Entergy

Entergy Nuclear Generation Co.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

Mike Bellamy
Site Vice President

10 CFR 50.90

November 21, 2000
ENGC Ltr. 2.00.066

US Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

SUPPLEMENTAL REQUEST FOR TECHICAL SPECIFICATION CHANGE CONCERNING STANDBY GAS TREATMENT AND CONTROL ROOM HIGH EFFICIENCY AIR FILTRATION SYSTEMS

This letter requests Nuclear Regulatory Commission approval of proposed changes to Pilgrim Nuclear Power Station Technical Specifications under 10CFR 50.90 concerning the Standby Gas Treatment (SGTS) and Control Room High Efficiency Air Filtration (CRHEAFS) Systems. These changes supplement the Technical Specification revisions previously submitted in response to Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal" (ENGC Ltr. 2.99.115, 11/22/99).

Pilgrim requests NRC review and approval of the attached changes to Technical Specification Sections 3.7.B.1 and 3.7.B.2. The attached "Determination of No Significant Hazards Considerations" evaluation is provided with the proposed changes.

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Please contact J.L. Rogers at (508)830-8110 if you should require further information on this issue.

Sincerely,

Mike Bellamy

Commonwealth of Massachusetts)
County of Plymouth)

Then personally appeared before me, Mike Bellamy, who being duly sworn, did state that he is Site Vice President of Entergy Nuclear Generating Company and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Entergy Nuclear Generating Company and that the statements are true to the best of his knowledge and belief.

My commission expires: September 20, 2000 DATE NOTARY PUBLIC

Attachment 1: Narrative on Proposed Technical Specification Changes and "No Significant Hazards Consideration"
Attachment 2: Technical Specification Revisions
Attachment 3: Technical Specification Amended Pages

cc: Mr. Alan B. Wang, Project Manager
Project Directorate I-3
Office of Nuclear Reactor Regulation
Mail Stop: OWFN 8F2
U. S. Nuclear Regulatory Commission
1 White Flint North
11555 Rockville Pike
Rockville, MD 20852

U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Pilgrim Nuclear Power Station

Mr. Robert Hallisey
Radiation Control Program
Commonwealth of Massachusetts
Exec Offices of Health & Human Services
174 Portland Street
Boston, MA 02114

Mr. Steve McGrail, Director
Mass. Emergency Management Agency
400 Worcester Road
P.O. Box 1496
Framingham, MA 01701-0313

Attachment 1 to Entergy Letter 2.00.066

Narrative on Proposed Technical Specification Changes and "No Significant Hazards Consideration"

Description of Proposed Changes

Pilgrim proposes the following changes to Technical Specifications section 3.7.B.1.b.2:

The Technical Specification amended pages contained in Attachment 4 to Entergy Letter 2.99.115 currently require the results of the SGTS laboratory carbon sample analysis to show ≥97.5% methyl iodide removal at a velocity within 10% of system design. Pilgrim proposes to change this section to: (1) specify that the removal efficiency applies to each bank of charcoal adsorbers (two inch nominal depth) and (2) remove the requirement for velocity being within 10% of system design.

Pilgrim proposes the following changes to Technical Specifications section 3.7.B.2.b.2:

The Technical Specification amended pages contained in Attachment 4 to Entergy Letter 2.99.115 currently require the results of the CRHEAFS laboratory carbon sample analysis show ≥97.5% methyl iodide removal at a velocity within 10% of system design. Pilgrim proposes to change this section to remove the requirement for velocity being within 10% of system design.

Reason for Proposed Change

Pilgrim proposes these changes to remove potential misinterpretations and redundancy thus ensuring the Technical Specifications (TS) clearly specify the testing and performance requirements for SGTS and CRHEAFS charcoal adsorbers.

Safety Evaluation

Delete Velocity Within Ten Percent of System Design

The requirement that SGTS and CRHEAFS gas velocity be within 10% of system design is not required to be in TS to ensure the systems are capable of performing their safety functions and can be deleted. The TS require testing of the charcoal adsorbers in accordance with American Society for Testing and Materials (ASTM) D3803-1989. This standard specifies allowable tolerances for various test parameters, including gas or face velocity. Therefore, since the TS require testing to ASTM D3803-1989 and this standard specifies face velocity tolerances, the requirement for a specified gas velocity is redundant and can be removed without impacting the ability of either system to perform its safety function.

Specify Methyl Iodide Removal Efficiency Applies to Each Bank

Generic Letter 99-02 requires use of a safety factor of two for calculating the T.S. acceptance criteria for methyl iodide removal efficiency. Application of this safety factor results in methyl iodide removal efficiency of 97.5% being specified in Pilgrim TS. This efficiency is applied to each bank of carbon adsorbers in SGTS. Adding the clarifying statement that 97.5% applies to each carbon adsorber bank and not to both banks combined eliminates the possibility for misinterpreting the acceptance criteria.

A similar change is not being made to CRHEAFS because it has only one carbon adsorber bank and is not subject to possible misinterpretation.

