

10 CFR 50.90

November 8, 2002  
5928-02-20185

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

Subject: Technical Specification Change Request No. 315 – Deletion of Auxiliary and Fuel Handling Building Air Treatment System Technical Specification Requirements

Three Mile Island, Unit 1 (TMI Unit 1)  
Facility Operating License No. DPR-50  
NRC Docket No. 50-289

In accordance with 10 CFR 50.4(b)(1), enclosed is Technical Specification Change Request No. 315.

The purpose of this Technical Specification Change Request is to revise TMI Unit 1 Technical Specification Sections 3.15.3 and 4.12.3 to delete the requirements for the Auxiliary and Fuel Handling Building Air Treatment System. This ventilation system is not a safety related system and is not required to prevent or mitigate the consequences of any design basis accident scenario.

Information supporting this Technical Specification Change Request is contained in Enclosure 1 to this letter, and the proposed marked up Technical Specification pages are contained in Enclosure 2.

Using the standards in 10 CFR 50.92, AmerGen Energy Company, LLC (AmerGen) has concluded that these proposed changes do not constitute a significant hazards consideration, as described in the enclosed analysis performed in accordance with 10 CFR 50.91(a)(1). Pursuant to 10 CFR 50.91(b)(1), a copy of this Technical Specification Change Request is provided to the designated official of the Commonwealth of Pennsylvania, Bureau of Radiation Protection, as well as the chief executives of the township and county in which the facility is located.

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NRC approval of this change is requested by November 8, 2003.

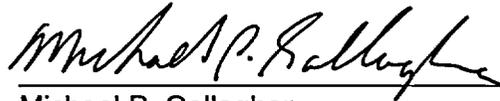
No new regulatory commitments are established by this submittal. If any additional information is needed, please contact David J. Distel at (610) 765-5517.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

11-08-02

Executed On



Michael P. Gallagher  
Director, Licensing & Regulatory Affairs  
Mid-Atlantic Regional Operating Group

- Enclosures: (1) TMI Unit 1 Technical Specification Change Request No. 315 Evaluation of Proposed Changes  
(2) TMI Unit 1 Technical Specification Change Request No. 315 Markup of Proposed Technical Specification Page Changes

cc: H. J. Miller, Administrator, USNRC Region I  
T. G. Colburn, USNRC Senior Project Manager, TMI Unit 1  
J. D. Orr, USNRC Senior Resident Inspector, TMI Unit 1  
File No. 02074

**ENCLOSURE 1**

**TMI Unit 1 Technical Specification Change Request No. 315**

**Evaluation of Proposed Changes**

## 1.0 INTRODUCTION

This letter is a request to amend Operating License DPR-50 for Three Mile Island, Unit 1.

The proposed changes would revise the Operating License by deleting the surveillance and operability requirements of the Auxiliary and Fuel Handling Building Ventilation systems (AFHBVS). This ventilation system is not a safety related system and is not required to prevent or mitigate the consequences of any accident scenario. In accordance with the rules and regulations delineated in the NRC Final Policy Statement, 60 FR 36953 and codified in 10CFR50.36, this ventilation system does not meet the criteria to be included in the Technical Specifications.

AmerGen Energy Company, LLC (AmerGen) requests that the following changed replacement pages be inserted into the existing Technical Specifications.

Revised Technical Specification Pages: ii, iv, 3-62c, 4-55c, and 4-55d.

Technical Specification Pages 3-62d and 4-55e are deleted in their entirety.

The marked up pages showing the requested changes are provided in Enclosure 2.

## 2.0 DESCRIPTION OF PROPOSED AMENDMENT

This amendment request deletes the TMI Unit 1 Technical Specification Sections 3.15.3 and 4.12.3, "Auxiliary and Fuel Handling Building Air Treatment System" and their corresponding bases. This air treatment system was originally required to be operable to mitigate the affects of off-site dose releases from three different accident scenarios: (1) the Maximum Hypothetical Accident (MHA), (2) the Waste Gas Tank Rupture Accident (WGTR), and (3) a Fuel Handling Accident (FHA) inside the Fuel Handling Building. As a result of a past modification that installed a separate Fuel Handling Building Engineered Safety Feature (ESF) Air Treatment system and previously approved reanalysis of the bounding conditions for the MHA and the WGTR scenarios, the AFHBVS is not safety related nor required for accident mitigation. Recent revisions to Technical Specification 3.15.3 Bases, submitted under Technical Specification Change Request (TSCR) No. 274, dated February 2, 1999 and approved by the Commission under License Amendment No. 215, dated August 24, 1999, has clarified the AFHBVS design requirements and accident analysis considerations. This proposed Technical Specification change does not involve any modification to plant systems, structures or components.

