June 26, 2002

MEMORANDUM TO: James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Travis L. Tate, Project Manager, Section 2 ***/RA/***
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION E-MAILED TO THE LICENSEE RE: PILGRIM NUCLEAR POWER STATION, TECHNICAL SPECIFICATION CHANGES TO TRIP LEVEL SETTINGS, CALIBRATION FREQUENCIES, AND EDITORIAL CHANGES (TAC NO. MB3613)

Attached are two requests for additional information transmitted by electronic mail to Entergy Nuclear Generation Company (the licensee) regarding the Nuclear Regulatory Commission staff's review of the licensee's application dated December 12, 2001. Attachment 1 contains a list of questions sent to Mr. Steve Brennion on February 26, 2002. Attachment 2 contains questions and requests for clarifying information sent to Mr. Bryan Ford on April 12, 2002. Conference calls were held between the staff and the licensee on April 4 and 18, 2002, to discuss the requested information. This memorandum documents the requests sent to the licensee to facilitate discussions prior to the staff initiating a formal request for additional information.

Docket No. 50-293

Attachments: As stated

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REQUEST FOR ADDITIONAL INFORMATION
PILGRIM NUCLEAR POWER STATION
TECHNICAL SPECIFICATION CHANGE CONCERNING CHANGE OF TRIP LEVEL SETTINGS, CALIBRATION FREQUENCIES, AND EDITORIAL CHANGES

"Main Steam Line Tunnel Exhaust Duct High Temperature"

1. The current Technical Specification trip level setting is $\leq 170^{\circ}F$ and is based on detection and isolation of a 10 g.p.m. leak from the main steam lines inside the main steam tunnel. The proposed trip level setting is $\leq 175^{\circ}F$ and allows detection and isolation of a main steam line leak of 20 g.p.m. Why are temperature and leakage rate increased for the proposed trip level setting?

2. Is the temperature setpoint calculated based on the leakage rate?

"Turbine Basement Exhaust Duct High Temperature"

3. The current Technical Specification trip level setting is $\leq 170^{\circ}F$ and is based on detection and isolation of a 150 g.p.m. leak from the main steam lines in the turbine basement. The proposed trip level setting allows detection and isolation of a main steam line leak of 225 g.p.m. Why are temperature and leakage rate increased for the proposed trip level setting?

4. Is the temperature setpoint calculated based on the leakage rate?

"RHR (LCPI) Pump Discharge Pressure Interlock" and
"Core Spray Pump Discharge Pressure Interlock"

5. The existing Technical Specification is 150±10 psig. The proposed setting is 160±6 psig. It states that this change is insignificant and does not impact system operation. Why is this change being made?

"RCIC Turbine Compartment Wall," "RCIC Exhaust Duct Torus Cavity" and
"RCIC Valve Station Area Wall"

6. The analytical limits for these setpoints are based on detection and isolation of RCIC steam line leaks of approximately 10 g.p.m. Why are these setpoints based on leaks of approximately 10 g.p.m., whereas the previously proposed setpoint, *"Main Steam Line Tunnel Exhaust Duct High Temperature,"* is based on a leak of 20 g.p.m.? Explain why leakage of 20 g.p.m. is acceptable for the previously proposed setpoint and leakage rates are limited to 10 g.p.m. for these setpoints.

7. Where the proposed trip level settings calculated in accordance with NRC Regulatory Guide 1.105, Rev. 2? If not, please explain how these setpoints were determined.

8. What are the analytical limits associated with the proposed trip level setting?

"HPCI Turbine Compartment Exhaust Duct," "HPCI Exhaust Duct Torus Cavity" and "HPCI/RHR Valve Station Area Exhaust Duct

9. The analytical limits for these setpoints are based on detection and isolation of HPCI steam line leaks of approximately 10 g.p.m. Why are these setpoints based on leaks of approximately 10 g.p.m., whereas the previously proposed setpoint, *"Main Steam Line Tunnel Exhaust Duct High Temperature,"* is based on a leak of 20 g.p.m.? Explain why leakage of 20 g.p.m. is acceptable for the previously proposed setpoint and leakage rates are limited to 10 g.p.m. for these setpoints.

10. Where the proposed trip level settings calculated in accordance with NRC Regulatory Guide 1.105, Rev. 2? If not, please explain how these setpoints were determined.

11. What are the analytical limits associated with the proposed trip level setting?

Note 1 of "Notes for Tables 4.2.A through 4.2.G"

In paragraph one on page 7 of 8 of letter number 2.01.086, "Request for Technical Specification Change Concerning Change of Trip Level Settings, Calibration Frequencies, and Editorial Changes," it states:

> *Note 1 of "Notes for Tables 4.2.A through 4.2.G" is changed to reference Figure 4.2-1 instead of the currently referenced Figure 4.1.1 (3c). This change corrects an oversight that occurred when the reformatting of Technical Specifications granted by Revision 177 renamed Figure 4.1.1 as Figure 4.2-2, but Note 1 was not changed. The content of Figure 4.2-1 is identical to the previous Figure 4.1.1; therefore, this is an administrative change.*

Should Figure 4.2-2, in the second sentence, be Figure 4.2-1?

Request For Additional Information
Technical Specification Instrumentation Calibration Frequencies
Pilgrim Nuclear Power Station
Entergy Nuclear Generating Company
Docket No.50-293

Entergy submittal of December 12, 2001 proposed Technical Specifications (TSs) revision of certain instrumentation calibration frequencies from the current 3 months to 24 months or 12 months. Following is stated as Entergy's justification for the proposed changes.

"The effect on total instrument loop uncertainty due to decreasing the calibration frequencies were included in the calculations that established the new TS trip settings in accordance with methodologies endorsed by R.G 1.105. The calculations conclude that sufficient margin exists between the trip level settings and the design basis analytical limit to account for all instrument and process inaccuracies, including decreased calibration frequencies. Therefore, the decreased calibration frequencies will have no effect on the ability of the affected instrumentation to perform their safety functions."

Revision 1 of R.G1.105 was issued in 1976 with no reference to any industry standard while Revision 2-1986 and Revision 3-1999, respectively endorsed 1982 and 1994 revisions of ISA Standard ISA-S67.04," Setpoints for Nuclear Safety-Related Instrumentation." This ISA standard provides guidance for establishing and maintaining the instrumentation setpoints. The 1982 revision of the ISA standard requires recording sufficient as-left and as-found LSSS data for each instrument channel to determine the true setpoint in terms of measured or derived process variables, and stated:

"Should these data indicate drift rates considerably less than originally expected, testing intervals or tolerances may be revised accordingly, with suitable justification and documented."
Entergy's justification for the proposed change does not provide sufficient details regarding the test data evaluation, extrapolation of 3-month test results for a 24-month test interval, and its reliability. R.G 1.105 states that ISA-67.04 provides limited guidance on drift evaluations and uncertainty terms development for the evaluation of an instrument surveillance interval and the staff has generally accepted drift evaluations based on statistical prediction techniques. The staff provided additional guidance for performing such evaluation in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals To Accommodate A 24-Month Fuel Cycle."

Entergy is requested to address, as a minimum, the issues identified in GL 91-04, provide calculations for staff audit, and justify the proposed 3-month to 24-month extension versus the GL allowed 18-month to 24-month (maximum of 30 months) instrumentation calibration interval.