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LCR H98-04

United States Nuclear Regulatory Commission
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Washington, DC 20555

Gentlemen:

**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS
ELIMINATION OF TECHNICAL SPECIFICATION 3.0.4 RESTRICTIONS
FOR FILTRATION, RECIRCULATION AND VENTILATION SYSTEM
DURING FUEL MOVEMENT AND CORE ALTERATION ACTIVITIES
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354**

In accordance with 10CFR50.90, Public Service Electric & Gas (PSE&G) Company hereby requests a revision to the Technical Specifications (TS) for the Hope Creek Generating Station (HC). In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

Implementation of the proposed changes contained in this submittal will eliminate the restrictions imposed by TS 3.0.4 for the Filtration, Recirculation and Ventilation System (FRVS) during fuel movement and core alteration activities. Since approval of these changes would significantly improve outage critical path scheduling flexibility, NRC review of the changes contained in this submittal is requested by February 13, 1999 to support the next refueling outage (RFO8) at Hope Creek.

The proposed changes have been evaluated in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and a determination has been made that this request involves no significant hazards considerations. The basis for the requested change is provided in Attachment 1 to this letter. A 10CFR50.92 evaluation, with a determination of no significant hazards consideration, is provided in Attachment 2. The marked up Technical Specification pages affected by the proposed changes are provided in Attachment 3.

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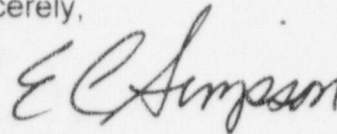
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Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance, but allow an implementation period of sixty days to provide sufficient time for associated administrative activities.

Should you have any questions regarding this request, please contact Mr. James Priest at 609-339-5434.

Sincerely,



Affidavit
Attachments (3)



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STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

E. C. Simpson, being duly sworn according to law deposes and says:

I am Senior Vice President - Nuclear Engineering of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning Hope Creek Generating Station, Unit 1, are true to the best of my knowledge, information and belief.

E C Simpson

Subscribed and Sworn to before me
this 19th day of October, 1998

Kimberly J. Brown
Notary Public of New Jersey

My Commission expires on June 16, 2003

HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354
REVISIONS TO THE TECHNICAL SPECIFICATIONS (TS)

BASIS FOR REQUESTED CHANGE:

Public Service Electric and Gas Company (PSE&G), under Facility Operating License No. NPF-57 for the Hope Creek Generating Station, requests that the TS contained in Appendix A to the Operating License be amended as proposed herein to revise TS Limiting Condition for Operation (LCO) 3.6.5.3.1 and 3.6.5.3.2 and provide an exception to the requirements of TS 3.0.4. The proposed change will permit entry into Operational Condition * (defined in these LCOs as plant operation when irradiated fuel is being handled in the secondary containment and during core alterations and operations with a potential to drain the reactor vessel) under certain plant conditions with inoperable Filtration, Recirculation and Ventilation System (FRVS) ventilation units and recirculation units. The change eliminates overly restrictive requirements imposed by TS 3.0.4 during refueling outages when equipment is removed from service and core alterations need to be performed. The proposed changes to the TS LCO requirements are indicated on the marked-up TS pages contained in Attachment 3 of this submittal.

REQUESTED CHANGE, PURPOSE AND BACKGROUND:

Currently, Hope Creek TS LCO 3.6.5.3.1 and 3.6.5.3.2 provide the configuration restrictions and operation limitations for ventilation and recirculation subsystems of FRVS. In Operational Condition *, the TS LCO permits one FRVS ventilation unit and up to two FRVS recirculation units to be inoperable for a seven day period prior to suspension of the Operational Condition * activities. Further degradation of the FRVS system in Operational Condition * would require the immediate suspension of the handling of irradiated fuel, core alterations and operations with a potential to drain the reactor vessel.

