

Regulatory Docket File

DUKE POWER COMPANY

POWER BUILDING

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A. C. THIES
SENIOR VICE PRESIDENT
PRODUCTION AND TRANSMISSION

P. O. Box 2178

May 2, 1974



Mr. Voss A. Moore, Assistant Director
For Light Water Reactors Group 2
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Re: Oconee Nuclear Station
Docket No. 50-287

Dear Mr. Moore:

Please find attached a description of the present Babcock & Wilcox quality assurance organization. This information is being submitted in response to your letter of January 22, 1974, and to subsequent verbal communication with members of your staff.

Oconee 3 is essentially complete with fuel loading expected in July, 1974. The B&W QA organization and program that was in effect during Oconee 3 design and construction is described in Appendix 1B of the Oconee FSAR. The organization described herein was implemented in early 1974. Essentially the same organizational freedom and authority existed under the past program as exists under the present program. This organizational freedom and authority is described under Quality Assurance in the attached description.

Very truly yours,

A. C. Thies
A. C. Thies *T.D.P.*

ACT:gje
Attachment



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QUALITY ASSURANCE DURING DESIGN AND CONSTRUCTION - BABCOCK & WILCOX

As a supplier of nuclear steam systems (NSS), Babcock & Wilcox (B&W) implements a QA program (QAP) through the Nuclear Power Generation Division (NPGD), which is responsive to each of the 18 criteria of Appendix B of 10 CFR 50.

Organization

The relationship of the activities described herein is shown in the organization chart, Figure 1. Within B&W, the NPGD has been delegated the overall responsibility for executing contracts for commercial nuclear steam systems, fuel, and related activities. In executing these contracts, NPGD is responsible for a scope of effort extending from the design concept through refueling of an NSS. The organizations within the NPGD that are primarily involved in quality assurance activities are the Reactor Department, the Fuel Department, Purchasing, Quality Assurance, and the New Product and Services Department.

Reactor Department

The General Manager, Reactor Department, reports to the General Manager, NPGD. His department includes the following sections: Systems Engineering, Component Engineering, Reactor Contracts, Nuclear Services, and Engineering Services and Administration.

The Manager, Systems Engineering, is responsible for engineering, preparation of specifications, and approval of drawings for systems, for purchased equipment, and for licensing services.

The Manager, Component Engineering, is responsible for engineering, preparation of specifications, and approval of drawings for B&W-supplied reactor coolant system components and Nuclear Equipment Division manufactured equipment.

The Manager, Reactor Contracts, is responsible for administration of nuclear contracts through a group of project managers who are assigned to the individual contracts being administered by NPGD. The senior project manager assigned to the project is responsible for all official communication with the plant owner and performs the purchasing function for all items fabricated by the Nuclear Equipment Division (NED) and the Commercial Nuclear Fuel Plant (CNFP) through requisitions.

The Manager, Nuclear Services, is responsible for operator training services, field consultation during plant startup activities, and the preparation of test specifications.

The Manager, Engineering Services and Administration, is responsible for the provision of graphic services, the maintenance of the central engineering files, the control of administrative processing of engineering documents, and the preparation and coordination of procedures primarily of interest to the reactor department.

Fuel Department

The General Manager, Fuel Department, reports to the General Manager, NPGD. The fuel department has complete responsibility for engineering, manufacturing, and shipping of fuel assemblies for each contract. The same responsibilities are held for other core components, such as orifice rods, burnable poison rod assemblies, and control rod assemblies. The fuel department is also responsible for detailed core design, the development of analytical procedures, the writing of test specifications, the analysis of test results, and the development of specifications for all products, manufactured or purchased, that are supplied in the fuel contract.

The Manager, Fuel Engineering, is responsible for design, engineering specifications, and drawings for fuel assemblies and other core components.

The Manager, Fuel Contracts, is responsible for the management and administration of NPGD commercial nuclear fuel contracts and the performance of out-of-core fuel management from the contract negotiation stage to the completion of contract commitments. He is responsible to the Senior Project Manager, Reactor Contracts, for the administration of initial load nuclear fuel contracts for B&W NSS.

Task Engineer Functions

Within the reactor and fuel department, certain engineers, known as task engineers, are given the responsibility for design or for setting design requirements and performing design reviews or system analyses for a specific component or system. Task engineers with design responsibility perform the project design function. Task engineers with design requirement and review responsibilities are known as integrators. The integrators report to an integration subsection Manager.

Purchasing

The Manager, Purchasing, reports to the General Manager, NPGD. Purchasing is responsible for the procurement of reactor accessories, equipment, fuel and fuel assembly parts from suppliers other than NED and CDFP. Purchasing also provides supplier interfaces with QA audits (QAA) and QC surveillance (QCS) as required to obtain satisfactory resolution of adverse findings of audits and surveillance.

Quality Assurance

The Manager, QA, reports to the General Manager, NPGD. He is responsible for the development and implementation of a program to ensure quality in the products and services in the NPGD scope of supply, including the application of quality assurance actions to site representative provided by B&W. Organizational freedom from the activities being regulated is ensured by the existence of QA as a separate organization within NPGD at the same level as the reactor and fuel departments. This provides sufficient authority and organizational freedom for QA personnel to identify quality problems; initiate, recommend or provide solutions through restraint orders, audit reports, or document review comments; verify implementation of solutions; and suspend or

control further processing or delivery of a nonconforming item until the proper disposition of the deficiency or unsatisfactory condition has been approved and documented.

