

December 1, 1999

Mr. Theodore A. Sullivan
Vice President Nuclear and Station Director
Entergy Nuclear Generation Company
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING TECHNICAL SPECIFICATION CHANGE REQUEST REGARDING HIGH PRESSURE COOLANT INJECTION AND REACTOR CORE ISOLATION COOLING SURVEILLANCE TESTING, PILGRIM NUCLEAR POWER STATION (TAC NO. MA5436)

Dear Mr. Sullivan:

By letter dated May 11, 1999, you requested a change to Pilgrim Nuclear Power Station's (Pilgrim) Technical Specification Section 3/4.5.C, "High Pressure Coolant Injection," and Section 3/4.5.D, " Reactor Core Isolation Cooling. The NRC has reviewed this submittal and determined that additional information is needed to complete the review. Enclosed is the staff's RAI. We request that you respond by January 30, 2000, as discussed with and agreed upon by Stephen Brennon of your staff.

Questions regarding this request should be sent to my attention at the above address or you can contact me at (301) 415-1445.

Sincerely,

ORIGINAL SIGNED BY:

Alan B. Wang, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosure: Request for Additional Information

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script that reads "Alan Wang".

Alan B. Wang, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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cc w/encl: See next page

Pilgrim Nuclear Power Station

cc:

**Resident Inspector
U. S. Nuclear Regulatory Commission
Pilgrim Nuclear Power Station
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Plymouth, MA 02360**

**Chairman, Board of Selectmen
11 Lincoln Street
Plymouth, MA 02360**

**Chairman, Duxbury Board of Selectmen
Town Hall
878 Tremont Street
Duxbury, MA 02332**

**Office of the Commissioner
Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108**

**Office of the Attorney General
One Ashburton Place
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Boston, MA 02108**

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Radiation Control Program
Commonwealth of Massachusetts
Executive Offices of Health and
Human Services
174 Portland Street
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**Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
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King of Prussia, PA 19406**

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**Mr. Jack Alexander
Manager, Reg. Relations and
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**Ms. Jane Perlov
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Executive Office of Public Safety
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**Mr. Steve McGrail, Director
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**Chairman, Citizens Urging
Responsible Energy
P.O. Box 2621
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Massachusetts Citizens for Safe Energy
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Nuclear Engineer
Massachusetts Municipal Wholesale
Electric Company
P.O. Box 426
Ludlow, MA 01056-0426

PILGRIM NUCLEAR POWER STATION, UNIT 1

General Design Criteria 37 and Standard Review Plan Section 6.3 require that the Emergency Core Cooling Systems be testable throughout the life of the plant to ensure the operability and performance of the system. The High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems are currently flow tested at both the higher and lower operating ranges of the system. This ensures that the pumps can develop the required flow throughout the operating range of the system. The current Technical Specifications (TS) requires the full-flow test at the higher operating range of the HPCI and RCIC pumps once per outage. The licensee has proposed to perform an alternative test at a lower pressure and flow to demonstrate HPCI and RCIC operability. The staff has reviewed your submittal and determined that in order to determine that the proposed change is equivalent to the current TS the following additional information is needed to complete our review.

- 1) Provide the specific acceptance criteria that will be utilized during the "equivalent" TS test for both the HPCI and RCIC pumps (i.e., at a turbine speed of X rpm the pump delivers a flow of at least Y gpm for a system head corresponding to a reactor pressure of Z psig).
- 2) Provide the basis for the TS acceptance criteria for both pumps (if the same methodology was used, please provide a description for one pump and describe any differences). The discussion should address the following topics:
 - a) utilization of industry standards;
 - b) performance data utilized, and justification of applicability to acceptance criteria; and
 - c) any system model which was used, including how it was benchmarked with actual performance data.
- 3) Was there any testing performed to confirm that the acceptance criteria developed was appropriate for the intended test? (In other words, was the acceptance criteria established such that if either the pump or system experienced degraded performance which would jeopardize either the pump or system to perform its safety-related function it would be detected). If yes, what was the extent of the testing (i.e., was the turbine speed established at the new speed with the orifice installed and the flow and pressure compared with the acceptance criteria and evaluated?) If no, why not?
- 4) The specific acceptance criteria for the alternate test should be in the TS. The current criteria for the full-flow test are in the TS and the new criteria should be included as the base line for demonstrating HPCI and RCIC pump operability by the alternative test.

Enclosure