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FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
BOUCHEY,R.D. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards response to Round 2 questions re fire protection evaluation.Response will be incorporated into FSAR in amend within 4 months.

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Washington Public Power Supply System
P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

Docket No. 50-397

July 20, 1981
G02-81-186
NS-L-02-CDT-81-006

Director, Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Subject: SUPPLY SYSTEM NUCLEAR PROJECT NO. 2
RESPONSES TO ROUND TWO QUESTIONS
FIRE PROTECTION EVALUATION

Reference: Letter, R. L. Tedesco (NRC) to R. L. Ferguson (WPPSS), "WNP-2 FSAR - Request for Information", May 5, 1981

Dear Mr. Schwencer:

Enclosed are sixty (60) copies of the responses to Round Two questions concerning the Fire Protection Evaluation. These responses are to be incorporated formally into the FSAR in an amendment within four months.

Very truly yours,

G. D. BOUCHEY
Director, Nuclear Safety

GDB:CDT:ct

Enclosures

cc: WS Chin, BPA
TA Mangelsdorf, Bechtel
J Plunkett, NUS Corporation
NS Reynolds, D&L
JJ Verderber, B&R (NY)
JA Satir, B&R (NY)
AD Toth, NRC
R Auluck, NRC

B001
S.1/1

Q. 040.079

The residual heat removal system is generally a low pressure system that interfaces with the high pressure primary coolant system. To preclude a LOCA through this interface, we require compliance with the recommendations of Branch Technical Position RSB 5-1. Thus, this interface most likely consists of two redundant and independent motor operated valves with diverse interlocks in accordance with Branch Technical Position ICSB 3. These two motor operated valves and their associated cable may be subject to a single fire hazard. It is our concern that this single fire could cause the two valves to open resulting in a fire-initiated LOCA through the subject high-low pressure system interface. To assure that this interface and other high-low pressure interfaces are adequately protected from the effects of a single fire, we require the following information:

a. Identify each high-low pressure interface that uses redundant electrically controlled devices (such as two series motor operated valves) to isolate or preclude rupture of any primary coolant boundary.

b. Identify each device's essential cabling (power and control) and describe the cable routing (by fire area) from source to termination.

c. Identify each location where the identified cables are separated by less than a wall having a three-hour fire rating from cables for the redundant device.

d. For the areas identified in item (c) above (if any), provide the bases and justification as to the acceptability of the existing design or any proposed modifications.

Response:

An analysis of the current WNP-2 Fire Protection Evaluation, which responds to Branch Technical Position APCSB 9.5-1 and of the new Appendix R 10CFR50, is now in progress. The analysis is anticipated to be completed by October 15, 1981. The response to the above question will be incorporated into this revised report.

Q. 040.078

To assure compliance with GDC 19, we require the following information be provided for the control room. If credit is to be taken for an alternate or dedicated shutdown method for other fire areas (as identified by Q. 040.075 item (c) or Q. 040.077 item (b)) in accordance with Section III.G.3 of new Appendix R to 10 CFR Part 50, the following information will also be required for each of these plant areas.

a. A table that lists all equipment including instrumentation and vital support system equipment that are required by the primary method of achieving and maintaining hot and/or cold shutdown.

b. A table that lists all equipment including instrumentation and vital support system equipment that are required by the alternate, dedicated, or remote method of achieving and maintaining hot and/or cold shutdown.

c. Identify each alternate shutdown equipment listed in item (b) above with essential cables (instrumentation, control and power) that are located in the fire area containing the primary shutdown equipment. For each equipment listed provide one of the following:

   1. Detailed electrical schematic drawings that show the essenteal cables that are duplicated elsewhere and are electrically isolated from the subject fire areas, or

   2. The results of an analysis that demonstrates that failure (open, ground, or hot short) of each cable identified will not affect the capability to achieve and maintain hot or cold shutdown.

d. Provide a table that lists Class 1E and Nonclass 1E cables that are associated with the alternate, dedicated, or remote method of shutdown. For each item listed, identify each associated cable located in the fire area containing the primary shutdown equipment. For each cable so identified, provide the results of an analysis that demonstrates that failure (open, ground, or hot short) of the associated cable will not adversely affect the alternate, dedicated, or remote method of shutdown.

