

August 2, 2007

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENTS RE: TECHNICAL SPECIFICATION 3.7.3 ULTIMATE HEAT
SINK REQUEST FOR PROCESSING ON AN EMERGENCY BASIS (TAC NOS.
MD6014 AND MD6015)

Dear Mr. Crane:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 183 to Facility Operating License No. NPF-11 and Amendment No. 170 to Facility Operating License No. NPF-18 for the LaSalle County Station, Units 1 and 2, respectively. The amendments are in response to your application dated June 29, 2007, as supplemented by letter dated August 1, 2007, and letters dated August 2, 2007.

In accordance with Section 50.91 of Title 10 of the *Code of Federal Regulations*, the supplemental letter dated August 1, 2007, requested processing of the license amendment request on an emergency basis in order to avoid shutdown of both units. The amendments revised the maximum allowed technical specification (TS) temperature limit, contained in TS Surveillance Requirement 3.7.3.1, of the cooling water supplied to the plant from the core standby cooling system (CSCS) pond (i.e., the ultimate heat sink) from ≤ 100 °F to ≤ 101.25 °F.

A copy of the Safety Evaluation is also enclosed. The Safety Evaluation describes the emergency circumstances under which the amendment was issued and the final determination of no significant hazards. The Notice of Issuance, addressing the final no significant hazards determination and opportunity for a hearing, will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Stephen P. Sands, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures:

1. Amendment No. 183 to NPF-11
2. Amendment No. 170 to NPF-18
3. Safety Evaluation

cc w/encls: See next page

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NAME	MThorpe-Kavanaugh	SSands	EWhitt	SJones via e-mail	RDennig via telecon	WKemper via e-mail	APH JCM	RGibbs

DATE	8/ 02 /07	8/ 02 /07	8/ 02 /07	8/ 02 /07	8/ 02 /07	8/ 02 /07	8/ 02 /07	8/ 02 /07
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OFFICIAL RECORD COPY

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 183
License No. NPF-11

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated June 29, 2007, as supplemented by letter dated August 1, 2007, and letters dated August 2, 2007, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-11 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 183, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented immediately upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Russell Gibbs, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: August 2, 2007

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 170
License No. NPF-18

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated June 29, 2007, as supplemented by letter dated August 1, 2007, and letters dated August 2, 2007, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 170, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented immediately upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Russell Gibbs, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: August 2, 2007

ATTACHMENT TO LICENSE AMENDMENT NOS. 183 AND 170

FACILITY OPERATING LICENSE NOS. NPF-11 AND NPF-18

DOCKET NOS. 50-373 AND 50-374

Replace the following pages of the Facility Operating Licenses and Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

License NPF-11
Page 3

License NPF-11
Page 3

License NPF-18
Page 3

License NPF-18
Page 3

TSs
3.7.3-2

TSs
3.7.3-2

- (4) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3489 megawatts thermal).
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 183, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (3) Conduct of Work Activities During Fuel Load and Initial Startup

The licensee shall review by committee all Unit 1 Preoperational Testing and System Demonstration activities performed concurrently with Unit 1 initial fuel loading or with the Unit 1 Startup Test Program to assure that the activity will not affect the safe performance of the Unit 1 fuel loading or the portion of the Unit 1 Startup Program being performed. The review shall address, as a minimum, system interaction, span of control, staffing, security and health physics, with respect to performance of the activity concurrently with the Unit 1 fuel loading or the portion of the Unit 1 Startup Program being performed. The committee for the review shall be composed of at least three members, knowledgeable in the above areas, and who meet the qualifications for professional-technical personnel specified by

- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70 possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station Units 1 and 2.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

- (1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3489 megawatts thermal). Items in Attachment 1 shall be completed as specified. Attachment 1 is hereby incorporated into this license.

