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10 CFR 50.12

November 25, 2002
2130-02-20336

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Clinton Power Station
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Exemption Request from the Requirements of 10 CFR 50.36(c)(1)

10 CFR 50.36(a) specifies that applicants for operating Licenses provide Technical Specifications in accordance with this section. 10 CFR 50.36(c)(1) prescribes that technical specifications include items in the following categories: 1) safety limits, 2) limiting safety system settings, and 3) limiting control settings. As discussed in the regulation, safety limits are limits upon important process variables that are found to be necessary to reasonably protect the integrity of certain physical barriers that guard against the uncontrolled release of radioactivity. If any safety limit is exceeded, the reactor must be shut down, and the Commission must be notified. One such safety limit is the Safety Limit Minimum Critical Power Ratio (SLMCPR) as contained in the Technical Specifications (TS) for Boiling Water Reactors. As discussed below, Exelon Generation Company, LLC, (Exelon) and AmerGen Energy Company, LLC (i.e., AmerGen) have determined that it would be beneficial to remove the numeric value of the SLMCPR limit from TS.

Therefore, in accordance with 10 CFR 50.12(a)(2)(ii) and 50.12(a)(2)(iii), Exelon and AmerGen request an exemption from the 10 CFR 50.36(c)(1) requirement for the inclusion of the SLMCPR in the TS for all of the BWRs. If this exemption is approved, separate license amendments will be submitted to change each plant's TS to eliminate the specific SLMCPR limit and to specify that the SLMCPR limit is maintained in the Core Operating Limits Report (COLR). The COLR is a licensee-controlled document that contains similar operating limits.

10 CFR 50.12 authorizes the Commission, upon application by any interested person, to grant exemptions from the requirements of the regulations when special circumstances are present. Exelon and AmerGen believes that such special circumstances are present in this instance to warrant exemption from the regulatory requirements of 10 CFR 50.36(c)(1). Specifically, Sections (ii) and (iii) of 10 CFR 50.12(a)(2) apply.

**10 CFR 50.12(a)(2)(ii)**

*(ii) "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule."*

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The SLMCPR is typically located in Section 2.1 of the Improved Technical Specification plants. SLMCPRs ensure that specified acceptable fuel design limits are not exceeded during steady state operation, normal operational transients, and abnormal operational transients. The fuel cladding integrity safety limit (SL) is established such that fuel damage is calculated not to occur if the limit is not violated. Because fuel damage is not directly observable, a stepback approach is used to establish an operating SL. Although the SLMCPR is defined in the plant TS, the Operating Limit MCPR is defined in the COLR and is monitored to ensure that the SLMCPR is not violated during plant transients. The SLMCPR is an analytical value not relied upon by the plant computer software utilized to monitor thermal limits. Therefore, it does not provide any daily operational value and could be relocated to a licensee-controlled document, such as the COLR.

As an example, as provided in a recent SLMCPR revision for Peach Bottom Atomic Power Station (PBAPS), Unit 2 (letter from J. P. Boska (NRC) to J. L. Skolds (Exelon), dated September 23, 2002), the new SLMCPRs are calculated using NRC approved methodology described in "General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A-14 (GESTAR-II), and U.S. Supplement, NEDE-24011-P-A-14-US, June, 2000, which incorporates Amendment 25. Amendment 25 was used for determining the cycle specific SLMCPRs. The NRC safety evaluation approving Amendment 25 is contained in a letter from the NRC to General Electric Company, dated March 11, 1999. Any revision to the SLMCPRs would require the use of a specific fuel vendors NRC approved methodology for PBAPS, or any other Exelon or AmerGen Boiling Water Reactor. Therefore, reviewing the actual value determined from the calculation of the SLMCPR in the TS as a license amendment serves no benefit, and is redundant to the NRC review and approval of the methodology used to establish the SLMCPR value.

