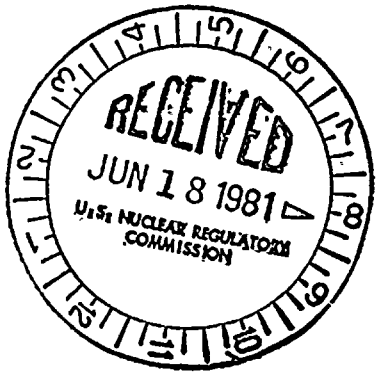
Docket No. 50-397

JUN 15 1981



Washington Public Supply System
ATTN: Mr. R. L. Ferguson
Managing Director
3000 George Washington Way
Richland, Washington 99352

Dear Mr. Ferguson:

SUBJECT: WNP-2 FSAR - REQUEST FOR ADDITIONAL INFORMATION

As a result of our review of your application for operating license, we find that we need additional information regarding the WNP-2 FSAR. The specific information required is in the area of quality assurance and is listed in the Enclosure.

To maintain our licensing review schedule for the WNP-2 FSAR, we will need responses to the enclosed request by July 31, 1981. If you cannot meet this date, please inform us within seven days after receipt of this letter of the date you plan to submit your responses so that we may review our schedule for any necessary changes.

Please contact Raj Auluck, Licensing Project Manager, if you desire any discussion or clarification of the enclosed request.

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Sincerely,

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
Request for Additional
Information

cc: w/encl.
See next page

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NRC FORM 318 (10/80) NRCM 0240 OFFICIAL RECORD COPY ☆ USGPO: 1980—329-824

Dear Mr. Ferguson:

[illegible] your application for operating license [illegible] need additional information regarding [illegible]. The [illegible] are required [illegible] quality [illegible] listed in the Enclosure.

[illegible] your responses [illegible] necessary changes.

[illegible]

Sincerely,

Robert L. Tedesco, Assistant Director for Licensing
Division of Licensing

DISTRIBUTION:
[illegible]
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Enclosure: Request for Additional Information

cc w/encl.: See next page

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601 Williams Boulevard
Richland, Washington 99352

ENCLOSURE

WPPSS - WNP-2

Design and Construction QA Program

Request for Additional Information

420.0 Quality Assurance Branch

421.1 Describe the management interface controls for QA activities between WPPSS and the principal contractors, i.e., Burns & Roe, Bechtel, and General Electric, to assure proper implementation of the QA program.

421.2 Clarify if the "...Corporate QA Program" (Ref. p. 3) is the same as the "...Project QA Program" (Ref. p. 12).

421.3 Describe in more detail the QA responsibilities of each of the organizational elements identified in Figure 17.1.1-1 down to and including the WNP-2 Program Director level.

421.4 Because he reports to the Program Director, it appears that the Project Quality Assurance Manager is not sufficiently free from the pressures of cost and schedules to effectively implement his responsibilities. Describe how this situation will not exist and also his interface role with the Quality Assurance Director.

421.5 Describe the QA responsibilities of WPPSS Engineering (Ref. Figure 17.1.1-3) with regards to Burns & Roe Engineering, e.g., perform design verification?

421.6 Clarify if the stop work authority of the QA Director (Ref. p. 3), the Project QA Manager (Ref. p. 12), and QA personnel (Ref. p. 15) is delineated in writing.

421.7 Describe the qualifications for the positions of QA Director and Project QA Manager.

421.8 Give a brief summary of WPPSS's corporate QA policies.

421.9 Describe the provisions which assure that procedures required to implement the QA program are consistent with QA program commitments and corporate policies (should be established at the Managing Director level) and are properly documented, controlled, and made mandatory through a policy statement or equivalent document signed by a responsible official.

421.10 On p. 11, it is noted that "startup activities will be conducted in accordance with the Operational QA Program...." Clarify if the preoperational test program will be covered by the design and construction or the operational QA program.

421.11 Describe the criteria for determining the number of individuals in the specific QA organizational elements.

421.12 Provide a commitment that the development, control, and use of computer code programs will be conducted in accordance with the QA program.

421.13 Describe the provisions for notifying the NRC for review and acceptance of changes (1) in the accepted QA program description as presented or referenced in the SAR or SSAR prior to implementation, and (2) in organizational elements within 30 days after announcement. (Note - editorial changes or personnel reassignments of a non-substantive nature do not require NRC notification).