- (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 170, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- (3) Conduct of Work Activities During Fuel Load and Initial Startup

The licensee shall review by committee all Unit 2 Preoperational Testing and System Demonstration activities performed concurrently with Unit 2 initial fuel loading or with the Unit 2 Startup Test Program to assure that the activity will not affect the safe performance of the Unit 2 fuel loading or the portion of the Unit 2 Startup Program being performed. The review shall address, as a minimum, system interaction, span of control, staffing, security and health physics, with respect to performance of the activity concurrently with the Unit 2 fuel loading or the portion of the Unit 2 Startup Program being performed. The committee for the review shall be composed of at least three members, knowledgeable in the above areas, and who meet the qualifications for professional-technical personnel specified by section 4.4 of ANSI N18.7-1971. At least one of these three shall be a senior member of the Assistant Superintendent of Operation's staff.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. NPF-11
AND AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. NPF-18
EXELON GENERATION COMPANY, LLC
LASALLE COUNTY STATION, UNITS 1 AND 2
DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated June 29, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML071830436, as supplemented by letter dated August 1, 2007 (ADAMS Accession No. ML072140249) and letters dated August 2, 2007 (ADAMS Accession No. ML072140562 and ML072140578), Exelon Generation Company, LLC (the licensee), requested changes to the technical specification (TS) surveillance requirements (SRs) for LaSalle County Station (LSCS), Units 1 and 2. The proposed changes would revise the maximum allowed Technical Specification (TS) temperature limit, contained in TS Surveillance Requirement 3.7.3.1, of the cooling water supplied to the plant from the Core Standby Cooling system (CSCS) pond (i.e., the Ultimate Heat Sink (UHS)) from ≤ 100 °F to ≤ 101.25 °F.

In the supplemental letter dated August 1, 2007, the licensee, in accordance with Section 50.91(a)(iii)(5) of Title 10 of the *Code of Federal Regulations* (10 CFR), requested processing of the license amendment request on an emergency basis in order to avoid shutdown of both units. Prolonged hot weather in the area has resulted in sustained elevated cooling water temperature supplied to the plant from UHS and would require both units to be placed in hot standby within 12 hours, and cold shutdown within 36 hours if the current TS limit of ≤ 100 °F is exceeded.

Additionally, the August 1, 2007 submittal would increase the TS limit on the UHS temperature from the present value of ≤ 100 °F to a proposed value of ≤ 101.25 °F. The licensee indicated that the plant safety analyses and other considerations establish a limit of 102 °F for the UHS temperature, and that the requested increase constitutes a reduction in the margin justified on the basis of the accuracy of the temperature measurement. Exelon proposed that the temperature measurement accuracy is improved by the use of upgraded instrumentation, and also by the application of a measurement practice that Exelon believes to further reduce measurement uncertainty.

ENCLOSURE

2.0 REGULATORY EVALUATION

The NRC staff's evaluation of the proposed changes is based upon the following:

- 10 CFR Section 50.36(c), "Technical specifications";
- 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 5, "Sharing of structures systems and components";
- Regulatory Guide (RG) 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3,
- NUREG-0800, "Standard Review Plan," for this review: 6.2.1, "Containment Functional Design", 6.2.1.1.C "; Pressure-Suppression Type BWR Containments"; and 6.2.2, "Containment Heat Removal Systems."

Section 50.36(c)(2)(ii)(B) of 10 CFR Part 50, specifies that a TS limiting condition for operation (LCO) must be established for, among other things, each operating restriction that is an initial condition of a design-basis accident or transient analysis that assumes either failure of or presents a challenge to the integrity of a fission product barrier.

Section 50.36(c)(3) of 10 CFR Part 50 specifies that "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained"

Together, these two provisions of 10 CFR 50.36 require that the surveillance practice and the associated LCO result in adequate assurance that, if the temperature limit in the surveillance requirement is met, the actual value of the UHS temperature will not exceed the limit assumed in the associated safety analyses, despite the presence of unavoidable measurement error.

