



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

March 15, 2016

Mr. Bryan C. Hanson  
Senior Vice President  
Exelon Generation Company, LLC  
President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION, UNIT NO. 1; DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; AND QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST TO REVISE THE REACTOR STEAM DOME PRESSURE IN TECHNICAL SPECIFICATION 2.1.1, "REACTOR CORE SLs" (CAC NOS. MF6640–MF6644)

Dear Mr. Hanson:

By application dated August 18, 2015, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15231A097), Exelon Generation Company, LLC (the licensee) requested a change to the facility operating licenses for Clinton Power Station, Unit No. 1; Dresden Nuclear Power Station, Units 2 and 3; and Quad Cities Nuclear Power Station, Units 1 and 2. The proposed change reduces the reactor steam dome pressure specified in Technical Specification 2.1.1, "Reactor Core SLs [Safety Limits]," for each of these facilities.

The U.S. Nuclear Regulatory Commission has reviewed the application and determined that it needs additional information to complete its review. A response to the enclosed request for additional information is requested to be provided within 30 days from the date of this letter.

Should you have any questions, please contact me at 301-415-1380 or by email at [blake.purnell@nrc.gov](mailto:blake.purnell@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "BP Purnell".

Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-461, 50-237, 50-249,  
50-254, and 50-265

Enclosure: Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION  
LICENSE AMENDMENT REQUEST TO REVISE  
REACTOR STEAM DOME PRESSURE IN SAFETY LIMITS  
CLINTON POWER STATION, UNIT NO. 1  
DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3  
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2  
DOCKET NOS. 50-461, 50-237, 50-249, 50-254, AND 50-265

By application dated August 18, 2015, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15231A097), Exelon Generation Company, LLC (the licensee) requested a change to the facility operating licenses for Clinton Power Station (CPS), Unit No. 1; Dresden Nuclear Power Station, Units 2 and 3; and Quad Cities Nuclear Power Station, Units 1 and 2. The proposed change revises the reactor steam dome pressure specified in Technical Specification (TS) 2.1.1, "Reactor Core SLs [Safety Limits]," for each of these facilities. Specifically, the licensee proposes to reduce the reactor steam dome pressure from 785 pounds per square inch gauge (psig) to 685 psig.

The U.S. Nuclear Regulatory Commission (NRC) has reviewed the application and determined that the information below is needed to complete its review.

**RAI-1**

The licensee proposes to reduce the reactor steam dome pressure specified in TS 2.1.1.1 and TS 2.1.1.2 from 785 psig to 685 psig based on the lower-bound pressure for the critical power correlation for the fuel currently used in the reactor cores. The application states that CPS has a mixed core of GE 14 and GNF2 fuel which are produced by Global Nuclear Fuel – Americas, LLC (GNF). For the GNF2 fuel, the application references GNF reports NEDC-33292P, NEDC-33270P, and NEDE-24011-P-A as the basis supporting the proposed change. For the GE14 fuel, the application references GNF reports NEDC-32851P-A as the basis supporting the proposed change.

Section 3.8.3 of GNF report NEDC-33270P discusses the critical power correlation for GNF2 fuel (i.e., GEXL17 correlation). This section includes the pressure range over which the GEXL17 correlation is valid for GNF2 fuel consistent with the information provided in Table 5-4 of GNF2 report NEDC-33292P. In Section 3.0 of Attachment 1 to the application, the licensee states that the lower bound pressure limit for the GEXL17 correlation is 700 pounds per square inch atmospheric (psia).

Enclosure

GNF report NEDC-32851P-A discusses the critical power correlation for GE14 fuel (i.e., GEXL14 correlation). Similar to the GEXL17 correlation, Section 5.2 of the report states that the lower bound pressure limit for the GEXL14 correlation is 700 psia.

Converting 700 psia to psig, the lower bound pressure for the GEXL17 and GEXL14 correlations is approximately 685.3 psig. As such, the 685 psig value specified in the proposed TS change at CPS is slightly outside the pressure range in which the GEXL17 and GEXL14 correlations are valid for GNF2 and GE14 fuel. Provide further justification for the proposed 685 psig value at CPS or propose a revised pressure value for this TS change that is supported by the GEXL17 and GEXL14 correlations (e.g., 700 psia).

March 15, 2016

Mr. Bryan C. Hanson  
Senior Vice President  
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President and Chief Nuclear Officer  
Exelon Nuclear  
4300 Winfield Road  
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Sincerely,  
*/RA/*  
Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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**ADAMS Accession No. ML16071A206**

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