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DMB

September 10, 1984

Mr. James G. Keppler
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Braidwood Station Units 1 and 2
10 CFR 50.55(e) 30-day Interim Report
G. K. Newberg Welding Program Deficiencies
NRC Docket Nos. 50-456/457

Dear Mr. Keppler:

On August 10, 1984, the Commonwealth Edison Company notified your office of a potential deficiency reportable pursuant to 10 CFR 50.55(e) regarding deficiencies in the Gust K. Newberg Welding Program at our Braidwood Station. This letter provides information concerning this matter to fulfill the thirty day reporting requirement and is considered to be an interim report. For tracking purposes, this deficiency was assigned Number 84-15.

DESCRIPTION OF DEFICIENCY

A review of Gust K. Newberg welding has revealed some inconsistencies in the Gust K. Newberg welding program. These inconsistencies can be categorized as 1) Gust K. Newberg engineers specified AWS weld process specifications (WPS) that had not been incorporated into the Gust K. Newberg welding procedure for flux core welding or did not specify WPSs for all joints, 2) Gust K. Newberg ironworkers welded to AWS pre-qualified details that were not approved by Sargent & Lundy for the flux core procedure or were not specified by the Gust K. Newberg engineer, and 3) Gust K. Newberg ironworkers listed procedures on traveler packages as being used that they did not use or did not list all WPSs used.

Investigations indicate that this problem is confined to flux core arc welds (FCAW) on cover plate installations in Unit 1 and Unit 2 Containments, and box beam end connection modifications in the Unit 1 Containment.

ANALYSIS OF SAFETY IMPLICATIONS

When this problem was initially identified, the potential for inadequate welds was postulated. Weld failure could lead to loss of safety functions. However, our investigations to date have shown that the welding program inconsistencies relate to documentation only and that no physical defects exist.

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CORRECTIVE ACTION TAKEN

A Commonwealth Edison Company Stop Work Order was issued on August 14, 1984, relative to all Gust K. Newberg (GKN) welding. During the period of the Stop Work Order, a review of all Structural Steel Traveler Packages (SSIT) currently in the field was undertaken. All documentation deficiencies found during this review have been corrected.

To prevent recurrence of the identified deficiencies, Gust K. Newberg Procedure 26 (Welding) was revised (Rev. 21) and approved on August 14, 1984. In addition, Gust K. Newberg Procedure 43 (Flux Core Arc Welding) was revised (Rev. 5) and approved on August 14, 1984. Gust K. Newberg Engineers and Ironworkers' Foreman were trained on Gust K. Newberg Procedure 26 on August 14 and August 17, 1984. The Stop Work Order was subsequently lifted on August 17, 1984.

A review is also being conducted of all completed SSIT packages. As of August 29, 1984, 306 SSITs in Containment Unit 1 and Unit 2, and in the Auxiliary Building above grade were reviewed. This review indicated that the problem was limited to the FCAW process as discussed in the deficiency description above.

Based on the results of the 306 SSITs reviewed, we believe that the quality of work has not been jeopardized and that the documentation problems do not imply that safety deficiencies exist. This conclusion is based on the following:

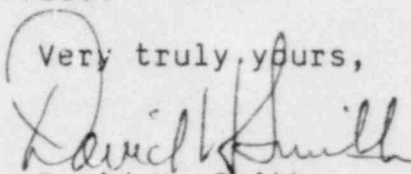
- 1) The welders involved were qualified according to American Welding Society (AWS) to use all welding processes involved.
- 2) The weld joints detailed by engineering and installed in the field conform to AWS pre-qualified details.
- 3) The welding processes used were pre-qualified by AWS and the size and type of electrodes used were limited, thereby limiting the variables available to the welder.
- 4) FCAW wire size, voltage, and amperage parameters are the same for all FCAW welds regardless of joint detail or orientation.
- 5) All welds were visually inspected and, in some cases, Nondestructive Examinations (NDE) were conducted. No physical defects were identified.

Our review of completed SSIT packages is ongoing. Commonwealth Edison Company NCR-646 has been issued to track the resolution of this matter. It is anticipated that the documentation

corrections, which are in accordance with Gust K. Newberg Procedure 29, will be complete by January 15, 1985. An Interim Report will be submitted by October 15, 1984. providing detailed results of the SSIT package reviews.

Please address any questions that you or your staff may have concerning this matter to this office.

Very truly yours,



David H. Smith
Nuclear Licensing Administrator

cc: NRC Resident Inspector - Braidwood

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