



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 16, 2017

LICENSEE: Exelon Generation Company, LLC

FACILITY: Clinton Power Station, Unit No. 1

SUBJECT: SUMMARY OF MARCH 7, 2017, PUBLIC PRE-SUBMITTAL TELECONFERENCE MEETING WITH EXELON GENERAION COMPANY, LLC TO DISCUSS PROPOSED LICENSE AMENDMENT REQUEST REGARDING RESIDUAL HEAT REMOVAL SYSTEM OPERBILITY IN MODE 3 AT CLINTON POWER STATION, UNIT 1 (CAC NO. MF9152)

On March 7, 2017, a Category 1 public teleconference meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generation Company, LLC (Exelon or the licensee). The purpose of the meeting was for Exelon to discuss with the NRC a proposed license amendment request (LAR) regarding residual heat removal (RHR) system operability in Mode 3 at Clinton Power Station, Unit No. 1 (Clinton). The meeting notice and agenda, dated February 21, 2017, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML17052A154. A list of attendees is enclosed.

The licensee's presentation is available at ADAMS Accession No. ML17067A372.

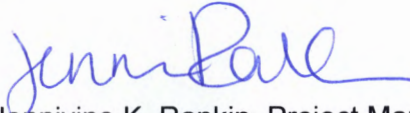
The licensee provided background information which includes a green finding and associated non-cited violation issued by the NRC related to the RHR system. Specifically, RHR cannot be realigned from shutdown cooling mode of operations to provide the technical specification (TS) required functions of the emergency core cooling system (ECCS) when the reactor coolant temperature is greater than 150 degrees Fahrenheit. In addition, the licensee provided information on the Clinton ECCS design and TS history.

The licensee proposes to submit a LAR to align the TS requirements with the design capabilities. The licensee expects their LAR to be similar to a LAR submitted for LaSalle County Station, Units 1 and 2 (LaSalle), which resolved a similar issue. The NRC approval of the LaSalle LAR is available at ADAMS Accession No. ML15244B410. The licensee expects to submit the LAR for Clinton on or before May 5, 2017.

There were no public comments made at this meeting and no public meeting feedback forms were received.

Please direct any inquiries to me at 301-415-1530, or by email at Jennivine.Rankin@nrc.gov.

Sincerely,



Jennivine K. Rankin, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 50-461

Enclosure:
List of Attendees

cc w/encl: Distribution via Listserv

SUBJECT: SUMMARY OF MARCH 7, 2017, PUBLIC PRE-SUBMITTAL TELECONFERENCE MEETING WITH EXELON GENERAION COMPANY, LLC TO DISCUSS PROPOSED LICENSE AMENDMENT REQUEST REGARDING RESIDUAL HEAT REMOVAL SYSTEM OPERBILITY IN MODE 3 AT CLINTON POWER STATION, UNIT 1 (CAC NO. MF9152) DATED MARCH 16, 2017

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ADAMS Accession Nos.:
Meeting Notice: ML17052A154
Meeting Summary: ML17067A372
Handouts: ML17067A362

OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL3/LA	NRR/DORL/LPL3/BC (A)	NRR/DORL/LPL3/PM
NAME	JRankin	SRohrer	KGreen	JRankin
DATE	03/09/17	03/09/17	03/16/17	03/16/17

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LIST OF ATTENDEES

MARCH 7, 2017, MEETING WITH EXELON GENERATION COMPANY, LLC

RESIDUAL HEAT REMOVAL SYSTEM OPERABILITY IN MODE 3

CLINTON POWER STATION, UNIT NO. 1

Name	Affiliation
Eric Oesterle	U.S. Nuclear Regulatory Commission (NRC)/Office of Nuclear Reactor Regulation (NRR)
Muhammad Razaque	NRC/NRR
Caroline Tilton	NRC/NRR
Jennie Rankin	NRC/NRR
John Schrage	Exelon Generation Company, LLC (Exelon)
Patrick Simpson	Exelon
Dale Shelton	Exelon
Jonathon Grim	Exelon
John Pfabe	Exelon

Enclosure

**Clinton Power Station
License Amendment Request
Mode 3 Applicability – LPCI/SDC**

NRC Pre-Submittal Teleconference
March 7, 2017



Agenda

- Objective of Meeting
- Background and Need for Amendment
- Schedule

Objective

- Present information to the NRC staff describing a proposed License Amendment Request (LAR) for Clinton Power Station (CPS) to resolve a CDBI violation concerning incapability of the residual heat removal (RHR) design to support Technical Specification (TS) operability requirements.
- Obtain feedback from the NRC staff on the proposed LAR and gain an understanding of the NRC staff's expectations for the content of a high quality submittal.
- Answer any questions from the NRC staff regarding the proposed LAR.