421.14 On page 14 modify the second paragraph to provide an additional commitment to "comply with 10 CFR 50.55a and the regulatory position of the regulatory guides specified in Appendix C.3 of the FSAR." In addition, modify Appendix C.3 to address the following regulatory guides or describe acceptable alternatives: 1.28-Rev. 2; 1.29-Rev. 3; 1.30; 1.39-Rev. 2; 1.74; 1.116; 1.123-Rev. 1; 1.144-Rev. 1; and 1.146.

421.15 Identify existing or proposed QA procedures to reflect that each criterion of 10 CFR 50 Appendix B will be met by documented procedures.

421.16 Provide a description of how management (above or outside the QA organization) regularly assesses the scope, status, adequacy, and compliance of the QA program to 10 CFR 50 Appendix B. These measures should include:

a. Frequent contact with program status through reports, meetings, and/or audits.

b. Performance of an annual assessment preplanned and documented. Corrective action is identified and tracked.

421.17 Provide a summary description on how responsibilities and control of quality-related activities are transferred from the principal contractors to WPPSS during the phaseout of design and construction and during preoperational testing and plant turnover.

421.18 Describe the provisions which assure that the scope of the design control program includes such activities as field design engineering; physics, seismic, stress, thermal, hydraulic, radiation, and the SAR accident analyses; associated computer programs; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; and quality standards.

421.19 Describe WPPSS's organizational responsibilities for reviewing, approving, and verifying design documents such as system descriptions, design input and criteria, design drawings, design analyses, computer programs, specifications, and procedures.

421.20 Describe WPPSS's organizational responsibilities for (1) procurement planning; (2) the preparation, review, approval, and control of procurement documents; (3) supplier selection; (4) bid evaluations; and (5) review and concurrence of supplier QA programs prior to initiation of activities affected by the program. Describe the involvement of the QA organization in implementing these responsibilities.

421.21 Provide a commitment that the types of controlled documents include: documents related to computer codes; QA and QC manuals; topical reports; SAR; and nonconformance reports.

421.22 Describe the provisions which assure that the QA organization, or an individual other than the person who generated the document but qualified in quality assurance, reviews and concurs with controlled documents with regards to QA-related aspects.

421.23 Provide a commitment that procurement of spare or replacement parts for structures, systems, and components important to safety is subject to present QA program controls, to codes and standards, and to technical requirements equal to or better than the original technical requirements.

421.24 Clarify that receiving inspection is performed to assure:

a. Material, components, equipment, and acceptance records satisfy the inspection instructions prior to installation or use.

b. Specified inspection, test and other records, (such as certificates of conformance attesting that the material, components, and equipment conform to specified requirements) are available at the nuclear power plant prior to installation or use.

421.25. Describe the provisions which assure that suppliers' certificates of conformance are periodically evaluated by audits, independent inspections, or tests to assure they are valid.

421.26. Describe WPPSS's organizational responsibilities for qualification of special processes, equipment, and personnel.

421.27 Describe the provisions which assure that inspection results are documented, evaluated, and their acceptability determined by a responsible individual or group.

421.28 Describe the provisions which assure that procedures provide criteria for determining the accuracy requirements of inspection and test equipment and criteria for determining when inspections or tests are required or define how and when inspections and testing activities are performed.

421.29 Describe the provisions which assure that test procedures (Ref. p. 30) or instructions provide as required for the following:

a. Test prerequisites such as calibrated instrumentation, adequate test equipment and instrumentation including their accuracy requirements, completeness of item to be tested, suitable and controlled environmental conditions, and provisions for data collection and storage.

b. Mandatory inspection hold points for witness by owner, contractor, or inspector (as required).

421.30 Describe the provisions which assure that calibration of measuring and test equipment should be against standards that have an accuracy of at least four times the required accuracy of the equipment being calibrated or, when this is not possible, have an accuracy that assures the equipment being calibrated will be within required tolerance and that the basis of acceptance is documented and authorized by responsible management.

421.31. Describe the provisions which assure that calibrating standards have greater accuracy than standards being calibrated.

421.32. Provide a commitment that documentation identifies the nonconforming item; describes the nonconformance, the disposition of the nonconformance, and the inspection requirements; and includes signature approval of the disposition. Nonconformances are corrected or resolved prior to the initiation of the preoperational test program on the item.

421.33 Provide a commitment that audits include an objective evaluation of quality-related practices, procedures, instructions; activities and items; and review of documents and records to ensure that the QA program is effective and properly implemented.

