

Exelon Generation 4300 Winfield Road Warrenville, IL 60555 www.exeloncorp.com

Nuclear

10 CFR 50.55a

RS-07-130

October 11, 2007

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D. C. 20555

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject:

Response to Request for Additional Information Related to Relief Request I3R-05, "Post-Tensioning Inspection Scheduling Requirement For Sites With Two Plants"

## References:

- Letter from S. R. Landahl (Exelon Generation Company, LLC) to U. S. NRC, "Submittal of Relief Requests Associated with the Third Inservice Inspection (ISI) and the Second Containment Inservice Inspection (CISI) Interval," dated April 30, 2007
- Letter from U. S. NRC to C. M. Crane, (Exelon Generation Company, LLC), "LaSalle County Station, Units 1 and 2 – Request for Additional Information (TAC NOS. MB5467 AND MB5468)," dated September 17, 2007

A part of Reference 1, Exelon Generation Company, LLC, (EGC), requested NRC approval of a relief request for the second Containment Inservice Inspection (CISI) interval for LaSalle County Station (LSCS), Units 1 and 2. Specifically, relief request I3R-05 pertained to the post-tensioning inspection scheduling requirements for sites with two plants.

In Reference 2, the NRC transmitted a Request for Additional Information to EGC concerning relief request I3R-05. The response to Reference 2 is presented in the attachment to this letter.

Please note that this particular relief request was previously approved as a part of the previous CISI interval for LSCS Units 1 and 2.

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Patrick R. Simpson

As stated in Reference 1, EGC requests approval of this relief request by January 31, 2008.

There are no regulatory commitments contained within this letter. Should you have any questions concerning this letter, please contact Alison Mackellar at (630) 657-2817.

Respectfully,

Patrick R. Simpson Manager - Licensing

Attachment: Response to Request for Additional Information Related to Relief Request I3R-05

## **ATTACHMENT**

## Response to Request for Additional Information Related to Relief Request I3R-05

## Request for Additional Information

In reviewing the Exelon Generation Company's (Exelon's) submittal dated April 30, 2007, related to Relief Request I3R-05, 'Request for Relief for Post-Tensioning System Inspection Scheduling Requirements For Sites with Two Plants In Accordance with 10 CFR 50.55a(a)(3)(i) [Title 10 of the *Code of Federal Regulations* (10 CFR)],' for the LaSalle County Station (LSCS), Units 1 and 2, the NRC staff has determined that the following information is needed in order to complete its review:

In light of the fact that several LSCS, Unit 1 containment tendons were found severely degraded during an inservice inspection in 2003, please discuss your program for substantiating the structural integrity of one unit when severely degraded tendon conditions are found during tendon surveillance of the other unit, for surveillances scheduled based on IWL-2421(b) for sites with multiple plants. How was this finding addressed when the degraded conditions were identified for LSCS, Unit 1 tendons in 2003, that ensured an acceptable level of quality and safety of the post-tensioning systems of both units?

#### Response

Inspections and testing of the Post-Tensioning Tendon systems at LaSalle County Station (LSCS) are conducted in accordance with Exelon Generation Company, LLC (EGC) procedure ER-AA-330-006, "Inservice Inspection and Testing of the Pre-Stressed Concrete Containment Post Tensioning Systems." This procedure is currently applicable to LSCS and was also the procedure that governed the examinations and tests conducted in 2003 when degraded conditions were identified for LSCS Unit 1. ER-AA-330-006 as applied to LSCS requires that in the event that any acceptance standard is not met that the applicability of the condition to the other unit at the same site be evaluated. In addition, EGC's Corrective Action Program (CAP) requires an unacceptable condition identified during an inspection be documented in an Issue Report (IR).

The ER-AA-330-006 and the CAP process ensure the structural integrity of one unit is evaluated when severely degraded tendon conditions are found during tendon surveillance of the other unit, for surveillances scheduled based on American Society of Mechanical Engineers (ASME) Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," Subsection IWL, "Requirements for Class CC Concrete Components of Light-Water Cooled Plants," paragraph 2421, "Sites With Multiple Plants," subparagraph (b).

The LSCS Unit 1, 25<sup>th</sup> Year (2003) Post-Tensioned Tendon Surveillance performed required physical testing and visual examinations. The LSCS Unit 2, 20<sup>th</sup> Year (2003) Post-Tensioned Tendon Surveillance required visual examinations.

The LSCS Unit 1 Surveillance identified seven (7) of the ninety (90) wires failed for Vertical Tendon V12A. This failure was entered into the EGC CAP (IR #157920). Based on this failure, the scope of inspection was expanded to determine extent of the degraded conditions for both LSCS Units 1 and 2. A detailed operability evaluation (OE-03-008) was performed as part of the corrective action process in accordance with EGC procedures. The conclusions of the operability evaluation supported continued operation of both Units.

## **ATTACHMENT**

# Response to Request for Additional Information Related to Relief Request I3R-05

As a result of the expanded inspection scope, several additional vertical "A" type tendons in both Units 1 and 2 were identified that exceeded acceptance criteria of EGC procedure ER-AA-330-006 and ASME Section XI IWL requirements. A root cause evaluation was performed that determined that the failure of the tendon wires was attributed to water induced corrosion caused by failure of the intrusion barriers and aided by the loss of corrosion protection medium (i.e., grease) in the top region of the vertical "A" type tendons.

Corrective actions completed to prevent recurrence included replacement of degraded tendons in both Units 1 and 2, and the installation of a revised floor plate and upper grease cap design for all accessible "A" type and "C" type tendons to prevent water intrusion. As required by the 1998 edition of ASME Section XI, an ASME Engineering Evaluation Report that addressed the above was completed. This evaluation resulted in extensive visual inspections and physical tests of all accessible vertical tendons in both units that were inspected in 2003 for extent of condition. Subsequent augmented inspections were also required and have been completed for both Units in 2004 and 2006 and are still in progress. The remaining augmented inspections and tests will be completed in 2007.