Accordingly, removal of the SLMCPR values from the TS and relocating these values to a licensee controlled document serves the underlying purpose of the regulation in that the methodology used to determine the actual SLMCPR values are NRC reviewed and approved, thus ensuring acceptable SLMCPR values are derived from such NRC approved methods. The analyses which define the SLMCPR values are typically referenced in the plant Technical Specifications. Since the methodology used to determine the SLMCPR values is reviewed and approved by the NRC, the underlying purpose of the regulation to provide adequate protection to the health and safety of the public is equivalently maintained. Furthermore, since the specific value of SLMCPR will be maintained in the COLR, which is required to be submitted to NRC if changed, NRC will continue to be routinely informed of changes in the actual value.

**10 CFR 50.12(a)(2)(iii)**

(iii) *"Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted,*
*or that are significantly in excess of those incurred by others similarly situated;"*

The cycle specific nature of the SLMCPR value and the resultant need to frequently request TS changes poses an undue hardship for Licensees. Therefore, Exelon and AmerGen consider that an exemption to 10 CFR 50.36(c)(1) is justified by 10 CFR 50.12(a)(2)(iii).

The NRC has previously acknowledged that the SLMCPR is a cycle specific parameter that is calculated in accordance with NRC approved methodology. In circumstances for which the SLMCPR methodology has not been previously reviewed and approved generically, a reference is added to the TS to provide cycle-by-cycle approval. This policy was demonstrated in the review of the R-Factor Methodology for PBAPS, Unit 3, which was approved on a cycle-by-cycle basis via a

reference in the Technical Specifications (letter from L. Padovan (NRC) to G. Hunger, Jr. (PECO Energy Company (now Exelon), dated October 9, 1997), until the methodology was approved generically by the NRC (letter from B. Buckley (NRC) to J. Hutton (PECO Energy (now Exelon), dated October 5, 1999).

During the first few cycles of operation, the calculated SLMCPR value did not routinely change cycle-to-cycle. In more recent times, however, the calculated SLMCPR has typically varied cycle-to-cycle. With the advent of advanced core management techniques, more sophisticated modeling techniques and methodology changes (which are approved by the NRC), an unintended consequence of the current rule is that frequent license amendments are now required.

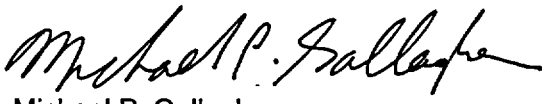
Additionally, as discussed in GL 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications", "a number of Technical Specifications (TS) address limits associated with reactor physics parameters that generally change with each reload core requiring the processing of changes to TS to update these limits each fuel cycle. If these limits are developed using an NRC-approved methodology, the license amendment process is an unnecessary burden on the licensee and the NRC. An alternative to including the values of these cycle-specific parameters in individual specifications is provided and is responsive to industry and NRC efforts on improvements in TS." In the case of the SLMCPR, the value would be contained in the COLR, and submitted to the NRC on a cycle by cycle basis as typically required by the plant TS.

The revision of the SLMCPR values in the TS each operating cycle consumes Licensee and NRC resources. Relocation of the SLMCPR value to the COLR would place more focused attention on important license amendments that impact safety during pre-outage periods.
An alternative approach would be to revise the SLMCPR earlier in operating cycle; however, the SLMCPR for the cycle is typically not determined until the core design is completed. This occurs late in the previous operating cycle in order to ensure that the updated core is optimally designed for the new cycle.

The proposed exemption: 1) is authorized by law in that no law exists which precludes the activities covered by this exemption request, 2) will not present an undue risk to the public health and safety, 3) is consistent with the common defense and security, and 4) will not have an adverse impact on the environment.

We request your review and approval by November 25, 2003.

Sincerely,



Michael P. Gallagher
Director, Licensing and Regulatory Affairs
Mid Atlantic Regional Operating Group

cc: Regional Administrator – NRC Region I
Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
NRC Senior Resident Inspector – Oyster Creek Generating Station