In summary, due to the installation of a separate Fuel Handling Building ESF ventilation system to mitigate the affects of an irradiated fuel handling accident inside the Fuel Handling Building and a reanalysis of the dose consequences from the Maximum Hypothetical Accident and the Waste Gas Tank Rupture Accident, the original design requirements and accident mitigation functions of the AFHBVS are no longer applicable to the approved TMI Unit 1 licensing basis. Therefore, Technical Specifications 3.15.3 and 4.12.3, which specify the minimum availability, efficiency, and surveillance testing of the AFHBVS are to be deleted.

Technical Specification 4.12.2, Reactor Building Purge Air Treatment System, Bases (page 4-55c) is revised to delete the reference to the Auxiliary and Fuel Handling Building Ventilation system test requirements since these Technical Specification test requirements are proposed to be eliminated. This change to page 4-55c is an administrative change since the affected Basis statement is only a historical reference. There is no other Technical Specification requirement or bases that will need to be revised as a result of this proposed change. A typographical error is also being corrected on Technical Specification Bases page 4-55c. This change revises the word "note" to "not." This is an editorial correction only.

Technical Specification Table of Contents (page iv) is also revised to list the existing Section 4.12.4, Fuel Handling Building ESF Air Treatment System. This section presently exists in the TMI Unit 1 Technical Specifications but was not listed in the Table of Contents. This change is an editorial change only.

### 3.0 BACKGROUND

The Auxiliary and Fuel Handling Building Ventilation System (AFHBVS) provides the following functions as stated in TMI Unit 1 UFSAR Sections 9.8.2 and 9.8.3:

1. Supplies filtered and tempered outside air to the Auxiliary Building and operating floors of the Fuel Handling Building.
2. Supplies heat to supply air for temperature control, or cool selected areas where heat generation is high.
3. Exhausts air from the Auxiliary Building and Fuel Handling Building operating floors, maintaining negative pressure with respect to the outside environment. This prevents radioactive material release during normal and refueling operations.
4. Filters exhaust air through roughing, HEPA and carbon filters prior to discharge, with the exhaust flow being continuously monitored. The exhaust flow is continuously monitored for radioactivity, and appropriate action is taken to protect the public in the event of high radiation. This action includes isolating the Fuel Handling Building operating floor from the normal ventilation system while the Fuel Handling Building ESF Ventilation system is operating.
5. Continuously monitors inlet air against smoke, fumes and combustible vapors and isolates the buildings if their presence is detected.
6. Maintains a pressure differential between occupied areas and areas specifically designated as potentially contaminated. Contaminated areas are maintained at a lower pressure than clean areas.

In 1987 the Fuel Handling Building Engineered Safety Feature Ventilation System (FHBESFVS) was installed in response to a TMI Unit 1 Restart commitment (Reference TMI Restart Hearing Partial Initial Decision (PID), Section III.B, paragraph 1265, Vol.1, dated December 14, 1981). As described in TMI Unit 1 Updated Final Safety Analysis Report (UFSAR) Section 9.8.2.1.b, the FHBESFVS is designed to mitigate, monitor and record the radiation release resulting from a postulated TMI Unit 1 irradiated fuel handling accident in the Fuel Handling Building. In accordance with Technical Specification 3.15.4, "Fuel Handling Building ESF Air Treatment System", the system is required to be operational continuously while irradiated fuel handling operations are in progress. As a result of the operation of the FHBESFVS and its design requirements,

the AFHBVS is not required to be operational to mitigate the effects of a fuel handling accident. This revised design basis for the AFHBVS was added to the Bases of Technical Specification 3.15.3 under TSCR 274 and associated License Amendment No. 215.

