



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

October 21, 2015

LICENSEE: Exelon Generation Company, LLC

FACILITIES: Braidwood Station, Units 1 and 2, and Byron Station, Unit Nos. 1 and 2

SUBJECT: SUMMARY OF AUGUST 27, 2015, MEETING WITH EXELON GENERATION COMPANY LLC TO DISCUSS PROPOSED SUBMITTAL REALTED TO AUXILIARY FEEDWATER CROSS-TIE (TAC NOS. MF6378, MF6370, MF6380, AND MF6381)

On August 27, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a Category 1 public meeting with Exelon Generation Company, LLC (Exelon, the licensee) at NRC Headquarters, 11555 Rockville Pike, One White Flint North, Rockville, Maryland. The purpose of the meeting was to discuss Exelon's proposal to resubmit a license amendment request supporting the use of a piping cross-tie (x-tie) between the 'A' trains of the auxiliary feedwater systems (AFW) of Units 1 and 2, for both Byron and Braidwood to provide additional design flexibilities for responding to a beyond design basis event. Enclosure 1 contains a list of attendees. The licensee's presentation is available in the Agencywide Document Access and Management System (ADAMS) under Accession No. ML15232A683.

BACKGROUND:

In 2008, the licensee approved the installation of a plant modification to add a x-tie line between the Unit 1 and Unit 2, 'A' AFW trains to permit the sharing of the AFW trains between the Units. During inspection activities, the NRC staff identified that the licensee failed to obtain a license amendment prior to implementing a change to the plant that could result in a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component important to safety as previously evaluated in the Updated Final Safety Analysis Report (UFSAR). As a result, on November 3, 2011, the NRC issued a non-cited violation (NCV) for Byron (ADAMS Accession No. ML113070678) and a similar NCV was issued on November 9, 2011, for Braidwood (ADAMS Accession No. ML113130388).

On January 31, 2012, the licensee submitted a license amendment application (ADAMS Accession No. ML12033A023), to add information to the UFSAR describing the design and shared x-tie piping between the discharges of the Unit 1 and Unit 2, 'A' train motor-driven AFW pumps. The NRC staff identified a concern that by implementing the AFW cross tie between the units, it appeared that the licensee could adversely affect the non-accident unit's AFW system ability to mitigate an accident, because it can no longer sustain a single failure and perform its safety function. The submittal was later supplemented by a letter dated February 1, 2013 (ADAMS Accession No. ML13035A017). In a letter dated June 3, 2015 (ADAMS Accession No. ML15154B363), the licensee withdrew the application.

DISCUSSION:

The licensee provided an overview of the x-tie configuration and described the proposed submittal. The intent of the x-tie is to allow the use of one AFW pump from the non-accident unit to provide flow upon the loss of all accident unit specific normal feedwater and both trains of the accident unit's AFW. The x-tie is intended for an event that goes beyond the NRC required design basis accident of loss of all normal feedwater and safety-related AFW. The NRC staff questioned whether this x-tie would serve as the primary mitigation path for the event. The licensee indicated that the x-tie would be the second safety-related source and is based on an approach approved for the Calvert Cliffs AFW x-tie.

Additional questions were asked related to the technical specification availability/operability of the non-accident unit's AFW during the postulated event. The NRC staff also questioned the pedigree of the x-tie, such as the design structural integrity expectations on surveillance and testing. Also the NRC staff questioned whether use of the x-tie could result in additional high energy line break not considered in the current analyses.

Additional discussions by the NRC staff were related to whether the sharing of safety-related components such as the condensate storage tank and the switchyard x-tie could significantly impair the ability to perform a shutdown and cooldown on the non-accident unit or create a previously unidentified event or failure mode. A considerable part of the discussion centered around whether the licensee would need an exemption to General Design Criteria 5, "Sharing of structures, systems, and components." The NRC staff took an action to assess whether there were any known constraints related to an exemption; however, a request for an exemption is a decision to be made by the licensee.

The licensee identified that they would need to defeat an interlock on the non-accident AFW discharge valve. The NRC staff also voiced concerns with the potential need for changes in or additions of manual actions, the associated procedures and the associated operator completion times. The discussion also included the need for the licensee to address the impacts of the proposed on emergency operating procedures. The licensee indicated that they would go back and take a look at the submittal to ensure that the areas of concern identified were addressed in their submittal.

Members of the public were in attendance, and no feedback forms were received. A member of the public questioned whether this process should be proceduralized under Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(x). The NRC staff indicated that 10 CFR 50.54(x) is for emergency conditions where deviating from the license is necessary to maintain public health and safety.

No commitments or regulatory decisions were made by the NRC staff during the meeting.

Sincerely,

/RA/

Eva A. Brown, Senior Project Manager
Plant Licensing III-2 and
Planning and Analysis
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456, STN 50-457,
STN 50-454 and STN 50-455

Enclosure:
List of Attendees

cc w/encl: Distribution via Listserv

Ms. Ruth Thomas
354 Woodland Drive
Columbus, NC 28722

Attendees
Nuclear Regulatory Commission
Public Meeting with Exelon
Concerning Auxiliary Feedwater Crosstie
August 27, 2015

U. S. NUCLEAR REGULATORY COMMISSION

Timothy McGinty
Greg Casto
Travis Tate
Robert Elliott
Larry Wheeler
Matthew Hamm
Eva Brown

EXELON GENERATION COMPANY LLC

Doug Spitzer*
Phillip Raush
Joseph Bauer
David Gullott

PUBLIC

Deann Raleigh
Ruth Thomas*

* By phone

Enclosure

No commitments or regulatory decisions were made by the NRC staff during the meeting.

Sincerely,

/RA/

Eva A. Brown, Senior Project Manager
Plant Licensing III-2 and
Planning and Analysis
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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Columbus, NC 28722

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ADAMS Accession No.: ML15272A210

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DATE	10/19/15	10/5/15	10/20/15	10/21/15

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