421.34 Provide a commitment that "all aspects" (Ref. p. 40) cover activities associated with:

a. Indoctrination and training programs.

b. Interface control between WPPSS and the principal contractors.

c. Corrective action, calibration, and nonconformance control systems.

d. SAR and SSAR commitments.

421.35 Clarify where the "home office audit group" (Ref. p. 41) is located in WPPSS's organization.

421.36 Describe the QA responsibilities of each of the organizational elements noted in Figure 17.1.1-4.

421.37 Page 4, Section 17.1.2.2 - Define the term "prepurchased equipment contracts" in the second sentence.

421.38 Provide a commitment that the Burns & Roe QA program "will follow the regulatory position of the Regulatory Guides identified in Appendix C.3 of the WNP-2 FSAR." (Ref. Question No. 14)

421.39 Page 45, Section 7 - The purchase of spare or replacement parts shall be to the latest QA program requirements. Modify the present statement to address this position or describe an acceptable alternative.

421.40 Identify the organizational element that performs receipt inspection of items on "prepurchased equipment contracts" which are the responsibility of Burns & Roe.

421.41 Section 17.1.3 - General Electric's current activities related to WNP-2 should be in accordance with NEDO-11209-04A, Revision 2 dated February 1, 1980. In addition, General Electric should update their commitment to the following Regulatory Guides or describe acceptable alternatives: 1.28-Rev. 2; 1.58-Rev. 1; 1.144-Rev. 1; and 1.146.

421.42 Section 17.1.4.3 - Bechtel should update their commitment to the following Regulatory Guides or describe acceptable alternatives: 1.28-Rev. 2; 1.39-Rev. 2; 1.123-Rev. 1; and 1.144-Rev. 1.

Request for Additional Information

WPPSS-2

420.0 Quality Assurance Branch

421 Section 17.1.2.2 of the standard format (Regulatory Guide 1.70) requires the identification of safety-related structures, systems, and components controlled by the quality assurance program. You are requested to supplement and clarify the WPPSS-2 list in Table 3.2-1 of the FSAR in accordance with the following:

a. The following items do not appear in Table 3.2-1 of the FSAR. Add the appropriate items to Table 3.2-1 and provide a commitment that the remaining items are subject to the pertinent requirements of the FSAR operational quality assurance program or justify not doing so.

1. Biological shielding within containment vessel, reactor building, and control building.

2. Missile barriers within containment vessels, reactor building, control building, diesel-generator building, and standby service water pump houses.

3. Spent fuel pool and liner.

4. Equipment and drain floor piping and containment isolation valves.

5. Quencher and quencher support.

6. Downcomers and braces.

7. Containment spray system.

8. Condensate and feedwater system piping from PRV to the outermost isolation valves and the containment isolation valves.

9. Primary containment access hatches/locks/doors, penetration assemblies, and vacuum relief valves.

10. Engineering safety features actuation system.

11. Combustible gas control system hydrogen recombiners.

12. Instrumentation & controls associated with:

a) ADS (cf. Table 7.3-21)
b) LPCI (cf. Table 7.3-4)
c) MSIV-LCS
d) Primary containment vacuum relief system
e) Standby gas treatment system
f) Reactor building recirculation system
g) Reactor building isolation and HVAC support system

h) Habitability systems, control room isolation, and supporting HVAC systems
i) ESF auxiliary support systems:

1) RHR service water
2) Containment instrument gas

j) HVAC for ESF systems:

1) SGTS equipment room
2) Diesel generator building
3) ESSW pumphouse
4) ESF switchgear room
5) ECCS unit coolers
6) Drywell unit coolers
7) Control structure chilled water system

k) Reactor core isolation cooling remote shutdown panel
l) Safety-related display (NSSS and non-NSSS)
m) Refueling interlock system
n) Rod block monitor system
o) Rod sequence control system
p) Rod worth minimizer
q) Diesel generator initiation (NSSS and non-NSSS)

Note: In lieu of adding a through q above to Table 3.2-1, it would be acceptable to add an item 50, "Instrumentation and Control Equipment," with a sub-1, "Safety-related Instrument and Control Systems," with a comment 38, "Safety-related instrumentation and control systems and components are identified in detail in Chapter 7, Table 7.1-1 of the FSAR. The pertinent quality assurance requirements of Section 17.2 of the FSAR will apply to these systems and components."

