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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

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

Subject: Commitments and Plans Related to Extended Power Uprate Operation

References:

1. Letter from K. R. Jury (Exelon Generation Company, LLC) to U. S. NRC, "Commitments for Resolution of Steam Dryer Degradation Issue," dated June 27, 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 K. R. Jury (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated May 12, 2004
4. Letter from D. Bost (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated December 10, 2004
5. Letter from D. Bost (Exelon Generation Company, LLC) to U. S. NRC, "Revised Commitments and Plans Related to Extended Power Uprate Operation," dated January 31, 2005
6. Letter from J. A. Benjamin (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated May 13, 2005
7. Letter for P. R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Clarification of Regulatory Commitments Related to Extended Power Uprate (EPU) Operations," dated June 13, 2005

8. Letter for P. R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated July 26, 2005

In the referenced letters, Exelon Generation Company, LLC (EGC) made regulatory commitments regarding operation of Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2, at extended power uprate (EPU) conditions. EGC has completed many of the commitments outlined in the referenced letters through engineering evaluations, inspections, equipment modifications, meetings with the NRC, and submittal of various responses to NRC requests for additional information and technical documentation.

EGC completed detailed evaluations of the QCNPS replacement steam dryers in accordance with commitments 9 and 10 of Reference 8, and submitted the results of these evaluations to the NRC. On August 29, through September 1, 2005, EGC met the NRC technical staff to discuss the results and conclusions of these evaluations, and the decision and basis regarding scale model testing of the DNPS steam dryers. Prior to meeting adjournment, the NRC technical staff detailed a list of questions that remain to be resolved with respect to evaluation of the QCNPS steam dryers and their suitability for long-term EPU operation. EGC agreed to address these questions to resolve the issue of steam dryer performance for QCNPS. Based on the schedule for completion of analytical work aimed at addressing the remaining questions, EGC is revising the committed dates for meeting with NRC management and submitting a formal request for returning the affected units to EPU operation as outlined in commitments 12 and 13 of Reference 8.

Further, the NRC provided feedback that EGC should provide a justification and basis for continuing EPU operation of the Quad Cities units while the additional engineering work is completed prior to meeting with NRC management. During the technical meeting held on August 29, through September 1, 2005, EGC provided detailed discussions supporting the operation of the QCNPS units at EPU power levels for both short-term (i.e., prior to meeting with NRC management) and continuous operation. In summary, the detailed evaluations of the QCNPS replacement steam dryers, using the acoustic circuit model and finite element analysis of derived steam dryer loads, demonstrated that adequate structural margin exists for the replacement steam dryers at all operating conditions, up to and including the full licensed power level of 2957 megawatts-thermal (MWt).

Thermal power levels increased throughout the summer, allowing EGC to collect and evaluate data on the QCNPS units at power levels above those included in startup testing following steam dryer replacement. QCNPS Unit 2 collected steam dryer sensor data at 2907 MWt on June 27, 2005, and achieved a maximum power level of 2918 MWt on July 17, 2005. QCNPS Unit 1 achieved a maximum power level of 2945 MWt on August 10, 2005. EGC evaluated plant and steam dryer performance, including moisture carryover sample results, at these higher power levels and identified no adverse impacts for continued EPU operation. This further validated the acceptable performance of the steam dryers above the original licensed thermal power level (i.e., 2511 MWt).

In the short term, thermal power levels on the QCNPS units are expected to decrease as condenser backpressure decreases over the coming weeks due to seasonal variations in circulating water temperature. Therefore, the QCNPS units have operated at their maximum

thermal power levels expected for 2005, with no indication of dryer degradation or EPU extent of condition issues.

EGC performed detailed comparisons of in-plant loads, based on data collected from the installed instrumentation, to the loads used to design the replacement steam dryers. EGC assessed the structural adequacy of the replacement steam dryers using strain gauge data collected on the QCNPS Unit 2 steam dryer. Comparisons of this data to calculated stresses, determined using finite element analysis, provided assurance of the robustness of the replacement dryer design. Given the extensive instrumentation installed on the Unit 2 steam dryer, these evaluations also support the conclusion that adequate loads were used in designing the replacement steam dryers. Further, EGC compared strain gauge data collected on the main steam lines of both QCNPS units. In comparing the Unit 1 strain gauge data to that collected on Unit 2, EGC concluded that the steam dryer loads are similar for both units.