The Maximum Hypothetical Accident (MHA) as described in TMI Unit 1 UFSAR Section 14.2.2.5, was reevaluated under TSCR No. 274, and approved by NRC in Amendment No. 215, to account for a higher leakage rate from ESF systems and to include a source of fission product leakage through ESF valves to tanks vented to the atmosphere. Technical Specification 4.5.4 was re-titled to "Engineered Safeguards Feature (ESF) System Leakage" and increased the total leakage rate from 0.6 gph to 15 gph. This analysis contained new and/or revised assumptions and conservatism's and resulted in dose consequences that remained below the limits of 10CFR100 for the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ) with no credit taken for the carbon filters of the AFHBVS. TSCR No. 274 and associated License Amendment No. 215 thus revised Technical Specification Section 3.15.3 to indicate that the AFHBVS is not credited in the analysis of the dose consequences of a MHA. Further, License Amendment No. 235, dated September 19, 2001, (TSCR No. 290) licensed full implementation of an alternative radiological source term in accordance with Regulatory Guide 1.183 for TMI Unit 1 based on a reanalysis of the bounding MHA using assumptions consistent with the above in terms of ESF leakage, ESF vent paths, and no credit for AFHBVS carbon and particulate filters. License Amendment No. 235 replaced the whole body and thyroid dose guidelines of 10CFR100 with the total effective dose equivalent (TEDE) criteria of 10CFR50.67.

The Waste Gas Tank Rupture Accident (WGTR), evaluated in UFSAR Section 14.2.2.6, assumes that all of the radioactive contents in the tank would be released into the Auxiliary Building. The inventory of these contents is assumed to contain 1% of the iodine and all of the noble gas of one reactor coolant volume. This activity is assumed to be released to the environment in one instantaneous puff. The TMI Unit 1 analysis of record for this event identified that calculated dose consequences at the EAB and LPZ were completed without credit for iodine removal by the AFHBVS carbon filters. The resultant dose was below the limits of 10CFR100. License Amendment No. 215 revised the TMI Unit 1 Technical Specification Bases 3.15.3 to clarify that the AFHBVS is not required to mitigate the consequences of the WGTR accident. TMI Unit 1 UFSAR Update 15 (April 2000) revised UFSAR Section 14.2.2.6 to identify that no credit is given to the AFHBVS for iodine removal during the WGTR accident.

The AFHBVS is designed to provide and distribute clean, filtered and tempered outside air to the operating floors of the Auxiliary Building and the Fuel Handling Building. It not only provides a controlled environment but also prevents the release of possible airborne radioactive contaminants to the environment during normal power operation by filtering exhaust air prior to release. Although not required, it is also operated during fuel handling operations to minimize dose to the workers and maintain a habitable working environment. If a fuel handling accident occurs the AFHBVS will be shutdown and isolation dampers will close, isolating the operating floor of the Fuel Handling Building from the Auxiliary Building and the remainder of the Fuel Handling Building. The FHBESFVS will continue to operate, mitigating the off-site dose affects of the accident.

The deletion of the Technical Specification Sections 3.15.3 and 4.12.3 will eliminate the unnecessary Technical Specification operability requirements of the AFHBVS. Dioctylphthalate (DOP) and halogenated hydrocarbon testing, carbon sample analysis, and verification of fan operability will be removed from the requirements of Technical Specification surveillance testing. Normal ventilation system testing and performance monitoring will be incorporated into the TMI Unit 1 Preventive Maintenance Program.

#### 4.0 REGULATORY REQUIREMENTS & GUIDANCE

The Fuel Handling Building Engineered Safety Feature Ventilation System was designed, installed and tested in accordance with the intent of Regulatory Guide 1.52, Revision 2, March 1978 and applicable sections of Regulatory Guide 8.8. The operability requirements for this system were incorporated into the Technical Specifications as Sections 3.15.4 and 4.12.4, under Technical Specification Change Request (TSCR) No. 156, dated August 25, 1986, and associated License Amendment No. 122, dated December 12, 1986. TMI Unit 1 License Amendment No. 122 stated that the Auxiliary and Fuel Handling Building Air Treatment System specifications were maintained to ensure adequate protection against postulated emergency core cooling system (ECCS) leakage during the design basis Maximum Hypothetical Accident (i.e., ESF leakage) and mitigation of the Waste Gas Tank Rupture Accident.

