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10 CFR 50.90

RS-10-126
August 10, 2010

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

Limerick Generating Station, Units 1 and 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

Subject: Additional Information and Supplement Supporting Request for License Amendment Regarding Measurement Uncertainty Recapture Power Uprate

- References:
1. Letter from M. D. Jesse (Exelon Generation Company, LLC) to U. S. NRC, "Request for License Amendment Regarding Measurement Uncertainty Recapture Power Uprate," dated March 25, 2010
 2. Letter from P. Bamford (U. S. NRC) to M. J. Pacilio (Exelon Generation Company, LLC), "Limerick Generating Station, Unit Nos. 1 and 2 – Request for Additional Information Related to Request for License Amendment Regarding Measurement Uncertainty Recapture Power Uprate," dated July 2, 2010

In Reference 1, Exelon Generation Company, LLC (EGC) requested an amendment to Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively. Specifically, the proposed changes revise the Operating License and Technical Specifications (TS) to implement an increase in rated thermal power of approximately 1.65%. In Reference 2, the NRC requested additional information to support review of the proposed changes. In response to this request, EGC is providing the attached information for question four of the requested information.

The attachments to this letter provide a supplemental change to the TS beyond those submitted in Reference 1. This proposed additional TS change has been reviewed by the LGS Plant Operations Review Committee and approved by the Nuclear Safety Review Board in accordance with the requirements of the EGC Quality Assurance Program.

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Supporting Request for License Amendment
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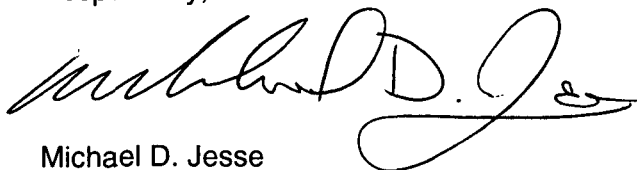
EGC has reviewed the information supporting a finding of no significant hazards consideration and the environmental consideration provided to the NRC in Reference 1. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the additional information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

There are no regulatory commitments contained in this letter.

Should you have any questions concerning this letter, please contact Mr. Kevin Borton at (610) 765-5615.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 10th day of August 2010.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael D. Jesse", with a stylized flourish at the end.

Michael D. Jesse
Manager, Licensing – Power Uprate
Exelon Generation Company, LLC

Attachments:

1. Response to Request for Additional Information
2. Revision to Standby Liquid Control System Technical Specifications

cc: NRC Regional Administrator, Region I
NRC Senior Resident Inspector - Limerick Generating Station
NRC Project Manager, NRR - Limerick
Pennsylvania Department of Environmental Protection - Bureau of Radiation Protection

ATTACHMENT 1
Response to Request for Additional Information

NRC Request 4

According to the LAR Attachment 1, section 3.5.2, regarding the TS implications of an improper SLCS switch alignment of the "C" pump, the following is stated: "For the condition in which three pumps are aligned for automatic operation, action statement "b" applies, and requires that the system shall be restored to operable status [less than three pumps lined up for automatic operation] within eight hours or be in hot shutdown within the following twelve hours." Since having three pumps lined up for automatic operation would lead to the entire system being placed in a limiting condition for operation, the provisions of 10 CFR 50.36(c)(3) require that an appropriate surveillance be in place to assure SLCS system operability. No such surveillance was proposed in the LAR. Please provide an amended application with an appropriate surveillance, or provide a justification as to why no corresponding surveillance requirement was proposed in the LAR regarding the switch position(s).

Response

Attachment 2 provides a markup of page 3/4 1-20 for the Unit 1 and Unit 2 Technical Specifications (TS) for the SLCS system. This markup includes new Surveillance Requirement (SR), 4.1.5.b.4, which requires verification that no more than two SLCS pumps are aligned for automatic operation. This SR will be incorporated into the Limerick Generating Station (LGS) surveillance frequency control program with a monthly (i.e., 31 day) frequency. The monthly frequency is consistent with the frequency for current SR 4.1.5.b.3, which requires verification that each valve in the SLCS flow path is in its correct position. The monthly frequency is sufficient to verify operability, since misalignment of the C SLCS pump hand switch will also provide a main control room alarm, as described in Reference 1.