To ensure that facility operation is not initiated or that higher conditions of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to an operable status, TS 3.0.4 prohibits entry into an Operational Condition when the requirements for the LCO are not met and the associated TS Action Statement requires a

shutdown within a specified time interval. Therefore, to comply with these TS 3.0.4 requirements, Hope Creek can not initiate handling of irradiated fuel in the secondary containment, perform core alterations or start operations with a potential to drain the reactor vessel unless all FRVS ventilation units and recirculation units are operable. However, this restriction has imposed significant scheduling restrictions during refueling outages, since the majority of Operational Condition * activities take place in outages when FRVS subsystems and their support systems are also required to be taken out of service for 18 month maintenance and surveillance activities. Delays in the restoration of any FRVS components and their support systems would adversely impact outage critical path schedules when Operational Condition * activities are required to be performed in order to comply with TS 3.0.4.

Therefore, to preclude extended delays in outage activities while maintaining an appropriate level of plant safety (as described in the following sections), PSE&G is proposing that a note be added to TS LCOs 3.6.5.3.1 and 3.6.5.3.2, stating that the provisions of TS 3.0.4 are not applicable for core alterations and when handling irradiated fuel in the secondary containment when the plant is in Operational Condition 5 with reactor vessel water level greater than or equal to 22 feet 2 inches. Approval of these changes will enable Hope Creek to initiate certain Operational Condition * activities, while controlling plant operation within the limits imposed by the existing LCOs and associated Action Statements. No FRVS TS Surveillance Requirements or LCO Action Statement time limits are being modified as a result of these proposed changes.

JUSTIFICATION OF REQUESTED CHANGES:

System Description

As stated in Section 6.8.1 of the Hope Creek UFSAR, FRVS consists of two subsystems that are required to perform post-accident, safety-related functions simultaneously. These subsystems are: 1) the recirculation system, which reduces offsite doses significantly below 10CFR100 guidelines during a loss-of-coolant accident (LOCA), refueling accident, or occurrences of high radioactivity in the Reactor Building; and 2) the ventilation system, which maintains the Reactor Building at a negative pressure with respect to the outdoors. The configuration of these subsystems is shown in UFSAR Figures 9.4-4 and 9.4-5. Upon Reactor Building isolation, the FRVS recirculation system is actuated and recirculates the Reactor Building air through

filters for cleanup. This subsystem is the initial cleanup system before discharge is made via the FRVS ventilation subsystem, which discharges the air through filters to the outdoors via a vent at the top of the Reactor Building.

Each of the six FRVS recirculation unit filter trains is sized and specified for treating incoming air at 30,000 cfm at 140°F. The two FRVS ventilation subsystems consist of 100 percent capacity, 9,000-cfm centrifugal fans and filter trains. Each FRVS ventilation unit takes the discharge from the FRVS recirculation system and processes the air through an electric heating coil, charcoal filter, and HEPA filter.

Design Basis Requirements

The Hope Creek design basis requirements for FRVS, during the plant operating conditions of concern in this LCR, are derived from the regulatory criteria contained in USNRC Safety Guide 25, "Assumptions Used For Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility For Boiling and Pressurized Water Reactors," dated, March 23, 1972. The assumptions related to the release of radioactive material from the fuel and fuel storage facility as a result of a fuel handling accident contained in Safety Guide 25 have been used at Hope Creek to evaluate the performance of FRVS to mitigate the spectrum of these fuel handling accidents.

However, in the Hope Creek analyses supporting the conclusions and dose consequences stated in UFSAR Section 15.7.4, only one FRVS ventilation unit is credited for iodine removal capability following a fuel handling accident, with filter efficiencies that are limited by Safety Guide 25 criteria. As a result, the iodine removal capability of the carbon adsorbers in the FRVS recirculation units is conservatively omitted from the offsite dose evaluation. Even with this conservative omission, the dose received by the member of the public following a design basis fuel handling accident is within 2.62E-1 rem whole body (2-hour dose at site boundary) and 5.56E0 rem thyroid (2-hour dose at site boundary). These results are well below the regulatory limits contained in 10CFR100. Since the proposed TS revisions do not alter the dose assessment calculations, the proposed changes contained in this submittal do not impact either the 10CFR100 or 10CFR50, Appendix A, Criterion 19 dose consequences stated in the UFSAR. Thus, the entry into Operational Condition * to initiate core alterations or handling of irradiated fuel in the secondary

containment with four operable FRVS recirculation units and one operable FRVS ventilation unit (and remaining in this configuration for up to seven days) will not result in a reduction of the amount of iodine removal capability assumed to be available in Hope Creek's analysis based on Safety Guide 25 criteria. In fact, the iodine removal capability of the four FRVS recirculation units required to be operable in addition to the one FRVS ventilation unit that would be operable prior to performing operational condition * activities, will ensure that dose rates from Safety Guide 25 refueling accidents are lower than that already calculated in the Hope Creek analyses.