The previously approved reanalysis of the design basis Maximum Hypothetical Accident and the Waste Gas Tank Rupture accident determined that the calculated dose consequences of these accident scenarios remained below the limits specified in 10CFR100 or 10CFR50.67 without crediting the use of the AFHBVS. The Bases for Technical Specification 3.15.3 was previously revised to reflect that no credit was taken for the use of the carbon or particulate filters of the AFHBVS for the mitigation of the dose consequences of these accidents, under TSCR No. 274 and associated License Amendment No. 215. In addition, the AFHBVS is not credited for the mitigation of any other design basis accident evaluated in Section 14.0 of the TMI Unit 1 UFSAR.

10CFR50.36 delineates the requirements for the content of the Technical Specifications of the plant. Items to be included are those that involve safety limits for important process variables or those that involve a limiting condition for operation. 10CFR50.36.c(2)(ii)(C), Criterion 3, states that a limiting condition for operation must be established for "a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." The design basis of the Auxiliary and Fuel Handling Building Ventilation System does not meet this criteria or any other found in 10CFR50.36.

#### 5.0 TECHNICAL ANALYSIS

##### Design Basis

The inclusion of the AFHBVS into the Technical Specifications was based on its function to reduce the radiological consequences of a postulated Fuel Handling Accident in the Fuel Handling Building, a Maximum Hypothetical Accident, or a Waste Gas Tank Rupture. The design basis as described in TMI Unit 1 UFSAR Sections 9.8.2 and 9.8.3 does not credit this system in any of these three accident scenarios.

### Fuel Handling Accident

The FHBESFVS was designed and installed in accordance with the intent of Regulatory Guide 1.52, Revision 2, specifically to mitigate the effects of the fuel handling accident inside the Fuel Handling Building. TMI Unit 1 UFSAR Section 9.8.2 describes the design requirements of this system. The NRC evaluated and approved the design (License Amendment No. 122, dated December 12, 1986) using the acceptance criteria from Standard Review Plan Section 15.7.4 "Radiological Consequences of Fuel Handling Accidents", Revision 1, July 1981. This evaluation demonstrated that the FHBESFVS will adequately mitigate a Fuel Handling Accident inside the Fuel Handling Building and maintain dose consequences at the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ) within the guidelines of 10CFR100 limits. In addition, because the FHBESFVS is not seismically qualified, the NRC staff performed an independent safety analysis of a fuel handling accident with failure of this system and demonstrated that the radiological consequences remained below the criteria of 10CFR100. TMI Unit 1 UFSAR Section 14.2.2.1 credits the FHBESFVS for mitigation of the Fuel Handling Accident in the Fuel Handling Building scenario. No credit is given to the AFHBVS because upon a high radiation signal in the exhaust ducts the AFHBVS supply fans stop and isolation dampers close providing a barrier between the AFHBVS and the operating floor of the Fuel Handling Building. Removal of the AFHBVS from the Technical Specifications will not impact the safety of the plant or the public since this system is not a barrier to the dose consequences of a fuel handling accident.

### Maximum Hypothetical Accident

The dose consequence analysis for the TMI Unit 1 Maximum Hypothetical Accident was previously reanalyzed and approved by NRC in Amendment Nos. 215 and 235 to take into account increased Engineered Safeguards system leakage and to incorporate more conservative parameters in the accident analysis. The results of these analyses demonstrated that the dose received at the EAB and LPZ remained below the limits of 10CFR100 (Amendment No. 215) or 10CFR50.67 (Amendment No. 235). In addition, the reanalyzed control room operator dose remained below the limit of 5 rem TEDE, as specified in 10CFR50.67 (Amendment No. 235). The results of these previous analyses do not credit iodine removal by the AFHBVS carbon or particulate filters. TMI Unit 1 UFSAR Section 14.2.2.5 "Maximum Hypothetical Accident" reflects the results of this accident scenario.