The Manager, QA, is assigned by division policy the responsibility and authority to establish, define, implement and enforce NPGD programs, policies, procedures, techniques, and disciplines that will ensure meeting quality objectives of federal regulations (specifically Appendix B to 10 CFR 50), the applicable codes, standards, regulatory guides, and contracts.

The Manager, QA, NPGD, must be a graduate of an accredited college or university in an engineering or a scientific field or be able to substitute experience at a rate and level determined acceptable by the next higher level of management. He must have a minimum of 10 years of quality related experience in industry, 5 years of which shall have been in a nuclear related field and 2 years in a managerial capacity. He must have education or experience in non-destructive examination (NDE) principles and practices. A working knowledge of AEC requirements and of ASME Codes is highly desirable.

The Manager, QA, implements the QA program through the actions of four operating groups, Quality Assurance Audits (QAA), Quality Control Surveillance (QCS), Quality Assurance Engineering (QAE), and Fuels Quality Assurance (FQA).

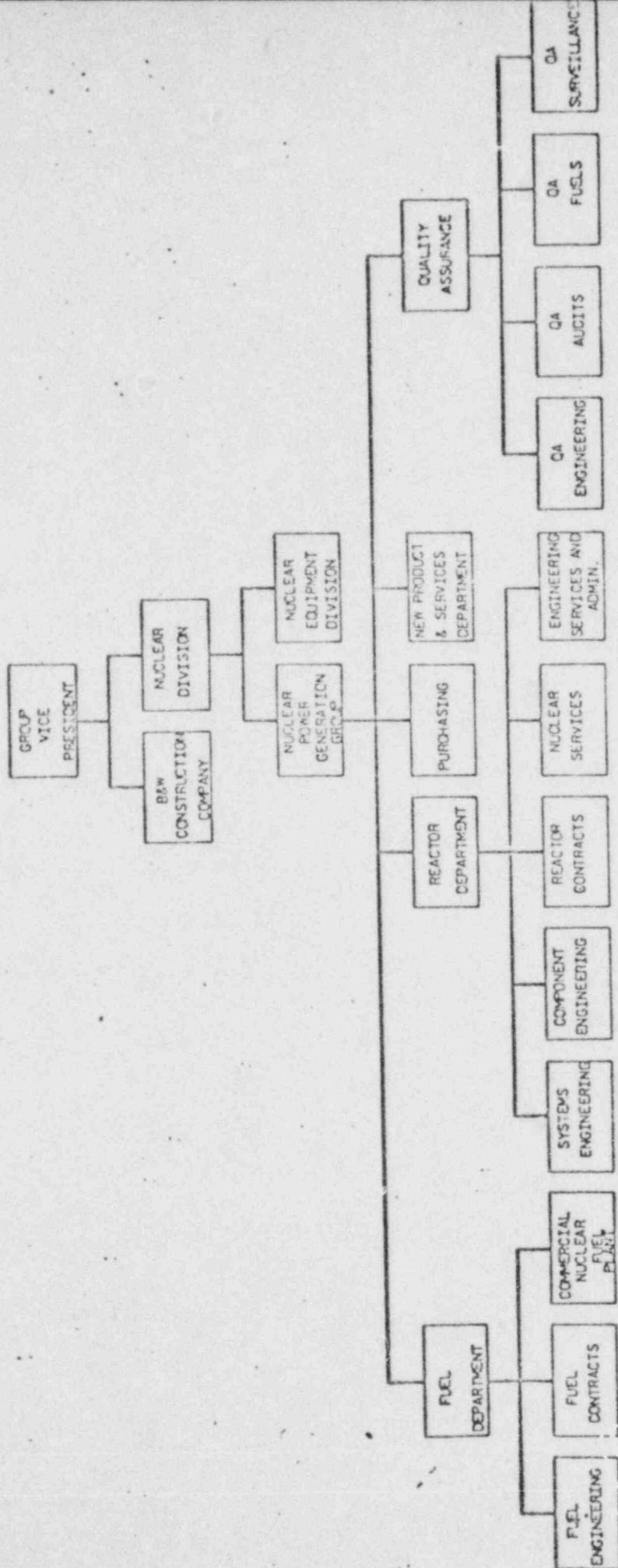
QAA conducts a program of audits to evaluate the implementation of quality assurance programs by NPGD and its suppliers. These audits include checks for the existence of suitable programs that ensure the required quality.

QCS inspects the sources of supply for the continuing application of quality assurance programs and actions to products produced for NPGD. These inspection actions are described in the sections of this chapter dealing with procured items.

QAE and FQA provide review and analysis of quality related actions performed by all the sections of NPGD and suppliers. This includes the review of design and manufacturing actions for the proper application of quality assurance requirements, including the necessary checks and balances during design, inspections during manufacturing, tests for verification of designs, and control of interfaces through all stages of a contract.

New Products and Services Department

The Manager of the Policies, Procedures, and Standards Group of the New Products and Services Department is responsible for the administrative coordination and control of the administrative and technical policies, procedures, and standards within the NPGD and for the coordination of these with the requirements established by other organizations of B&W.



ORGANIZATION CHART

Figure 1