

April 29, 2003

Mr. John L. Skolds, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: RESPONSE TO TASK INTERFACE AGREEMENT 2001-14, "EVALUATION OF  
LASALLE WATER HAMMER ANALYSIS"

Dear Mr. Skolds:

The U.S. Nuclear Regulatory Commission (NRC) has reviewed your letter dated January 13, 2003, which provided Exelon Generation Company, LLC, (EGC) perspectives regarding Task Interface Agreement (TIA) 2001-14, "Evaluation of LaSalle Water Hammer Analysis," involving the impact of operating LaSalle County Station (LSCS) Residual Heat Removal (RHR) system in Suppression Pool Cooling (SPC) mode.

Your letter stated that EGC agrees with the NRC staff's TIA conclusion that continuous long term operation of a single train of the RHR system in the SPC mode is within the LSCS design basis, but that the LSCS licensing basis is silent with respect to any limitations on the use of SPC. EGC has determined that the LSCS licensing basis needs to be clarified to prevent similar misunderstandings in the future. In this respect, please note that the original General Electric (GE) RHR design basis assumed initiation only from the Standby mode and expected RHR to be aligned in SPC mode during normal power operation for only a low fraction of operating time. Therefore, extended use (increased frequency and long duration) of the RHR system in the SPC mode during normal operation may be outside the original design basis accident analysis assumptions. The staff's position regarding this mode of operation is described in Information Notice (IN) 87-10, "Potential for Water Hammer During Restart of Residual Heat Removal Pumps, Supplement 1," dated May 15, 1997.

Your letter also stated that EGC agrees with the TIA conclusion that the water hammer analysis LSCS used in their assessment did not provide adequate design basis justification for changing the original design intent regarding the extent of SPC usage to allow continuous operation of the RHR system in the SPC mode. LSCS initiated an interim action requiring that whenever a single train of RHR is operating in the SPC mode, the LPCI mode of operation for that RHR train is declared inoperable. The staff finds this interim action is appropriate but not sufficient. The staff concludes that all modes of operation for a RHR train should be declared inoperable while operating that train in SPC mode because initiation of RHR in any mode could subject that train to water hammer loads.

EGC believes that the TIA position (i.e., that a water hammer analysis is required) is inconsistent with the original design basis accepted by the NRC and requests that a backfit analysis be performed in accordance with Section 50.109 of Title 10 of the *Code of Federal Regulations*, "Backfitting." Further, EGC believes that this issue is generic in nature and

requests that this TIA position not be imposed at LSCS until the staff's position is resolved generically and uniformly addressed within the industry. After careful review, the staff agrees that a water hammer analysis requirement for "short operational periods" may be inconsistent with the original licensing basis and previous staff reviews. The staff has taken the position that a design basis loss-of-coolant accident (LOCA) coincident with a loss of offsite power (LOOP) is not postulated to occur during the low fraction of time that RHR is expected to be operated in the SPC mode. Therefore, a water hammer analysis is not required for "short operational periods."

The staff further concludes that continuous long term operation of a single train of the RHR system in the SPC mode is not within the LSCS design basis. The staff expects that use of SPC during normal operation would be of short duration and that this design basis limitation is adequately described in the licensing basis. The staff recommends that the Updated Final Safety Analysis Report be updated at the next opportunity. Any increase in frequency beyond that assumed in the licensing basis, once updated, would then constitute a nonconforming condition subject to resolution per Part 9900, "Technical Guidance," of the NRC Inspection Manual. A revision to TIA 2001-14 clarifying the staff's position on water hammer analysis requirements for the RHR system when it is aligned in the SPC mode was issued on April 28, 2003. TIA 2001-14, Revision 1, is being made publicly available in ADAMS under Accession No. ML030640015 and will be accessible from the Electronic Reading Room on the NRC Web site.

In summary, the staff concludes that requiring a water hammer analysis for infrequent use of the RHR system in the SPC mode would be considered a backfit under the provisions of 10 CFR 50.109. Due to the low safety significance of this issue, the staff does not consider it necessary to pursue this as a generic safety issue at this time or revise its position previously provided in IN 87-10 and its supplement. However, the staff recognizes the generic nature of this problem and plans to issue another supplement to IN 87-10 in the near future to clarify the potential impact on operability of the RHR system when it is aligned in SPC mode.

Sincerely,

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William A. Macon, Jr., Project Manager, Section 2  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

cc: See next pages

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William A. Macon, Jr., Project Manager, Section 2  
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