### Waste Gas Tank Rupture

The Waste Gas Tank Rupture Accident (WGTR), evaluated in UFSAR Section 14.2.2.6, assumes that all of the radioactive contents in the tank would be released into the Auxiliary Building. The inventory of these contents is assumed to contain 1% of the iodine and all of the noble gas of one reactor coolant volume. This activity is assumed to be released to the environment in one instantaneous puff. The TMI Unit 1 analysis of record for this event identified that calculated dose consequences at the EAB and LPZ were completed without credit for iodine removal by the AFHBVS carbon filters. The resultant dose was

below the limits of 10CFR100. License Amendment No. 215 revised the TMI Unit 1 Technical Specification Bases 3.15.3 to clarify that the AFHBVS is not required to mitigate the consequences of the WGTR accident. TMI Unit 1 UFSAR Update 15 (April 2000) revised UFSAR Section 14.2.2.6 to identify that no credit is given to the AFHBVS for iodine removal during the WGTR accident.

The removal of the AFHBVS from the Technical Specifications does not affect the design basis as described in the TMI Unit 1 UFSAR. The current UFSAR Sections 9.8.2, "Fuel Handling Building Ventilation System" and 9.8.3 "Auxiliary Building Ventilation System", identify that the AFHBVS is not credited towards mitigation of the various accident scenarios, as previously approved in License Amendment Nos. 122, 215, and 235. The design basis of the FHBESFVS is described in UFSAR Section 9.8.2 and credits only the FHBESFVS for mitigation of the Fuel Handling Accident in the Fuel Handling Building. Technical Specification Sections 3.15.4 and 4.12.4 "Fuel Handling Building ESF Air Treatment System" were added to the TMI Unit 1 Technical Specifications under TSCR No.156 and associated License Amendment No. 122, dated December 12, 1986, and provide the minimum availability and efficiency requirements for the FHBESFVS and the verifications that the system will be able to perform its design function.

The AFHBVS provides air treatment for the operating floors of the Fuel Handling Building and various areas of the Auxiliary Building. By exhausting through the roughing, HEPA and carbon filters, the AFHBVS system reduces radioactive material releases during normal operations and supplements the FHBESFVS during normal refuel operations. The AFHBVS radiation monitor post-accident monitoring functions described in Technical Specification 3.1.6 Bases and the instrumentation requirements provided in Technical Specification Tables 3.5-3 and 4.1-4, are not affected by this proposed change. Testing of the AFHBVS fan stop and damper isolation interlocks is performed monthly as part of the Area Radiation Monitor RM-G9 surveillance requirements, and quarterly as part of the FHB exhaust air Radiation Monitor RM-A4 surveillance requirements. This testing provides continued assurance that these interlocks will function to isolate the AFHBVS from the FHB in the event of a Fuel Handling Accident in the Fuel Handling Building. The AFHBVS is not credited in any of the aforementioned accident scenarios for mitigation of the dose consequences to the public and does not affect the safe operation of the plant. Because the system does not meet the requirements of 10CFR50.36 it should not be included in the Technical Specifications. This system will continue to be operational and provide its design function as specified in the TMI Unit 1 UFSAR. Elimination from the Technical Specifications will relieve the plant from an unnecessary operability requirement and the burden of Technical Specification surveillance testing. The system will continue to be monitored and tested under periodic operations surveillance and the TMI Unit 1 Preventive Maintenance Program.

### Conclusion

The proposed change to delete Technical Specifications 3.15.3 and 4.12.3, "Auxiliary and Fuel Handling Building Air Treatment System" reflects the current design function of the AFHBVS. The AFHBVS is not safety-related and is not credited in any design basis accident scenario for TMI Unit 1. Therefore, the AFHBVS does not meet the 10CFR50.36 criteria for inclusion in Technical Specifications. This proposed change results in an operational efficiency that is achievable in part from implementation of the alternative radiological source term. Removal of this system from Technical

Specifications eliminates the requirement to demonstrate the effectiveness of this system in operation. This simplifies testing and design tasks. Consequently, the proposed Technical Specification changes will not adversely affect nuclear safety or safe plant operations.

