

LICENSEE: EXELON GENERATING COMPANY, LLC

April 28, 2008

FACILITY: BYRON STATION, UNIT NO. 2

SUBJECT: SUMMARY OF FEBRUARY 13, 2008, MEETING WITH EXELON GENERATING COMPANY, LLC ON PRE-SUBMITTAL OF RELAXATION REQUEST FROM FIRST REVISED NRC ORDER EA-03-009

On February 13, 2008, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generating Company, LLC at NRC Headquarters, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland. A list of attendees is provided as Enclosure 1.

The purpose of the meeting was to discuss a pre-submittal regarding a relaxation request from first revised NRC Order EA-03-009, "Establishing Interim Inspection Requirements at Pressurized Water Reactors," for Byron Station (Byron), Unit No. 2. The licensee's meeting handouts are contained in Enclosure 2.

Specifically, the licensee discussed the spring 2007 inspection results where indications of a defect were found in the reactor pressure vessel (RPV) penetration 68. Following this discovery, a boat sample was taken. The rounded indication in the weld was not collected in the boat sample.

The linear indication captured by the boat sample exhibited multiple crack morphologies including lack of fusion, hot cracking and primary water stress-corrosion cracking (PWSCC). The PWSCC propagation was found to be toward the wetted surface. The licensee determined that the subsurface linear defect was connected to the lack of fusion defect and concluded that these are both connected below the surface to the round surface flaw that was not captured in the boat sample. The licensee further indicated that the necessary conditions for PWSCC would not have been simultaneously met without the presence of the original fabrication weld defects.

Also, the licensee presented information on probabilistic evaluations and growth projections, which were developed by Westinghouse and are contained in Enclosure 2. The industry histogram used in the probabilistic assessment was submitted to the NRC in 1997, and the growth projections used PWSCC growth rates per MRP-55, Revision 1. The growth projections presented showed the minimum time for an undetected flaw to initiate to a leak path is expected to be greater than nine years (or a time of six fuel cycles).

The proposed inspection frequency presented by the licensee is to perform a volumetric examination every fourth refueling outage, with no additional surface examinations of RPV penetration 68, and a bare metal visual examination every third refueling outage. These proposed examinations are consistent with the NRC Order EA-03-009 requirements for plants with a low susceptibility RPV head.

The NRC staff raised several considerations with regard to any potential submittal. The NRC staff explained that operational experience in other components and international experience with upper heads had found PWSCC in alloy 600 materials at similar reactor coolant temperatures as found in the Byron, Unit 2 upper head location. The NRC staff noted that the inspection frequency for low susceptibility plants in accordance with NRC Order EA-03-009 was based on no previous cracking identified by the licensee. The NRC staff explained that the deterministic basis for this generic inspection frequency was based on limitations in the scope of the susceptibility methodology and the established crack growth rates for alloy 600/182/82 materials being based on an average result rather than a bounding rate for all data. The NRC staff explained that the licensee would need to provide plant specific information on crack growth rates for these materials to support a deterministic flaw analysis approach. Further, additional inspections to confirm no additional PWSCC flaws may provide some support for a potential submittal. The NRC staff also noted that since the licensee's conclusion was of a weld defect being the cause of the indications, ensuring that no similar weld defects exist may aid in a potential submittal. No commitments or regulatory decisions were made by the NRC staff during the meeting.

Members of the public were not in attendance. Public Meeting Feedback forms were received. Comments received included the following: (1) good discussion was noted between the NRC staff and licensee to understand topics, and (2) concerns and a deficiency was noted in the lack of a clear drawing showing the likely leak path and mechanisms, which was taken as a lesson learned. These have been forwarded to the NRR Senior Communications Analyst who will forward them to the Office of the Executive Director for Operations.

Please direct any inquiries to me at 301-415-5735, or mmt@nrc.gov.

/RA/

Meghan M. Thorpe-Kavanaugh, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-455

Enclosures:

1. List of Attendees
2. Meeting Handouts

cc w/encls: See next page

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/RA/

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Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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OFFICE	LPL3-2/PM	LPL3-2/PM	LPL3-2/LA	DCI/CPNB/BC	LPL3-2/BC
NAME	CGoodwin	MThorpe-Kavanaugh	EWhitt	TChan	RGibbs
DATE	4/17/08	4/17/08	4/17/08	4/17/08	4/28/08

List of Attendees
U.S. Nuclear Regulatory Commission
Public Meeting with Exelon Generating Company, LLC
Regarding Pre-Submittal of Relaxation Request from First Revised
NRC Order EA-03-009 for Byron Station, Unit No. 2
February 13, 2008

U.S. NUCLEAR REGULATORY COMMISSION

William Batemen
Terence Chan
Thomas Bilik
Jay Collins
Russell Gibbs
Meghan Thorpe-Kavanaugh
Marshall David
Cameron Goodwin

EXELON GENERATING COMPANY, LLC

David Czufin
Patrick Simpson
Jean Smith
Guy DeBoo
Richard Hall
Scot Greenlee
David Chrzanowski
Jeff Hendricks
Scott Koernschild
Doug Spitzer
Roman Gesior

WESTINGHOUSE

Jack LeRoe
Bruce Bishop

Byron Station, Unit Nos. 1 and 2

cc:

Corporate Distribution
Exelon Generation Company, LLC
Via e-mail

Byron Distribution
Exelon Generation Company, LLC
Via e-mail

Illinois Emergency Management Agency
Division of Disaster Assistance &
Preparedness
Via e-mail

Mr. Dwain W. Alexander, Project Manager
Westinghouse Electric Corporation
Via e-mail

Howard A. Learner
Environmental Law and Policy
Center of the Midwest
Via e-mail

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