The additional markup of the LGS TS does not affect any of the TS pages previously submitted in Reference 2. No TS Bases pages or Technical Requirements Manual pages are affected by this additional SR.

REFERENCES

1. Letter from M. D. Jesse (Exelon Generation Company, LLC) to U. S. NRC, "Additional Information Supporting Request for License Amendment Regarding Measurement Uncertainty Recapture Power Uprate," dated July 30, 2010
2. Letter from M. D. Jesse (Exelon Generation Company, LLC) to U. S. NRC, "Request for License Amendment Regarding Measurement Uncertainty Recapture Power Uprate," dated March 25, 2010

ATTACHMENT 2
Revision to Standby Liquid Control System Technical Specifications

Revised Page 3/4 1-20 (Units 1 and 2)
Insert for Page 3/4 1-20

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. In accordance with the Surveillance Frequency Control Program by:
1. Verifying the continuity of the explosive charge.
 2. Determining by chemical analysis and calculation* that the available weight of Boron-10 is greater than or equal to 185 lbs; the concentration of sodium pentaborate in solution is less than or equal to 13.8% and within the limits of Figure 3.1.5-1 and; the following equation is satisfied:

$$\frac{C}{13\% \text{ wt.}} \times \frac{E}{29 \text{ atom \%}} \times \frac{Q}{86 \text{ gpm}} \geq 1$$

where

C = Sodium pentaborate solution (% by weight)

Q = Two pump flowrate, as determined per surveillance requirement 4.1.5.c.

E = Boron 10 enrichment (atom % Boron 10)

3. Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

← Insert

- c. Demonstrating that, when tested pursuant to Specification 4.0.5, the minimum flow requirement of 41.2 gpm per pump at a pressure of greater than or equal to 1230 ± 25 psig is met.

- d. In accordance with the Surveillance Frequency Control Program by:

1. Initiating at least one of the standby liquid control system loops, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of the batch successfully fired. All injection loops shall be tested in 3 operating cycles.
2. Verify all heat-treated piping between storage tank and pump suction is unblocked.**

- e. Prior to addition of Boron to storage tank verify sodium pentaborate enrichment to be added is ≥ 29 atom % Boron 10.

* This test shall also be performed anytime water or boron is added to the solution or when the solution temperature drops below the limits of Figure 3.1.5-1 for the most recent concentration analysis, within 24 hours after water or boron addition or solution temperature is restored.

** This test shall also be performed whenever suction piping temperature drops below the limits of Figure 3.1.5-1 for the most recent concentration analysis, within 24 hours after solution temperature is restored.

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

b. In accordance with the Surveillance Frequency Control Program by:

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$$\frac{C}{13\% \text{ wt.}} \times \frac{E}{29 \text{ atom \%}} \times \frac{Q}{86 \text{ gpm}} \geq 1$$

where

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Q = Two pump flowrate, as determined per surveillance requirement 4.1.5.c.

E = Boron 10 enrichment (atom % Boron 10)

3. Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

← Insert

c. Demonstrating that, when tested pursuant to Specification 4.0.5, the minimum flow requirement of 41.2 gpm per pump at a pressure of greater than or equal to 1230±25 psig is met.

d. In accordance with the Surveillance Frequency Control Program by:

1. Initiating at least one of the standby liquid control system loops, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of the batch successfully fired. All injection loops shall be tested in 3 operating cycles.
2. Verify all heat-treated piping between storage tank and pump suction is unblocked.**

e. Prior to addition of Boron to storage tank verify sodium pentaborate enrichment to be added is ≥ 29 atom % Boron 10.

* This test shall also be performed anytime water or boron is added to the solution or when the solution temperature drops below the limits of Figure 3.1.5-1 for the most recent concentration analysis, within 24 hours after water or boron addition or solution temperature is restored.

** This test shall also be performed whenever suction piping temperature drops below the limits of Figure 3.1.5-1 for the most recent concentration analysis, within 24 hours after solution temperature is restored.

Insert for TS Page 3/4 1-20

4. Verifying that no more than two pumps are aligned for automatic operation.