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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) to Revise Containment Spray Nozzle Surveillance Requirements (SR)

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 replace the current fixed Frequency for testing the containment spray nozzles in SR 3.6.5.8 with a maintenance or event based Frequency. 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.

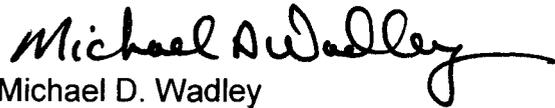
NMC requests approval of this LAR within one calendar year of the submittal date. Upon NRC approval, NMC requests 90 days to implement the associated changes. In accordance with 10 CFR 50.91, NMC is notifying the State of Minnesota of this LAR by transmitting a copy of this letter and enclosure to the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

If there are any questions or if additional information is needed, please contact Mr. Dale Vincent, P.E., at 651-388-1121, extension 4107.

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 **NOV 19 2007**

A handwritten signature in black ink that reads "Michael D. Wadley". The signature is written in a cursive style with a long horizontal flourish extending to the right.

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) to Revise Containment Spray Nozzle Surveillance Requirements (SR)

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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) 3.6.5, "Containment Spray and Cooling Systems", which will replace the current fixed Frequency for testing the containment spray nozzles in SR 3.6.5.8 with a maintenance or event based Frequency.

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 3.6.5, "Containment Spray and Cooling Systems": This LAR proposes to revise the 10-year Frequency for performance of SR 3.6.5.8 to require verification following maintenance which could result in nozzle blockage. This change is acceptable because nozzle blockage is considered unlikely during periods without maintenance since the nozzles are passive components, the spray header portion of the containment spray system is dry, and the materials of construction are corrosion resistant. Foreign material introduced as a result of maintenance is the most likely cause for obstruction; therefore, verification during and following such maintenance would suffice to assure no material is introduced that could cause nozzle blockage.

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 3.6.5.

2.2 Background

Currently SR 3.6.5.8 requires verification every 10 years that the containment spray nozzles are unobstructed. The NRC has recognized that nozzle flow testing at this frequency is not necessary due to the design of the system. In the development of NUREG-1366 (Reference 1), the NRC found that problems in pressurized water reactor containment spray systems were construction related, that is, nozzle blockage is considered unlikely, except as a consequence of maintenance or repair. Recently, in response to these conclusions, many nuclear power plants have requested, and the NRC has granted, license amendments which revise their containment spray nozzles

surveillance Frequency to “following maintenance which could result in nozzle blockage”. Some of these plants are identified below in the discussion of precedents.

The PINGP Units 1 and 2 containment spray nozzles were last verified to be unobstructed in February 2001 and May 2000 respectively. This LAR is submitted to revise SR 3.6.5.8 requirements prior to the next required verification.

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).”

Containment Spray Description

The containment spray system provides containment atmosphere cooling to limit post accident pressure and temperature in containment to less than the design values. Containment pressure reduction and the iodine removal capability of the spray reduce the release of fission product radioactivity from containment to the environment, in the event of a design basis accident (DBA), to within limits.

The containment spray system consists of two separate trains of equal capacity, each capable of meeting the design bases. Each train includes a containment spray pump, spray headers in the upper region of containment, nozzles, valves, and piping. Piping which may be contact with borated water is austenitic stainless steel. The containment spray system is maintained closed during normal operation to provide containment isolation. Each train is powered from a separate Engineered Safety Features (ESF) bus.

The containment spray system provides a spray of borated water mixed with sodium hydroxide (NaOH) from the spray additive tank into the upper regions of containment to

reduce the containment pressure and temperature and to remove fission products from the containment atmosphere during a DBA. Each train of the containment spray system provides adequate spray coverage to provide 100% of the containment spray system design requirements for containment heat removal.

The containment spray system is actuated either automatically by a containment High-High pressure signal or manually. An automatic actuation signal opens the containment spray pump discharge valves, opens the spray additive system valves, starts the two containment spray pumps, and begins injection. A manual actuation of the Containment Spray System requires the operator to simultaneously actuate two separate switches on the main control board to begin the same sequence. The spray injection continues until containment pressure is reduced to less than 20 psig or a refueling water storage tank (RWST) level Low-Low alarm is received. When one of these conditions is reached, containment spray is manually terminated and does not operate during the DBA recirculation phase.