Response:

An analysis of the current WNP-2 Fire Protection Evaluation, which responds to Branch Technical Position APCSB 9.5-1 and to the new Appendix R 10CFR50, is now in progress. The analysis is anticipated to be completed by October 15, 1981. The response to the above question will be incorporated into the revised report.

Q. 040.077

Provide one of the following for each of the circuits identified in Q. 040.076 item (c):

a. The results of an analysis that demonstrates that failure caused by open, ground, or hot short of cables will not affect its association shutdown system (see note below).

b. Identify each circuit requiring a solution in accordance with Section III.G.3 of Appendix R; or,

c. Identify each circuit meeting or that will be modified to meet the requirements of Section III.G.3 of Appendix R (ie., three-hour wall, 20 feet of clear space with automatic fire suppression, or on-hour barrier with automatic fire suppression).

NOTE: Option (a) above is considered to be one method of meeting the requirements of Section III.G.3 Appendix R. If option (a) above is selected, the information requested in Q. 040.076 items (a) and (c) should be provided in general terms and the information requested by Q. 040.076 item (b) need not be provided.

Response:

An analysis of the current WNP-2 Fire Protection Evaluation, which responds to branch technical position APCSB 9.5-1 and to the new Appendix R 10CFR50, is now in progress. The analysis is anticipated to be completed by October 15, 1981. The response to the above question will be incorporated into the revised report.

Q. 040.076

Provide a table that lists Class IE and non-Class IE cables that are associated with the essential safe shutdown systems identified in Q. 040.075. For each cable listed (see note below):

a. Define the cables' association to the safe shutdown system (common power source, common raceway, separation less than the IEEE Standard 384 guidelines, cables for equipment whose spurious operation will adversely affect shutdown systems, etc.).

b. Describe each associated cable routing (by fire area) from source to termination; and,

c. Identify each location where the associated cables are separated by less than a wall having a three-hour fire rating from cables required for or associated with any redundant shutdown system.

NOTE: Option (a) of Q. 040.077 is considered to be one method of meeting the requirements of Section III.G.3 Appendix R. If option (a) is selected, the information requested in items (a) and (b) above should be provided in general terms and the information requested by (b) above need not be provided.

Response:

An analysis of the current WNP-2 Fire Protection Evaluation, which responds to branch technical position APCSB 9.5-1 and to the new Appendix R 10CFR50, is now in progress. The analysis is anticipated to be completed by October 15, 1981. The response to the above question will be incorporated into the revised report.

Q. 040.075

Provide a table that lists all equipment including instrumentation and vital support systems equipment required to achieve and maintain hot and/or cold shutdown. For each equipment listed:

a. Differentiate between equipment required to achieve and maintain hot shutdown and equipment required to achieve and maintain cold shutdown;

b. Define each equipment's location by fire area;

c. Define each equipment's redundant counterpart;

d. Identify each equipment's essential cabling (instrumentation, control and power). For each cable identified: (1) describe the cable routing (by fire area) from source to termination, and (2) identify each fire area location where the cables are separated by less than a wall having a three-hour fire rating from cables for any redundant shutdown system; and,

e. List any problem areas identified by d.2 above that will be corrected in accordance with Section III.G.3 of Appendix R (i.e., alternate or dedicated shutdown capability).

Response:

An analysis of the current WNP-2 Fire Protection Evaluation, which responds to branch technical position APCSB 9.5-1 and to the new Appendix R 10CFR50, is now in progress. The analysis is anticipated to be completed by October 15, 1981. The response to the above question will be incorporated into the revised report.