JUL 19 2007

L-PI-07-049
10 CFR 50.90

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

Prairie Island Nuclear Generating Plant Units 1 and 2
Dockets 50-282 and 50-306
License Nos. DPR-42 and DPR-60

License Amendment Request (LAR) Adopting Provisions of Regulatory Guide (RG) 1.52, Revision 3

Pursuant to 10 CFR 50.90, the Nuclear Management Company, LLC (NMC) hereby requests an amendment to the Technical Specifications (TS) for the Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2 to revise TS 3.6.9, "Shield Building Ventilation System (SBVS)," TS 3.7.12, "Auxiliary Building Special Ventilation System (ABSVS)," TS 3.7.13, "Spent Fuel Pool Special Ventilation System (SFPSVS)," and TS 5.5.9, Ventilation Filter Testing Program (VFTP)," to incorporate system and filter testing changes consistent with RG 1.52, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants", Revision 3. NMC has evaluated the proposed changes in accordance with 10 CFR 50.92 and concluded that they involve no significant hazards consideration.

The enclosure to this letter contains the licensee's evaluation of the proposed changes.

NMC requests approval of this LAR within one calendar year of the submittal date. Upon Nuclear Regulatory Commission (NRC) approval, NMC requests 90 days to implement the associated changes. In accordance with 10 CFR 50.91, NMC is notifying the State of Minnesota of this LAR by transmitting a copy of this letter and enclosure to the designated State Official.

If there are any questions or if additional information is needed, please contact Mr. Dale Vincent, P.E., at 1-651-388-1121.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on JUL 19 2007

Michael D. Wadley
Site Vice President, Prairie Island Nuclear Generating Plant Units 1 and 2
Nuclear Management Company, LLC

Enclosure: Evaluation of Proposed Changes

cc: Administrator, Region III, USNRC
Project Manager, Prairie Island, USNRC
Resident Inspector, Prairie Island, USNRC
State of Minnesota

ENCLOSURE

Evaluation of the Proposed Changes

License Amendment Request (LAR) Adopting Provisions of Regulatory Guide (RG) 1.52, Revision 3

ATTACHMENTS:

1. Technical Specification Pages (Markup)
2. Bases Pages (Markup) (For information only)
3. Technical Specification Pages (Retyped)

1. SUMMARY DESCRIPTION

This LAR is a request to amend Operating Licenses DPR-42 and DPR-60 for Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2.

The Nuclear Management Company, LLC (NMC) requests Nuclear Regulatory Commission (NRC) review and approval of proposed revisions to Technical Specification (TS) 3.6.9, "Shield Building Ventilation System (SBVS)," TS 3.7.12, "Auxiliary Building Special Ventilation System (ABSVS)," TS 3.7.13, "Spent Fuel Pool Special Ventilation System (SFPSVS)," and TS 5.5.9, "Ventilation Filter Testing Program (VFTP)". The proposed revisions will incorporate system and filter testing changes consistent with RG 1.52, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants", Revision 3 (RG 1.52). The Technical Specifications, with the revisions proposed in this LAR, meet applicable regulatory guidance.

2. DETAILED DESCRIPTION

2.1 Proposed Changes

Brief descriptions of the associated proposed TS changes are provided below along with discussions of the justification for each change. The specific wording changes to the TS are provided in Attachments 1 and 3 to this enclosure.

TS 3.6.9, "Shield Building Ventilation System (SBVS)": This LAR proposes to revise Surveillance Requirement (SR) 3.6.9.1 to require testing for greater than or equal to 15 minutes every 31 days. This change is acceptable because it incorporates the guidance of RG 1.52, Revision 3.

TS 3.7.12, "Auxiliary Building Special Ventilation System (ABSVS)": This LAR proposes to revise SR 3.7.12.1 to require testing for greater than or equal to 15 minutes every 31 days. This change is acceptable because it incorporates the guidance of RG 1.52, Revision 3.

TS 3.7.13, "Spent Fuel Pool Special Ventilation System (SFPSVS)": This LAR proposes to revise SR 3.7.13.1 to require testing for greater than or equal to 15 minutes every 31 days. This change is acceptable because it incorporates the guidance of RG 1.52, Revision 3.

TS 5.5.9, "Ventilation Filter Testing Program (VFTP)": This LAR proposes to revise the first paragraph of this TS to require performance of the required program testing every 24 months. This change is acceptable because it incorporates the guidance of RG 1.52, Revision 3.