The containment spray nozzles are SPRACO Type-1713 with the ramp bottom design. The spray nozzles are stainless steel, have a 3/8 inch diameter orifice and are not subject to clogging by particles less than 1/4 inch in maximum dimension. The nozzles are connected to four 360 degrees ring headers with two ring headers per train and 84 nozzles per train (42 on each ring header). The nozzles and headers are so oriented as to ensure adequate coverage of the containment volume.

The containment spray nozzles air flow tests were conducted on Unit 1 in 1978, 1982, 1988, 1992 and 2001 as required by the plant TS; likewise, air flow tests were conducted on Unit 2 in 1978, 1984, 1989 and 2000. All tests were acceptable and no tests indicated any plugged nozzles.

Anecdotal accounts indicate there may have been an inadvertent containment spray pump actuation in 1974 during Unit 1 startup activities. The pump was reported to have been secured before containment was sprayed down and the system was subsequently flushed, cleaned and tested to verify the system was free of obstructions. As noted above, five surveillance tests have been performed as required by TS which demonstrated that the nozzles are not plugged.

The probability of foreign material (FM) intrusion into the containment spray headers and nozzles is very low. System configuration is such that introduction of foreign material through the nozzles is highly unlikely. Any FM introduced into the system at low elevations would have to migrate through over 150 feet of large bore vertical piping before reaching the ring headers. A review of maintenance records reveals that there has been no maintenance or modifications on any of the spray headers or spray rings above the containment isolation check valves since the last nozzle test air flow test.

There have been system maintenance or modifications on each unit's containment spray system since the last surveillance of the spray nozzles. In the Fall 2004 Unit 1 refueling outage and the Spring 2005 Unit 2 refueling outage, the containment spray

system was modified to allow full flow pump recirculation. Following completion of the Unit 1 modification installation activities, a local leakage rate test (LLRT) in accordance with the requirements of TS 5.5.14 was conducted on the containment isolation valves in each containment spray penetration. The LLRT for one penetration failed due to FM in a check valve which was traced to the containment spray piping modification. Subsequent to this discovery, the FM was removed from the containment spray system and the foreign material exclusion (FME) program was revised to correct deficiencies. There was no opportunity for FM to be carried to the spray nozzles because the valve which prevents containment spray flow to the nozzles remained closed during the time that FM was in the system. No FME issues were identified following installation of the full flow recirculation modifications on the Unit 2 containment spray system.

Current TS Requirements, Basis and Limitations

SR 3.6.5.8 requires verification every 10 years that each containment spray nozzle is unobstructed. This verification may be performed by blowing air or smoke through the nozzles. License Amendments 116 (Unit 1) and 109 (Unit 2), issued March 10, 1995 (Reference 2), revised the Frequency for this SR from 5 years to 10 years. This change was based on the guidance provided in Generic Letter (GL) 93-05 (Reference 3) which was based on the NRC staff findings and recommendations stated in NUREG-1366 (Reference 1).

The risks and costs associated with performance of this test are not commensurate with the safety benefit of performing the test unless there has been an activity which may have resulted in the introduction of material into the piping that may lead to nozzle blockage. The containment spray nozzles are located high in the containment. Access to the nozzles, to verify the required air or smoke flow, is difficult and presents personnel safety hazards. The costs of performing the air/smoke flow test are high, since performance of the test may delay critical-path refueling outage activities. These risks and costs are unwarranted given the very low risk of nozzle obstruction.

Proposed Changes

This LAR proposes to revise SR 3.6.5.8 to require verification that each spray nozzle is unobstructed following maintenance which could result in nozzle blockage.

Technical Basis for Change

Existing SR 3.6.5.8 requires verification that the containment spray system nozzles are unobstructed at least once per 10 years which is demonstrated by performing an air or smoke test through each spray header and verifying that each spray nozzle is unobstructed. The requested revision would change the surveillance frequency to require verification that the nozzles are unobstructed only after a maintenance activity which could result in nozzle blockage.

Due to the reasons discussed below, nozzle blockage is considered unlikely during normal operations.