Determination of No Significant Hazards Considerations

10CFR50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analyses using the standards in 10CFR50.92 to determine no significant hazards considerations. In accordance with 10CFR50.91, Pilgrim has performed an analysis for the proposed changes to the Technical Specifications.

(1) The operation of Pilgrim Station in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The accident analyses performed to ensure compliance with the dose limits of 10CFR Part 100 and 10CFR Part 50, Appendix A, GDC 19, use assumptions regarding SGTS and CRHEAFS performance. The analyses assume radioiodine removal efficiencies for each SGTS train to be 99 % and each CRHEAFS train to be 95%. These analyses also assume individual charcoal bank efficiencies of 95 %.

Specifying that the allowable removal efficiency of ≥ 97.5 % applies to each carbon adsorber bank in SGTS ensures that the minimum allowable removal efficiency of each carbon adsorber bank is greater than that assumed in Pilgrim accident analyses. The TS requirement for velocity to be within 10% of system design for both SGTS and CRHEAFS can be deleted because the value for gas velocity is specified in ASTM D3803-1989. Specifying this parameter in TS is redundant and could cause confusion. Neither change adversely affects the ability of the carbon adsorbers to perform their safety function. Therefore, the consequences of an accident previously evaluated will not be increased.

SGTS and CRHEAFS do not initiate any accidents previously analyzed in the Updated Final Safety Analysis Report (UFSAR). Therefore, since no accident initiators are affected by the proposed changes, the probability of an accident previously evaluated will not be increased.

(2) The operation of Pilgrim Station in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

No new or different types of accidents or malfunctions than those previously analyzed in the UFSAR are introduced by this proposed change because there are no new failure modes or equipment being introduced. Rather, the changes being proposed reduce the possibility for misinterpreting the acceptance criteria and test conditions to be used for carbon adsorber tests. Testing charcoal adsorber banks to ASTM D3803-1989 and specifying acceptance criteria for each carbon adsorber bank ensures the removal efficiencies are bounded by Pilgrim accident analyses. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously analyzed.

(3) The operation of Pilgrim Station in accordance with the proposed amendment will not involve a significant reduction in the margin of safety.

Deleting the criteria for velocity to be within 10% of system design while requiring testing in accordance with ASTM D3803-1989 does not affect the accuracy of the test results. Specifying that the minimum allowable removal efficiency of 97.5 % applies to each carbon adsorber bank prevents possible misinterpretation of the acceptance criteria. Both changes ensure the existing safety margin is not inadvertently reduced.

These changes have been reviewed and recommended for approval by Pilgrim's Operations Review Committee and the Nuclear Safety Review and Audit Committee.

Environmental Consideration

The proposed amendment clarifies charcoal testing methods and acceptance criteria. The proposed change is consistent with NRC accepted methods. The proposed change does not impact plant configuration or design. The proposed amendment only clarifies requirements with respect to components installed within the restricted area as defined in 10 CFR Part 20. Pilgrim Nuclear Power Station has determined the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and there is no significant increase in individual or cumulative occupational radiation exposure resulting from the implementation of this proposed change. Pilgrim has performed a no significant hazards consideration analysis (see above) and found the proposed amendment involves no significant hazards. Accordingly, Pilgrim concludes the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Part 51.22 (c) (9). Therefore, pursuant to 10 CFR Part 51.22(b), Pilgrim concludes no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

Schedule of Change

This change will be implemented within 60 days following Pilgrim's receipt of its approval by the Commission.

Attachment 2 to Entergy Letter 2.00.066

Technical Specification Revision Pages

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

b. 2. The results of the laboratory carbon sample analysis shall show each carbon adsorber bank is capable of ~~-~~≥97.5% methyl iodide removal at ~~a velocity within 10% of system design,~~ 70% R.H. and 86°F. The carbon sample shall be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 and tested in accordance with ASTM D3803-1989. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified in 3.7.B.1.c.

c. From and after the date that one train of the Standby Gas Treatment System is made or found to be inoperable for any reason, continued reactor operation, irradiated fuel handling, or new fuel handling over the spent fuel pool is permissible only during the succeeding seven days providing that within 2 hours all active components of the other standby gas treatment train are verified to be operable and the diesel generator associated with the operable train is operable.

If the system is not made fully operable within 7 days, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within the next 36 hours and fuel handling operations shall be terminated within 2 hours.

Fuel handling operations in progress may be completed.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

each branch of the standby gas treatment system shall be demonstrated, with Specification 3.7.B.1.d satisfied.

5. Each train of the standby gas treatment system shall be operated for at least 15 minutes per month.

6. The tests and analysis of Specification 3.7.B.1.b.2 shall be performed after every 720 hours of system operation.

b. 1. In-place cold DOP testing shall be performed on the HEPA filters after each completed or partial replacement of the HEPA filter bank and after any structural maintenance on the HEPA filter system housing which could affect the HEPA filter bank bypass leakage.

2. Halogenated hydrocarbon testing shall be performed on the charcoal adsorber bank after each partial or complete replacement of the charcoal adsorber bank or after any structural maintenance on the charcoal adsorber housing which could affect the charcoal adsorber bank bypass leakage.