## 6.0 REGULATORY ANALYSIS

This proposed change will delete Technical Specification Sections 3.15.3 and 4.12.3, "Auxiliary and Fuel Handling Building Air Treatment System". The AFHBVS is a non-safety related system whose primary function is to supply filtered and tempered air to the Auxiliary and Fuel Handling Buildings. It will provide ventilation cooling for equipment and will maintain a negative pressure within the buildings to prevent the spread of contamination. A negative pressure is maintained in the buildings by the supply and exhaust ducts being arranged to direct air from areas of lower to higher radioactivity. The exhaust is vented through roughing, HEPA and carbon filters. The design intent is to provide a monitored and filtered release path for exhaust air from the Auxiliary and Fuel Handling Buildings during normal power operation. The system was designed in accordance with good engineering practices. This system is not required to be operable for the mitigation of the radiological effects of any analyzed accident scenario. Regulatory Guide 1.52, does not apply to the design basis of the AFHBVS as described in TMI Unit 1 UFSAR Section 9.8.2, "Fuel Handling Building Ventilation System", Section 9.8.3, "Auxiliary Building Ventilation System" and Section 14.2.2, "Accident Analysis". The periodic testing of the Fuel Handling Building isolation dampers intended to isolate the Auxiliary Building ventilation from the refueling operating floor upon receipt of a "Hi" Radiation signal in the main exhaust ducts, installed in accordance with TMI Unit 1 restart commitments, is not affected by this proposed change.

This system does not meet the criteria of 10CFR50.36 for inclusion in the Technical Specifications. TMI Unit 1 Technical Specification Sections have been revised, based on previously approved changes, to clarify that the AFHBVS is not required for the mitigation of any accident scenarios in TMI Unit 1 UFSAR Chapter 14. The deletion of Technical Specification Sections 3.15.3 and 4.12.3 will require no physical change to the system, nor will it change the method of operation of the system as described in the TMI Unit 1 UFSAR. There will be no impact to the design basis of the system as described in TMI Unit 1 UFSAR Sections 9.8.2 and 9.8.3. This proposed change to the Technical Specifications will not endanger the health and safety of the public and the system will continue to operate in a manner consistent with its design basis.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## 7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

AmerGen has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

- 1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No.

This change will delete the existing Technical Specifications 3.15.3 and 4.12.3. It does not impact nor change the physical configuration of any system, structure or component, nor does it change the manner in which any system is operated. Any change to the system design will be evaluated in accordance with the requirements of 10CFR50.59. Failure of the AFHBVS will neither initiate any type of accident nor increase the severity of the consequences of an accident. Previously approved analyses of the dose consequences of the accidents described in the TMI Unit 1 UFSAR confirmed that potential dose consequences were below the limits of 10CFR100 or 10CFR50.67 without the operation of the AFHBVS. These analyses are not affected by the proposed Technical Specification change. Thus, the AFHBVS is not required for mitigation of any accident as described in TMI Unit 1 UFSAR Chapter 14.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No.

This activity will delete sections of the Technical Specifications applicable to the AFHBVS. This change does not physically alter any system, structure or component. Any change to the system design will be evaluated in accordance with the requirements of 10CFR50.59. The proposed change will not cause the AFHBVS to operate outside of its design basis. There will be no impact to any operational feature of the system or any procedures that control its operation. The design basis of the AFHBVS as described in the UFSAR is not revised.

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

- 3. Does the proposed change involve a significant reduction in a margin of safety?**

Response: No.

The deletion of Technical Specification Sections 3.15.3 and 4.12.3 will not impact the operation of the Auxiliary and Fuel Handling Building Air Treatment system or the Fuel Handling Building ESF Ventilation system. The proposed change will not cause these systems to be placed in a configuration outside of their design

basis nor will it reduce the margin of safety of these systems. The AFHBVS will continue to be operable in accordance with applicable plant operating procedures. The AFHBVS will also continue to be tested and maintained under periodic operations surveillance and the TMI Unit 1 Preventive Maintenance Program.

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

Based on the above, AmerGen concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## 8.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 9.0 REFERENCES

- a) TMI Unit 1 Technical Specification Change Request No. 274, Letter to the NRC dated February 2, 1999.
- b) TMI Unit 1 License Amendment No. 215, NRC letter dated August 24, 1999.
- c) TMI Unit 1 Technical Specification Change Request No. 290, Letter to NRC dated January 29, 2001
- d) TMI Unit 1 License Amendment No. 235, NRC letter dated September 19, 2001
- e) TMI Restart Hearing Partial Initial Decision (PID), Section III.B, paragraph 1265, Vol. 1, dated December 14, 1981.

