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 AUTH.NAME AUTHOR AFFILIATION
 SCRENSSEN,G.C. Washington Public Power Supply System
 RECIP.NAME RECIPIENT AFFILIATION
 KNIGHTON,G. NRC - No Detailed Affiliation Given

SUBJECT: Discusses 880610 meeting re fire protection insp.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

Docket No. 50-397

G02-88-163

July 26, 1988

Mr. George B. Knighton
U. S. Nuclear Regulatory Commission
P1-137
Washington, D. C. 20555

Dear Mr. Knighton:

Subject: NUCLEAR PLANT NO. 2
OPERATING LICENSE NPF-21
APPROVED FIRE PROTECTION PROGRAM

References: (1) Letter, GC Sorensen to NRC, Fire Protection Program,
dated January 29, 1987 (G02-87-034)
(2) Letter, EG Adensam (NRC) to GC Sorensen, same subject,
dated February 5, 1987

During the exit meeting on June 10, 1988 for the fire protection inspection at WNP-2, there was considerable discussion concerning the "approved Fire Protection Program" for WNP-2 and actions which could be taken by the Supply System under that program and our License Condition 2.C (14). Based on that discussion, it appears that further clarification is required as to how License Condition 2.C (14) is to be applied. License Condition 2.C (14) states that:

"The licensee shall maintain in effect all provisions of the approved Fire Protection Program."

In response to direction provided by NRC staff during a fire protection exit meeting with members of NRC and Region V at Supply System offices on January 15, 1987, the Supply System transmitted Reference 1 which outlined the "approved Fire Protection Program." Additionally, prior to submittal, the program was presented to and discussed in detail with the staff during meetings on January 20 and 21, 1987 in Bethesda. Reference 2 provided NRC acknowledgement that the attachment to Reference 1, for purposes of License Condition 2.C (14) "will be considered your approved Fire Protection Program." This approval was contingent on the timely submittal by the Supply System of a license amendment request pursuant to the guidance of Generic Letter 86-10. This license amendment request was submitted in a timely manner on February 10, 1987 and is presently under staff review.

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In accordance with the agreement at the January 1987 meeting, as documented in Reference 1, the Supply System has not altered any provision of the approved Fire Protection Program without prior NRC staff approval. As noted in Reference 1, we have made changes in the facility or procedures as described in the FSAR pursuant to 10CFR50.59. These changes did not alter the approved program, nor did they involve any of the situations evaluated under 10CFR50.59, which would have required prior staff approval.

It should be noted that clarification is required in two areas of the program description provided with Reference 1.

- (1) Under Paragraph III.A. "Plant Design," it is stated that "door openings in required fire barriers are protected with listed 3 hour rated doors." The sentence should be amended as follows: "Door openings in required fire barriers are protected with listed 3 hour rated doors except for locations where a lesser rating is used and that use has been previously recognized and approved by the staff and noted in the FSAR." This same revision applies to Paragraph V.A. "Control Room."

There are areas where fire dampers and doors having less than a 3 hour rating are provided. However, the fire hazards analysis shows that a lesser rating is acceptable. The above clarification is a part of the plant design which was reviewed and approved by the NRC. No change to the program is implied.

- (2) Paragraph III.B "Safe Shutdown Capability," the listing of systems used for safe shutdown for purposes of fire protection, should be revised as follows:

- a) Three of seven automatic . . ."

Should be: "Six of seven automatic . . ."

- b) "Three ADS valves controlled from the Alternate Remote Shutdown Panel."

Should be: "Three ADS valves controlled from the Alternate Remote Shutdown Panel and three safety relief valves controlled from the Remote Shutdown Panel."

These changes were made at NRC direction and therefore had NRC approval prior to implementation. A marked up copy of the affected pages is enclosed with this letter.

G Knighton
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FSAR Amendment 37 (September 22, 1986) described the implementation of the WNP-2 Fire Protection Program. Changes to this description were made in FSAR Amendment 38 (August 26, 1987), and further changes will be provided in Amendment 39 (scheduled for submittal in September 1988). These changes in the FSAR description do not alter any provisions of the approved Fire Protection Program as provided to the NRC (Reference 1).

