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ComEd

April 19, 1996

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: LaSalle Station Unit 1
ComEd Response to March 20, 1996 NRC Request for Additional Information on Commonwealth Edison Company Response to Generic Letter 92-01, Revision 1, Supplement 1: "Reactor Vessel Structural Integrity"
NRC Docket 50-373

References:

1. USNRC Generic Letter 92-01, Revision 1, Supplement 1, "Reactor Vessel Structural Integrity"

2. November 17, 1995 ComEd Response to NRC Generic Letter 92-01, Revision 1, Supplement 1: "Reactor Vessel Structural Integrity."

The purpose of this letter is to provide the Commonwealth Edison Company (ComEd) response to the March 20, 1996 NRC Request for Additional Information (RAI) on the ComEd response to Parts (2), (3), and (4) of the subject Generic Letter for LaSalle County Station Unit 1.

The subject RAI requests additional information on weld heat number 1P3571 of the LaSalle County Station Unit 1 reactor vessel, which was fabricated by Combustion Engineering (ABB/CE). The subject RAI asks that a plan be provided within 30 days of the date of the subject RAI for providing (a) the requested information, and (b) revised pressure temperature limits.

The subject RAI questions and ComEd responses are:

RAI Question #1) " Demonstrate that -30F is a bounding value of initial reference temperature. Compare the unirradiated Charpy impact and drop weight test data that is the basis for the initial reference temperature of -30F to the unirradiated Charpy impact and drop weight test data from all other welds (data from sister plants and the

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ABB/CE database) fabricated using heat number IP 3571 weld wire. If the data is not bounding, the licensee should use the mean value and standard deviation for Combustion Engineering Linde 1092 welds to determine the initial reference temperature and margin term in their reactor vessel integrity assessments."

ComEd Response:

The method of determining the initial reference temperature for weld heat 1P3571 is described in Section 5.2.3.3.1.4 of the LaSalle County Station FSAR. This method was reviewed by the NRC and accepted as "conservative and equivalent to the requirements of Paragraph IV.A.2.a of Appendix G," in NUREG-0519 Supplement No. 2. This method is identical to the method described in Boiling Water Reactor Owners Group (BWROG) Report NEDC-32399-P, "Basis for GE RTNDT Estimation Method," September 1994, which was accepted by the NRC in a Safety Assessment dated December 16, 1994.

Although ABB/CE fabrication records indicate that the tandem wire submerged arc welding (SAW) process was utilized in depositing weld heat 1P3571 in the LaSalle Unit 1 reactor vessel, more conservative Charpy data for weld heat 1P3571 from the single wire SAW process was used as the input to the GE RTNDT estimation method which resulted in the value of -30F for weld heat 1P3571.

It should be noted that the -30F initial reference temperature value obtained for weld heat 1P3571 using the GE RTNDT estimation method does bound all available weld heat 1P3571 drop weight NDTT values: -50F, found in WCAP-14042, "Kewaunee Weld Drop Weight Test Program Results," April 1994, and -30F, found in CR 75-269, "Unirradiated Mechanical Properties of Maine Yankee Nuclear Pressure Vessel Materials," 1 February 1975. In addition, the available weld heat 1P3571 Charpy data from Kewaunee, Maine Yankee, and LaSalle Unit 1 supports an initial reference temperature of -64F in accordance with ASME Section III NB-2331. This data was presented in Figure 5-6 of GE-NE-523-A166-1294, "LaSalle Unit 1 RPV Surveillance Materials Testing and Analysis," Revision 1, June 1995.

Based on the available weld heat 1P3571 drop weight and Charpy data, the GE estimation technique for initial reference temperature is a very conservative approach appropriate to BWRs, and there is no impact on existing LaSalle Unit 1 pressure-temperature limits.

RAI Question #2) "Since the amount of copper reported for welds fabricated using heat number IP 3571 weld wire varies from 0.066% to 0.53%, the licensee should determine the best-estimate copper using a weighted average. The weighted average for heat number IP 3571 weld material should be determined by: (a) determining the average amount of copper for each weld in the database, (b) determining the number of coils used in the fabrication of the weld, and (c) dividing the sum of the products of the average amount of copper for a weld and the number of coils used to fabricate the weld by the number of coils to produce the welds. Identify for each weld sample in the database the location within the sample where the measurements were taken. The best-estimate nickel should be a simple average of the average nickel from each weld in the database."

ComEd Response:

In lieu of a best-estimate weighted average, a more conservative, bounding approach to chemistry appropriate to BWRs was taken in the evaluation of impact on pressure-temperature limits performed in the BWRVIP "Bounding Assessment of BWR/2-6 Reactor Pressure Vessel Integrity Issues," EPRI Report TR-105908, November 1995. This was submitted by reference in Reference 2. This analysis demonstrated that there is no impact on the LaSalle Unit 1 pressure-temperature limits. On this basis, the continued integrity of the LaSalle Unit 1 reactor vessel is assured, and all previously submitted pressure-temperature limits remain valid.

Further, in light of the weld variability observed in welds fabricated by ABB/CE, ComEd has decided to participate in the Combustion Engineering Owners Group Reactor Vessel Working Group Weld Property Evaluation Task. The determination of best-estimate chemistry values using a statistically sound methodology, consistent with available fabrication records, will be addressed in this Task. The results of this long-term effort are expected to be bounded by the evaluations of the BWRVIP "Bounding Assessment of BWR/2-6 Reactor Pressure Vessel Integrity Issues," and will be reported when they become available.

If there are any further questions or comments concerning this letter, please refer them to me at (815) 357-6761, extension 3600.

Respectfully,

D. Ray for

R. E. Querio
Site Vice President
LaSalle County Station

Enclosure

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