

RS-04-080

May 27, 2004

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket No. 50-237 and 50-249

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: License Renewal Commitment for Scoping of Steam Dryers at the
Dresden and Quad Cities Nuclear Power Stations

- References: (1) Letter from J. A. Benjamin (Exelon Generation Company, LLC) to U.S. NRC, "Application for Renewed Operating Licenses," dated January 3, 2003
- (2) Letter from J. A. Benjamin (Exelon Generation Company, LLC) to U.S. NRC, "Commitments and Information Related to Extended Power Uprate," dated April 2, 2004
- (3) Letter from Keith Jury (Exelon Generation Company, LLC) to U.S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated May 12, 2004

Since the completion of extended power uprate (EPU) modifications, Quad Cities Nuclear Power Station Units 1 and 2 (QCNPS) has experienced degradation of the steam dryers. Subsequent investigation has revealed that the steam dryer degradation was attributed to high cycle fatigue. Exelon has structurally modified the steam dryers on both units and is currently limiting operation to pre-EPU power levels at which the dryers have successfully operated for over 25 years without failure. Additionally, Exelon is working with General Electric Nuclear Energy to identify the loads responsible for the high cycle fatigue. In References 2 and 3, Exelon provided the plans for conducting testing and analysis of flow effects to properly design and modify the QCNPS steam dryers for operation at EPU power levels.

Inspections of the steam dryers on both units at Dresden Nuclear Power Station (Dresden) have identified some component cracking. Based on data acquired to date, the dryer loading at Dresden is lower than that at QCNPS. In addition, the Dresden steam dryers have not experienced the extent of structural degradation as seen at QCNPS. The steam dryers on both Dresden units have been repaired and structurally modified based upon lessons learned from the QCNPS experiences. For these reasons, both Dresden units continue to operate at EPU power levels.

In section 2.3.1 of the Dresden and Quad Cities License Renewal Application (Reference 1), Exelon excluded the steam dryers from the scope of license renewal. This scoping is consistent with NUREG-1801, Generic Aging Lessons Learned (GALL) Report. The basis for this decision is that reactor vessel steam dryers do not perform a safety function and are not required to prevent or mitigate the consequences of accidents. When properly designed, steam dryers will not generate loose parts during a design basis event that will interfere with the ability to shut down the reactor, provide adequate core cooling, and isolate the main steam lines.

Upon successful completion of the plans described in References 2 and 3, the Quad Cities and Dresden steam dryers will maintain their structural integrity at EPU power levels for long-term operation and will not generate loose parts. The steam dryers therefore need not be within the scope of license renewal. However, should Exelon's plans not be successful, Exelon will include the steam dryers in the scope of license renewal under 10 CFR 54.4, "Scope," paragraph (a)(2) and will provide the appropriate aging management in accordance with 10 CFR 54.37, "Additional records and recordkeeping requirements," paragraph (b). This new commitment should be added to Item Number 9 of Appendix A of the License Renewal Safety Evaluation Report for Dresden and Quad Cities Nuclear Power Stations.

Should you have any questions, please contact Al Fulvio at 610-765-5936.

Respectfully,

Keith R. Jury
Director – Licensing and Regulatory Affairs

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station
NRC Senior Resident Inspector – Dresden Nuclear Power Station
Illinois Emergency Management Agency – Division of Nuclear Safety