Licensing Basis Requirements

The TS requirements currently restricting refueling operations due to FRVS inoperability are contained in LCOs 3.0.4, 3.6.5.3.1 and 3.6.5.3.2. LCOs 3.6.5.3.1 and 3.6.5.3.2 provide specific requirements for the operability of the FRVS ventilation and recirculation subsystems respectively. LCO 3.0.4 provides generic restrictions on changes in plant Operational Conditions, which ensures that facility operation is not initiated or that higher conditions of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to an operable status.

For the specific case of FRVS and Operational Condition *, core alterations and handling of irradiated fuel is permitted for a period of up to seven days with only one FRVS ventilation unit and four FRVS recirculation units operable. This configuration can be accommodated during a refueling outage since: 1) the removal of the "A" & "C" or the "B" & "D" channels can still support operability of this minimum complement of FRVS needed to continue core alterations, etc.,; and 2) core alterations can usually be completed within a seven day window. However, the additional implementation of the TS 3.0.4 requirements, which prohibits the initiation of core alterations and handling of irradiated fuel with FRVS in the aforementioned condition, imposes significant plant configuration and scheduling burdens that adversely impact critical path outage activities, with no corresponding safety benefit.

The configuration and scheduling burden includes the required restoration of all FRVS support equipment (including Service Water pumps, Safety Auxiliaries Cooling System pumps, Emergency Diesel Generators, and Class 1E buses and distribution systems)

prior to an initiation of core reload or offload activities. These actions are unnecessarily restrictive since FRVS (i.e., one ventilation unit and four recirculation units operable) still provides sufficient iodine removal capability to mitigate the spectrum of refueling accidents (as discussed in the previous section). In addition, for the changes proposed in this LCR where the requirements of TS 3.0.4 would not apply to the FRVS LCO, specific plant restrictions will also be imposed.

The first restriction imposed is the limitation on Operational Condition * activities that can be initiated with FRVS in a degraded configuration. Specifically, operations with a potential to drain the reactor vessel (e.g., control rod drive maintenance) can not be initiated while in the FRVS LCO Action Statement. This restriction is being retained since vessel draindown events are not within the scope of the aforementioned USNRC Safety Guide 25 analyses supporting the proposed changes contained in this submittal.

The second restriction imposed will be the requirement to have the reactor water level greater than or equal to 22 feet 2 inches during Operational Condition 5, Refueling, in order to initiate core alterations or handling of irradiated fuel while in the FRVS LCO Action Statement. During this plant configuration, FRVS redundancy requirements will be consistent with other plant systems needed to support refueling activities, such as in the Residual Heat Removal LCO 3.9.11.1. In addition, imposing this Operational Condition 5 requirement will also ensure that the basis for the exception to TS 3.0.4 requirements (to facilitate refueling activities) is followed. For instance, the initiation of handling of irradiated fuel in the spent fuel pool during Operational Condition 1, Power Operations, with degraded FRVS capability will not be permitted with the proposed TS restrictions in place.

The third restriction is the retention of the seven day limitation on operation within the FRVS LCO Action Statement. Since the duration of plant operation in a degraded condition remains unchanged, the probability of a refueling accident coincident with additional failures of FRVS remains the same as the current TS requirements (assuming TS Action a.2 for LCOs 3.6.5.3.1 and 3.6.5.3.2 is entered just after Operational Condition * is entered).

Finally, the proposed TS changes are consistent with the guidance contained GE BWR/4, "Improved Technical Specifications," NUREG-1433, Revision 1, dated April 7, 1995. In NUREG-1433, the bases state that LCO 3.0.4 restrictions are not applicable in Operational Conditions 4 and 5, Cold Shutdown and Refueling, since the TS Actions of the individual specifications sufficiently define the remedial measures to be taken. Since PSE&G believes (as discussed in the previous paragraphs) that sufficient remedial measures will remain in place within the FRVS LCO and its associated Action Statements, the proposed elimination of TS 3.0.4 requirements in the FRVS LCO would be consistent with the intent of the Improved Technical Specifications and is justified.