13. Onsite ac power systems (Class 1E)

a) Diesel generator packages including auxiliaries (e.g., lube system, jacket cooling, air start system; governor, voltage regulator, excitation system)
b) 4160 volt switchgear
c) 480V load centers
d) 480V motor control centers
e) Instrumentation, control, and power cables (including underground cable system, cable splices, connectors, and terminal blocks)
f) Conduit and cable trays and their supports:

Raceway installations containing Class 1E cables and other raceway installations required to meet seismic Category 1 requirements (those whose failure during a seismic event may result in damage to any Class 1E or other safety related system or components).

g) Transformers
h) Valve operators
i) Protective relays and control panels
j) AC control power inverters
k) Containment electrical penetration assemblies
l) Other cable penetrations (fire stops)

14. Onsite dc power systems (Class 1E)

a) 24, 125, and 250 volt DC distribution equipment
b) Conduit and cable trays and their supports:

Raceway installations containing Class 1E cables and other raceway installations required to meet seismic Category 1 requirements (those whose failure during a seismic event may result in damage to any Class 1E or other safety related system or components).

c) Battery racks
d) Protective relays and control panels

15. Radiation monitoring (fixed and portable).

16. Radioactivity monitoring (fixed and portable).

17. Radioactivity sampling (air, surfaces, liquids).

18. Radioactive contamination measurement and analysis.

19. Personnel monitoring internal (e.g., whole body counter) and external (e.g., TLD system).

20. Instrument storage, calibration, and maintenance.

21. Decontamination (facilities, personnel, and equipment).

22. Respiratory protection, including testing.

23. Contamination control.

24. Radiation shielding.

25. Meteorological data collection programs.

26. Expendable and consumable items necessary for the functional performance of safety-related structures, systems, and components (i.e., weld rod, fuel oil, boric acid, snubber oil, etc.).

27. Measuring and test equipment used for safety-related structures, systems, and components.

28. Safety-related masonry walls (see IE Bulletin 80-11).

29. Class 1E electrical duct banks.

30. Buried essential service water pipe line.

b. The following items from Table 3.2-1 need expansion and/or clarification as noted. Revise the list as indicated or justify not doing so.

1. The heat exchangers, pumps, interconnecting piping, and valves associated with item 21, the fuel pool cooling and cleanup system, should be under the pertinent controls of the FSAR operational quality assurance program.

2. Reactor vessel internals (e.g., dryers, separators, feedwater spargers, jet pump instrumentation, etc.) associated with item 1.6 should be under the pertinent controls of the FSAR operational quality assurance program.

c. Enclosure 2 of NUREG-0737, "Clarification of TMI Action Plan Requirements" (November 1980) identified numerous items that are safety-related and appropriate for OL application and therefore should be in Table 3.2-1. These items are listed below. Add the appropriate items to Table 3.2-1 and provide a commitment that the remaining items are subject to the pertinent requirements of the FSAR operational QA program or justify not doing so.

		NUREG-0737 (Enclosure 2) Clarification Item
1.	Plant-safety-parameter display console.	I.D.2
2.	Reactor coolant system vents.	II.B.1
3.	Plant shielding.	II.B.2
4.	Post accident sampling capability.	II.B.3
5.	Valve position indication.	II.D.3
6.	Dedicated hydrogen penetrations.	II.E.4.1
7.	Containment isolation dependability.	II.E.4.2
8.	Accident monitoring instrumentation.	II.F.1
9.	Instrumentation for detection of inadequate core-cooling.	II.F.2
10.	HPCI & RCIC initiation levels.	II.K.3(13)
11.	Isolation of HPCI & RCIC.	II.K.3(15)
12.	Challenges to and failure of relief valves.	II.K.3(16)
13.	ADS actuation.	II.K.3(18)
14.	Restart of core spray and LPCI.	II.K.3(21)
15.	RCIC suction.	II.K.3(22)
16.	Space cooling for HPCI & RCIC.	II.K.3(24)
17.	Power on pump seals.	II.K.3(25)
18.	Common reference level.	II.K.3(27)
19.	ADS valve, accumulators, and associated equipment and instrumentation.	II.K.3(28)

20.	Emergency plans.	III.A.1.1/III.A.2
21.	Emergency support facilities.	III.A.1.2
22.	Inplant I_2 radiation monitoring.	III.D.3.3
23.	Control-room habitability.	III.D.3.4

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