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June 3, 2015

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

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Response to Request for Additional Information Regarding Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves in an IST Cold Shutdown Justification or Refuel Justification

References:

(1) Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U.S. NRC, "Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves in an IST Cold Shutdown Justification or Refuel Justification," dated December 1, 2014

(2) Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Response to Request for Additional Information Regarding Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves," dated March 26, 2015

(3) Email from Blake Purnell (U.S. NRC) to Timothy A. Byam (Exelon Generation Company, LLC), "Clinton Power Station, Unit 1 - Request for Additional Information Regarding Relief Request 2203 (TAC No. MF5344)," dated April 28, 2015

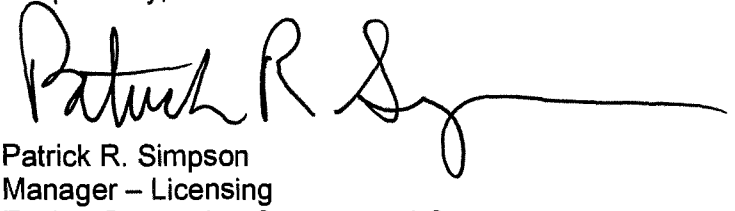
In Reference 1, Exelon Generation Company, LLC, (EGC) submitted relief request (RR) 2203 for Clinton Power Station (CPS), Unit 1 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14335A541). RR 2203 was requested because CPS transitioned to 12-month fuel cycles beginning in the spring of 2015. In the past, CPS operated with a 24-month fuel cycle. The RR is a proposed alternative to the requirements of the American Society of Mechanical Engineers (ASME), "Code for Operation and Maintenance of Nuclear Power Plants," 2004 Edition (OM Code), Subsections ISTC-3521(e), ISTC-3521(h), ISTC-3522(c), and ISTC-3522(f). These OM Code subsections require that ASME Class 1, 2, and 3 valves in an inservice testing cold shutdown justification (CSJ) or refueling justification (RFJ) be tested each refueling outage. EGC's proposed alternative is to test CSJ and RFJ valves every 2 years.

In Reference 2, EGC provided supplemental information in response to a request for additional information to support this RR by letter dated March 26, 2015 (ADAMS Accession No. ML15085A458).

As noted in Reference 3, the NRC has reviewed the RR and supplemental response and determined that it needs additional information to complete its review. Therefore, in Reference 3, the NRC requested that EGC provide additional information to support their review of the subject relief request (i.e., Reference 1). The response to this request is provided in the attachment to this letter. The NRC requested that EGC respond to the request for additional information on or before June 19, 2015.

This letter contains no new regulatory commitments. If you have any questions concerning this letter, please contact Timothy A. Byam at (630) 657-2818.

Respectfully,



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

Attachment: Response to Request for Additional Information Regarding Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves in an IST Cold Shutdown Justification or Refuel Justification

cc: NRC Regional Administrator, Region III
NRC Senior Resident Inspector – Clinton Power Station
Illinois Emergency Management Agency – Division of Nuclear Safety

ATTACHMENT
Response to Request for Additional Information Regarding Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves in an IST Cold Shutdown Justification or Refuel Justification

In an email from Blake Purnell (U.S. NRC) to Timothy A. Byam (Exelon Generation Company, LLC), "Clinton Power Station, Unit 1 - Request for Additional Information Regarding Relief Request 2203 (TAC No. MF5344)," dated April 28, 2015, the following request for additional information was provided.

On December 1, 2014, Exelon Generation Company, LLC (the licensee) submitted relief request (RR) 2203 for Clinton Power Station (CPS), Unit 1 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14335A541). The licensee provided supplemental information to support this RR by letter dated March 26, 2015 (ADAMS Accession No. ML15085A458).

RR 2203 was requested because CPS will transition to a 12-month fuel cycle beginning in the spring of 2015. In the past, CPS has operated with a 24-month fuel cycle and the current cycle is scheduled to be 18-months ending this spring. The RR is a proposed alternative to the requirements of the American Society of Mechanical Engineers (ASME), "Code for Operation and Maintenance of Nuclear Power Plants," 2004 Edition (OM Code), Subsections ISTC-3521(e), ISTC-3521(h), ISTC-3522(c), and ISTC-3522(f). These OM Code subsections require that ASME Class 1, 2, and 3 valves in an inservice testing cold shutdown justification (CSJ) or refueling justification (RFJ) be tested each refueling outage. The licensee's proposed alternative is to test CSJ and RFJ valves every 2 years.

The NRC staff has reviewed the RRs and determined that it needs additional information to complete its review.

Background
In its March 26, 2015, letter, the licensee states it reviewed the performance history of the 70 valves that are designated as RFJ valves. The letter stated:

> *Reactor Core Isolation Cooling [RCIC] System testable check valve (i.e., 1E51-F066) has experienced multiple failures with the last two in consecutive outages. This valve is in a position to be tested during "refueling only outages" in addition to "refueling/ maintenance outages." Until four consecutive years of tests are passed, this valve will be tested each refueling outage (i.e., 1 year test interval).*

NRC RAI
Describe how testing will change if an RFJ valve that is tested once every 2 years fails a test. The response should specify changes in test frequency and the number of consecutive passed tests required to return the valve to a 2-year test interval (i.e., information similar to what was provided for the RCIC system testable check valve above).

EGC Response
Testing for RFJ valves that fail under the proposed relief will not change from the process currently used. Currently, if a RFJ valve were to fail, it would be tested during the next outage (i.e., 24 months later). During the proposed "refueling only outage" there is no intent to perform maintenance on CSJ/RFJ valves other than stroking the valves as required (i.e., those valves classified as CSJ). If a valve were to fail during stroking, corrective action would be implemented and a post-maintenance test would be performed prior to returning the valve to service. There would be no change in test frequency and no defined number of consecutive

successful tests required to return to a 24 month test frequency. History shows that a 24 month testing frequency has been acceptable for these valves.

As described in Reference 1, CPS intends to alternately schedule one short outage that will primarily focus on refueling outage activities with minimal maintenance activities (i.e., "refueling only outages") and one more traditional refueling outage consisting of both refueling activities and maintenance activities (i.e., "refueling/maintenance outages"). The plan is for a minimal amount of testing and system outages to be performed during the "refueling only outages." Therefore, during "refueling only outages," testing of certain CSJ/RFJ valves would incur system unavailability and possibly increased shutdown risk. Since the "refueling/maintenance outages" will require more system outages to accomplish, testing during this outage will allow for addressing any plant risk associated with taking a system out of service. The RCIC testable check valve, 1E51F066, is an exception since this valve is within part of the reactor pressure vessel (RPV) piping that is removed during RPV disassembly and therefore the opportunity exists to perform the test without causing system unavailability or increased shutdown risk to perform the testing.

References:

1. Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U.S. NRC, "Proposed Alternative Testing Requirements for ASME Class 1, 2, and 3 Valves in an IST Cold Shutdown Justification or Refuel Justification," dated December 1, 2014