

RS-12-210

10 CFR 50.55a

December 7, 2012

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Quad Cities Nuclear Power Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Additional Information Regarding Relief Request RV-04 Associated with the Fifth Inservice Testing Interval

- References:
1. Letter from D. M. Gullott (Exelon Generation Company, LLC) to U.S. NRC, "Submittal of Relief Requests Associated with the Fifth Inservice Testing Interval," dated February 15, 2012
 2. Letter from B. Mozafari (U.S. NRC) to M. J. Pacilio (Exelon Generation Company, LLC), "Quad Cities Nuclear Power Station, Units 1 and 2 – Request for Additional Information Related to Relief Request, RV-04, from ASME OM Code ISTC-5150, Solenoid-Operated Valves Associated with the Fifth Inservice Testing (TAC Nos. ME7981 and ME7982)," dated December 3, 2012

In Reference 1, Exelon Generation Company, LLC (EGC) requested NRC approval of relief requests associated with the fifth 10-year inservice testing (IST) program interval for Quad Cities Nuclear Power Station (QCNPS). EGC's submittal included relief request RV-04, which is related to High Pressure Coolant Injection system exhaust line drain pot to gland seal condenser solenoid valves. In Reference 2, the NRC requested additional information that is needed to complete review of relief request RV-04. In response to this request, EGC is providing the attached information, which addresses NRC Requests 1, 2, and 3. During a telephone discussion with the NRC on December 6, 2012, it was agreed that EGC would defer the response to NRC Request 4 because additional clarification is needed from the NRC regarding the specific information being requested.

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There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

Respectfully,

A handwritten signature in black ink, appearing to read 'D M Gullott', with a long horizontal line extending to the right.

David M. Gullott
Manager – Licensing

Attachment: Response to Request for Additional Information

cc: NRC Regional Administrator, Region III
NRC Senior Resident Inspector, Quad Cities Nuclear Power Station

ATTACHMENT
Response to Request for Additional Information

NRC Request 1

In relief request RV-04, Section 4.0, "Impracticability of Compliance", the first paragraph, first sentence states, "Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (f)(5)(iii), relief is requested from the requirement of ASME, Code of Operation and Maintenance, paragraph ISTC-5150." ISTC-5150 contains paragraphs ISTC-5151, ISTC-5152, ISTC-5153, and references requirements ISTC-3500, ISTC-3300, ISTC-3310, and ISTC-3320. Clarify from which paragraphs of the ISTC of the ASME OM Code is relief being requested.

Response

As stated in proposed Relief Request RV-04, the affected High Pressure Coolant Injection (HPCI) system solenoid operated valves (i.e., 1(2)-2301-032-SO) are not equipped with position indicators and the valves are completely enclosed. Therefore, valve position cannot be verified by direct observation. Due to the design limitations of the system and valves, the following requirements of ISTC-5150, "Solenoid-Operated Valves," related to stroke timing cannot be met.

- ISTC-5151, "Valve Stroke Testing," paragraphs (a), (b), and (c)
- ISTC-5152, "Stroke Test Acceptance Criteria," paragraphs (a), (b), and (c)
- ISTC-5153, "Stroke Test Corrective Action," paragraph (b)

Accordingly, relief is requested from these specific parts of ISTC-5150.

NRC Request 2

Section 5.0, "Burden Caused by Compliance," states "Compliance with the quarterly exercising and stroke timing requirements of the Code would require either system modifications to replace these valves with ones of testable design, or to purchase non-intrusive test equipment and develop new test methods and procedures." Justify why modifying the system by replacing these valves with a testable design, or purchasing non-intrusive test equipment, is not feasible (i.e., cost, planning or new method and procedure).

Response

The station design does not include remote light indication for the 1(2)-2301-032-SO valves. These valves are completely enclosed such that the valve position cannot be verified by direct observation. Due to the absence of a visible valve stem and light indication, "switch to light" stroke timing cannot be performed. In addition, there are no known reliable non-intrusive test methods for measuring stroke times for this valve configuration.

In order to perform stroke timing of these valves, a design change would have to be implemented. The modification would include: (1) changing the valve design to include position limit switches, (2) routing light indication cabling from the plant through containment boundaries to the control room, and (3) installing position indication lights in the main control room panels. It is estimated that this modification would cost in excess of \$300,000 per unit. This remote valve indication would be installed solely for meeting the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code requirements and would serve no other operational purpose.

ATTACHMENT
Response to Request for Additional Information

A quarterly exercise of the 1(2)-2301-032-SO valves is currently performed and its associated level switches operate as proven by the receipt of the "HPCI TURBINE EXH DRAIN POT HIGH LEVEL" alarm (i.e., water level increase) and reset (i.e., water level decrease due to the open exercise of valves 1(2)-2301-032-SO). During this same evolution, the valve solenoid is also verified actuated (i.e., valve solenoid is magnetized) by use of a test probe. This testing approach provides adequate assurance that the valves function as required.

NRC Request 3

Section 6.0, "Proposed Alternative and Basis for Use," does not provide any operational history (i.e., maintenance and reliability data) or note any failures of solenoid-operated valves 1(2)-2301-032-SO. Provide details of operational history and information regarding any failure of these valves. Also, describe how often the internals for these valves have been replaced or repaired, and note any defects identified during maintenance activities for the fourth 10-year inservice testing interval.

Response

A quarterly exercise of the 1(2)-2301-032-SO valves is currently performed and its associated level switch operate as proven by the receipt of the "HPCI TURBINE EXH DRAIN POT HIGH LEVEL" alarm (i.e., water level increase) and reset (i.e., water level decrease due to the open exercise of valves 1(2)-2301-032-SO). During this same evolution, the valve solenoid is also verified actuated (i.e., valve solenoid is magnetized) by use of a test probe. This testing approach provides adequate assurance that the valves function as required.

A review of the work and inservice testing (IST) history of these valves did not identify any cases of these valves failing to stroke open since they were added to the IST program scope in November 1994.

The station has a preventive maintenance activity to replace these valves once every fifth refueling outage (i.e., approximately every 10 years). This activity was last performed on May 11, 2007, on Unit 1, and on April 3, 2008, on Unit 2. No defects were noted.