The regulatory requirements and the guidance upon which the staff based its review of the containment response to an increase of 1.25 °F in UHS temperature are based on Appendix A of 10 CFR Part 50, in particular,

- (1) GDC 5 requires, in part, that "Structures, systems, and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions";
- (2) GDC 16 as it relates to the containment and associated systems establishing a leak-tight barrier against the uncontrolled release of radioactivity to the environment and assuring that the containment design conditions important to safety are not exceeded for as long as the postulated accident requires;
- (3) GDC 38 as it relates to the containment heat removal system safety function which shall be to reduce rapidly, consistent with the functioning of other associated systems, the containment pressure and temperature following any LOCA and to maintain them at acceptably low levels;

(4) The balance of plant systems, including the safety-related CSCS are evaluated to GDC 44 as it relates to the capability to transfer heat loads from safety-related structures systems and components to the ultimate heat sink under both normal operating and accident conditions;

(5) GDC 50 as it relates to the containment heat removal system which shall be designed so that the containment structure and its internal compartments can accommodate without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from any LOCA.

RG 1.105 provides guidance on instrument setpoint methodology. It also establishes that instrument setting should provide a 95 percent probability that limits will not be exceeded in 95 percent of the cases in which they are challenged (this is commonly referred to as 95/95 confidence). This in turn implies that measurement uncertainties should be established as ± 1.96 standard deviations for a normal probability distribution, which in general practice is often rounded to two standard deviations (commonly referred to as 2-sigma, or 2σ). When errors to one side of the limiting setpoint are conservative, and so non-conservative operation occurs only on the other side of the limiting setpoint, the 95-percent probability band can be taken to be asymmetrical rather than centered on the limiting setpoint. In such a case, when adequately justified, the uncertainty can be established at 1.645 standard deviations.

3.0 TECHNICAL EVALUATION

LSCS is a Boiling-Water Reactor (BWR)-5 with a Mark II containment. The UHS consists of an excavated CSCS pond integral with the cooling lake. Exelon requests the UHS temperature limit adjustment on the basis of:

- (1) the accuracy of the instrumentation used to monitor the UHS temperature, and
- (2) improved accuracy due to the statistical handling of the UHS temperature measurements.

Exelon states that the accident analyses assume an UHS temperature of not more than 104 °F, and that an allowance of 2 °F is appropriate to allow for transient heat-up. The limiting temperature is thus 102 °F. Exelon states that the present TS limit of 100 °F on the measured temperature is based upon the 102 °F limit with an additional 2 °F allowance for measurement error. Exelon further states that the uncertainty in the measurement is less than 0.75 °F, and that the 102 °F limit would, therefore, be adequately protected with a TS limit of 101.25 °F (measured temperature). Exelon also states that the reduction in uncertainty is the result of the application of new instrumentation installed under the provisions of 10 CFR 50.59, "Changes, tests and experiments," and partly due to the manual averaging of at least two of the four measurements.

In its August 1, 2007, letter, Exelon provided an uncertainty analysis that concludes that the total single-channel uncertainty is not more than 0.74 °F, and that the uncertainty is not more than ± 0.53 °F for a two-channel average.

3.1 Primary Containment Response

According to the updated final safety analysis report (UFSAR), the containment heat removal function is accomplished by the suppression pool cooling mode and drywell and suppression chamber spray modes of the residual heat removal (RHR) system. The RHR heat exchangers are cooled by water supplied from the CSCS. However as per UFSAR, no credit was taken for the RHR spray modes for containment heat removal or fission product removal following a design basis loss-of-coolant-accident (LOCA). The RHR system operated in suppression pool cooling mode performs the containment heat removal function. As per UFSAR Table 6.2-3A, the CSCS water temperature used for post-accident containment analyses is 104 °F which is not revised in the licensing amendment request. Therefore, there is no impact on the current containment post-accident short-term and long-term analyses documented in UFSAR. The increase in the UHS water temperature to 101.25 °F without an increase in the post accident cooling water supply temperature to the RHR heat exchangers, is accomplished by reducing the temperature measurement uncertainty through the use of higher precision temperature measuring equipment.

The licensee proposed to revise SR 3.7.3.1, changing the maximum CSCS temperature requirement from ≤ 100 °F to ≤ 101.25 °F. The NRC staff determined that the proposed change meets the requirements of 10 CFR Part 50 Appendix A, (1) GDC 16 because the licensee showed that the primary containment design conditions important to safety are not exceeded following a postulated design-basis accident, (2) GDC 38 because the licensee showed that the RHR system heat exchangers would remove primary containment heat and maintain its pressure and temperature below their design limits following design-basis accident, and (3) GDC 50 because the licensee showed that the primary containment heat removal system is designed so that the primary containment structure and its internal compartments can accommodate the temperature change without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from the design-basis LOCA.

