October 13, 2000

Mr. Oliver D. Kingsley, President
Nuclear Generation Group
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: QUAD CITIES - REVIEW OF REMEDIATION PLAN FOR IGSCC SUSCEPTIBLE WELDS (TAC NO. MA7022)

Dear Mr. Kingsley:

By letter dated November 3, 1999, as supplemented by letter dated August 3, 2000, the Commonwealth Edison Company (ComEd, or the licensee) transmitted its response to the NRC's concerns regarding the proposed remediation plan for welds that are susceptible to intergranular stress corrosion cracking (IGSCC) at Quad Cities Nuclear Power Station, Unit 1. The staff reviewed these letters and concludes that ComEd has adequately resolved the staff's concerns, as discussed below.

By letter dated March 31, 1999, ComEd submitted a proposed remediation plan for IGSCC-susceptible welds at Quad Cities Nuclear Power Station, Unit 1. The staff had concerns regarding the proposed inspection schedule for the fifteen (15) 28-inch recirculation pipe welds that were treated with the induction heating stress improvement (IHSI) process. In the remediation plan, the licensee proposed to inspect those welds in accordance with the schedule of Category C welds based on the determination that the welds have received an effective IHSI treatment. However, the licensee's previous assessment, presented to NRC in a letter dated January 26, 1999, had determined that the IHSI treatment of those fifteen welds was either limited or ineffective, and proposed to inspect those welds in accordance with the schedule of Category D welds. The March 31, 1999, submittal did not provide detailed discussion regarding the discrepancies between the two assessments. In accordance with Generic Letter 88-01, the inspection schedule for Category C welds is 100 percent every 10 years, and for Category D welds, it is all welds every two refueling cycles.

By letter dated June 14, 1999, the staff asked ComEd to address the staff's concerns and propose a plan to implement corrective actions. By letter dated November 3, 1999, as supplemented by letter dated August 3, 2000, ComEd responded to the staff's concerns as follows:

(1) The staff's June 14, 1999, letter asked ComEd to document the IHSI acceptance criteria and provide a detailed account of the IHSI-effectiveness assessment process and results on a weld-specific basis, and to revise the January 26, 1999, letter with updated results of the IHSI treatment and a discussion of the discrepancies between the two assessments of IHSI effectiveness. ComEd's response provided additional details regarding the second assessment, including the acceptance criteria and a detailed

account of the assessment process. The licensee stated that the discrepancies between the two assessments was due to the unavailability of some significant IHSI data during the first assessment, so that the heat transfer calculations to determine the through-wall temperature difference could not be performed. The staff concludes that ComEd has provided adequate information to resolve the concerns regarding the assessment of the effectiveness of the IHSI treatment of the welds.

(2) The staff's June 14, 1999, letter recommended that ComEd inspect weld 02AS-F8 in accordance with the schedule of Category D welds due to the concern that this weld may not have been effectively treated by the IHSI process, since the licensee's earlier assessment had rated the IHSI treatment of this weld to be ineffective. Weld 02AS-F8 is a weld connecting a recirculation suction pipe to valve 1-0202-4A. The subject valve body is reported to have a low ferrite content which is susceptible to IGSCC. Based on the additional information provided in ComEd's response, the staff has determined that the IHSI treatment of this weld is effective because the additional information has shown that all essential processing criteria are met. The licensee proposed to supplement the UT inspection of this weld (Category C schedule) with a visual inspection (VT-2). The visual inspection will be performed either during the Class 1 System Pressure Test or while the Unit is shutting down for a refueling outage. The staff has determined that the licensee's proposed inspection (UT and VT) schedule for weld 02AS-F8 is acceptable, because there is reasonable assurance that the structural integrity of the subject weld will be maintained.

The staff has reviewed ComEd's responses and concludes that ComEd has adequately addressed the staff's concerns.

Sincerely,

/RA/

Stewart N. Bailey, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-254

cc: See next page

account of the assessment process. The licensee stated that the discrepancies between the two assessments was due to the unavailability of some significant IHSI data during the first assessment, so that the heat transfer calculations to determine the through-wall temperature difference could not be performed. The staff concludes that ComEd has provided adequate information to resolve the concerns regarding the assessment of the effectiveness of the IHSI treatment of the welds.

(2) The staff's June 14, 1999, letter recommended that ComEd inspect weld 02AS-F8 in accordance with the schedule of Category D welds due to the concern that this weld may not have been effectively treated by the IHSI process, since the licensee's earlier assessment had rated the IHSI treatment of this weld to be ineffective. Weld 02AS-F8 is a weld connecting a recirculation suction pipe to valve 1-0202-4A. The subject valve body is reported to have a low ferrite content which is susceptible to IGSCC. Based on the additional information provided in ComEd's response, the staff has determined that the IHSI treatment of this weld is effective because the additional information has shown that all essential processing criteria are met. The licensee proposed to supplement the UT inspection of this weld (Category C schedule) with a visual inspection (VT-2). The visual inspection will be performed either during the Class 1 System Pressure Test or while the Unit is shutting down for a refueling outage. The staff has determined that the licensee's proposed inspection (UT and VT) schedule for weld 02AS-F8 is acceptable, because there is reasonable assurance that the structural integrity of the subject weld will be maintained.

The staff has reviewed ComEd's responses and concludes that ComEd has adequately addressed the staff's concerns.

Sincerely,

/RA/

Stewart N. Bailey, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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