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New York Power Authority

John C. Brons
Executive Vice President
Nuclear Generation

October 25, 1989
JPN-89-068

U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D. C. 20555

Attn: Document Control Desk

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Request for Additional Information
Containment Vent and Purge and Reactor Building Closed Loop Cooling Water System Containment Isolation Valves

References:

1. NYPA letter, J. C. Brons to NRC, dated January 17, 1989 (JPN-89-006) regarding Technical Specification changes.

2. NRC letter, D. E. LaBarge to J. C. Brons, dated May 18, 1989 requesting additional information.

Dear Sir:

In Reference 1, the Power Authority submitted proposed changes to the FitzPatrick plant Technical Specifications regarding containment isolation valves. The intent of the proposed changes was to:

- Restrict primary containment vent and purge operations through 12" valve 27MOV-120 when primary containment integrity is required. This would allow vent and purge operations using only 6" valve 27MOV-121 and would protect the Standby Gas Treatment System from overpressure and/or excessive differential pressures.

- Adopt "action" requirements for inoperable primary containment isolation valves that are worded similarly to those in Standard Technical Specifications.

- Adopt wording similar to that in the Standard Technical Specifications concerning intermittent reopening of the valves.

- Limit vent and purge exhaust valve open angle to ensure valve closure during loss-of-coolant accident conditions.

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In Reference 2, the NRC requested additional information on Containment Vent and Purge and Reactor Building Closed Loop Cooling Water System Containment Isolation Valves. The purpose of this letter is to provide the additional information which is included in Attachment 1. Page 186 of the proposed Technical Specifications is also attached. It supersedes page 186 as submitted in Reference 1.

Should you or your staff have any questions regarding this matter, please contact Ms. S. M. Toth of my staff.

Very truly yours,

for John C. Brons
Executive Vice President
Nuclear Generation

Encl.

cc: U. S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Office of the Resident Inspector
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Mr. David E. LaBarge
Project Directorate I-I
Division of Reactor Projects - I/II
U. S. Nuclear Regulatory Commission
Mail Stop 14 B2
Rockville, MD 20852

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ATTACHMENT I TO JPN-89-068

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION ON PRIMARY CONTAINMENT AND REACTOR BUILDING CLOSED LOOP COOLING WATER SYSTEM (RBCLCW) ISOLATION VALVES

NRC QUESTION 1: The proposed amendment specifies that Valve Number 27MOV-121 will be used for inerting or deinerting. Since inerting or deinerting will not be allowed unless this valve is operable, describe the testing program which periodically ensures that the valve is operable.

NYPA RESPONSE: Valve 27MOV-121 is included in the IST program. When primary containment is required, the vent and purge flow path is restricted to this valve. Restricting the vent and purge flow path protects the SGTS (Standby Gas Treatment System) from overpressurization in the event of a LOCA during venting or purging. The containment isolation function is provided by the containment isolation valves themselves and not by this valve.

NRC QUESTION 2: The proposed amendment adds Section 4.7.D.1.e on page 186 which would require that the RBCLCW isolation valves be fully closed and reopened anytime the reactor is in the cold condition exceeding 48 hours, if the valves have not been fully closed and reopened during the preceding 92 days. Since designation of these valves appears to be vaguely worded in the specification, provide assurance that the new requirement will not be misinterpreted or revise the wording to show that the valves referenced are the "remote manual" RBCLCW isolation valves. Also, justify use of 92 days rather than 31 days, which would be consistent with recirculation pump discharge valve testing required in Section 4.5.A.5.

NYPA RESPONSE: The Authority will revise the wording of the Specification to show RBCLCW isolation valve numbers in Section 4.7.D.1.e on page 186. Cycling the valves once every 92 days when in the cold condition for more than 48 hours is consistent with the test frequency of other valves that perform similar functions. Additionally, valves which perform automatic isolation functions are cycled once each operating cycle according to current Technical Specifications. This is consistent with Standard Technical Specifications.

Also consistently with Standard Technical Specifications, recirculation pump discharge valves are cycled every 31 days when in the cold condition for more than 48 hours, because they perform an emergency core cooling function. Valves which are part of the In-Service Test Program are cycled according to Technical Specification requirements. In add A, test data for these valves is analyzed to detect valve degradation.

NRC QUESTION 3: The proposed amendment incorporates changes to Specification 3.7.D.2 which would allow up to four hours for an isolation valve listed in Table 3.7-1 to be inoperable before the affected penetration must be isolated by deactivating the associated automatic valve in the closed position, or closing a manual valve, or installing a blind flange. Justify the use of four hour intervals rather than "Immediately," as defined in Section 1.0.

NYPA RESPONSE: Use of four hour intervals is consistent with the Standard Technical Specifications.

NRC QUESTION 4a: Another proposed change to Specification 3.7.D.2 would allow reopening of isolation valves which were closed to satisfy the penetration isolation criteria in the event that a primary containment isolation valve is inoperable. The proposal would allow them to be reopened on an intermediate basis under administrative control and would allow the containment vent and purge line isolation valves to be reopened for safety related reasons. A proposed change to the corresponding Bases section would state that the "safety related reasons include, but are not limited to, the following: inerting or deinerting (the) primary containment; maintaining containment oxygen concentration; maintaining drywell and suppression pool atmospheric pressures; and maintaining the differential pressure between the drywell and suppression pool."