3.2 Balance-of-Plant

The August 2, 2007, license amendment request (LAR) states, in part: "... the proposed increase in the allowable indicated temperature is based solely on a reduction of the existing instrument loop uncertainty value, there is no change in the actual inlet temperature...." The NRC staff concurs with the licensee's assessment that the real temperature of the inlet coolant will remain within the range of real inlet temperatures that may be present with the existing indicated temperature limit. Therefore, the proposed change to the indicated temperature limit has no substantive effect on the heat removal from safety-related components, nor on the function or operability of balance-of-plant components exposed to, or cooled by, the inlet water. Therefore, the requirements of GDC 44 continue to be satisfied and the proposed change is acceptable.

3.3 Instrument Channel Uncertainty Analysis

The NRC has reviewed Exelon's August 1, 2007, emergency LAR and the NRC staff's evaluation is presented below:

3.3.1 Bases for Instrument Uncertainties

The licensee's uncertainty analysis is based on the 95/95 confidence level for a single-sided uncertainty (i.e., two or three standard deviations of the error distributions), which is consistent with RG 1.105. The licensee has justified the single-sided uncertainty since only the rising temperature is of concern in this case and decreasing temperature does not affect the LCO condition for the plant. Therefore, the licensee used +1.645 standard deviation for this calculation. The NRC staff finds the licensee's basis for +1.645 standard deviation for this calculation acceptable. The licensee further stated that this calculation was prepared in accordance with its setpoint methodology, which has been used for reactor protection system and engineered safety feature actuation system setpoints. The NRC staff previously reviewed and approved the setpoint methodology for these instruments in connection with the licensee's application to extend its operating cycle to 24 months. Based on this, the NRC staff did not review the detailed calculation submitted by the licensee; this information may be audited or inspected by the NRC regional staff at a later date.

3.3.2 Measuring and Test Equipment (M&TE) Uncertainty

Exelon's analysis assumes that the M&TE uncertainty is independent among channels. Therefore, calibration of the channels should be implemented with different M&TE equipment. The licensee in its submittal of August 1, 2007, stated that the calibration procedures specify that one instrument loop will be calibrated using either the Fluke 45 or the HP 34401A instrument, and that the other loop must then be calibrated using the other instrument. Based on this, the NRC staff finds that the licensee has adequately addressed this issue. The licensee also stated that the calibration standard of the equipment utilized is more accurate than the M&TE equipment by a ratio of at least 4:1 and according to IEEE Standard 498 guideline has stated that calibration standard effect will be insignificant when it exceeds the 4:1 ratio. Based on this, the NRC staff finds that the licensee has adequately addressed this area.

3.3.3 Drift Calculation Methodology

Exelon's analysis provides accuracy values for all loop components from equipment vendor references that include drift. The licensee has stated that it used a methodology for the calculation of drift that is similar to the method used for reactor protection system and engineered safety feature actuation system instrumentation. The NRC staff has previously reviewed and approved the setpoint methodology used for these instruments in approving the licensee's operating cycle extension to 24 months. Since this methodology has been reviewed and approved by the NRC staff previously, the NRC staff finds the licensee has adequately addressed this area. NRC regional staff may review this area during an inspection.

3.3.4 Cross-Unit Sharing UHS Temperature Measurement

The requested LAR provides for the sharing of UHS temperature measurements among units. The UHS temperature sensors are located at the inlets to each of the two condenser banks at each of the two units at the site. The measurements are, therefore, representative of the actual UHS temperature only when the associated circulating water pumps and valves are operating and open. If a unit is not in operation, the associated UHS temperature measurements may appear to be valid, but will in fact represent only the temperature of the stagnant water at the measurement location and will no longer be representative of the UHS temperature.