**ENCLOSURE 2**

**TMI Unit 1 Technical Specification Change Request No. 315**

**Markup of Proposed Technical Specification Page Changes**

**Revised TS Pages**

**ii**

**iv**

**3-62c**

**3-62d**

**4-55c**

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3.15.3 AUXILIARY AND FUEL HANDLING BUILDING AIR TREATMENT SYSTEM

~~Deleted~~

Applicability

Applies to the Auxiliary and Fuel Handling Building Air Treatment System.

Objective

To specify the minimum availability and efficiency for the Auxiliary and Fuel Handling Building Air Treatment System.

Specification

- 3.15.3.1 The Auxiliary and Fuel Handling Building Air Treatment System including two pairs of exhaust fans (AH-E-14 A & B and AH-E-14 C & D) and four banks of exhaust filters (AH-F2A, B, C and D) shall be operable at all times during power operation, except as provided in 3.15.3.3 and specified in 3.22.2.4.
- 3.15.3.2 The Auxiliary and Fuel Handling Building Air Treatment System is operable when its surveillance requirements are met and:
- a. The results of the in-place DOP and halogenated hydrocarbon tests at design flows on HEPA filters and charcoal adsorber banks shall show <0.05% DOP penetration and <0.05% halogenated hydrocarbon penetration, except that the DOP test will be conducted with prefilters installed.
  - b. The results of laboratory carbon sample analysis shall show  $\geq 90\%$  radioactive methyl iodide decontamination efficiency when tested at 30°C, 95% R.H.
  - c. Each set of fans (AH-E-14 A & C and AH-E-14 B & D) shall be shown to operate within the range 100,580 CFM to 130,691 CFM (design flow is specified as 118,810 CFM).
- 3.15.3.3
- a. With one pair of Auxiliary and Fuel Handling Building Air Treatment System exhaust fans (AH-E-14A and C or AH-E-14B and D) inoperable, verify that the redundant pair of exhaust fans is in operation and discharging through its HEPA filters and charcoal adsorbers within 8 hours, except as provided in 3.15.3.3.b.
  - b. From the date that the Auxiliary and Fuel Handling Building Air Treatment System becomes inoperable for any reason during power operation, the system (at least one pair of exhaust fans discharging through its HEPA filters and charcoal adsorbers) must be restored to operable condition within 7 days. If the system is not restored to operable within 7 days, prepare and submit a special report to the NRC within the next 30 days outlining the actions taken to restore operability and the plans and schedules for restoring the system to operable status.

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Bases

The Auxiliary and Fuel Handling Building Air Treatment System (part of the Auxiliary and Fuel Handling Building Ventilation System - References 1 and 2), consists of four banks of exhaust filters (AH-F2A, B, C, and D) and two sets of fans (AH-E-14A and C, and AH-E-14B and D) which take the exhaust air from both the Auxiliary Building and the Fuel Handling Building and discharge it to the Auxiliary and Fuel Handling Building exhaust stack. The air normally passes through all four filter banks when either set of fans is in operation.

This system is not nuclear safety related. When available, it can be used to reduce the off-site dose releases; however, no credit was taken for this system in the analyses of the Waste Gas Tank Rupture (WGTR) Accident (Reference 4) or Maximum Hypothetical Accident (Reference 3), or for any other events releasing radioactivity through the Auxiliary Building. The dose consequences resulting from any of these events will be less than the 10 CFR 100 limits with or without system operation.

The in-place testing criteria for the HEPA and carbon adsorber banks, and the laboratory testing for the carbon adsorbers shall be performed in accordance with the test methods of ANSI/ASME N510-1980.

Note: The Fuel Handling Building ESF Air Treatment system controls the release resulting from a postulated spent fuel accident in the Fuel Handling Building per Technical Specification 3.15.4.