Although Bases changes are not a part of this LAR, Attachment 2 to this enclosure includes marked up Bases pages for information. The changes proposed in Attachment 2 are directly related to the changes proposed to TS 3.6.9, TS 3.7.12 and TS 3.7.13.

In summary these changes are acceptable because they are consistent with current regulatory guidance.

2.2 Background

Currently the SBVS, ABSVS and SFPSVS are required by their respective TS to be operated for 10 or more continuous hours each month with the system heaters operating. These requirements were based on the original version of RG 1.52 issued in June 1973 which provided means acceptable to the NRC for demonstrating system operability.

In June 2001, the NRC issued Revision 3 of RG 1.52 which provides guidance to operate filtration systems for 15 or more minutes, with their heaters on, each month to demonstrate operability. RG 1.52 also provides guidance for performance of filter testing every 24 months.

This LAR proposes to revise the TS SRs for SBVS, ABSVS and SFPSVS to require operation for greater than or equal to 15 minutes each month with their heaters on. Operation for a longer time, such as 10 hours, may not improve system performance or provide any additional benefit for demonstrating operability. However, additional operation does require additional plant operator time and increase the run-time on the charcoal adsorber which requires more frequent charcoal testing and may require more frequent replacement of the charcoal beds. This LAR also proposes to require testing of the filters every 24 months.

With the TS changes proposed in this LAR the plant will continue to operate safely and the health and welfare of the public is protected.

3. TECHNICAL EVALUATION

PINGP is a two unit plant located on the right bank of the Mississippi River approximately 6 miles northwest of the city of Red Wing, Minnesota. The facility is owned by Northern States Power Company (NSP) and operated by NMC. Each unit at PINGP employs a two-loop pressurized water reactor designed and supplied by Westinghouse Electric Corporation. The initial PINGP application for a Construction Permit and Operating License was submitted to the Atomic Energy Commission (AEC) in April 1967. The Final Safety Analysis Report (FSAR) was submitted for application of an Operating License in January 1971. Unit 1 began commercial operation in December 1973 and Unit 2 began commercial operation in December 1974.

The PINGP was designed and constructed to comply with NSP's understanding of the intent of the AEC General Design Criteria (GDC) for Nuclear Power Plant Construction Permits, as proposed on July 10, 1967. PINGP was not licensed to NUREG-0800, "Standard Review Plan (SRP)."

System Descriptions

Shield Building Ventilation System

The SBVS is required by AEC GDC 70, "Control of Releases of Radioactivity to the Environment", to ensure that radioactive materials that leak from the primary containment into the shield building (secondary containment) following a design basis accident (DBA) are filtered and adsorbed prior to exhausting to the environment.

The containment has a secondary containment called the shield building, which is a concrete structure that surrounds the steel primary containment vessel. Between the containment vessel and the shield building inner wall is an annular space that collects a portion of the containment leakage following a loss of coolant accident (LOCA). The SBVS initiates and maintains a negative air pressure in the shield building by means of filtered exhaust ventilation of the shield building following receipt of a safety injection (SI) signal.

The SBVS consists of two separate and redundant trains. Each train includes a heater, a prefilter, moisture separators, a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section for removal of radioiodines, a recirculation fan and an exhaust fan. The prefilters remove large particles in the air, and the moisture separators remove entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Heaters are included to reduce the relative humidity of the airstream. The moisture separators function to reduce the moisture content of the airstream. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The ventilation system for each shield building includes a vent stack which penetrates the shield building dome and discharges to the atmosphere.

Auxiliary Building Special Ventilation System

The ABSVS is a standby ventilation system, common to the two PINGP units, that is designed to collect and filter air from those areas within the auxiliary building which have the potential for collecting significant containment leakage that could bypass the shield building and leakage from systems which could recirculate primary coolant during LOCA mitigation.

The ABSVS consists of two independent and redundant trains. Each train consists of a heater, a prefilter, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. The prefilters remove any large particles in the air, and with the heaters, reduce the level of entrained water droplets

present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The primary purpose of the heaters is to maintain the relative humidity at an acceptable level.

Ductwork, dampers, and instrumentation also form part of the system. The system initiates filtered ventilation of the ABSV boundary following receipt of an SI signal, high radiation signal or manual initiation. The radiation signal is not credited for accident mitigation.

