

10 CFR 50.90

RS-09-077
June 20, 2009

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Request for Processing an Amendment to Technical Specifications Section 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," to Eliminate Requirements for Main Steam Line Isolation on High Turbine Building Temperature on an Emergency Basis

Reference: Letter from P. R. Simpson (EGC) to U. S. NRC, "Request for Amendment to Technical Specifications Section 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," to Eliminate Requirements for Main Steam Line Isolation on High Turbine Building Temperature, dated June 15, 2009

In the referenced letter, Exelon Generation Company, LLC (EGC), requested a change to the Technical Specifications (TS) of Facility Operating License No. NPF-62 for Clinton Power Station (CPS), Unit 1. The proposed change was requested to eliminate the requirement for main steam line (MSL) isolation on high Turbine Building temperatures from Technical Specifications (TS) Section 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," Table 3.3.6.1-1 (i.e., Function 1.f). The proposed change was based on EGC's determination that the MSL Turbine Building Temperature – High isolation function does not meet the 10 CFR 50.36 criteria for inclusion in the CPS TS based on the following:

- The Turbine Building temperature sensors associated with the MSL isolation are used to detect a MSL leak equivalent to 25 gpm. This does not represent a significant degradation of the reactor coolant system pressure boundary.
- As stated in the CPS Updated Safety Analysis Report (USAR) Section 15.6.4, the pressure and temperature transients associated with a MSLB outside containment are insufficient to cause fuel damage.
- During a design basis MSLB outside containment, MSIV closure is assumed to occur due to high MSL flow.
- As stated in the CPS TS Bases, no credit is taken for these instruments in any transient or accident analysis.

Due to the recent increases in seasonal temperatures, Turbine Building temperatures at CPS have approached MSL isolation setpoints for the Turbine Building instruments. Outside air temperature and resulting Turbine Building temperature trends indicate that the trip setpoint may be exceeded in the near future, which would cause a MSL isolation and subsequent

reactor scram. The TS change included in the referenced letter will allow EGC to alleviate the potential for an avoidable plant transient.

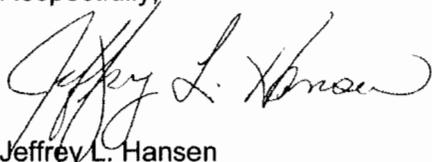
Therefore, in accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (a)(5), EGC is requesting that further processing of the license amendment request included in the referenced letter be completed on an emergency basis, since the failure to act in a timely way would result in shutdown of CPS, Unit 1. Approval of the referenced license amendment is requested by June 22, 2009. An explanation of the emergency situation and why it could not be avoided is included in the Attachment to this letter.

There are no regulatory commitments contained within this letter.

Should you have any questions concerning this letter, please contact Mr. Mitchel A. Mathews at (630) 657-2819.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 20th day of June 2009.

Respectfully,



Jeffrey L. Hansen
Manager – Licensing
Exelon Generation Company, LLC

Attachment: Basis for Requesting an Emergency License Amendment

ATTACHMENT

BASIS FOR REQUESTING AN EMERGENCY LICENSE AMENDMENT

Explanation of Emergency Situation

10 CFR 50.91, "Notice for public comment; State consultation," paragraph (a)(5) states that where the NRC finds that an emergency situation exists, in that failure to act in a timely manner would result in derating or shutdown of a nuclear power plant, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or public comment. The regulation requires that a licensee requesting an emergency amendment explain why the emergency situation occurred and why the licensee could not avoid the situation.

In March 2009, Clinton Power Station (CPS) operators identified elevated temperatures in the Turbine Building. An investigation determined that eight Plant Chilled Water system (WO) area coolers were out of service contributing to the elevated temperatures. Additionally, two small steam leaks on the feedwater system were identified. A deep downpower from 97 percent to 28 percent reactor power was completed in May 2009 to attempt to repair one of the feedwater leaks and restore the WO area coolers that were known to be out of service. Attempts to repair the feedwater leakage were not successful, but through the use of temporary power under the station temporary modification process, five of the eight WO area coolers were restored to service. The remaining three area coolers were determined to have failed motors. These failed air coolers are located near the main steam lines (MSLs) in an approximately 1.5 rem per hour gamma field during full power operations. Repairs would take approximately four hours per fan, resulting in approximately 18 rem of dose for the station.

It has been determined that with a trip of a WO chiller or area coolers, there is very little operating margin between the normal operating temperatures and the Turbine Building main steam line (MSL) isolation setpoints. This condition could be exacerbated by minor steam leaks that are inaccessible during full power operation.