In conclusion, the results of comparisons of in-plant loads to the design loads, the comparisons of main steam line strain gauge data collected on both units, and the evaluation of the installed strain gauge data from the QCNPS Unit 2 steam dryer, provides EGC with additional confidence in the short-term and long-term structural adequacy of the replacement steam dryers to operate at EPU conditions.

The attachment to this letter outlines the remaining committed actions, as well as our going forward commitments that support operation of the DNPS and QCNPS units at EPU conditions. The commitments contained in the attachment reflect the status of the QCNPS steam dryer replacement effort, including clarification of commitments addressed in Reference 7. The commitments in the attachment supersede those described in the referenced letters, and represent our commitments in their entirety.

If you have any questions concerning this submittal, please contact Mr. Thomas G. Roddey, at (630) 657-2811.

Respectfully,

Keith R. Jury
Director, Licensing and Regulatory Affairs

Attachment: Summary of Commitments

ATTACHMENT

The following table identifies commitments being made by Exelon Generation Company, LLC (EGC). Any other actions discussed in this letter represent intended or planned actions by EGC. They are described for the NRC's information and are not regulatory commitments.

	Commitment	Committed Date or Outage
1	EGC will continue to conduct daily monitoring of moisture carryover and other key reactor and plant parameters while operating at full power at Dresden Nuclear Power Station (DNPS) Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS) Units 1 and 2, to provide an early indication of potential dryer structural integrity issues. If indications of steam dryer damage or structural integrity concerns are identified, EGC will reduce power at a minimum to the pre-extended power uprate (EPU) level on the affected unit and evaluate and disposition the issue in accordance with the corrective action process.	Ongoing
2	During the next scheduled refueling outage on DNPS Unit 2 and QCNPS Unit 2, EGC will perform a general visual inspection of the reactor pressure vessel internals, steam, and feedwater systems, including inspection and disassembly if needed of the most susceptible components, which include electromatic relief valves. The scope of the inspections will be based upon the results of the EPU vulnerability team effort. If the inspections indicate potential degradation of the reactor pressure vessel internals, steam, or feedwater systems and components, EGC will evaluate and disposition the issue in accordance with the corrective action process. EGC will implement the lessons learned and recommendations from assessment of the vulnerability of other plant equipment to adverse flow effects from EPU operation at DNPS and QCNPS.	Fall 2005 refueling outage for DNPS Unit 2 Spring 2006 refueling outage for QCNPS Unit 2
3	EGC will attempt to locate and retrieve the lost DNPS Unit 2 feedwater sample probe.	Fall 2005 refueling outage for DNPS Unit 2
4	EGC will perform future inspections of the DNPS and QCNPS steam dryers using guidance contained in BWRVIP-139, "BWR Vessel and Internals Project Steam Dryer Inspection and Flaw Evaluation Guidelines," dated April 2005.	Ongoing
5	EGC will evaluate results of the Fall 2005 DNPS Unit 2 steam dryer inspection, and determine appropriate action for DNPS Unit 3. The acceptance criteria will be that no structurally significant cracking is identified that would limit operation.	Within 30 days of completing the Fall 2005 refueling outage for DNPS Unit 2

	Commitment	Committed Date or Outage
6	EGC will evaluate results of the Spring 2006 QCNPS Unit 2 steam dryer inspection, and determine appropriate action for QCNPS Unit 1. The acceptance criteria will be that no structurally significant cracking is identified that would limit operation.	Within 30 days of completing the Spring 2006 refueling outage for QCNPS Unit 2
7	Where lessons learned from evaluations or inspections conducted pursuant to commitments described in this letter indicate significant potential degradation of the steam dryer, EGC will take appropriate actions up to and including shutting down the applicable unit to conduct inspections or modifications on an expedited basis.	Fall 2006 refueling outage for DNPS Unit 3 Spring 2007 refueling outage for QCNPS Unit 1
8	EGC will meet with the NRC to share the results of the Fall 2005 DNPS Unit 2 steam dryer inspection, and the impact on, and plans for, DNPS Unit 3. EGC will factor the DNPS Unit 2 inspection results and analytical work done to date into the decision making process related to operating DNPS Unit 3 at EPU power levels and whether a mid-cycle outage is appropriate for a steam dryer inspection.	Within 30 days of completing the Fall 2005 refueling outage for DNPS Unit 2

