



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

December 4, 1985

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Visual Weld Acceptance Criteria for
Structural Welding (NCIG-01, Rev. 2)
NRC Docket Nos. 50-237/249 and 50-254/265

Reference: Letter from J. P. Knight to D. E. Dutton
dated June 26, 1985.

Dear Mr. Denton:

The referenced letter documented NRC concurrence with use of the subject NCIG-01, Revision 2 document prepared by the Nuclear Construction Issues Group for visual inspection of non-ASME class structural weldments. Accordingly, Commonwealth Edison proposes to apply this document for structural weld inspections (excluding ASME Section XI inservice inspections) during the current Dresden 3 Recirculation Pipe Replacement outage and for other applicable work at Dresden and Quad Cities.

On November 1, 1985, a telecon was held with Messrs. R. Gilbert and D. Smith of your Staff during which they concurred with use of the new criteria in the manner indicated in the referenced letter. As discussed during that call, we propose to incorporate use of the VWAC revision 2 document into our next scheduled revision of the Updated Final Safety Analysis Reports (UFSAR) for Dresden and Quad Cities. A sample revised page for the Dresden 3 UFSAR is attached. A training program is being developed for weld inspectors at Dresden and Quad Cities regarding implementation of the new inspection criteria.

Since weld inspection procedures are currently being developed for the Dresden Unit 3 outage, we would appreciate a prompt response indicating your concurrence with our proposed implementation of NCIG-01, Revision 2 and its incorporation into our UFSAR's. If you have any questions regarding this matter, please contact this office.

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One signed original and ten (10) copies of this letter are provided for your use.

Sincerely,



J. R. Wojnarowski
Nuclear Licensing Administrator

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Attachment

cc: R. Gilbert - NRR
R. Bevan - NRR
Quad Cities Resident Inspector
Dresden Resident Inspector

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12.1.2.4.4.1 Applicable Codes and FSAR

1. Piping

The analysis of the piping has been performed in accordance with USAS ANSI B31.1 1967. In addition to this Code requirement, the Safety Analysis Report also requires a verification that safety-related systems remain functional in the event of a Design Basis Earthquake (DBE).

2. Pipe Supports

The qualification of existing pipe supports has been performed in accordance with original design criteria documented in the FSAR, including AISC Manual of Steel Construction (Sixth Edition) and MSS-SP58 (1967). Additional design bases such as vendor data and other limitations not covered in the FSAR or the above-mentioned Codes were reconstructed based on the existing design drawings and the understanding of the industry standards at the time. New supports were designed in accordance with MSS-SP58 (1975), ANSI B31.1 (1977 Addenda through Summer 1979), and AISC Manual of Steel Construction (Seventh Edition). Standard support components were selected to conform with MSS-SP69 (1976). Existing elements of modified supports comply with the criteria of existing supports. New elements of modified supports comply with criteria of new supports. Attachments to supports utilizing integral pipe attachments are of material compatible with the pipe and conform to the piping jurisdictional Code.

Add 3. Visual Weld Inspection

12.1.2.4.4.2 Special Analysis Limits

Visual weld inspection is in accordance with guidelines prepared by the Nuclear Construction Issues Group, NCI 6101, Rev. 2 titled "Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants."

1. Piping Analysis Initial Acceptance Criteria²

IE Bulletin 79-14 requires that the as-built stress level of piping systems be determined when additional supports are required to meet the FSAR design loading requirements for the acceptance review of a given piping system. While the appropriate FSAR requirements are intended to assure safe operation after an Operating Basis Earthquake (OBE), the Initial Acceptance Criteria is based on the capability of a system to function during and immediately after a Safe Shutdown Earthquake (SSE). Initial acceptance was evaluated when FSAR allowables were exceeded, and was based on twice yield for SSE. The basic criterion for initial acceptance for carbon steel and stainless steel is:

$$\sigma_{SSE} + \sigma_g + \sigma_p \leq 2 \sigma_y$$