Background

December 2016 NRC CDBI Inspection

- Green finding and associated Non-cited Violation (NCV) for failure to promptly identify that the incapability of the RHR design to support TS operability requirements was a condition adverse to quality.
- Specifically, when reactor coolant temperature is greater than 150°F, RHR cannot be realigned from SDC mode of operations to provide the TS required functions of the emergency core cooling system.
- CPS captured this issue in the Corrective Action Program (CAP) both prior to, and subsequent to the inspection. The planned corrective action, as documented in NRC Inspection Report 05000461/12016009, was to submit an LAR to align TS requirements with the design capabilities.

Background (cont.)

CPS Design

- TS 3.5.1⁽¹⁾ requires all low pressure ECCS injection/spray systems to be OPERABLE in Modes 1, 2, and 3.
- By design, the suppression pool suction valve on the ECCS Loop that is supporting SDC operations must be shut, otherwise the reactor coolant would drain to the suppression pool. The suppression pool suction valve does not automatically realign on a LPCI signal.
- In addition, the suppression pool suction valve is not capable of opening for manual realignment, due to both water hammer and pressure locking/thermal binding concerns which have not been analyzed above 150 °F.

(1) TS 3.5.1, ECCS - Operating

Background (cont.)

TS History

- Prior to implementing NUREG-1434 Improved Tech Specs (ITS) in 1994, the CPS TS 3.5.1 recognized the required LPCI inoperability, and annotated Mode 3 applicability with a Note that stated:

One LPCI subsystem of the RHR system may be aligned in the shutdown cooling mode when reactor vessel pressure is less than the LPCI cut-in permissive set point.

- ITS did not include this site-specific Mode 3 note, and therefore it was removed in the CPS ITS conversion. Instead, ITS provided a new note in the Surveillance Requirements for TS 3.5.1, and a similar note in TS 3.5.2, TS 3.6.1.7, TS 3.6.1.9, and TS 3.6.2.3⁽²⁾:

Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor vessel pressure less than the residual heat removal cut-in permissive pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable.

- (2) TS 3.5.2, ECCS – Shutdown; TS 3.6.1.7, Residual Heat Removal (RHR) Containment Spray System; TS 3.6.1.9, Feedwater Leakage Control System (FWLCS); and TS 3.6.2.3, Residual Heat Removal (RHR) Suppression Pool Cooling

Background (cont.)

TS History (cont.)

- CPS implemented the new TS 3.5.1, TS 3.5.2, TS 3.6.1.7, TS 3.6.1.9, and TS 3.6.2.3 with the same interpretation as the pre-ITS TSs. That is, the station considered the new note to be an allowance to consider LPCI operable, if capable of being realigned.
- However, since the suppression pool suction valve is not capable of opening for manual realignment (i.e., as previously discussed), CPS is not able to implement the ITS Note, and therefore, declares LPCI inoperable during decay heat removal in Mode 3 with reactor pressure less than the cut-in permissive.
- The current NRC interpretation of the ITS LCO and associated Note is that the systems are required to be OPERABLE, and failure to implement the Note (i.e., declaring LPCI inoperable) constitutes entry into the ACTIONS for operational convenience.

Proposed Resolution

- The NRC issued a similar Green Finding and associated NCV to LaSalle County Station (LSCS) in 2012. In response to that Finding/NCV, LSCS submitted, and the NRC approved an LAR in October 2015 that deleted this Note [ML15244B410].
- The proposed change will delete the ITS Note from CPS TS 3.5.1, TS 3.5.2, TS 3.6.1.7, TS 3.6.1.9, and TS 3.6.2.3.
- The proposed CPS TS change will also reinstate the pre-ITS Note to the Applicability for TS 3.5.1, TS 3.6.1.7, TS 3.6.1.9, and TS 3.6.2.3.

One Low pressure coolant injection (LPCI) subsystem may be inoperable during alignment and operation for decay heat removal with reactor steam dome pressure less than the residual heat removal cut-in permissive pressure in MODE 3.

Schedule

- Submit license amendment request on, or before 05-May-2017
- Request review and approval in 12 months.