Spent Fuel Pool Special Ventilation System

SFPSVS refers to that portion of the Spent Fuel Special and Containment Inservice Purge system that filters airborne radioactive particulates from the spent fuel pool enclosure following a fuel handling accident in that area. The Spent Fuel Pool Special Ventilation fans exhaust air to prefilter-absolute-charcoal filters, then to the associated Shield Building vent stack (Unit 1 for Train A; Unit 2 for Train B).

The SFPSVS consists of two independent and redundant trains, each capable of meeting the design requirements. Each train consists of a heater, a prefilter, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Heaters function to reduce the relative humidity of the airstream. Ductwork, dampers, and instrumentation also form part of the system.

The system initiates filtered ventilation of the spent fuel pool enclosure following receipt of a high radiation signal from a radiation detector located in the exhaust ducting of the spent fuel pool normal ventilation system.

The SFPSVS is a standby system. Upon receipt of the actuating signal, normal air supply to and discharge from the spent fuel pool ventilation system are isolated, and the stream of ventilation air discharges through the two SFPSVS filter trains.

Current TS Requirements and Basis

Currently SR 3.6.9.1, SR 3.7.12.1 and SR 3.7.13.1 require their filtration train to be operated for 10 or more hours every 31 days with the heaters on. TS 5.5.9 requires performance of VFTP tests each operating cycle or 18 months for shared systems.

In June 1973, the AEC issued the original version of RG 1.52 which was the first guide issued for air cleaning systems in nuclear power plants. At that time, the design, construction and licensing the of the PINGP units was substantially complete. The original TS issued for PINGP did not include specific requirements for ventilation system heater testing for the SBVS, ABSVS and SFPSVS.

By letter dated January 8, 1975, the AEC requested the PINGP licensee to submit proposed TS for SBVS, ABSVS and SFPSVS consistent with the guidance of RG 1.52, issued June 1973. The NRC issued license amendments 17 and 11, for Units 1 and 2

respectively, on October 14, 1976 which introduced requirements in the PINGP TS to operate each safeguards filtration train for 10 or more hours every month with the heaters on. These requirements have remained substantively unchanged since that time.

The original plant TS did include filter testing which over time became scattered in various locations in the TS. The conversion to ITS consolidated all of the filter testing requirements into TS 5.5.9 which requires performance of the VFTP testing each operating cycle or 18 months for shared systems.

Proposed Changes

This LAR proposes TS changes which will require the SBVS, ABSVS and SFPSVS filtration trains to be operated for 15 or more minutes every 31 days with the heaters on. These changes are shown in Attachments 1 and 3 to this Enclosure. Enclosure 2 provides the associated Bases marked up to show directly related changes. The Bases changes are provided for information only.

This LAR also proposes to require VFTP testing to be performed every 24 months.

Technical Basis for Change

The current TS requirements for operating the safeguards trains monthly with the heaters on were based on the original issuance of RG 1.52, issued June 1973. In June 2001, the NRC issued RG 1.52, Revision 3 which revised the guidance for many of the ventilation system tests. This LAR proposes changes to SBVS, ABSVS and SFPSVS TS required testing which is consistent with RG 1.52, Revision 3, Section C, Regulatory Position 6.1 which states, "Each ESF atmosphere cleanup train should be operated continuously for at least 15 minutes each month, with the heaters on (if so equipped), to justify the operability of the system and all its components."

In their Value/Impact Statement published October 2000 with the draft of RG 1.52, Revision 3 (Reference 1), the NRC concluded that:

> The guide [RG 1.52, Revision 3] would be useful to industry because it would notify them in a consistent manner of changes in ESF filter system testing and inspection provisions and would thus promote understanding of current NRC positions and prevent any unnecessary costs being applied to meet a provision no longer recommended by the NRC staff. None of the changes is expected to impose significant additional burdens on applicants or licensees. Some of the changes may relax certain guide positions but without compromise to safety, thereby reducing cost and effort. There would be no costs associated with the revised positions related to testing and inspection of new and used charcoal because the revised positions are in accordance with GL 99-02.

This LAR proposes to revise the PINGP TS to "prevent any unnecessary costs being

applied to meet a provision no longer recommended by the NRC staff"; specifically the monthly system testing will be reduced from 10 hours to 15 minutes. As discussed below, testing the heaters for 15 minutes is sufficient to verify that the safety function of the heaters is met and, thus, these changes do not reduce the safety of these systems. Note that the "revised positions related to testing and inspection of new and used charcoal" referred to the Value/Impact Statement quoted above were incorporated into the PINGP TS by license amendments 158 and 161 for Unit 1, and 149 and 152 for Unit 2.

