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Mr. J. Wells, Manager
Quality Assurance
Duke Power Company
422 South Church Street
Charlotte, SC 28242

Dear Mr. Wells:

SUBJECT: QA PROGRAM FOR OPERATION - CATAWBA NUCLEAR STATION

In our acceptance letter for Amendment 5 of DUKE-1-A, "Quality Assurance Program," we noted that we would compare Amendment 5 to Section 17.2 of Revision 1 of the Standard Review Plan (NUREG-75/087) for the Catawba Nuclear Station. We have completed this review which resulted in the enclosed "Request for Additional Information."

Please respond to the enclosure on a schedule which is compatible with the review schedule for the Catawba Nuclear Station. An acceptable response is required to each item in the enclosure before a Safety Evaluation Report indicating the acceptability of Chapter 17 of the Catawba FSAR can be issued.

If you have any questions regarding the above, call Jack Spraul of my staff or me on (301) 492-7741.

Sincerely,

Original signed by
Walter P. Haass

Walter P. Haass, Chief
Quality Assurance Branch
Division of Engineering

Enclosure:
Request for Additional
Information

OFFICE	DE:QAB	DE:QAB					
SURNAME	JSpraul:cg	WPHaass					
DATE	8/5/81	8/6/81					

REQUEST FOR ADDITIONAL INFORMATION

Duke Power Company - Catawba Nuclear Station

For Catawba FSAR, the following questions resulted from reviewing Amendment 5 of DUKE-1 to Rev. 1 of the SRP. The number in parentheses under the question number refers to Section 17.2.X of the report.

1. Appendix 17A of DUKE-1 lists the qualification requirements of the Corporate Quality Assurance Manager. Provide a commitment that both the Corporate Quality Assurance Manager and the Station Senior QA Engineer meet the qualification requirements of Section 4.4.5 of ANSI/ANS-3.1-1978.

2. (2) Describe how the Quality Assurance Program is applied to the development, control, and use of computer programs.

3. (2) Identify the structures, systems, components, and consumables at Catawba covered by the QA program. One way to do this would be to revise Section 17.2 of the Catawba FSAR to include a list of these items or make reference to other sections of the Catawba FSAR where such a list can be found. Indicate who (by position title) is authorized to approve changes to this list. Finally, clarify that this list is controlled under Duke Power Company's document control program described in Part 17.2.6 of DUKE-1.

4. (2) Clarify that the fire protection system (per Section 9.5.1 of the Catawba FSAR) is covered by the pertinent requirements of the QA program described in DUKE-1.

5. (2) Provide a commitment that special equipment, environmental conditions, skills, and processes will be provided within the scope of the QA program as necessary.

6. (2) Describe provisions which make adherence to procedures mandatory. For example, has a policy statement or similar document been issued to that effect by a responsible official? If so, indicate by position title who has issued such a document.

7. (2) Clarify the last paragraph of the introduction to include a commitment to notify NRC-QAB of changes (1) for review and acceptance in the accepted description of the QA program in DUKE-1 prior to implementation and (2) in organizational elements within 30 days after announcement.

8. (2) Provide a commitment that Duke's QA program for operation will be implemented at Catawba at least 90 days prior to fuel loading.

9. (2) For Catawba, update Table 17.0-1 commitment to Regulatory Guides as noted below. Clarify each alternative to identify the applicable guidance and the proposed alternative in detail.

Regulation/ Regulatory Guide	Listed Revision	Revision Required
10 CFR 50 Appendix B	OK	OK
10 CFR 50.55a	1971 Code	1977 Code
10 CFR 50 Appendix A (Typo)	OK	OK

Regulation/ Regulatory Guide	Listed Revision	Revision Required
R.G. 1.8	1	1-R
1.26	Missing	3
1.28	1	2
1.29	Missing	3
1.30	0	Same
1.33	2	Same
1.37	0	Same
1.38	2	Same
1.39	2	Same
1.58	0	1
1.64	2	Same
1.70	2	Not Required in DUKE-1
1.74	0	Same
1.88	2	Same
1.94	1	Same
1.116	0-R	Same
1.123	1	Same
1.144	0	1
1.146	Missing	0
BTP ASB 9.5-1	Missing	Per SRP Rev. 2, Section 9.5.1

It may be advantageous to provide a table in DUKE-1 showing the applicable revision vs. plant.

10. (2) The third paragraph of Section 17.2.2 allows record transfer subsequent to hardware transfer. The staff's position is that the records should be transferred no later than when the hardware is transferred. Commit to meet this position or provide an alternative for our evaluation.

11. (2) The fifth and sixth paragraphs of Section 17.2.2 address personnel indoctrination and training. Clarify the following:

a) Documentation of formal training includes the objective, content of the program, attendees, and date of attendance.

b) Proficiency of personnel performing and verifying activities affecting quality is maintained by retraining, reexamining, and/or recertifying.

c) Who (by position title) certifies inspectors, testers, and examiners.

12. (3) Describe measures which assure that responsible plant personnel are made aware of design modifications which may affect the performance of their duties.

13. (3) Describe how modifications are designed if it is determined that the station is not adequately qualified to perform this function (reference the third paragraph of Section 17.2.3).

14. (3) Describe the controls applied by the Duke Power Company to the development and use of computer programs. Discuss verification, certification, and use of computer programs.

15. (3) Describe internal and external design interface controls, procedures, and lines of communication among participating design organizations and across technical disciplines for the review, approval, release, distribution, and revision of modification documents involving design interfaces.

16. (3) Describe guidelines or criteria used by the Duke Power Company to determine the method of verifying the design of plant modifications.