On June 15, 2009, Exelon Generation Company (EGC), LLC submitted a request for amendment to the CPS Technical Specifications (TS) in letter RS-09-079. Specifically, the proposed change was requested to eliminate the requirement for MSL isolation on high Turbine Building temperatures from TS Section 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," Table 3.3.6.1-1 (i.e., Function 1.f). The proposed change was based on EGC's determination that the MSL Turbine Building Temperature – High isolation function does not meet the 10 CFR 50.36 criteria for inclusion in the CPS TS as follows:

- The Turbine Building temperature sensors associated with the MSL isolation are used to detect a MSL leak equivalent to 25 gpm. This does not represent a significant degradation of the reactor coolant system pressure boundary.
- As stated in the CPS Updated Safety Analysis Report (USAR) Section 15.6.4, the pressure and temperature transients associated with a MSLB outside containment are insufficient to cause fuel damage.
- During a design basis MSLB outside containment, MSIV closure is assumed to occur due to high MSL flow.
- As stated in the CPS TS Bases, no credit is taken for these instruments in any transient or accident analysis.

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In this amendment request, EGC stated that during operation in the summer months at CPS, the ambient temperatures within the Turbine Building trend up with increased outside air temperatures and approach the MSL isolation on Turbine Building temperature setpoints. The most limiting MSL isolation setpoint is 135 °F in the Turbine Building. All discussions of Turbine Building temperature that follow are related to these instruments. The TS change was proposed in order to allow EGC to eliminate the potential for an avoidable plant transient.

Temperatures in the turbine building, including the turbine building heater bay, vary with the seasons. This results from variations in cooling system temperatures with lake temperatures and heating and cooling of the CPS structures. Generally, from the coldest winter months to the hottest late summer months, a variation of 12 °F to 15 °F is seen.

Since June 15, 2009, due to the recent increases in seasonal temperatures, and plant conditions, Turbine Building temperatures at CPS have risen to the point that a MSL isolation may occur due to reduced margins between the in-plant temperatures and the trip setpoints for the instruments. Outside air temperatures have risen, which has resulted in temperatures within the Turbine Building reaching a high of 128 °F on June 19, 2009. This temperature is approaching levels that had been predicted as the highs for the summer.

Based on current weather forecasts, the outside air temperature at CPS is predicted to be approximately 95 °F on June 22, 2009, followed by several days in the low 90 °F range. With high temperatures for extended periods in the weather forecast, it is estimated that turbine building heater bay temperatures will reach or exceed 130 °F on or about Monday, June 22, 2009, based on structure latent heat and minimal overnight cooling. This predicted temperature trend will result in further challenges to the margins to MSL Turbine Building Temperature - High isolation function setpoints in the very near term.

Historical temperature data has been reviewed to estimate the summer Turbine Building heater bay peak temperature based on current conditions. Based on current trends and historical data, a peak summer temperature of 135 °F - 137 °F is projected within the Turbine Building heater bay.

CPS Operations is monitoring and trending Turbine Building temperatures on an increased frequency (i.e., every four hours), to verify the performance of the Turbine Building ventilation and identify any vulnerabilities. Cameras have been installed in the Turbine Building heater bay to monitor the Feedwater leakage for degradation. Additional temporary air movers have been installed in the Turbine Building to reestablish cooling flow, and all ventilation filters have been replaced and are being monitored daily. Cooling loads for the WO system have been evaluated, and CPS has maximized cooling to the Turbine Building Heater Bays. The Turbine Building MSL Isolation instruments have been calibrated and the available margin between the as-left calibration settings and trip setpoints has been utilized.

A reevaluation of projected temperature trends indicates that the CPS MSL isolation trip setpoints will likely be exceeded in the near future, which would cause a MSL isolation and subsequent reactor scram. As discussed above, this emergency situation results from unforeseen adverse environmental conditions due to unseasonably high outside air temperatures in the area along with failure of equipment that is not accessible during full power

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BASIS FOR REQUESTING AN EMERGENCY LICENSE AMENDMENT

operation due to elevated dose rates in the Turbine Building heater bays. Under these conditions, EGC could not have reasonably applied for this emergency license amendment in advance of the event or in a more timely manner.

In addition, as demonstrated in EGC's June 15, 2009, license amendment request, the proposed change does not involve a significant hazards consideration.

Based on the above, the requirements for an emergency situation as stipulated in 10 CFR 50.91(a)(5) have been met.