The licensee stated that its surveillance procedure directs the operating personnel to record only the circulating water temperature from the unit in operation. The licensee has further stated that the calculated uncertainties for one available loop is +0.74 °F and for two available loops is +0.53 °F. It is considered extremely unlikely that three of the four resistance temperature detectors or associated circuitry would be unavailable simultaneously. In the unlikely event this condition were to occur, the 0.75 °F allowance for conservatism bounds the instrument uncertainties associated with any combination of operable temperature measurement devices to meet the requirements of SR 3.7.3.1. Based on this, the NRC staff finds the licensee has adequately addressed this area.

The NRC staff has reviewed the licensee's submittal related to the proposed license amendment and determined that it is consistent with the plant's design basis. The licensee has considered the effect of increased UHS temperature on plant design and determined it does not affect the current licensing basis and continues to meet the requirements of 10 CFR 50.36, GDC 5, and the guidance of RG 1.105. The licensee demonstrated that raising the UHS temperature from ≤ 100 °F to ≤ 101.25 °F will not affect the safety analysis of the plant. This increase is solely based on the improvement in accuracy afforded by higher precision instruments and using multiple instrument loops for this measurement. Therefore, the NRC staff finds the licensee's proposed license amendment request acceptable.

4.0 EMERGENCY CIRCUMSTANCES

The NRC's regulations 10 CFR 50.91 contain provisions for issuance of an amendment where the Commission finds that emergency circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a *Federal Register* notice allowing 30 days for prior public comment.

In the August 1, 2007, supplement, the licensee requested that this amendment be treated as an emergency amendment. In accordance with 10 CFR 50.91(a)(iii)(5), the licensee provided information regarding why this emergency situation occurred and how it could not be avoided.

The licensee provided the following explanation.

Reason Emergency Situation Has Occurred:

The LaSalle County Station (LSCS), Units 1 and 2, Ultimate Heat Sink (UHS) consists of an excavated Core Standby Cooling System (CSCS) pond integral with the cooling lake, and the piping and valves connecting the UHS with the residual heat removal service water system and Diesel Generator Cooling Water System. Prolonged hot weather in the area, in conjunction with high humidity during the daytime and minimal cooling at night, has resulted in sustained elevated cooling water temperature supplied to the plant from the CSCS pond. The lake level has been raised to the high end of the operating band, and make up and blow down have been optimized, in an attempt to limit the impact of the environmental conditions.

However, despite these efforts, the LSCS UHS thermal model temperature projections currently indicate that the maximum allowed Technical Specification temperature limit of 100 °F will be exceeded during the evening hours of August 3, 2007. This projection is based on a thermal model that, based on previous experience, is reliable. However, if

conditions worsen, the UHS temperature limit may be reached earlier. Without approval of the proposed change, Technical Specification 3.7.3, "Ultimate Heat Sink (UHS)," would require both units to shutdown if the existing Technical Specification temperature limit of ≤ 100 °F is exceeded.

The forecasted UHS temperatures are the highest experienced in the station's history. Previously, the highest UHS temperature experienced was 99.8 °F in August 2005. The forecasted UHS temperatures are a result of prolonged high ambient temperatures, coupled with a lack of winds.

The Commission expects licensees to apply for licensee amendments in a timely fashion. In this situation, however, the NRC staff has determined that the licensee has explained, as set forth above, why this emergency situation occurred and why it could not avoid this situation. Based on the licensee's reasons set for above, the NRC staff has determined that the licensee could not reasonably have foreseen the prolonged hot weather in the area. Accordingly, the NRC staff has determined that the licensee made a timely application for the amendment, has not abused the emergency provisions of 10 CFR 50.91 and did not itself create the emergency.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92(c) state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or,
- (2) Create the possibility of a new or different kind of accident from any previously evaluated; or,
- (3) Involve a significant reduction in a margin of safety.

The following analysis was provided by the licensee in their letter dated June 29, 2007, as supplemented by letter dated August 1, 2007, and letters dated August 2, 2007.

1. The proposed TS change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change will allow the indicated temperature of the cooling water supplied to the plant from the CSCS pond to be increased to ≤ 101.25 °F based on reducing the temperature measurement uncertainty by use of higher precision temperature measuring equipment.

