GPU Nuclear

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C321-93-2156
December 16, 1993

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Technical Specification Change Request No. 210

Pursuant to 10 CFR 50.90, GPU Nuclear Corporation, operator of the Oyster Creek Nuclear Generating Station (OCNGS), Facility Operating License No. DPR-16, requests a change to that license.

TSCR No. 210 clarifies the requirements for maintaining secondary containment integrity when one or more Reactor Building Ventilation supply and exhaust valves are declared inoperable. The TSCR adds a new Limiting Condition for Operation, Basis Statement, and Surveillance requirements for these isolation valves.

This change request has been reviewed in accordance with Section 6.5 of the OCNGS Technical Specifications, and using the standards in 10 CFR 50.92 we have concluded that this proposed change does not constitute a significant hazards consideration.

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Pursuant to 10 CFR 50.91(b)(1), a copy of this change request has been sent to the State of New Jersey Department of Environmental Protection.

Very truly yours,

J. J. Barton
Vice President and Director
Oyster Creek

Attachments
JJB/DGJ/plp

cc: Administrator, Region I
NRC Resident Inspector
Oyster Creek NRC Project Manager

GPU NUCLEAR CORPORATION
OYSTER CREEK NUCLEAR GENERATING STATION

Facility Operating
License No. DPR-16

Technical Specification Change Request
No. 210
Docket No. 50-219

Applicant submits, by this Technical Specification Change Request No. 210 to the Oyster Creek Nuclear Generating Station Operating License, a change to pages 1.0-3, 3.5-6, 3.5-7, 3.5-8, 3.5-9, 3.5-10, 3.5-11 and 4.5-11.

BY J. J. Barton
J. J. Barton
Vice President and Director
Oyster Creek

Sworn and Subscribed to before me this 16th day of December 1993.

Judith M. Crowe
A Notary Public of NJ

JUDITH M. CROWE
Notary Public of New Jersey
My Commission Expires 1/25/95

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
GPU Nuclear Corporation)

Docket No. 50-219

CERTIFICATE OF SERVICE

This is to certify that a copy of Technical Specification Change Request No. 210 for Oyster Creek Nuclear Generating Station Operating License, filed with the U.S. Nuclear Regulatory Commission on December 16, 1993 has this day of 12/16 1993, been served on the Mayor of Lacey Township, Ocean County, New Jersey by deposit in the United States mail, addressed as follows:

The Honorable Louis A. Amato
Mayor of Lacey Township
818 West Lacey Road
Forked River, NJ 08731

By _____
J. J. Barton
Vice President and Director
Oyster Creek

OYSTER CREEK NUCLEAR GENERATING STATION
OPERATING LICENSE NO. DPR-16
DOCKET NO. 50-219
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 210

Applicant hereby requests the Commission to change Facility Operating License No. DPR-16 as discussed below, and pursuant to 10 CFR 50.91, an analysis concerning the determination of no significant hazards consideration is also presented:

1.0 SECTIONS TO BE CHANGED

Sections 1.14, 3.5, 4.5 and 3.5 Basis.

2.0 EXTENT OF CHANGE

Revise Technical Specification (TS) definition 1.14C. Add new Specifications 3.5.B.2, 3.5.B.3 ,4.5.R., and a Basis statement to TS 3.5. Edit TS 3.5.B.1.1 and renumber (TS 3.5.B.4.). Renumber TS 3.5.B.2 through 3.5.B.4, to 3.5.B.4 through 3.5.B.7. Revise Specification references within to reflect new Specification numbers. Enclose new pages, 3.5-7 through 3.5-10, due to repagination.

3.0 CHANGES REQUESTED

As delineated on the attached revised Technical Specification pages 1.0-3, 3.5-6, 3.5-7, 3.5-8, 3.5-9, 3.5-10, 3.5-11 and 4.5-11.

4.0 DISCUSSIONS

Introduction

The Technical Specifications (TS) define the requirements for secondary containment integrity. One requirement, Section 1.14 Item C, st tes that all reactor building ventilation system (RBVS) automatic :solation valves are operable or are secured in the closed position.

During maintenance activities, a secondary containment isolation valve (V-28-39) was declared inoperable due to a sheared pin on the valve stem. By TS 1.14C., this valve had to be secured in the closed position within four hours (TS 3.5B.1.1) or the plant had to proceed with an orderly shutdown within 24 hours.

The purpose of this Safety Evaluation (SE) is to evaluate alternate means to isolate the RBVS supply and exhaust ducts which penetrate the secondary containment boundary, when one or more isolation valves are declared inoperable. This SE will: (1) investigate the requirements for secondary containment integrity, (2) review the RBVS design basis; and (3) provide justification

for maintaining secondary containment integrity with an inoperable isolation valve; and (4) propose appropriate changes to the Technical Specification.