	Commitment	Committed Date or Outage
9	After replacement of the QCNPS Unit 2 steam dryer, operation at EPU power levels will continue while detailed evaluations of the instrumented data are performed, provided the QCNPS Unit 2 Startup Test Plan acceptance criteria (i.e., go/no-go decisions) are met. Operation will be limited to a power level at which acceptance criteria are satisfied. Operational and analytical insights/results will be shared with the NRC on an ongoing basis during periodic updates. As a minimum, EGC will provide feedback to the NRC on the steam dryer data and other plant instrumentation data and the assessment of the design-basis load cases (i.e., including the acoustic circuit and scale models) during the 24-hour hold point at 2493 MWt, within 72 hours of data collection at 930 MWe or the maximum reactor thermal power level achieved, and within 14 days of EPU operation. Detailed evaluations will be performed to compare the predicted QCNPS Unit 2 steam dryer loads, developed using the acoustic circuit model and main steam line strain gauge data, with the actual QCNPS Unit 2 loads obtained from the instrumented steam dryer. EGC will determine whether the assessment of the design-basis load cases at the maximum reactor thermal power level achieved needs to be conducted in a "blind" manner (i.e., similar to the "blind" assessments at lower power levels) and will discuss that determination with the NRC prior to the load determination/blind benchmark. Specific acceptance criteria for the design-basis load cases, including the acoustic circuit and scale models, shall be prepared prior to initiating the assessment of the load cases. The detailed evaluations will be completed and submitted to the NRC within 60 days of data collection at 930 MWe or the maximum reactor thermal power level achieved.	During QCNPS Unit 2 startup, within 14 days of EPU operation, and within 60 days of QCNPS Unit 2 data collection at 930 MWe or the maximum reactor thermal power level achieved (Complete)

10	After replacement of the QCNPS Unit 1 steam dryer, operation at EPU power levels will continue while detailed evaluations of the QCNPS Unit 2 instrumented data are performed, provided the QCNPS Unit 1 Startup Test Plan acceptance criteria (i.e., go/no-go decisions) are met. Operation will be limited to a power level at which acceptance criteria are satisfied. Operational and analytical insights/results will be shared with the NRC on an ongoing basis during periodic updates. EGC will provide the results of the validation of the acoustic circuit model based on QCNPS Unit 2 instrumented steam dryer data prior to exceeding 2511 MWt at QCNPS Unit 1. EGC will also provide feedback to the NRC on the plant instrumentation data and calculation of the steam dryer loads based on the acoustic circuit model prior to exceeding 2511 MWt and within seven days of reaching the maximum reactor thermal power level achieved. Detailed evaluations will be completed and submitted to the NRC within 80 days following reaching full power on QCNPS Unit 1 with the replacement steam dryer installed.	During QCNPS Unit 1 startup and within 80 days following reaching full power on QCNPS Unit 1 with the replacement steam dryer installed (Complete)
11	EGC will meet with the NRC technical staff to discuss the results and conclusions of evaluations performed pursuant to commitments 9 and 10 above. EGC will also discuss the decision and basis regarding scale model testing of the DNPS steam dryers during this meeting.	Week of August 29, 2005 (Complete)
11a	EGC will meet with the NRC technical staff to discuss the remaining open items identified pursuant to commitment 11 above.	Week of November 7, 2005
12	EGC will meet with NRC management to discuss the results and conclusions of evaluations performed pursuant to commitments 9 and 10 above. Where NRC management leading the meeting is not satisfied with the results and conclusions of those evaluations, EGC will voluntarily return the affected QCNPS unit(s) to pre-EPU power levels if EGC is unable to resolve those concerns within 14 days.	By November 22, 2005
13	Following resolution of any concerns identified as part of commitment 12, EGC will formally request the return of the affected unit(s) to EPU operation. Where no concerns are identified under commitment 12, EGC will formally request NRC acceptance for continuous EPU operation of the QCNPS units.	December 9, 2005