No. 79-02 is intended to establish criteria for the evaluation of interim acceptability of plant operation with less than the design factors of safety for piping supports due to as-built problems, under design, base plate flexibility, or anchor bolt deficiencies.

In the reviews for system operability of the Duane Arnold and Crystal River facilities, criteria have been developed by the NRC staff that defines pipe support operability. The criteria has been applied in lieu of other analysis or evaluation. Specifically, the licensees identified problems with pipe supports in which the original design factors of safety were not met but some lesser margin was available. The design margins of four or five are intended to be final design and installation objectives but systems may be classed as operable on an interim basis with some lesser margin providing a program of restoration to at least the Bulletin factors of safety has been developed. Facilities which fall outside the operability criteria are considered to probably require a Technical Specification exception and will require review on a case by case basis.

Action to be Taken by Licensees:

For the following two cases, plant operation may continue or may begin:

- a. For the support as a unit, the factor of safety compared to ultimate strengths is less than the original design but equal to or greater than two.
- b. For the anchor bolts the factor of safety is equal to or greater than two and for the support steel the original design factor of safety compared to ultimate strengths is met.

The above criteria may be applied provided that the affected systems are upgraded to design margins of safety expeditiously for normally accessible supports and by the next refueling for nonaccessible supports. Accessibility is as defined in Bulletin No. 79-14 where "normally accessible" refers to those areas of the plant which can be entered during reactor operation.

1. Any support not satisfying the criteria should be classed as inoperable and the Technical Specification action statement met unless it can be shown that the system can function in a design basis seismic event without the support.
2. Repairs to supports should result in return to the design factor of safety.
3. Operations may be continued while repairs to upgrade the system from a factor of safety equal to or greater than two with respect to design loads are performed. Consideration must be given to the effect of the repair process on support function and system operability. In other words the time the support is not functional should be limited to T.S. action statement times or the support must be determined not to cause the system to be unable to perform its function in a seismic event. The licensee should also exercise care not to take several supports on a given system out of service at the same time or cause both trains of one safeguards system to be made inoperable at the same time. Control over workmen on safety related systems during plant operation requires a high degree of control by the licensee.
4. There are no special reporting requirements for this supplement to the Bulletin; however, the reporting requirements as set forth in the regulations and licenses must be met.

LISTING OF IE BULLETINS
ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
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 (Correction)	Seismic Analyses for As-Built Safety-Related Piping System	7/27/79	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	Cracking in Feedwater System Piping	6/25/79	All PWRs with an OL for action. All BWRs with a CP for information

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ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
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
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

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Bulletin No.	Subject	Date Issued	Issued To
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
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
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
79-02 (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
79-02	Pipe Support Base Plate Designs Using Concrete Using Concrete Expansion Anchor Bolts	3/8/79	All Power Reactor Facilities with an OL or a CP

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ISSUED IN LAST SIX MONTHS

Bulletin No.	Subject	Date Issued	Issued To
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
79-01 (Correction)	Environmental Qualification of Class 1E Equipment (Deficiencies in the Environmental Qualification of ASCO Solenoid Valves)	2/28/79	All Power Reactor Facilities with an OL or CP
79-01	Environmental Qualification of Class 1E Equipment (Deficiencies in the Environmental Qualification of ASCO Solenoid Valves)	2/8/79	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