The Reactor Building encloses the reactor and its primary containment. This structure provides secondary containment when the primary containment is in service, and functions as the primary containment during periods when the primary containment is open, as during refueling. The Reactor Building houses the refueling and reactor servicing equipment, new and spent fuel storage facilities, and other reactor auxiliary, emergency, and service equipment. The design basis of the secondary containment is to minimize ground level release of airborne radioactive materials, and to provide for controlled, elevated release of the building atmosphere during a Design Basis Accident (a loss of coolant accident or a refueling accident).

During power operations, the RBVS regulates temperature (40°F $\leq$ 104°F), and minimizes airborne contamination by moving air from cleaner areas to potentially radioactive areas. The RBVS is also used during inerting and deinerting of the primary containment.

The RBVS consists of one air washer, three 50 percent capacity supply fans and one steam heating coil bank. There is one dedicated exhaust fan and an alternate exhaust fan. Butterfly valves are used in the RBVS ducts for isolation and to maintain secondary containment integrity under post accident conditions.

Two isolation valves are installed in series in each supply or exhaust duct that penetrates the secondary containment boundary. These valves are interlocked with the supply fans to open when one fan is running. Since these valves are relied upon to maintain secondary containment integrity, they close on receipt of an automatic or manual isolation signal.

The RBVS will be shutdown automatically and isolate by any one of the following signals:

a. Refueling floor high radiation
b. Reactor Building Exhaust duct high radiation
c. High Drywell Pressure
d. Low-Low reactor water level
e. Reactor Building pressure greater than +1.0 in. WG.
f. Manual action from the Control Room
g. High temperature ($\geq$ 300°F) in the Reactor Building Ventilation System ductwork

This request proposes both technical and editorial changes to the Technical Specifications. The technical changes include a new Limiting Condition for Operation (LCO), Surveillance Requirements and Basis. There are also editorial changes. First, revise TS definition 1.14C. to read: All automatic secondary containment isolation valves are operable or are secured in the closed

position. This change will provide consistent valve nomenclature between the definition, and a new Limiting Condition for Operation and Surveillance.

Second, edit and renumber existing Specifications, and change references within these Specifications to permit the inclusion of the new LCO.

Reactor Building Ventilation System Design

Three supply fans are located outside of the Reactor Building. The supply ductwork for the RBVS is mounted on the exterior West Wall of the Reactor Building. The supply fans discharge to a horizontal duct which turns 90 degrees at each terminus to form two vertical runs to elevation 119'-3". From each vertical duct, the RBVS supplies various elevations by penetrating the Reactor Building wall. Inside the Reactor Building, each supply duct has two butterfly valves (isolation valves) mounted in series by a short spool piece. Additional ductwork upstream and downstream of these secondary containment isolation valves provide for the necessary dimensional transitions to the ductwork which supplies air at that elevation.

Two separate supply ducts penetrate the west wall at Reactor Building elevations 51'-3", 75'-3" and 95'-3". At elevation 119'-3" four separate supply ducts penetrate the floor. Ductwork (two separate supplies) downstream of the 51'-3" isolation valves also supply the lower elevations (23'-6", (-)19'-6", etc.) and miscellaneous equipment areas such as the shutdown pumps (38'-0") and the steam/feedwater tunnel.

The supply air also flows from lower to higher elevations within the Reactor Building. For example, air flows from elevation 23'-6" to 51'-3" via the equipment access areas. In a similar manner air flows from elevations: 51'-3" to 75'-3", 75'-3" to 95'-3", and 95'-3" to 119'-3" (refueling floor).

Air from the refueling floor exhausts to a single duct. This main duct also picks up various area exhausts (CRD rebuild room, shutdown pump room, steam/feedwater tunnel, etc.) prior to exiting the Reactor Building. A pair of automatic butterfly valves (V-28-21,-22) outside the Reactor Building provide for secondary containment isolation upstream of the exhaust fans.

During normal plant operation, the RBVS is operating and all secondary containment isolation valves are open. During a Design Basis Accident (DBA), the supply and exhaust fans are tripped and the secondary containment isolation valves are automatically closed. The standby gas treatment system (SGTS) fans are automatically started to maintain a negative pressure in the secondary containment. With two isolation valves in series for each supply and exhaust duct, the failure of one isolation valve to close during a design basis accident does not prevent the isolation of the secondary containment boundary.

Proposed LCO Effects on Supply Air

For each supply air duct, both secondary containment isolation valves are located inside the Reactor Building wall or the secondary containment boundary. If the first or inboard supply valve (closest to the Reactor Building wall) is declared inoperable, the supply duct can be isolated by securing this valve or the second or outboard valve in the closed position. If the outboard valve is declared inoperable, the supply duct can still be isolated by securing this valve or the inboard valve in the closed position. In both cases the supply duct penetration is isolated to the environs in the event of a Design Basis Accident.