The SBVS and ABSVS heaters were designed to be capable of increasing the temperature of the incoming air with 100% saturation by a sufficient amount to assure a 70% relative humidity of the air entering the charcoal bed. According to the PINGP Updated Safety Analysis Report (USAR), Section 10.3.4.2.3, relating to the ABSVS, "The heating coil is designed to dry incoming air at 100% saturation by increasing the temperature of the air entering the charcoal bed. The air is then dry enough to support the charcoal adsorber iodine removal efficiency requirements." (A similar statement is made in USAR Section 5.3.2.1 for the SBVS.) This statement demonstrates that the safety function of the heater is to dry the air through heating rather than dry the charcoal filter bed as implied by RG 1.52, Revision 2, Section C, Regulatory Position 4.i and current Bases statements. Operation of the heaters for 10 hours may temporarily dry the charcoal bed, but this is not effective since ambient humidity will likely return to the charcoal bed following conclusion of the test.

License amendments 166/156 approved alternate source term (AST) methodology for fuel handling accidents at PINGP. The AST fuel handling accident analyses do not credit filtration by the SFPSVS or holdup of radioactive releases following a fuel handling accident; therefore, the design function of the SFPSVS filtration train heaters is not discussed in the USAR. Although the FSAR and USAR do not state the design basis for the SFPSVS filter heaters, it is reasonable to assume that they have the same function as the SBVS and ABSVS filter heaters since the design is similar.

Since the safety function of the filter heaters is to heat the incoming air, the current TS SRs do not serve a valid regulatory function. Title 10 Code of Federal Regulations 50.36 (10 CFR 50.36) requires testing to assure that the necessary quality of systems and components are maintained and that the TS Limiting Conditions for Operation (LCO) will be met. Operation of these safeguards filtration trains for 15 minutes with the heaters on is sufficient to demonstrate that the heaters perform their safety function, that is, heat the air, and thus meets the requirements of 10 CFR 50.36. Operation of the system for an additional 9 hours and 45 minutes to dry the filter beds is not necessary to meet the requirements of 10 CFR 50.36.

Current TS 5.5.9 requires safeguards filter testing each operating cycle or 18 months for shared systems which is similar to the guidance of RG 1.52, Revision 2, Section C, Regulatory Position 5.c which states, "HEPA filters sections should be tested in place (1) initially, (2) at least once per 18 months thereafter . . .", and Regulatory Position 5.d which states, "Adsorber leak testing should be conducted (1) initially, (2) at least once

per 18 months thereafter . . ." RG 1.52, Revision 3, Section C, Regulatory Position 6.3 provides filter testing schedular guidance as follows, "In-place aerosol leak tests for HEPA filter upstream from the carbon adsorbers in ESF atmosphere cleanup systems should be performed . . . at least once each 24 months . . .", and C 6.4 provides the following schedular guidance, "In-place leak testing for adsorbers should be performed . . . at least once each 24 months . . ." This LAR proposes to revise TS 5.5.9 to require program testing each 24 months to be consistent with RG 1.52, Revision 3.

A Frequency of 24 months is a reasonable time period to perform filter testing. There is no reason to tie this testing to a refueling cycle since in-place testing for SBVS and ABSVS must be performed during plant operating conditions and SFPSVS testing may be performed during plant operating conditions.

The 24-month Frequency proposed in this LAR will be the maximum time between scheduled tests. TS 5.5.9 concludes with the statement, "The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test Frequencies." The PINGP TS SR 3.0.2 includes the unique limitation, "The specified Frequency is met for each SR with a specified Frequency of 24 months if the Surveillance is performed within 24 months . . ." Thus the reference to SR 3.0.2 in TS 5.5.9 does not allow scheduling these tests specified as 24 months for any interval beyond 24 months.

Furthermore, these tests may be performed more frequently due to contingency tests required by the VFTP. For example, the VFTP requires filter testing after every 720 hours of system operation or following painting, fire or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.

The TS changes proposed in this LAR will reduce the burden on plant operators and reduce plant operating costs. Reference 1 characterized these changes as relaxations of previous guidance but "without compromise to safety, thereby reducing cost and effort". Removal of unnecessary ventilation system testing requirements and extension of filter testing Frequencies may improve plant safety by freeing the operators to perform other, more safety significant activities.