References

- (1) UFSAR Section 9.8.2 - "Fuel Handling Building Ventilation System"
- (2) UFSAR Section 9.8.3 - "Auxiliary Building Ventilation System"
- (3) UFSAR Section 14.2.2.5 - "Maximum Hypothetical Accident"
- (4) UFSAR Section 14.2.2.6 - "Waste Gas Tank Rupture"

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## Bases

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once every refueling interval to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Tests of the charcoal adsorbers with Halogenated hydrocarbon refrigerant shall be performed in accordance with approved test procedures. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If test results are unacceptable all adsorbent in the system should be replaced with an adsorbent qualified according to ASTM D3803-1989. Tests of the HEPA filters with DOP aerosol shall also be performed in accordance with approved test procedures. Any HEPA filters found defective should be replaced with filters qualified according to Regulatory Guide 1.52, March 1978.

Fans AH-E7A & B performance verification is necessary to ensure adequate flow to perform the filter surveillance of T.S. 4.12.2.1 and 4.12.2.3 and can only be demonstrated by running both fans simultaneously. This can only be accomplished when purge valves are not limited to 30° open (i.e., cold shutdown).

The reactor building purge exhaust system no longer is relied upon to serve an operating accident mitigating (i.e. LOCA) function. ~~The retest requirement of T.S. 4.12.2.2a has therefore been changed to reflect the same retest requirements as the auxiliary and fuel handling building ventilation system which similarly serves no operating accident mitigating function.~~

If significant painting, steam, fire, or chemical release occurs such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign material, the same tests and sample analysis shall be performed as required for operational use. The determination of significant shall be made by the Vice President-TMI Unit 1.

## References

- (1) UFSAR, Section 5.6 - "Ventilation and Purge Systems"

4-55c

Amendment No. 55, 108, 157, 179, 218, 226

240,

## 4.12.3 AUXILIARY AND FUEL HANDLING BUILDING AIR TREATMENT SYSTEM

*Deleted*Applicability

Applies to the Auxiliary and Fuel Handling Building Air Treatment System and associated components.

Objective

To verify that this system and associated components will be able to perform its design function.

Specification

- 4.12.3.1 At least once per refueling interval:
- a. The pressure drop across the combined HEPA filter and adsorber banks shall be demonstrated to be less than 6 inches of water at flow rates from 100,580 CFM to 130,691 CFM (design flow is 118,810 CFM).
  - b. The tests and sample analysis required by Specification 3.15.3.2 shall be performed.
- 4.12.3.2 Testing necessary to demonstrate operability shall be performed as follows:
- a. The tests and sample analysis required by Specification 3.15.3.2 shall be performed following significant painting, steam, fire, or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.
  - b. DOP testing shall be performed after each complete or partial replacement of a HEPA filter bank or after any structural maintenance on the system housing that could affect the HEPA filter bank bypass leakage.
  - c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of a charcoal adsorber bank or after any structural maintenance on the AH-F2A, B, C, or D housing that could affect charcoal adsorber bank bypass leakage.
  - d. The fan combination AH-E14A and C and AH-E14B and D shall be operated at least 10 hours every month.
- 4.12.3.3 An air distribution test shall be performed on the HEPA filter bank after any maintenance or testing that could affect the air distribution within the system. The air distribution across the HEPA filter bank shall be uniform within  $\pm 20\%$ . The test shall be performed between 100,580 CFM and 130,691 CFM (design flow is 118,810 CFM).

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Bases

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once every refueling interval to show system performance capability.

Tests and sample analysis assure that the HEPA filters and charcoal adsorbers can perform as evaluated. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. The in-place test criteria and laboratory test criteria for activated charcoal will meet the guidelines of ANSI-N510-1980. If test results are unacceptable, all adsorbent in the system should be replaced with an adsorbent qualified according to Regulatory Guide 1.52, March 1978 or ANSI-N509-1980. Any HEPA filters found defective should be replaced with filters qualified according to Regulatory Guide 1.52, March 1978 or ANSI-N509-1980.

If significant painting, steam, fire, or chemical release occurs such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign material, the same tests and sample analysis shall be performed as required for operational use. The determination of what is significant shall be made by the Vice President-TMI Unit 1.

Operation of the Auxiliary and Fuel Handling Building Exhaust Fans each month for at least ten (10) hours will demonstrate operability of the fans.

4-55c

Amendment No. ~~55, 122, 157, 179~~ 218