Conclusion

PSE&G considers that the current TS 3.0.4 and the FRVS LCO requirements impose significant plant configuration and scheduling challenges that adversely impact critical path outage activities, with no corresponding safety benefit. Therefore, the changes proposed in this submittal would facilitate the scheduling and completion of outage-related activities, while retaining and imposing sufficient configuration controls within the TS to appropriately maintain the capability of FRVS to mitigate design basis refueling accidents.

HOPE CREEK GENERATING STATION
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10CFR50.92 EVALUATION

Public Service Electric & Gas (PSE&G) has concluded that the proposed changes to the Hope Creek Generating Station (HC) Technical Specifications do not involve a significant hazards consideration. In support of this determination, an evaluation of each of the three standards set forth in 10CFR50.92 is provided below.

REQUESTED CHANGE

To preclude extended delays in outage activities, while maintaining an appropriate level of plant safety, PSE&G is proposing that a note be added to TS LCOs 3.6.5.3.1 and 3.6.5.3.2, stating that the provisions of TS 3.0.4 are not applicable for core alterations and when handling irradiated fuel in the secondary containment when the plant is in Operational Condition 5 with reactor vessel water level greater than or equal to 22 feet 2 inches.

BASIS

1. *The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.*

The proposed TS change does not involve any physical changes to plant structures, systems or components (SSC). FRVS will continue to function as designed. FRVS is an Engineered Safety Feature (ESF) designed to mitigate the consequences of an accident, and therefore, can not contribute to the initiation of any accident. For refueling accidents, the current design basis analysis of FRVS credits only the iodine removal capability of the FRVS ventilation unit and neglects the considerable iodine removal capability of the FRVS recirculation units. In addition, this proposed TS change will not increase the probability of occurrence of a malfunction of any plant equipment important to safety, since the time limits imposed by the current FRVS LCO Action Statements are not affected by these proposed changes. The proposed changes merely allow entry into the FRVS LCO Action Statement in order to support refueling activities.

Therefore, the proposed TS changes, which would permit the initiation of core alterations and handling of irradiated fuel with only one operable FRVS ventilation unit and four operable FRVS recirculation units for a limited seven day period under specific refueling conditions, would not result in the increase of the consequences of an accident previously evaluated.

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

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

The proposed TS changes do not involve any physical changes to plant SSC. The design and operation of the FRVS is not changed from that currently described in the UFSAR. FRVS will continue to function as designed to mitigate the consequences of an accident. No changes of any kind are being made to FRVS, or its support or supported systems. Deleting the restrictions imposed by TS 3.0.4 as proposed in this TS change request eliminates a compliance restriction imposed by the current TS. Since the current TS already provide a seven day period to perform refueling activities with inoperable FRVS ventilation and recirculation units, the proposed changes would not introduce plant operation in a configuration that is not already permitted in the TS. Therefore, there is no possibility that implementing this proposed TS change would create a different type of malfunction to the FRVS than any previously evaluated. In addition, the proposed TS changes do not alter the conclusions described in the UFSAR regarding operation of FRVS.

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

3. The proposed change does not involve a significant reduction in a margin of safety.

The proposed TS change involves the elimination of TS 3.0.4 restrictions imposed on the FRVS LCO. The TS 3.0.4 requirements impose an unnecessary challenge to performing refueling activities when the FRVS LCO Action Statements already sufficiently define the remedial measures to be taken. The time

limits imposed by the current FRVS LCO Action Statements are not affected by these proposed changes. The FRVS LCO will retain sufficient configuration controls to appropriately maintain the capability of FRVS to mitigate design basis refueling accidents, no new FRVS configurations will be permitted by the proposed changes, and there will be no reduction in any margin of safety resulting from this proposed TS change. Therefore, the proposed TS change does not involve a significant reduction in a margin of safety.

CONCLUSION

Based on the above, PSE&G has determined that the proposed changes do not involve a significant hazards consideration.