Conclusions

This LAR proposes TS changes which reduce safeguards ventilation system testing requirements and extend the Frequency for filter testing. These changes are consistent with the guidance of the NRC-issued Regulatory Guide 1.52, Revision 3. These changes will reduce the burden on plant operations associated with testing the safeguards ventilation systems. Operation and maintenance of the Prairie Island Nuclear Generating Plant with the proposed TS revisions will continue to protect the health and safety of the public.

4. REGULATORY SAFETY ANALYSIS

4.1 Applicable Regulatory Requirements/Criteria

Title 10 Code of Federal Regulations 50.36, "Technical specifications":

> (c) Technical specifications will include items in the following categories:
>
> 3) *Surveillance requirements*. Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

This license amendment request proposes changes to Surveillance Requirements for the Shield Building Ventilation System, Auxiliary Building Special Ventilation System, and Spent Fuel Pool Special Ventilation System which revise the required run-time for the filter heaters. This license amendment request also proposes to revise the Frequency for performance of filter tests for these systems and the Control Room Special Ventilation System. With these changes, the Technical Specifications will continue to assure that the necessary quality of these systems and their components is maintained and the limiting conditions for operation of these systems will continue to be met.

Thus with the changes proposed in this license amendment request, the requirements of Title 10 Code of Federal Regulations 50.36 continue to be met.

General Design Criteria

The construction of the Prairie Island Nuclear Generating Plant was significantly complete prior to issuance of 10 CFR 50, Appendix A, General Design Criteria. The Prairie Island Nuclear Generating Plant was designed and constructed to comply with the Atomic Energy Commission General Design Criteria as proposed on July 10, 1967 (AEC GDC) as described in the plant Updated Safety Analysis Report. AEC GDC proposed Criterion 70 provides design guidance for the operating capability of systems to control gaseous radioactive effluents.

> AEC GDC Criterion 70 – Control of Releases of Radioactivity to the Environment
>
> The facility design shall include those means necessary to maintain control over the plant radioactive effluents, whether gaseous, liquid, or solid. Appropriate holdup capacity shall be provided for retention of gaseous, liquid, or solid effluents, particularly where unfavorable environmental conditions can be expected to require operational limitations upon the release of radioactive effluents to the environment. In all cases, the design for radioactivity control shall be justified (a) on the basis of 10CFR20 requirements for normal operations and

for any transient situation that might reasonably be anticipated to occur and (b) on the basis of 10 CFR 100 dosage level guidelines for potential reactor accidents of exceeding low probability of occurrence except that reduction of the recommended dosage levels may be required where high population densities of very large cities can be affected by the radioactive effluents.

The Shield Building Ventilation, Auxiliary Building Special Ventilation, Spent Fuel Pool Special Ventilation, and Control Room Special Ventilation systems were designed to control releases on the basis of 10 CFR 100 dosage levels. This license amendment request proposes changes to Surveillance Requirements for these systems which will continue to demonstrate that these systems are operable and capable of performing their design function. These changes do not affect system performance and thus do not affect the ability of these systems to maintain control over plant gaseous radioactive releases.

Regulatory Guide 1.52, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants", Revision 3

Regulatory Guide 1.52, Revision 3 describes methods acceptable to the NRC Staff for implementing the requirements of NRC regulations with respect to the safeguards ventilation systems. The Prairie Island Nuclear Generating Plant Technical Specifications are currently consistent with previous revisions of this Regulatory Guide. This license amendment request proposes to update the Technical Specifications to be consistent with Revision 3 with respect to testing requirements for systems with heaters and the Frequency of filter testing.

With these changes, the safeguards ventilation system testing with heaters operating and the filter testing Frequency meet the guidance of Regulatory Guide 1.52, Revision 3.

4.2 Precedent

The Nuclear Management Company is not aware of precedent for revising plant Technical Specifications to incorporate the revisions to Regulatory Guide 1.52, Revision 3.

4.3 Significant Hazards Consideration

The Nuclear Management Company 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 amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

This license amendment request proposes changes to Surveillance Requirements for the Shield Building Ventilation System, Auxiliary Building Special Ventilation System, and Spent Fuel Pool Special Ventilation System which revise the required system run-time with their filter heaters on. This license amendment request also proposes to revise the Frequency for performance of filter tests for these systems and the Control Room Special Ventilation System.