Since both isolation valves are located inside the secondary containment boundary, there are restrictions on the removal of the inboard or outboard valve. The inboard valve can only be removed when secondary containment is not required per TS 3.5B.1. Otherwise, there would be a breach of the secondary containment boundary. The outboard valve can be removed when secondary containment integrity is required as long as the inboard valve is secured in the closed position. The supply duct penetration would then be isolated to the environs in the event of a Design Basis Accident.

In the situations described above, the LCO would provide 8 hours to complete the duct isolation or valve repair which minimizes the probability of a radiological release concurrent with one inoperable isolation valve in a supply duct. The time (8 hours) allowed for compensatory actions is consistent with the Standard Technical Specifications (NUREG-0123, Rev. 3) for General Electric Boiling Water Reactors. If one isolation valve must be secured in the closed position, the RBVS will perform its design function under normal plant operations, because there are redundant supplies to the reactor building elevations.

Proposed LCO Effects on Exhaust Air

There is a single Reactor Building exhaust duct. Both secondary containment isolation valves (V-28-21, V-28-22) for this duct are outside of the Reactor Building.

When one or both of these secondary containment isolation valves are declared inoperable, the exhaust duct must be isolated to preserve secondary containment integrity. Since there is a single exhaust duct, the RBVS must be secured. Supply Fans SF-1-12, SF-1-13 and SF-1-14 and exhaust fans EF-1-5 and EF-1-6 will be shutdown. All Secondary Containment isolation valves will be closed, and the SGTS initiated to minimize airborne contamination. Station Procedures provide the appropriate precautions and limitations for operation of the RBVS and SGTS in this manner.

The design function of the SGTS is to provide a barrier between the radiation source and the environs during a design basis accident. In this respect, the SGTS filters the exhaust air and maintains a negative pressure.

During the LCO, the inboard or the outboard isolation valve would be secured in the closed position and the RBVS and the SGTS aligned for a potential radiological release. In this regards, one inoperable isolation valve does not create a possibility for an accident or malfunction of a different type than any previously identified nor increase the consequences of an accident during the maintenance activities. The exhaust duct would be isolated for a Design Basis Accident.

Since both exhaust isolation valves are located outside of the secondary containment boundary, there are restrictions on the removal of either valve. V-28-21 can only be removed when secondary containment is not required per TS 3.5B.1. Otherwise, there would be a breach of the secondary containment boundary. V-28-22 can be removed when secondary containment is required as long as the inboard valve is secured in the closed position. The main exhaust duct would already be isolated to the environs and the SGTS operating in the event of a Design Basis Accident.

5.0 DETERMINATION

GPU Nuclear has determined that operation of the Oyster Creek Nuclear Generating Station in accordance with the proposed Technical Specifications does not involve a significant hazard. The changes do not:

1. Involve a significant increase in the probability or the consequence of an accident previously evaluated.

   The failure of any component in the RBVS was not considered as a credible initiating event for a design basis accident. However, the RBVS is designed to mitigate the consequences of a potential radiological release by the isolation of all supply and exhaust ducts to the environs. Since the failure of the RBVS was never considered as one of the initiators of an accident, this proposed change cannot increase the probability of occurrence of an accident. During the proposed Limiting Condition for Operation (LCO), the supply or exhaust duct will be isolated within 8 hours by one isolation valve secured in its post accident design position. Since the duct can perform its intended design function (isolation), there is no increase in the consequences of an accident.

2. Create the possibility of a new or different kind of accident from any previously evaluated.

The design function of the RBVS automatic isolation valves is to isolate the ducts which penetrate the Reactor Building or Secondary Containment during a radiological release. During the LCO, the duct will be isolated within 8 hours by one isolation valve secured in the closed position. Since the duct will be isolated, this change will not create a possibility for an accident or malfunction of a different type than previously identified.

3. Involve a significant reduction in a margin of safety.

If a RBVS automatic isolation valve (supply) is declared inoperable, the proposed LCO would allow continued plant operation with that supply duct isolated. Since the RBVS can still perform its design function (redundant ductwork) under normal plant and design accident conditions, there is no reduction in the margin of safety. For an inoperable isolation valve in the exhaust duct, the exhaust duct will be isolated within 8 hours by one isolation valve secured in the closed position. Further, the RBVS and the SGTS will be aligned for an accident condition with no reduction in the margin of safety.

6.0 IMPLEMENTATION

We request that the amendment authorizing this change become effective 60 days after issuance.