

RS-13-098

10 CFR 50.55a

April 1, 2013

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

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Response to Request for Additional Information Related to Request for NRC Approval of Relief Requests for Fifth Inservice Testing Interval (TAC Nos. ME9871 and ME9872)

Reference: Letter from P. R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Submittal of Relief Requests Associated with the Fifth Inservice Testing Interval," dated October 30, 2012

In the referenced letter, Exelon Generation Company, LLC (EGC) requested approval of relief requests associated with the upcoming Fifth IST Interval at Dresden Nuclear Power Station, Units 2 and 3.

During the NRC's review of the referenced document, the NRC found that additional information was required to support its review. The requested information is provided in the attachment to this letter.

There are no regulatory commitments contained within this letter. Should you have any questions concerning this letter, or require additional information, please contact Mitchel Mathews at (630) 657-2819.

Respectfully,



Patrick R. Simpson
Manager – Licensing
Exelon Generation Company, LLC

Attachment: Response to NRC Request for Additional Information

RAI-RV-23H-1:

In Relief Request RV-23H, Section 3, "Applicable Code Requirements," notes that relief is requested from the requirements of the American Society of Mechanical Engineers (ASME), Code of Operation and Maintenance of Nuclear Power Plants (OM Code), Paragraphs ISTC-3300, ISTC-3310, ISTC-5151 (a), (b), and (c), and ISTC-5152. The ASME OM Code also provides inservice testing requirements for solenoid-operated valves in ISTC 5151(d) and ISTC-5153. Confirm that no relief is needed from ISTC-5151(d) and ISTC-5153.

Exelon Generation Company, LLC (EGC) Response:

As stated in proposed Relief Request RV-23H, the affected high pressure coolant injection (HPCI) system solenoid operated valves 2(3)-2301-32 are not equipped with position indicators and the valves are completely enclosed; therefore, valve position cannot be verified by direct observation.

While valve operation cannot be assessed during the quarterly exercise, EGC will comply with the requirements of ISTC-5151(d) during the functional testing during refueling.

With regards to ISTC-5153, EGC is only requesting relief from the stroke timing requirements in ISTC-5153(b). All other ISTC-5153 requirements will be met for the fifth IST interval at DNPS.

RAI-RV-23H-2:

The Section 4.0, "Reason for Request," second paragraph states that, "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." Please explain 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).

EGC Response:

The Dresden Nuclear Power Station (DNPS), Units 2 and 3 design does not include remote light indication for the 2(3)-2301-32-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 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.

A semi-annual exercise of the 2(3)-2301-32-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 2(3)-2301-32-SO). During this same evolution, the valve solenoid is also verified actuated (i.e., valve solenoid is magnetized) by use of a small metal object. This testing approach provides reasonable assurance that the valves function as required.

RAI-RV-23H-3:

Section 5.0, "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 2-2301-032 and 3-2301-032. Please provide details of the operational history and information regarding any failures of these valves for each unit. Also, describe how often the internals for these valves have been replaced or repaired and note any defects identified during maintenance activities, during the fourth ten-year inservice testing (IST) interval at Dresden 2 and 3.

EGC Response:

A review of the work and Inservice Testing 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. EGC has a preventive maintenance activity to replace these DNPS valves once every six years. The valve internals were not repaired or replaced during the fourth ten-year interval. This activity was last performed on March 11, 2013, on Unit 2, and on December 8, 2007, on Unit 3. No defects were noted.

RAI-RV-23H-4:

The Section 5.0, second paragraph, under "Basis for Use," states, in part, that, "failure of these valves to perform their safety function would be indicated by the drain pot high level alarm operation with low pressure steam." (1) Please provide details of any consequences of failures of the 2(3)-2301-032 valves during normal and emergency operations, and (2) explain what actions and/or procedures are used if these valves fail to perform their safety function.

EGC Response:

If the HPCI Drain Pot Steam Trap (i.e., 2(3) 2301-2) fails, then the HPCI drain pot bypass valve (i.e., 2(3) 2301-32) would receive a signal to open to drain condensation to the unit's gland steam condenser. If both 2301-2 and 2301-32 fail to open, then the exhaust drain pot could begin to fill, resulting in an exhaust diaphragm rupture and turbine blade and exhaust line check valve damage.

Operator actions are currently in place in accordance with DNPS Procedure DAN 902(3)-3 C-11 to trip the HPCI turbine if this occurs while the HPCI system is being tested. If an alarm is received during the emergency use of HPCI system, then manual trap bypass valve 2(3) 2301-50 is opened to drain to the unit's torus, and prevent HPCI system damage.

RAI-RV-23H-5:

The Section 5.0, third paragraph, under "Basis for Use," states that, "Following discussions with the manufacturer regarding valve design and application, it was decided to disassemble, examine and repair or replace these valves every third operating cycle." Please provide (1) the basis for this activity to be performed every third operating cycle, and (2) the criteria for selecting between repair and/or replacement of the valve during this activity.

EGC Response:

EGC has elected to replace the DNPS valve 2(3)-2301-32 on a six year interval, due to cost saving and dose concerns. The six-year replacement schedule has proven to be adequate for this valve and its application based on the history discussed in the response to RAI-RV-23H-3 above. The criteria for selecting between repair and/or replacement of the valve are based on performance, cost of repair versus replacement and dose concerns.

RAI-RV-02C-1

Will the alternative to ASME OM Code Mandatory Appendix I, Section I-1320, proposed by Relief Request RV-02C for testing of the Dresden Units 2 & 3 Main Steam Safety Valves (MSSVs) fully meet all requirements of ASME OM Code Case OMN-17? For instance, the referenced letter mentions compliance with OMN-17 paragraphs (a), (b), and (d) but contains no information regarding compliance with paragraphs (c) and (e).

EGC Response:

Paragraph (c) of Code Case OMN-17 states:

(c) Requirements for Testing Additional Valves. Additional valves shall be tested in accordance with the following requirements.

(1) For each valve tested for which the as-found set-pressure (first test actuation) exceeds the greater of either the plus/minus tolerance limit of the Owner-established set-pressure acceptance criteria or $\pm 3\%$ of valve nameplate set-pressure, two additional valves shall be tested from the same valve group.

(2) If the as-found set-pressure of any of the additional valves tested in accordance with subpara. (c)(1) exceeds the criteria noted therein, then all remaining valves of that same valve group shall be tested.

(3) The Owner shall evaluate the cause and effect on system capability of valves that fail to comply with the set-pressure acceptance criteria established in subpara. (c)(1), or the acceptance criteria for other required tests (e.g., acceptance of auxiliary actuating devices, compliance with Owner's seat tightness criteria). Based upon this evaluation, to address any generic concerns,

Attachment
Response to NRC Request for Additional Information
Page 5 of 5

the Owner shall determine the need for testing in addition to the minimum tests specified.

EGC will comply with paragraph (c) of Code Case OMN-17 during the fifth IST interval.

Paragraph (e) of Code Case OMN-17 states:

(e) Disassembly and Inspection. Each valve shall have been disassembled and inspected in accordance with subpara. (d) above prior to the start of the 72-mo test interval. Disassembly and inspection performed prior to the implementation of this Code Case may be used.

EGC removes a partial complement of the DNPS MSSVs each refueling outage and ships them to an ASME OM Code-certified vendor to perform as-found testing prior to resumption of electric power generation. The vendor also performs the inspection, refurbishment, and as-left testing that meet the maintenance requirements specified in subparagraph (d) of OMN-17. All MSSVs for each unit are refurbished in this manner every 72 months. For these reasons, the proposed alternative complies with paragraph (e) of Code Case OMN-17.