The nozzles and piping of the containment spray system are made of corrosion resistant materials (stainless steel). The piping at the containment spray headers elevation and the nozzles are kept dry, due to the height difference with the RWST, the suction source of the containment spray pumps. Therefore, degradation of the spray nozzles is not expected.

Blockage of the spray headers and nozzles due to solid boron accumulation is unlikely. The spray lines within containment may be filled with borated water up to 770 feet elevation which is below the elevation where water would enter the spray headers and nozzles (elevation 868 feet). This assures that the spray nozzles remain dry. The water level of 770 feet cannot be exceeded during normal (pumps not operating) operation because the highest elevation of the suction source, the RWST, is 770 feet elevation. During containment spray pump testing, the spray headers and nozzles are isolated by the containment spray pump discharge manual isolation valve and thus are not subject to flow from the containment spray system during pump testing activities.

NRC GL 93-05 (Reference 3), described a problem at San Onofre Nuclear Generating Station, Unit 1, that was caused because sodium silicate, a coating material applied to the containment spray system carbon steel piping, clogged seven nozzles. The PINGP containment spray system piping and nozzles are stainless steel and are not coated. Therefore, the GL 93-05 concern is not applicable to PINGP.

The nozzles are located near the top of the containment dome and therefore, introduction of FM from the exterior to the system is unlikely.

The frequency of this testing was established in NUREG-1366 (Reference 1) and NUREG-1431, "Standard Technical Specifications, Westinghouse Plants". In developing NUREG-1366 (Reference 1), NRC staff studied industry experience regarding problems revealed by means of this testing and found that the only problems in pressurized water reactor containment spray systems were those associated with construction activities. The containment spray nozzles were tested satisfactorily in the initial plant pre-operation test and 9 subsequent tests (five tests on Unit 1 and four tests on Unit 2). These tests have shown that the nozzles have unobstructed flow demonstrating that problems from original plant construction as identified in NUREG-1366 do not exist at PINGP.

NMC utilizes a foreign material exclusion (FME) program at PINGP for: a) preventing foreign material from entering a structure, system or component (SSC); b) inspecting SSCs for cleanliness immediately prior to closure, if the work may have introduced foreign material; and c) cleaning fluid systems and associated components that have been opened for maintenance or modification prior to closure. When maintenance or repairs are performed on the containment spray system, or other connected systems

that could result in obstruction of the spray nozzles, the FME program is expected to ensure that system cleanliness is maintained. Workers are required to report entry of FM into the containment spray system and obtain assistance in removing the foreign material. If FM exclusion is not maintained, the condition is entered in the NMC corrective action program which requires assessment of the circumstances and implementation of appropriate corrective actions. This will ensure the containment spray nozzles remain operable after maintenance.

These administrative controls are considered to be sufficient to assure FM is excluded from open systems and components during maintenance and maintenance activities. Therefore, the FME Program provides adequate assurance that debris or FM would not be left in the containment spray system that could significantly reduce the system's ability to perform its intended safety function. These FME controls are in place any time the containment spray system is opened for maintenance or testing.

A review of the containment spray system maintenance and modification history indicates that a number of work orders and modifications have been implemented on the containment spray system since the last air flow test including installation of containment spray pump full flow recirculation capability on both units. FME control was lost during the Unit 1 modification activities. As a result of this event, FME program changes were implemented to further assure that FME control will be maintained during modification and maintenance activities. Subsequent Unit 2 containment spray pump full recirculation modification activities did not result in loss of FME controls. Cleanliness control and FME practices, including post-work inspections, ensure that system cleanliness requirements are met. If maintenance activities or unanticipated circumstances result in concerns that the containment spray headers may become obstructed, performance of the spray nozzle flow test or a visual inspection would be required by the revised SR to verify system operability.