Analyzed accidents are assumed to be initiated by the failure of plant structures, systems, or components. An inoperable UHS is not considered as an initiator of any analyzed events. As such, there is not a significant increase in the probability of a previously evaluated accident. Allowing the UHS to operate at a higher allowable indicated temperature, but still within the design limits of the

equipment it supplies, will not affect the failure probability of that equipment. The current heat analysis calculations of record for LSCS [LaSalle County Station], Units 1 and 2, assume a UHS post-accident peak inlet temperature of 104 °F. The proposed temperature increase is based solely on a reduction of the existing instrument loop uncertainty value. The current analysis bounds the proposed change. This higher allowable indicated temperature does not impact the LOCA [loss of coolant accident] Peak Clad Temperature Analysis, LOCA Containment Analysis or the non-LOCA analyses; therefore, continued operation with a UHS temperature > 100 °F but ≤ 101.25 °F will not increase the consequences of an accident previously evaluated in the UFSAR [updated final safety analysis report].

Based on the above information, the increase in the allowable indicated temperature of the cooling water supplied to the plant from the UHS to ≤ 101.25 °F by reducing the existing instrument loop uncertainty value has no effect on the result of the design basis event and will continue to allow each required heat exchanger to perform its safety function. The heat exchangers will continue to provide sufficient cooling for the heat loads during the most severe 30-day period.

Based on the above information, increasing the allowable indicated temperature of the cooling water supplied to the plant from the CSCS pond from ≤ 100 °F to ≤ 101.25 °F by reducing the instrument uncertainty value has no impact on any analyzed accident; therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change involves newly installed upgraded precision temperature measuring equipment. This proposed action will not alter the manner in which equipment is operated, nor will the functional demands on credited equipment be changed. Raising the indicated UHS temperature limit does not introduce any new or different modes of plant operation, nor does it affect the operational characteristics of any safety-related equipment or systems; as such, no new failure modes are being introduced. The proposed action reduces the instrument uncertainty value but does not alter assumptions made in the safety analysis.

Increasing the allowable indicated of the cooling water supplied to the plant from the CSCS pond from ≤ 100 °F to ≤ 101.25 °F has no impact on safety related systems. The plant is designed such that the RHR [residual heat removal] pumps on the unit undergoing the LOCA/LOOP [loss of offsite power] conditions would start upon the receipt of a signal, and would load onto their respective Emergency Diesel Generators' emergency bus during the LOOP event. The increase in the allowable indicated temperature of the cooling water supplied to the plant from the CSCS pond will not require operation of additional RHR pumps; therefore, system operation is unaffected by the proposed change in the indicated UHS temperature limit.

Based on the above information, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed TS change does not involve a significant reduction in a margin of safety.

The proposed change allows an increase in the allowable indicated temperature of the cooling water supplied to the plant from the CSCS pond to ≤ 101.25 °F. The margin of safety is determined by the design and qualification of the plant equipment, the operation of the plant within analyzed limits, and the point at which protective or mitigative actions are initiated. The proposed action does not impact these factors as the analyzed peak inlet temperature of the UHS is unaffected based on the improved instrument uncertainty of the upgraded high precision temperature measurement instrumentation. This change is supported by an engineering calculation of the instrument loop uncertainty values associated with upgraded precision temperature measuring equipment. The reduction in the uncertainty value associated with the temperature measuring equipment from ± 1.8 °F to ± 0.74 °F is based solely on the use of more precise equipment. No setpoints are affected, and no other change is being proposed in the plant operational limits as a result of the change. All accident analysis assumptions and conditions will continue to be met. Adequate design margin is available to ensure that the required margin of safety is not significantly reduced.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the NRC staff's review of the licensee's analysis, the NRC staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that the amendment does not involve a significant hazards consideration and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendment. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change in surveillance requirements. The NRC staff has determined that the amendments involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final no significant hazards finding with respect to these amendments. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

8.0 CONCLUSION

The Commission has concluded, based on the discussion provided above that (1) the amendment does not: (a) involve a significant increase in the probability or consequences of an accident previously evaluated; or, (b) create the possibility of a new or different kind of accident from any previously evaluated; or, (c) involve a significant reduction in a margin of safety and therefore, the amendment does not involve a significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (3) such activities will be conducted in compliance with the Commission's regulations, and (4) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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