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

2. Control Room High Efficiency Air Filtration System

a. Except as specified in Specification 3.7.B.2.c or 3.7.B.2.e below, both trains of the Control Room High Efficiency Air Filtration System used for the processing of inlet air to the control room under accident conditions shall be operable when in the Run, Startup, and Hot Shutdown MODES, during movement of irradiated fuel assemblies in the secondary containment, and during movement of new fuel over the spent fuel pool, and during CORE ALTERATIONS, and during operations with a potential for draining the reactor vessel (OPDRVs),

or

the reactor shall be in cold shutdown within the next 36 hours.

b. 1. The results of the in-place cold DOP tests on HEPA filters shall show ≥99% DOP removal. The results of the halogenated hydrocarbon tests on charcoal adsorber banks shall show ≥99.9% halogenated hydrocarbon removal when test results are extrapolated to the initiation of the test.

2. The results of the laboratory carbon sample analysis shall show ≥97.5% methyl iodide removal at ~~a velocity within 10% of system design,~~ 70% R.H. and 86°F. The carbon sample shall be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 and tested in accordance with ASTM D3803-1989. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified in 3.7.B.2.c.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

2. Control Room High Efficiency Air Filtration System

a. At least once per operating cycle the pressure drop across each combined filter train shall be demonstrated to be less than 6 inches of water at 1000 cfm or the calculated equivalent.

b. 1. The tests and analysis of Specifications 3.7.B.2.b shall be performed once per operating cycle or following painting, fire or chemical release in any ventilation zone communicating with the system while the system is operating.

2. In-place cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing which could affect the HEPA filter bank bypass leakage.

3. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing which could affect the charcoal adsorber bank bypass leakage.

4. Each train shall be operated with the heaters in automatic for at least 15 minutes every month.

Attachment 3 to Entergy Letter 2.00.066

Technical Specification Amended Pages

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

b. 2. The results of the laboratory carbon sample analysis shall show each carbon adsorber bank is capable of ≥97.5% methyl iodide removal at 70% R.H. and 86°F. The carbon sample shall be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 and tested in accordance with ASTM D3803-1989. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified in 3.7.B.1.c.

c. From and after the date that one train of the Standby Gas Treatment System is made or found to be inoperable for any reason, continued reactor operation, irradiated fuel handling, or new fuel handling over the spent fuel pool is permissible only during the succeeding seven days providing that within 2 hours all active components of the other standby gas treatment train are verified to be operable and the diesel generator associated with the operable train is operable.

If the system is not made fully operable within 7 days, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within the next 36 hours and fuel handling operations shall be terminated within 2 hours.

Fuel handling operations in progress may be completed.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

each branch of the standby gas treatment system shall be demonstrated, with Specification 3.7.B.1.d satisfied.

5. Each train of the standby gas treatment system shall be operated for at least 15 minutes per month.

6. The tests and analysis of Specification 3.7.B.1.b.2 shall be performed after every 720 hours of system operation.

b. 1. In-place cold DOP testing shall be performed on the HEPA filters after each completed or partial replacement of the HEPA filter bank and after any structural maintenance on the HEPA filter system housing which could affect the HEPA filter bank bypass leakage.

2. Halogenated hydrocarbon testing shall be performed on the charcoal adsorber bank after each partial or complete replacement of the charcoal adsorber bank or after any structural maintenance on the charcoal adsorber housing which could affect the charcoal adsorber bank bypass leakage.

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

2. Control Room High Efficiency Air Filtration System

a. Except as specified in Specification 3.7.B.2.c or 3.7.B.2.e below, both trains of the Control Room High Efficiency Air Filtration System used for the processing of inlet air to the control room under accident conditions shall be operable when in the Run, Startup, and Hot Shutdown MODES, during movement of irradiated fuel assemblies in the secondary containment, and during movement of new fuel over the spent fuel pool, and during CORE ALTERATIONS, and during operations with a potential for draining the reactor vessel (OPDRVs),

or

the reactor shall be in cold shutdown within the next 36 hours.

b. 1. The results of the in-place cold DOP tests on HEPA filters shall show ≥99% DOP removal. The results of the halogenated hydrocarbon tests on charcoal adsorber banks shall show ≥99.9% halogenated hydrocarbon removal when test results are extrapolated to the initiation of the test.

2. The results of the laboratory carbon sample analysis shall show ≥97.5% methyl iodide removal at 70% R.H and 86°F. The carbon sample shall be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 and tested in accordance with ASTM D3803-1989. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified in 3.7.B.2.c.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont.)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (Cont.)

2. Control Room High Efficiency Air Filtration System

a. At least once per operating cycle the pressure drop across each combined filter train shall be demonstrated to be less than 6 inches of water at 1000 cfm or the calculated equivalent.

b. 1. The tests and analysis of Specifications 3.7.B.2.b shall be performed once per operating cycle or following painting, fire or chemical release in any ventilation zone communicating with the system while the system is operating.

2. In-place cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing which could affect the HEPA filter bank bypass leakage.

3. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing which could affect the charcoal adsorber bank bypass leakage.

4. Each train shall be operated with the heaters in automatic for at least 15 minutes every month.