Explain the administrative controls which are envisioned that would ensure adequate control of primary containment integrity in order to reopen a valve which is shut due to inoperability of a normal primary containment isolation valve.

NYPA RESPONSE: Reopening of an isolation valve is a general provision and is not restricted to vent and purge valves. Tagging of any valve opened under the described conditions will be established (under protective tagging procedures currently in use) before it is opened. Tagging or administrative controls will be applied only if opening the valve is contemplated. Valves which have

been closed will be verified closed on a daily basis as required by Technical Specification 4.7.D.2. The existing protective tagging system includes provisions for the issue of tags with "conditions and limitations" on the operation of the tagged component. This system will also assure reclosure of valves when containment isolation is required. The protective tagging system has been in use at the FitzPatrick plant for more than ten years and is a system of administrative control which licensed operators use frequently. Tagging is applied or removed only with permission from the Assistant Shift Supervisor or Shift Supervisor, both of whom are licensed senior operators.

NRC QUESTION 4b: Provide a more detailed justification which shows that the integrity of the primary containment is not unnecessarily compromised as a result of reopening the valves.

NYPA RESPONSE: Conditions requiring opening an operable isolation valve intermittently while the other isolation valve is inoperable are expected to occur very infrequently. Since most isolation valves are outside primary containment, and most instances of valve inoperability are a result of actuator problems, most repairs can be completed without affecting the valve pressure boundary. The small incremental risk of opening an isolation valve while one isolation valve is inoperable is insignificant. Forcing a plant shutdown to repair an isolation valve subjects the plant to unnecessary thermal cycling.

NRC QUESTION 4c: Discuss what is meant by reopening the valves on an "intermittent basis," including how long the valves will be allowed to be opened, how often, and especially why the proposed change contains a statement which specifically and separately addresses the vent and purge line isolation valves. Note that the proposal would allow the valves to be opened but does not address reclosing them.

NYPA RESPONSE: The reference to reopening valves on a intermittent basis does not specifically and separately address vent and purge isolation valves. The statement is part of a general paragraph applicable to all of the penetrations and valves listed in Table 3.7-1. For example, if one of the drywell floor drain sump valves was inoperable, it would be necessary to open the penetration to pump the sump periodically to determine the primary coolant leakage rate as required by the Technical Specifications. The alternative would be a plant shutdown to repair the valve. The wording proposed is the same as in the Standard Technical Specifications. In the wording used, it is implicit that the valve is reclosed when the task that it is opened for is completed.

NRC QUESTION 4d: Explain how the proposed change provides greater assurance of containment isolation in the event of an accident by imposing new restrictions on isolation and restoration of inoperable valves to operable status, as presented in the Evaluation of Significant Hazards Consideration section of your letter of January 17, 1989.

NYPA RESPONSE: The January 17, 1989 submittal supplements and revises several other earlier submittals. All of the submittals together provide greater assurance of containment isolation because of the restrictions on the opening angle of the vent and purge valves. Restricting the vent and purge path to the 6" valve protects SGTS from overpressure and/or excessive differential pressure but does not provide any assurance of primary containment isolation.

The current technical specification has no provision for restoring inoperable valves and no clear direction on operation of the second containment isolation valve if one CIV is inoperable. By providing specific requirements, containment isolation is better assured.

NRC QUESTION 5: Describe the locations where a blind flange could be installed which would satisfy the primary containment integrity requirement when a valve listed in Table 3.7-1 is inoperable.

NYPA RESPONSE: The wording used is the same as in the Standard Technical Specifications. No particular penetration is being addressed.

NRC QUESTION [illegible]: Determine if the proposed change to the Bases section should be expanded to more fully discuss the TS proposal items. Presently, it only discussed the containment isolation valves which are on the containment vent and purge lines, not the other valves which are in Table 3.7-1.

NYPA Response: The Bases section of the Technical Specifications contains information on containment isolation valves with additional details on vent and purge valves and RBCLCW valves. This section far exceeds the Bases in the Standard Technical Specifications for containment isolation valves. This section was added due to the unique design basis for these valves and to avoid any possible misunderstanding concerning acceptable reasons for opening the valves for operations such as drywell-torus differential pressure maintenance, vacuum breaker testing, etc.

3.7 (cont'd)

2. With one or more of the isolation valves listed in Table 3.7-1 inoperable, maintain at least one isolation valve operable in each affected penetration that is open and:

   a. Restore the inoperable valve(s) to operable status within 4 hours; or

   b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the closed position. Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control*, or

   c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or a blind flange.

*The containment vent and purge line isolation valves may also be opened for safety related reasons.

4.7 (cont'd)

(2.) With the reactor at reduced power level, trip main steam isolation valves and verify closure time.

d. At least twice per week, the main steam line power-operated isolation valves shall be exercised by partial closure and subsequent reopening.

e. The RBCLCWS isolation valves listed below shall be fully closed and repened anytime the reactor is in the cold condition exceeding 48 hours, if the valves have not been fully closed and reopened during the preceding 92 days.

RBCLCWS Isolation Valve Number
15AOV-130A
15AOV-130B
15AOV-131A
15AOV-131B
15AOV-132A
15AOV-132B
15AOV-133A
15AOV-133B
15AOV-134A

2. Whenever an isolation valve listed in Table 3.7-1 is inoperable, the position of at least one other valve in each line having an inoperable valve shall be recorded daily.