As requested in Reference 2, the Supply System submitted (February 10, 1987) a request to amend the WNP-2 license to incorporate the "standard license condition" contained in Generic Letter 86-10. NRC approval of this amendment request will permit the Supply System to make changes to the approved program if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. In the meanwhile, pending NRC approval of the Generic Letter 86-10 license amendment, we will not make changes to the approved fire protection program without prior NRC approval.

As noted, we do not consider the changes which have been made to be programmatic changes. If further clarification is necessary, we would be pleased to meet with you and other staff members as necessary to resolve any outstanding questions.

We were pleased with the results achieved during the June 6-10 fire protection inspection, and trust that the few remaining open items will soon be closed.

Should you have questions, please contact Mr. Alan Hosler, WNP-2 Licensing Manager at (509) 377-2327.

Very truly yours,


G. C. Sorensen, Manager
Regulatory Programs

cc: NS Reynolds/BCP&R
RB Samworth/NRC
JO Bradfute/NRC
JB Martin/RV
CB Ramsey/RV
AD Johnson/RV
Document Control Desk
NRC Resident Inspector



D. Fire Brigade

A trained and equipped 5-member Fire Brigade is provided for each shift. Fire Brigade drills are conducted at regular intervals not to exceed three months, with a drill including the local fire department at least every 12 months." The Fire Brigade and Fire Brigade Training shall comply with the criteria outlined in 10 C.F.R. 50, Appendix R, Sections III.H and III.I.

The plant Fire Brigade is trained to be self-sufficient. However, backup firefighting response is provided by agreement with a local fire department. Backup responders are oriented regarding plant physical layout and special hazards:

E. Quality Assurance Program

The quality assurance program is under the management of the Director of Licensing and Assurance, who reports directly to the Managing Director. The quality assurance organization formulates a fire protection QA program that is acceptable to the Plant Manager and verifies the effectiveness of the fire protection related activities through suitable reviews, surveillances and audits.

III. PLANT REQUIREMENTS

A. Plant Design

Redundant divisions of safe shutdown systems (including cabling) comply with the separation requirements of Section III.G of Appendix R to 10 C.F.R. Part 50 so that both trains are not subject to damage from a single fire.

Openings through required fire barriers for pipe, conduit, and cable trays are sealed with tested and approved 3 hour rated fire seals or justification for a lesser seal is provided that is comparable to that documented in the FSAR and previously approved by the NRC Staff. The inside of conduits are sealed using seals of acceptably tested configurations or which have been found acceptable by analysis to prevent the passage of smoke and hot gases across barriers.

Penetration openings for ventilation systems are provided with listed fire dampers having a rating equivalent to that required of the barrier, except for locations where justification is provided for a lesser rating which is comparable to that documented in the FSAR and previously approved by the Staff.

Door openings in required fire barriers are protected with listed 3 hour rated doors. Openings that are larger than those normally found or requiring special application are provided with doors of equivalent rating as noted by the manufacturer. Fire doors are verified operable in accordance with WNP-2 Technical Specifications.

except for locations where justification is provided for a lesser rating which is comparable to that documented in the FSAR and previously approved by the staff.

Emergency lights are provided in areas that must be accessed (ingress and egress) for safe shutdown. Fixed emergency communications independent of the normal plant communication system are located at preselected stations. A portable communications system is provided for the Fire Brigade.

Plant design used non-combustible materials to the extent possible for walls, roofs, ceilings, floors, etc. A surface treatment may be applied where it meets the provisions of Generic Letter 86-10, Enclosure 1 at p. 15, answer 3.5.2, e.g., control room wall paneling with fire retardant plastic laminate (see FSAR Amendment 33 at p. F.2-107). Transformers are dry type or cooled with a noncombustible liquid in areas that contain safe shutdown equipment.