Conclusions

This license amendment request proposes revising the containment spray nozzle surveillance to require verification that the nozzles are unobstructed following maintenance which could result in nozzle blockage. The containment spray system was demonstrated to be operable prior to initial plant startup, nine successful air or smoke tests have been performed, and the design of the system minimizes the likelihood of corrosion or degradation. Industry experience indicates that maintenance activities are the most likely cause of nozzles blockage. NMC utilizes an FME program during containment spray system maintenance or modifications which require opening the system. FME control was lost during Unit 1 system modification activities which were corrected without compromising nozzle cleanliness and resulted in improvements to the FME program. The surveillance requirement proposed by this license amendment requires verification of nozzle operability if maintenance or modification activities could have resulted in nozzle obstruction. 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 (CFR) 50.36, "Technical specifications"

Title 10 CFR 50.36 states:

(d) 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 to replace the current fixed Frequency for verifying the containment spray nozzles are unobstructed with a maintenance or event based Frequency. With these changes, the Technical Specifications will continue to assure that the necessary quality of this system and its components is maintained and the limiting conditions for operation of this system will continue to be met.

Thus with the changes proposed in this license amendment request, the requirements of Title 10 CFR 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. Bases 3.6.5 and Updated Safety Analysis Report Section 1.5 discuss the AEC GDC proposed Criteria which provide design guidance for the operating and testing capability of the containment spray system. Table 1 below lists these AEC GDC and indicates which ones are applicable to this license amendment request.

**Table 1
AEC GDC Applicable to Containment Spray System**

AEC GDC No.	Title	Applicable to this Amendment
37	Engineered Safety Features Basis for Design	No
38	Reliability and Testing of Engineered Safety Features	Yes

AEC GDC No.	Title	Applicable to this Amendment
41	Engineered Safety Features Performance Capability	No
42	Engineered Safety Features Components Capability	No
49	Containment Design Basis	No
52	Containment Heat Removal Systems	No
58	Inspection of Containment Pressure-Reducing Systems	No
59	Testing of Containment Pressure-Reducing Systems	No
60	Testing of Containment Spray Systems	Yes
61	Testing of Operational Sequence of Containment Pressure-Reducing Systems	No

The impact of the surveillance requirement changes proposed in this submittal, on the AEC GDC applicable to this license amendment request, is discussed as follows:

Criterion 38 -Reliability And Testability Of Engineered Safety Features

All engineered safety features shall be designed to provide high functional reliability and ready testability. In determining the suitability of a facility for proposed site, the degree of reliance upon and acceptance of the inherent and engineered safety afforded by the systems, including engineered safety features, will be influenced by the known and the demonstrated performance capability and reliability of the systems, and by the extent to which the operability of such systems can be tested and inspected where appropriate during the life of the plant.

With the surveillance requirement changes proposed in this license amendment request, the containment spray system will continue to be a reliable system and the system will also continue to be tested and inspected as appropriate during the life of the plant.

Criterion 60 - Testing Of Containment Spray Systems

A capability shall be provided to test periodically the delivery capability of the containment spray system at a position as close to the spray nozzles as is practical.

The surveillance requirement changes proposed in this license amendment request do not change or affect the testability design features of the containment spray system or the surveillance requirements to test the delivery capability of the system upstream from the spray nozzles.

With the changes proposed in this license amendment request, the requirements of AEC GDC 38 and 60 continue to be met and the plant Technical Specifications will continue to provide the basis for safe plant operation.

4.2 Precedent

On July 2, 2007, the Nuclear Regulatory Commission issued an amendment to the Arkansas Nuclear One, Unit 2 license (Reference 4) to require verification the containment spray nozzles are unobstructed following maintenance activities which could result in nozzle blockage. From their license amendment request submitted March 15, 2007 (Reference 5), the Arkansas Nuclear One, Unit 2 plant appears to be sufficiently similar to the Prairie Island Nuclear Generating Plant to provide precedent for approval of this license amendment request.

The NRC has also approved similar license amendment requests for many other plants including Beaver Valley Power Station (Accession No. ML030580356), Braidwood Station (Accession No. ML022880596), Calvert Cliffs Nuclear Power Plant (Accession No. ML040720077), Comanche Peak Station (Accession No. ML052790509), Crystal River Nuclear Plant (Accession No. ML051710381), R.E. Ginna Nuclear Power Plant (Accession No. ML061980055), Palisades Nuclear Plant (Accession No. ML030410045), and South Texas Project Electric Generating Station (Accession No. ML032340230).

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 Technical Specification Surveillance Requirement changes which will require verification that the containment spray system spray nozzles are unobstructed following maintenance which could result in nozzle blockage.