These systems are not accident initiators and therefore, these changes do not involve a significant increase in the probability of an accident. The proposed system and filter testing changes are consistent with current regulatory guidance for these systems and will continue to assure that these systems perform their design function. Thus these changes do not involve a significant increase in the consequences of an accident.

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

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

Response: No

This license amendment request proposes changes to Surveillance Requirements for the Shield Building Ventilation System, Auxiliary Building Special Ventilation System, and Spent Fuel Pool Special Ventilation System which revise the required system run-time with their filter heaters on. This license amendment request also proposes to revise the Frequency for performance of filter tests for these systems and the Control Room Special Ventilation System.

The changes proposed for these safeguards ventilation systems do not change any system operations or maintenance activities. Testing requirements will be revised and will continue to demonstrate that the Limiting Conditions for Operation are met and the system components are functional. These changes do not create new failure modes or mechanisms and no new accident precursors are generated.

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

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

This license amendment request proposes changes to Surveillance Requirements for the Shield Building Ventilation System, Auxiliary Building Special Ventilation System, and Spent Fuel Pool Special Ventilation System which revise the required system run-time with their filter heaters on. This license amendment request also proposes to revise the Frequency for performance of filter tests for these systems and the Control Room Special Ventilation System.

The design basis for the safeguards ventilation systems' heaters is to heat the incoming air which reduces the relative humidity. The heater testing changes proposed in this license amendment request will continue to demonstrate that the heaters are capable of heating the air, will perform their design function and are consistent with regulatory guidance, and thus these changes do not involve a significant reduction in a margin of safety. Periodic testing of the safeguards ventilation systems' filters is required to demonstrate that the filters perform their design function. The Frequency for performance of these filter tests proposed in this license amendment request will continue to demonstrate that the filters perform their intended function, is consistent with regulatory guidance and thus does not involve a significant reduction in a margin of safety.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, the Nuclear Management Company concludes that the proposed amendment does not involve a 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.

4.4 Conclusions

In conclusion, based on the considerations discussed in 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.

5. 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 criterion 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.

6. REFERENCES

1. Value/Impact Statement attached to Draft Regulatory Guide DG-1102 (Proposed Revision 3 to Regulatory Guide 1.52), issued October 2000, DG-1102 Accession No. ML003756180.

ENCLOSURE, ATTACHMENT 1

Technical Specification Pages (Markup)

3.6.9-1
3.7.12-2
3.7.13-2
5.0-23

4 pages follow

3.6 CONTAINMENT SYSTEMS

3.6.9 Shield Building Ventilation System (SBVS)

LCO 3.6.9 Two SBVS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SBVS train inoperable.	A.1 Restore SBVS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.9.1	Operate each SBVS train for ≥ 15 minutes~~10 continuous hours~~ with heaters operating.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each ABSVS train for ≥ 15 minutes~~10 hours~~ with the heaters operating.	31 days
SR 3.7.12.2	Perform required ABSVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.12.3	Verify each ABSVS train can produce a negative pressure within 6 minutes after initiation.	92 days
SR 3.7.12.4	Verify each ABSVS train actuates on an actual or simulated actuation signal.	24 months

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Both SFPSVS trains inoperable.	C.1 Suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each SFPSVS train for ≥ 15 minutes~~10 hours~~ with the heaters operating.	31 days
SR 3.7.13.2	Perform required SFPSVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each SFPSVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.13.4	Verify the SFPSVS fan in each train delivers 4680 to 5720 cfm.	24 months on a STAGGERED TEST BASIS

5.5 Programs and Manuals (continued)

5.5.9 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of the Control Room Special Ventilation System (CRSVS), Auxiliary Building Special Ventilation System (ABSVS), Shield Building Ventilation System (SBVS), and the Spent Fuel Pool Special and Inservice Purge Ventilation System (SFPSIPVS) at least once each 24 ~~operating cycle (18~~ months ~~for shared systems)~~.

Demonstrate for the ABSVS, SBVS, CRSVS, and SFPSIPVS systems that:

a. An inplace DOP test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% (for DOP, particles having a mean diameter of 0.7 microns);

b. A halogenated hydrocarbon test of the inplace charcoal adsorber shows a penetration and system bypass < 0.05%;

c. A laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than: 1) 15% penetration for ABSVS, 2) 15% penetration for SBVS, 3) 7.5% penetration for the SFPSIPVS, and 4) 2.5% penetration for the CRSVS when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and 95% relative humidity (RH);

d. The pressure drop across the combined HEPA filters and the charcoal adsorbers is less than 6 inches of water at the system flowrate ± 10%; and

e. A laboratory test of a sample of the charcoal adsorber shall have filter test face velocities greater than or equal to the following values for each system: 1) 54 fpm for the CRSVS, 2) 72 fpm for the ABSVS, 3) 47 fpm for the SBVS, and 4) 47 fpm for the SFPSIPVS.