17. (3) Discuss the use of first-line supervision as design reviewers (verifiers) and the timeliness of design verification of plant modifications. Clarify that Duke Power Company meets the criteria of item 3E2a on page 17.1-11 of Revision 1 of the Standard Review Plan (NUREG-75/087) in these areas if designs are ever "independently verified" by the designer's immediate supervisor.

18. (3) Discuss the timeliness of design verification. Clarify that Duke Power Company meets the criteria of item 3E2b on page 17.1-11 of Revision 1 of the Standard Review Plan.

19. (3) Provide a commitment that procedures differentiate between design documents that receive formal design verification by interdisciplinary teams and those that can be reviewed by a single individual, and clarify that specialized reviews are used when uniqueness or special design considerations warrant. Also indicate the types of design documents that are subject to Duke Power Company's procedural controls (specifications, calculations, computer programs, system descriptions, SARs, and drawings such as flow diagrams, P&IDs, electrical single line, diagrams, etc.).

20. (3) When designs and design modifications are verified by design review, provide a commitment that procedures identify the responsibility of the verifier, the areas and features to be verified, the pertinent considerations to be verified, and the documentation required.

21. (3) Describe measures which assure that the following provisions are included if design verification method is by test:

    a) Procedures provide criteria that specify when verification should be by test.

    b) Prototype, component, or feature testing is performed as early as possible prior to installation of plant equipment, or prior to the point when the installation would become irreversible.

    c) Verification by test is performed under conditions that simulate the most adverse design conditions as determined by analysis.

22. (4) The third paragraph of Section 17.2.4 of DUKE-1 addresses Quality Assurance Department review of purchase requisitions. Verify that this review determines that quality requirements are correctly stated, inspectable, and controllable; there are adequate acceptance and rejection criteria; and procurement documents have been prepared, reviewed, and approved in accordance with QA program requirements.

23. (4) Describe measures which assure that procurement documents identify applicable regulatory, technical, administrative, and reporting requirements; drawings; specifications; codes and industrial standards; test and inspection requirements; and special process instructions that must be complied with by suppliers.

24. (6) The fourth paragraph of Section 17.2.6 indicates the drawing master index is updated regularly. Define "regularly."

25. (6) Expand Section 17.2.6, "Document Control," to describe the control of as-built documentation, topical reports (such as DUKE-1), and SARs.

26. (6) Describe measures which assure that maintenance, modification, and inspection procedures are reviewed by the QA organization to determine:

a) The need for inspection, identification of inspection personnel, and documentation of inspection results.

b) That the necessary inspection requirements, inspection methods, and acceptance criteria have been identified.

27. (6) Provide a commitment that changes to documents are reviewed and approved by the same organizations that performed the initial review and approval or by other qualified responsible organizations delegated by the Duke Power Company.

28. (6) Describe procedures which assure that obsolete or superseded documents are removed and replaced by applicable revisions in work areas in a timely manner.

29. (6) The last paragraph of Section 17.2.6 addresses a master file and master index which identifies current drawing revisions. Discuss controls used to identify the current revision of instructions, procedures, specifications, and procurement documents.

30. (7) Describe the control of procurement of spare or replacement parts. Such parts should be subject to present (current) QA program controls, to applicable codes and standards, and to technical requirements equal to or better than the original technical requirements.

31. (7) Provide a commitment that suppliers' certificates of conformance are periodically evaluated by audits, independent inspections, or tests to assure they are valid.

32. (8) Describe the organizational responsibilities for the identification and control of materials, parts, and components.

33. (9) Describe the criteria used to determine which processes are controlled as special processes and provide as complete a list as possible.

34. (9) Identify organizational responsibilities for qualifying special processes and related equipment and personnel.

35. (9) Clarify that procedures are established for recording evidence of acceptable accomplishment of special processes using qualified procedures, equipment, and personnel.

36. (10) Provide a commitment that inspection procedures, instructions, or checklists provide, as required, for the following:

a) Identification of characteristics and activities to be inspected.

b) A description of the method of inspection.

c) Specifying necessary measuring and test equipment including accuracy requirements.

d) Identification of the individuals or groups responsible for performing the inspection operation.

e) Acceptance and rejection criteria.

f) Identification of required procedures, drawings, and specifications and revisions.

g) Recording inspector or data recorder and the results of the inspection operation.

h) Identification of the individuals or groups responsible for evaluating and documenting the acceptability of the inspection results.

37. (11) Section 17.2.11 requires procedures for testing. Provide a commitment that these procedures provide as required for the following:

a) The requirements and acceptance limits contained in applicable design and procurement documents.

b) Instructions for performing the test.

c) 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.

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

e) Acceptance and rejection criteria.

f) Methods of documenting or recording test data and results.

g) Provisions for assuring test prerequisites have been met.

38. (12) Describe the organizational responsibilities for establishing, implementing, and assuring the effectiveness of the calibration program (include radiation measuring equipment).

39. (13) Describe provisions for the storage (including shelf life control) of chemicals, reagents, lubricants, and other consumable materials.

40. (13) Provide a commitment that special handling, preservation, storage, cleaning, packaging, and shipping requirements are established and accomplished by suitably trained individuals in accordance with predetermined work and inspection instructions.

41. (14) A clearer commitment regarding the operable status of items would be substituting "identifiable" in the first sentence of 17.2.14 with "identified." Clarify.

42. (15) Provide a commitment that reworked, repaired, and replacement items are inspected and tested in accordance with the original inspection and test requirements or acceptable alternatives.

43. (16) It is not clear that Section 17.2.16, particularly with its reference to Section 17.2.15, addresses that part of corrective action required to preclude repetition of conditions adverse to quality. Clarify that corrective action as discussed in 17.2 includes both the correction of conditions adverse to quality as well as action required to preclude repetition. Also clarify that the requirements of Section 17.2.16 are described in procedures which require documentation of the actions.