

March 2, 2001

Oliver D. Kingsley, President
Nuclear Generation Group
Exelon Generation Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: QUAD CITIES AND DRESDEN - EXTENDED POWER UPRATE, ELECTRICAL
REQUEST FOR ADDITIONAL INFORMATION (TAC NOS. MB0842, MB0843,
MB0844 AND MB0845)

Dear Mr. Kingsley:

By letter dated December 27, 2000, Exelon Generation Company (EGC, the licensee) submitted a license amendment request for an extended power uprate (EPU) for the Dresden and Quad Cities nuclear power stations. The staff has identified additional information that is needed in order for them to complete their review of this submittal in the electrical area. These questions were telecopied to EGC on February 16, 2001, and were discussed with members of your staff on February 26, 2001. We revised question number six to clarify our request, based on these discussions. Your staff agreed to respond to this request for additional information (RAI) within thirty days of the date of this letter.

Should your staff have any questions about this RAI, please contact me at (301) 415-2863.

Sincerely,

/RA/

Lawrence W. Rossbach, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254 and 50-265

Enclosure: Dresden RAI
Quad Cities RAI

cc w/encl: See next page

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Quad Cities, Units 1 and 2

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March 2, 2001

SUBJECT: QUAD CITIES AND DRESDEN - EXTENDED POWER UPRATE, ELECTRICAL
REQUEST FOR ADDITIONAL INFORMATION (TAC NOS. MB0842, MB0843,
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Dear Mr. Kingsley:

By letter dated December 27, 2000, Exelon Generation Company (EGC, the licensee) submitted a license amendment request for an extended power uprate (EPU) for the Dresden and Quad Cities nuclear power stations. The staff has identified additional information that is needed in order for them to complete their review of this submittal in the electrical area. These questions were telecopied to EGC on February 16, 2001, and were discussed with members of your staff on February 26, 2001. We revised question number six to clarify our request, based on these discussions. Your staff agreed to respond to this request for additional information (RAI) within thirty days of receipt of this letter.

Should your staff have any questions about this RAI, please contact me at (301) 415-2863.

Sincerely,

/RA/

Lawrence W. Rossbach, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254 and 50-265

Enclosure: Dresden RAI
Quad Cities RAI

cc w/encl: See next page

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*No significant changes made to RAIs in memo's dated 2/16/1

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QUAD CITIES UNITS 1 & 2 EXTENDED POWER UPRATE

REQUEST FOR ADDITIONAL INFORMATION - ELECTRICAL

1. Provide details about the grid stability analysis including major assumptions and results and conclusions of the analysis.
2. Provide details (test configuration, number of tests, repeatability verifications, vendor's involvement, laboratory involvement, etc.) regarding a test to upgrade the switchgear and breakers to a higher momentary current rating.
3. Provide details of 4160 volt bus and auxiliary transformer overcurrent relay setpoints for operation at extended power uprate (EPU) condition including coordination with upstream and downstream breakers.
4. The initial conditions and assumptions for station blackout under EPU condition shall include an operating history of 100 days at EPU power condition. Clarify that the assumption used for the maximum decay heat for the station blackout (SBO) analysis is for EPU condition.
5. The SBO evaluation did not provide any discussion about adequacy of the areas of concern evaluated. The SBO coping analysis includes an alternate AC power source which will be available within one hour. Provide a discussion about the adequacy of the areas of concern (drywell temperature, suppression pool temperature, condensate storage inventories, battery capacity, control room ventilation, auxiliary electric room ventilation, reactor core isolation cooling room heatup) for an SBO event.
6. Discuss how the temperature and pressure profiles will change using the EPU rated thermal power condition and whether they will change for the first hour and after the first hour after the postulated steam line break for the drywell.
7. In Section 10.3.1.1, the licensee stated that the current accident conditions for temperature and pressure are modified for the EPU conditions. Provide a discussion regarding the effect of modified temperature and pressure for the EPU conditions on environmental qualification (EQ) of electrical equipment inside containment.
8. Provide a discussion regarding the effect of humidity for the EPU condition on EQ of electrical equipment.
9. In Section 10.3.1.2, the licensee stated that the accident temperature, pressure and humidity conditions outside containment, resulting from a loss-of-coolant accident inside containment may change with power levels as a result of the increased suppression pool temperature. How will the licensee verify the adequacy of EQ of electrical equipment without evaluating the effects of changes?
10. Identify the equipment potentially affected by the EPU condition and discuss how this equipment will be requalified. (The staff would like to have a meeting with the licensee regarding the new temperature, pressure and radiation profile and equipment test profiles).

DRESDEN UNITS 2 & 3 EXTENDED POWER UPRATE

REQUEST FOR ADDITIONAL INFORMATION - ELECTRICAL

1. Provide details about the grid stability analysis including major assumptions and results and conclusions of the analysis.
2. Provide details (test configuration, number of tests, repeatability verifications, vendor's involvement, laboratory involvement, etc.) regarding a test to upgrade the switchgear and breakers to a higher momentary current rating.
3. Provide details of 4160 volt bus and auxiliary transformer overcurrent relay setpoints for operation at EPU condition including coordination with upstream and downstream breakers.
4. The initial conditions and assumptions for station blackout under EPU condition shall include an operating history of 100 days at EPU power condition. Clarify that the assumption used for the maximum decay heat for station blackout (SBO) analysis is for EPU condition.
5. The SBO evaluation did not provide any discussion about adequacy of the areas of concern evaluated. The SBO coping analysis includes an alternate AC power source which will be available within one hour. Provide a discussion about the adequacy of the areas of concern (drywell temperature, suppression pool temperature, condensate storage inventories, battery capacity, control room ventilation, auxiliary electric room ventilation, isolation condenser area heatup, high pressure coolant injection room heatup) for one hour for the SBO event.
6. Discuss how the temperature and pressure profiles will change using the EPU rated thermal power condition and whether they will change for the first hour and after the first hour after the postulated steam line break for the drywell.
7. In Section 10.3.1.1, the licensee stated that the current accident conditions for temperature and pressure are modified for the EPU conditions. Provide a discussion regarding the effect of modified temperature and pressure for the EPU conditions on environmental qualification (EQ) of electrical equipment inside containment.
8. Provide a discussion regarding the effect of humidity for the EPU condition on EQ of electrical equipment.
9. In Section 10.3.1.2, the licensee stated that the accident temperature, pressure and humidity conditions outside containment, resulting from a loss-of-coolant accident inside containment may change with power levels as a result of the increased suppression pool temperature. How will the licensee verify the adequacy of EQ of electrical equipment without evaluating the effects of changes?
10. Identify the equipment potentially affected by the EPU condition and discuss how this equipment will be requalified. (The staff would like to have a meeting with the licensee regarding the new temperature, pressure and radiation profile and equipment test profiles).
11. Provide details of the isolated phase bus duct cooling system changes necessary for the extended power uprate (EPU).

12. Clarify what is meant by “to restore the margin at the reactor building DC panels, the amperage capacity of the main feed cables to these panels will be increased.” The discussion should include both original and revised margins at the reactor building DC panels, why the margin is changed, and how the amperage capacity of the main feed cables will be increased.