ENCLOSURE, ATTACHMENT 2

Bases Pages (Markup)

(For Information Only)

B 3.6.9-2
B 3.6.9-4
B 3.7.12-5
B 3.7.13-2
B 3.7.13-5

5 pages follow

BASES

BACKGROUND (continued)

system initiates and maintains a negative air pressure in the shield building by means of filtered exhaust ventilation of the shield building following receipt of a safety injection (SI) signal. The system is described in Reference 2.

The prefilters remove large particles in the air, and the moisture separators remove entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Heaters are included to reduce the relative humidity of the airstream. ~~Continuous operation of each train, for at least 10 hours per month, with heaters on, reduces moisture buildup on their HEPA filters and adsorbers.~~

The SBVS reduces the radioactive content in the shield building atmosphere following a DBA. Loss of the SBVS could cause site boundary doses, in the event of a DBA, to exceed the values given in the licensing basis.

APPLICABLE SAFETY ANALYSES

The SBVS design basis is established by the consequences of the limiting DBA, which is a LOCA. The accident analysis (Ref. 3) assumes that only one train of the SBVS is functional due to a single failure that disables the other train. The accident analysis accounts for the reduction in airborne radioactive material provided by the remaining one train of this filtration system. The amount of fission products available for release from containment is determined for a LOCA.

The modeled SBVS actuation in the safety analyses is based upon a worst case response time following an SI initiated at the limiting setpoint. The total response time, from accident initiation to attaining a negative pressure in the shield building, is less than 4.5 minutes. This response time bounds the signal delay, diesel generator startup and sequencing time, system startup time, and time for the system to attain the required pressure after starting.

The SBVS satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

BASES (continued)

ACTIONS

A.1

With one SBVS train inoperable, the inoperable train must be restored to OPERABLE status within 7 days. In this degraded condition, the remaining components are capable of providing 100% of the iodine removal needs after a DBA. The 7 day Completion Time is based on consideration of such factors as the availability of the OPERABLE redundant SBVS train and the low probability of a DBA occurring during this period. The Completion Time is adequate to make most repairs.

B.1 and B.2

If the SBVS train cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.9.1

Operation with the heaters on ~~(automatic heater cycling to maintain temperature)~~ for ≥ 15 minutes demonstrates operability of the system~~10 continuous hours eliminates moisture on the adsorbers and HEPA filters. Experience from filter testing indicates that the 10 hour period is adequate for moisture elimination on the adsorbers and HEPA filters.~~ Periodic operation also ensures that blockage, fan or motor failure, or excessive vibration can be detected for corrective action. The 31 day Frequency was developed in consideration of the known reliability of fan motors and controls, the two train redundancy available, and the iodine removal capability of the Containment Spray System.

BASES

ACTIONS (continued)

C.1 and C.2

If an ABSVS train cannot be restored to OPERABLE status or the ABSV boundary cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply.

To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.12.1

This SR verifies that each ABSVS train can be manually started~~,~~ and the associated filter heater energizes~~, and the filter units remain sufficiently dried out to ensure they can perform their function~~.

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not severe, testing each train once a month provides an adequate check on this system. ~~Monthly heater operations, with air circulation through the filter, dries out any moisture that may have accumulated in the charcoal from humidity in the ambient air.~~ Each ABSVS train must be operated ≥ 15 minutes~~10 hours~~ per month with the heaters energized. The 31 day Frequency is based on the known reliability of equipment and the two train redundancy available.

BASES

BACKGROUND (continued)

The SFPSVS is a standby system. Upon receipt of the actuating signal, normal air supply to and discharge from the spent fuel pool ventilation system are isolated, and the stream of ventilation air discharges through the two SFPSVS filter trains. The prefilters remove any large particles in the air~~, and the heaters remove any entrained water droplets present,~~ to prevent excessive loading of the HEPA filters and charcoal adsorbers. The SFPSVS is discussed in the USAR (Refs. 1, 2, and 3).

