

August 8, 2007

Mr. Christopher M. Crane  
President and Chief Nuclear Officer  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNIT NOS. 1 AND 2 - REQUEST FOR ADDITIONAL  
INFORMATION RELATED TO RELIEF REQUEST I3R-02 (TAC NOS. MD3855  
AND MD3856)

Dear Mr. Crane:

By letter to the Nuclear Regulatory Commission (NRC) dated February 14, 2006, Exelon Generation Company, LLC submitted Relief Request I3R-02, related to the use of risk-informed inservice inspection requirements, for the Byron Station, Unit Nos. 1 and 2.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on August 1, 2007, it was agreed that you would provide a response within 30 days from the date of this letter.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-3733.

Sincerely,

*/RA/*

Robert F. Kuntz, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. STN 50-454 and STN 50-455

Enclosure:  
Request for Additional Information

cc w/encl: See next page

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Byron Station, Unit Nos. 1 and 2

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## REQUEST FOR ADDITIONAL INFORMATION

### BYRON STATION, UNITS 1 AND 2

### DOCKET NOS. STN 50-454 AND STN 50-455

In reviewing the Exelon Generation Company's (Exelon's) submittal dated February 14, 2006, related to Relief Request I3R-02, which requested the use of risk-informed inservice inspection requirements, for the Byron Station, Units 1 and 2 (Byron), the NRC staff has determined that the following information is needed in order to complete its review:

#### Background

Relief Request I3R-02 states that in lieu of the evaluation and sample expansion requirements in EPRI TR-112657, Section 3.6.6.2, Byron will utilize the requirements of Subarticle - 2430, "Additional Examinations" contained in Code Case N-578-1. The alternative criteria for additional examinations contained in Code Case N-578-1 provides a more refined methodology for implementing necessary additional examinations. Relief Request I3R-02 also states that to supplement the requirements of EPRI TR-112657, Table 4-1, "Summary of Degradation-Specific Inspection Requirements and Examination Methods," Byron will utilize the provisions listed in Table 1, Examination Category R-A, "Risk-Informed Piping Examinations" contained in Code Case N-578-1.

The NRC staff notes that Regulatory Guide (RG) 1.193 "ASME Code Cases Not Approved for Use," dated August 2005, lists the code cases that the NRC has determined to not be acceptable for use on a generic basis. Code Case N-578-1 is listed in Table 2 "Unacceptable Section XI Code Cases" of RG 1.193. The summary given in Table 2 of RG 1.193 states in regards to Code Case N-578-1 that:

- (1) The Code Case does not address inspection strategy for existing augmented and other inspection programs such as intergranular stress corrosion cracking (IGSCC), flow-assisted corrosion (FAC), microbiological corrosion (MIC), and pitting.
- (2) The Code Case does not provide system-level guidelines for change in risk evaluation to ensure that the risk from individual system failures will be kept small and dominant risk contributors will not be created.

#### Requests for Additional Information

1. It is not clear what is meant by a more refined methodology for implementing additional examinations. How do the alternative criteria for additional examinations contained in Code Case N-578-1 provide a more refined methodology?

Enclosure

2. Please verify that any additional examinations required due to the identification of flaws or relevant conditions will be conducted during the current outage.
3. Discuss how ultrasonic examinations will be performed for each degradation mechanism. What volumes will be examined and what techniques will be used?
4. Please describe how volumetric examinations will be performed. Will volumetric examinations include the volume required for ASME Section XI examinations? Will ASME Section XI, Appendix VIII qualified examiners and procedures be used for all volumetric exams? Will the examination volume be scanned for both axial and transverse indications for all exams?
5. How will dissimilar metal welds be addressed? Discuss in detail the technical basis for including alloy 600 pressure-retaining dissimilar metal welds in your risk-informed inservice inspection, rather than a separate augmented program to the RI-ISI program.
6. Provide information regarding: examinations/system/components/degradation mechanisms/class, etc. similar to that provided in Attachment 1 of the Callaway submittal dated March 28, 2006 (Agencywide Documents Access and Management System Accession No. ML061010704). The information should show a summary of the changes in inspections from the Section XI program and changes from the previous risk informed-inservice inspection (RI-ISI) program to the proposed RI-ISI program.