The containment spray system and its spray nozzles are not accident initiators and therefore, these changes do not involve a significant increase the probability of an accident. The revised surveillance requirement will require event based verification in lieu of fixed Frequency verification which may require either fewer or more verifications of operability. The proposed changes to verify system operability following maintenance is considered adequate to ensure operability of

the containment spray system. Since the system continues to be available to perform its accident mitigation function, the consequences of accidents previously evaluated are not significantly increased.

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 Technical Specification Surveillance Requirement changes which will require verification that the containment spray system spray nozzles are unobstructed following maintenance which could result in nozzle blockage.

The proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change does not introduce new accident initiators or impact the assumption made in the safety analysis. Testing requirements will be revised and will continue to demonstrate that the Limiting Conditions for Operation are met and the system components are functional.

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 Technical Specification Surveillance Requirement changes which will require verification that the containment spray system spray nozzles are unobstructed following maintenance which could result in nozzle blockage.

The containment spray system is not susceptible to corrosion-induced obstruction or obstruction from sources external to the system. Maintenance activities that could introduce foreign material into the system would require subsequent verification to ensure there is no spray nozzle blockage. The spray header nozzles are expected to remain unblocked and available in the event that the safety function is required. Therefore, the capacity of the system would remain unaffected.

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. NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992.
2. Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2 – Issuance of Amendments RE: Line-Item Technical Specification Improvements to Reduce Surveillance Requirements for Testing During Power Operation as Recommended by Generic Letter 93-05 (TAC Nos. M90459 and M90460), dated March 10, 1995, Accession No. ML022250158.
3. Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing during Power Operation," dated September 27, 1993.

4. Arkansas Nuclear One, Unit No. 2 - Issuance of Amendment Re: Containment Spray Nozzle Technical Specifications Test Requirements (TAC No. MD4835), dated July 2, 2007, Accession No. ML071550003.
5. Arkansas Nuclear One, Unit 2, License Amendment Request, Proposed Technical Change Regarding Containment Spray Nozzle Test Requirements, dated March 15, 2007, Accession No. ML070780351.

ENCLOSURE, ATTACHMENT 1

Technical Specification Pages (Markup)

3.6.5-4

1 page follows

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.5.7 Verify each containment cooling train starts automatically on an actual or simulated actuation signal.	24 months
SR 3.6.5.8 Verify each spray nozzle is unobstructed.	<u>Following maintenance which could result in nozzle blockage</u> 10 years

ENCLOSURE, ATTACHMENT 2

Bases Pages (Markup)

(For Information Only)

B 3.6.5-13

1 page follows

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.6.5.7

This SR requires verification that each containment cooling train actuates upon receipt of an actual or simulated safety injection signal. The 24 month Frequency is based on engineering judgment. See SR 3.6.5.5 and SR 3.6.5.6, above, for further discussion of the basis for the 24 month Frequency.

SR 3.6.5.8

With the spray header drained, low pressure air or smoke can be blown through test connections. This SR ensures that each spray nozzle is unobstructed and provides assurance that spray coverage of the containment during an accident is not degraded. Due to the passive design of the nozzle, confirmation of operability following maintenance activities that can result in obstruction of sprays at 10-year intervals is considered adequate to detect obstruction of the nozzles. Confirmation that the spray nozzles are unobstructed may be obtained by such means as foreign materials exclusion (FME) controls during maintenance, a visual inspection of the affected portions of the system, or by an air or smoke test following maintenance involving opening portions of the system downstream of the containment isolation valves, or by draining and flushing the filled portions of the system inside containment, as appropriate. Maintenance that could result in nozzle blockage is generally a result of a loss of FME control. If loss of FME control occurs, an inspection or flush of the affected portions of the system should be adequate to confirm that the spray nozzles are unobstructed since water flow would be required to transport any debris to the spray nozzles. An air flow or smoke test may be appropriate when borted water has inadvertently flowed through a nozzle.

ENCLOSURE, ATTACHMENT 3

Technical Specification Pages (Retyped)

3.6.5-4

1 page follows

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.5.7 Verify each containment cooling train starts automatically on an actual or simulated actuation signal.	24 months
SR 3.6.5.8 Verify each spray nozzle is unobstructed.	Following maintenance which could result in nozzle blockage