APPLICABLE SAFETY ANALYSES

The SFPSVS design basis is established by the consequences of the limiting Design Basis Accident (DBA), a fuel handling accident (FHA) in the spent fuel pool enclosure. LCO 3.9.4, "Containment Penetrations," separately addresses a fuel handling accident in containment.

The analysis of the fuel handling accident, given in Reference 3, assumes that all fuel rods in an assembly are damaged. The DBA analysis of the fuel handling accident assumes that only one train of the SFPSVS is functional due to a single failure that disables the other train. The accident analysis accounts for the reduction in airborne radioactive material provided by the one remaining train of this filtration system. The amount of fission products available for release from the spent fuel pool enclosure is determined for a fuel handling accident. These assumptions and the analysis follow the guidance provided in Regulatory Guide 1.25 (Ref. 4).

The SFPSVS satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Two independent and redundant trains of the SFPSVS are required to be OPERABLE to ensure that at least one train is available, assuming a single failure disables the other train. This OPERABILITY requirement ensures that the atmospheric release

BASES

ACTIONS (continued)

C.1

When two trains of the SFPSVS are inoperable during movement of irradiated fuel assemblies in the spent fuel pool enclosure, action must be taken immediately to suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure. This does not preclude the movement of fuel to a safe position.

SURVEILLANCE REQUIREMENTS

SR 3.7.13.1

This SR verifies that each SFPSVS train can be started, and that the associated filter units and heaters can perform their function.

Standby systems should be checked periodically to ensure that they function properly. As the environmental and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system.

~~Monthly heater operation dries out any moisture accumulated in the charcoal from humidity in the ambient air.~~ Each SFPSVS train must be operated with heaters energized for ≥ 15 minutes~~10 hours~~. The 31 day Frequency is based on the known reliability of the equipment and the two train redundancy available.

SR 3.7.13.2

This SR verifies that the required SFPSVS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP).

The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations).

ENCLOSURE, ATTACHMENT 3

Technical Specification Pages (Retyped)

3.6.9-1
3.7.12-2
3.7.13-2
5.0-23

4 pages follow

3.6 CONTAINMENT SYSTEMS

3.6.9 Shield Building Ventilation System (SBVS)

LCO 3.6.9 Two SBVS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SBVS train inoperable.	A.1 Restore SBVS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.9.1	Operate each SBVS train for $\geq$ 15 minutes with heaters operating.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each ABSVS train for $\geq$ 15 minutes with the heaters operating.	31 days
SR 3.7.12.2	Perform required ABSVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.12.3	Verify each ABSVS train can produce a negative pressure within 6 minutes after initiation.	92 days
SR 3.7.12.4	Verify each ABSVS train actuates on an actual or simulated actuation signal.	24 months

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Both SFPSVS trains inoperable.	C.1 Suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each SFPSVS train for $\geq$ 15 minutes with the heaters operating.	31 days
SR 3.7.13.2	Perform required SFPSVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each SFPSVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.13.4	Verify the SFPSVS fan in each train delivers 4680 to 5720 cfm.	24 months on a STAGGERED TEST BASIS

5.5 Programs and Manuals (continued)

5.5.9 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of the Control Room Special Ventilation System (CRSVS), Auxiliary Building Special Ventilation System (ABSVS), Shield Building Ventilation System (SBVS), and the Spent Fuel Pool Special and Inservice Purge Ventilation System (SFPSIPVS) at least once each 24 months.

Demonstrate for the ABSVS, SBVS, CRSVS, and SFPSIPVS systems that:

a. An inplace DOP test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% (for DOP, particles having a mean diameter of 0.7 microns);

b. A halogenated hydrocarbon test of the inplace charcoal adsorber shows a penetration and system bypass < 0.05%;

c. A laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than: 1) 15% penetration for ABSVS, 2) 15% penetration for SBVS, 3) 7.5% penetration for the SFPSIPVS, and 4) 2.5% penetration for the CRSVS when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and 95% relative humidity (RH);

d. The pressure drop across the combined HEPA filters and the charcoal adsorbers is less than 6 inches of water at the system flowrate $\pm$ 10%; and

e. A laboratory test of a sample of the charcoal adsorber shall have filter test face velocities greater than or equal to the following values for each system: 1) 54 fpm for the CRSVS, 2) 72 fpm for the ABSVS, 3) 47 fpm for the SBVS, and 4) 47 fpm for the SFPSIPVS.