



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

September 16, 2014

LICENSEE: Exelon Generation Company, LLC

FACILITY: Byron Station, Units 1 and 2
Braidwood Station, Units 1 and 2

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON
AUGUST 19, 2014, BETWEEN THE U.S. NUCLEAR REGULATORY
COMMISSION AND EXELON GENERATION COMPANY, LLC CONCERNING
DRAFT REQUEST FOR ADDITIONAL INFORMATION, SET 40, PERTAINING
TO THE BYRON STATION AND BRAIDWOOD STATION, LICENSE RENEWAL
APPLICATION (TAC NOS. MF1879, MF1880, MF1881, MF1882)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Company, LLC (Exelon or the applicant), held a telephone conference call on August 19, 2014, to discuss and clarify the staff's draft request for additional information (DRAI), Set 40, concerning the Byron Station, Units 1 and 2, and the Braidwood Station, Units 1 and 2, license renewal application. The telephone conference call was useful in clarifying the intent of the staff's DRAIs.

Enclosure 1 provides a listing of the participants, and Enclosure 2 contains a listing of the DRAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

/RA/

Lindsay Robinson, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

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

Enclosures:

1. List of Participants
2. List of Draft Request for Additional Information

cc w/encls: Listserv

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OFFICE	LA:DLR	PM:RPB1:DLR	BC:RPB1:DLR	PM:RPB1:DLR
NAME	*YEdmonds	LRobinson	YDiazSanabria	LRobinson
DATE	9/16/14	9/16/14	9/16/14	9/16/14

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TELEPHONE CONFERENCE CALL
BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
August 19, 2014

PARTICIPANTS

Lindsay Robinson

Allen Hiser

Jim Medoff

John Hufnagel

Al Fulvio

Tom Quintenz

AFFILIATIONS

U.S. Nuclear Regulatory Commission (NRC)

NRC

NRC

Exelon Generating Company, LLC (Exelon)

Exelon

Exelon

DRAFT REQUEST FOR ADDITIONAL INFORMATION
BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2,
LICENSE RENEWAL APPLICATION

August 19, 2014

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Exelon Generation Company, LLC (Exelon or the applicant), held a telephone conference call on August 19, 2014, to discuss and clarify the following draft request for additional information (DRAI), Set 40, concerning the Byron Station, Units 1 and 2, and the Braidwood Station, Units 1 and 2, license renewal application (LRA).

DRAI 4.7.8-2

Applicable:

Byron Station and Braidwood Station (BBS), all units

Background:

License renewal application (LRA) Section 4.7.8 states that BBS, Units 1 and 2, performed pre-emptive flaw evaluations based on crack growth rate analyses on reactor vessel, pressurizer, primary steam generator sub-components, and primary coolant components. The LRA further states that flaw evaluations, which use fracture toughness as an input, were performed on reactor vessels. The applicant defines these analyses supporting flaw evaluations as plant-specific time limited aging analyses (TLAAs).

Issue:

It is not evident whether these analyses were performed in evaluation of actual flaws detected in Class 1 components at the plant or in evaluation of flaws that were assumed to occur in the components. If these analyses are pre-emptive in evaluation of assumed flaws, the staff seeks further clarification on how the analyses related to meeting all six criteria for defining TLAAs in 10 CFR 54.3(a), especially that for establishing that the analyses are used in a safety-basis decision (safety determination) for the current licensing basis.

Request:

1. Clarify whether the analyses discussed and evaluated in LRA Section 4.7.8 were performed on actual flaws that were found at the plant or whether they involve the analyses of assumed flaws in the components.
2. If the analyses were performed for any actual flaws, identify the location of the flaw (e.g., the component and the location in the component), the type of flaw, the disposition of the flaw, and whether the flaw currently remains in the component. Also, justify why the flaw should not be identified in the LRA in a manner similar to that for the flaws described in LRA Sections 4.7.4, 4.7.6, and 4.7.7.
3. If the analyses are pre-emptive for assumed flaws, then describe how the analyses conform to the six criteria for a TLAA as defined in 10 CFR 54.3.

ENCLOSURE 2

Discussion: The applicant requested clarification on the staff's request. The staff discussed its concerns regarding whether the flaw analysis was based on actual flaws or assumed flaws. The applicant explained that actual flaws were used in conjunction with generic flaw evaluation methodology for the flaw analysis. During the discussion, it became apparent that the staff's concern centered around which guidance documents were used to make the flaw analysis determination and which flaw locations, types of flaws, and the systems were involved. As a result of this discussion, the staff generated a revised RAI to encompass the staff's updated concern (see below). The revised RAI below was formally sent to the applicant on August 20, 2014, titled: "RAI 4.7.8-2."

RAI 4.7.8-2

Applicable:

Byron Station and Braidwood Station (BBS), all units

Background:

License renewal application (LRA) Section 4.7.8 states that BBS, Units 1 and 2, performed pre-emptive flaw evaluations based on crack growth rate analyses on reactor vessel, pressurizer, primary steam generator sub-components, and primary coolant components. The LRA further states that flaw evaluations, which use fracture toughness as an input, were performed on reactor vessels. The applicant defines these analyses supporting flaw evaluations as plant-specific TLAA's.

Issue:

The applicant's TLAA evaluation basis discussion in the "Fatigue Crack Growth Analyses" subsection of LRA Section 4.7.8, "Analyses Supporting Flaw Evaluations of Primary System Components," does not clearly identify which reactor pressurizer vessel (RPV), steam generator (SG), pressurizer, or reactor coolant pressure boundary (RCPB) piping components had contained flaws and were analyzed in accordance with the generic flaw evaluation methodology in WCAP-11063, "Handbook on Flaw Evaluations For Byron Unit 1 and 2 Steam Generators and Pressurizers" (LRA Reference 4.8.27) and which RPV, SG, pressurizer, or RCPB piping components had contained flaws and were analyzed in accordance with the generic flaw evaluation methodology in WCAP-12046, "Handbook on Flaw Evaluations for the Byron and Braidwood Units 1 and 2 Reactor Vessels" (LRA Reference 4.8.28).

Request:

Describe the RPV, SG, pressurizer, and RCPB flaws that were evaluated in accordance with the flaw evaluation criteria in WCAP-11063 and the RPV, SG, pressurizer, or RCPB flaws that were analyzed in accordance with the generic flaw evaluation methodology in WCAP-12046. Identify the NRC safety evaluation references that were issued in approval of these flaw evaluations.