B. Safe Shutdown Capability

Fire protection is provided for structures, systems, and components important to safe shutdown of the plant during and following a fire. The protection limits fire damage so that one train of systems necessary to achieve and maintain cold shutdown conditions is available from either the Main Control Room or the Remote and Alternate Remote Shutdown panels, the SM-8 Switchgear, and the DG-2 Control Panel.

For the purposes of fire protection, the systems used for safe shutdown are as follows:

Six

- 1) ~~Three~~ of seven Automatic Depressurization System (ADS) Valves controlled from the Main Control Room. Divisionalized control of ADS Valves is described in FSAR Section 7.3.1
- 2) Three ADS Valves controlled from the Alternate Remote Shutdown Panel *and three SRVs controlled from the Remote Shutdown Panel*
- 3) Residual Heat Removal System (RHRS)
- 4) Standby Service Water System (SSWS)
- 5) HVAC System
- 6) Electrical Distribution System (including the diesel generators)
- 7) Controls and instrumentation required for operation located on Main Control Room panels, Remote and Alternate Remote Shutdown panels, SM-8 switchgear, and the DG-2 panel for the above systems.

The Supply System has taken actions to assure the availability of at least one train of these systems in the event of a fire in any one fire area. The divisions available for each fire area are set forth in Table 1.

C. Safe Shutdown Criteria

Safe shutdown systems installed to ensure postfire shutdown capability need not be designed to meet seismic Category I criteria, single failure criteria, or other Design Basis Accident criteria, except where required due to interface with or impact on existing safety systems. In addition, credible spurious signals due to fire damage will not prevent safe shutdown.

The safe shutdown equipment and systems for each fire area are independent of allied circuits (i.e., circuits other than safe shutdown circuits whose failure may result in loss of safe shutdown capability) in the fire area such that hot shorts, open circuits, or shorts to ground in the allied circuits will not prevent operation of the safe shutdown equipment.

C. Halon Suppression Systems

Halon 1301 fire extinguishing systems are provided in the Main Control Room under the floor raceway system (PGCC) and meet NFPA 12A or an acceptable deviation from the code shall be available. Preventative maintenance and testing of the systems are performed in accordance with WNP-2 Technical Specifications.

D. Portable Extinguishers

Fire extinguishers are provided which meet NFPA 10 or an acceptable deviation from the code shall be available. Testing and maintenance are performed in accordance with the WNP-2 Technical Specifications.

V. REQUIREMENTS FOR SPECIFIC PLANT AREAS

A. Control Room

except for locations where justification is provided for a lesser rating which is comparable to that documented in the FSA and previously approved by the staff.
The Main Control Room is separated from other areas of the plant by barriers having minimum fire rating of 3 hours. Peripheral rooms in the Main Control Room (shift manager offices, pipe space, rest room and kitchen) are protected with an automatic sprinkler system and separated from the Control Room by noncombustible construction. The Control Room is provided with fire extinguishers and fire detection. Breathing apparatus for Main Control Room operators is available in the Control Room.

B. Cable Spreading Room

The primary fire suppression system in the cable spreading room is preaction with directional spray heads. Hose stations and portable extinguishers are located immediately outside the room; early warning smoke detection is provided. A 20 foot area of no intervening combustibles is included.

C. Switchgear Rooms

Switchgear rooms containing safe shutdown equipment are separated from the remainder of the plant by barriers with a minimum fire rating of 3 hours. Redundant switchgear divisions are separated from each other by barriers with a 3-hour fire rating. Detection is provided and will alarm in the Main Control Room. Fire hose stations and portable fire extinguishers are provided.

D. Remote and Alternate Remote Shutdown Rooms

Rooms containing shutdown equipment providing Alternative Shutdown capability are separated from each other and the Control Room by barriers having a minimum fire rating of 3 hours. Panels providing Alternative Shutdown capability are electrically isolated from the Control Room or protected so that a fire in the Control Room will not effect shutdown capability from the remote area. These rooms are provided with automatic fire detection that alarms in the Control Room. Portable extinguishers and manual hose stations are provided.