7590-01-P

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NOS. STN 50-456, STN 50-457, STN 50-454 AND STN 50-455

LICENSE NOS. 72, 77, 37, AND 66

EXELON GENERATION COMPANY, LLC

RECEIPT OF REQUEST FOR ACTION UNDER 10 CFR 2.206

Notice is hereby given that by petition dated April 20, 2012, Mr. Barry Quigley has requested that the U.S. Nuclear Regulatory Commission (NRC, the Commission) take action with regard to Braidwood Station, Units 1 and 2, and Byron Station, Unit Nos. 1 and 2. The petitioner requests that the NRC require Exelon Generation Company, LLC (Exelon) to shut down immediately, Byron Station, Unit Nos. 1 and 2, and Braidwood Station, Units 1 and 2, until all turbine building (TB) high-energy line break (HELB) concerns are identified and those important to safety are corrected.

As the basis for this request, the petitioner states the following:

- An adequate supply of combustion air for the diesel generators (DG) is threatened because the combustion air can be diluted with steam. Although the combustion air is drawn from an air shaft (not the TB), it is also the same air shaft that supplies ventilation for the DG room. Under certain conditions, the ventilation damper alignment is such that steam that enters the DG room from the ventilation exhaust can flow back into the inlet air shaft. From there it can be drawn into the engine, potentially starving the engine of air.

- The effects of high temperature in the engineered safety feature (ESF) switchgear rooms on the protective relaying setpoints has not been evaluated. The concern is that high temperatures could alter the setpoints, causing protective actions to occur under normal loading conditions.

- The current method of analysis for TB HELB uses a “lumped volume” approach wherein the mass and energy of the ruptured line mixes instantly with the entire volume before flowing into the areas of concern. Since this substantially reduces the energy flow, it does not always give conservative results. For example, a preliminary assessment using the subdivided volume feature in the GOTHIC computer code shows that the structural limits on the block wall between the ESF switchgear rooms would be substantially exceeded.

- There has been no structured and detailed review of the licensing requirements for HELB.

The NRC is treating this request pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.206. The request has been referred to the Director of the Office of Nuclear Reactor Regulation (NRR). As required by Section 2.206, the NRC will take appropriate action on this petition within a reasonable time. The petitioner met with the petition review board on May 16, 2012, to discuss the petition. The board reviewed the information provided in that meeting in its consideration of the petitioner's request for immediate action and in establishing the schedule for the review of the petition. By letter dated August 23, 2012, the Director of NRR denied the petitioner's request for immediate shutdown of Exelon's Byron Station, Unit Nos. 1 and 2, and Braidwood Station, Units 1 and 2. A copy of the petition is available for inspection at the Commission's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Publicly available documents created or received at the NRC are accessible electronically through the Agencywide Documents Access and Management System (ADAMS) in the NRC Library at http://www.nrc.gov/reading-rm/adams.html. Those who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to PDR.Resource@nrc.gov.

Dated at Rockville, Maryland, this 23rd day of August 2012.

FOR THE NUCLEAR REGULATORY COMMISSION.

/ ***RA*** /

Eric J. Leeds, Director,
Office of Nuclear Reactor Regulation.