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Cc: [Helker, David P:\(GenCo-Nuc\)](#); [Danna, James](#); [Alley, David](#); [Tsao, John](#); [Render, Diane](#); [Hood, Tanya](#)
Subject: Limerick-Unit 2: Request for Additional Information for Relief request Associated with Reactor Pressure Vessel Nozzle Repairs (CAC No. MF9702)
Date: Tuesday, May 16, 2017 10:37:00 AM

By letter dated May 15, 2017, Exelon Generation Company, LLC (the licensee) requested relief from certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI. The licensee submitted Relief Request I4R-17 associated with the alternate repair of a 2-inch instrument line nozzle at penetration N-16D on the reactor pressure vessel at the Limerick Generating Station (LGS), Unit 2 (CAC No. MF9702).

In order to complete its review, the U.S. Nuclear Regulatory Commission staff requests the following additional information. Please provide your response to the attached request for additional information within 30 days of the date of this correspondence.

- (1) (a) The relief request discussed performing a flaw evaluation, design analysis, and corrosion evaluation. However, these analyses are not included in the submittal. The relief request did not discuss when these analyses will be submitted for NRC review and approval. Please Clarify. Please, (b) Provide technical basis why the repair is acceptable for one fuel cycle, as relief was requested, in terms of the flaw evaluation, design analysis and corrosion evaluation.
- (2) Because the relief is requested for one fuel cycle only, discuss the path forward after one fuel cycle with regard to the repaired nozzle.
- (3) Wordings of the diagram in Enclosure 2 are not legible. Please, (a) Provide a legible diagram. (b) Provide the gap between the remnant nozzle and the new half nozzle. Discuss whether the gap is sufficient for the thermal expansion of the remnant nozzle and new half nozzle.
- (4) The proposed repair involves three new welds and a new reinforcement weld pad. The three welds are---a partial penetration weld joins the new half nozzle and the new reinforcement pad, a fillet weld joins the new half nozzle and new reducing insert, and a fillet weld joins the new reducing insert and the pipe. (a) Identify the size of the three welds and the thickness of the weld pad. (b) Discuss whether the welding of the three welds is performed in accordance with the ASME Code, Section IX. (c) Discuss the welding technique used on these three welds. (d) Discuss in detail the nondestructive examinations on the three welds. (e) Discuss whether all three welds and the weld pad are considered the pressure boundary. (f) Discuss whether a pressure test will be performed in accordance with the ASME Code, Section XI after the repair but prior to the plant startup.
- (5) The licensee submitted the relief request pursuant to 10 CFR 50.55a(z)(1) because the licensee concludes that the proposed alternatives provide an acceptable level of quality and safety. However, the relief request does not include a flaw evaluation, design analysis and corrosion evaluation. It is difficult for the NRC staff at this time to determine that the propose alternatives provide an acceptable level of quality and safety. However, the relief request may be submitted under alternate regulatory rules (e.g., 10 CFR 50.55a(z)(2)),

provided that hardship and unusual difficulties can be justified if an ASME Code repaired is performed.

If you have any questions, please contact me at 301-415-2597.

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