



Westinghouse  
Electric Corporation

Water Reactor  
Divisions

Nuclear Technology Division  
Box 355  
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August 27, 1982

Mr. Walter P. Haass, Chief  
Quality Assurance Branch  
Division of Engineering  
U. S. Nuclear Regulatory Commission  
1717 H Street  
Washington, D. C. 20555

Subject: Westinghouse Water Reactor Divisions' Quality Assurance Program  
Plan (WCAP-8370), Rev. 9A, Amendment #1

Dear Mr. Haass:

This letter is to notify you of an organizational restructuring within Water Reactor Divisions (WRD) effective August 1, 1982. The changes are summarized below. Also, Attachments A and B are provided as a means to describe, in topical report format, the WRD organization. Attachment A provides current organization charts (Figures 17-1 through 17-7) that supercede Figures 17-1 through 17-9 provided to you via the referenced letters. Attachment B is the current organizational description, written in the format of Section 17.1.1.1 of WCAP-8370. These changes will be formally incorporated in Revision 10 of WCAP-8370, planned for submittal to the U.S. NRC within 90 days of the issuance of Regulatory Guide 1.28, Revision 3.

Water Reactor Divisions (WRD)

In response to the continuing shift of the nature of the nuclear power industry to service-related activities, particularly associated with the increasing number of operating plants, the Water Reactor Divisions has been restructured in order to establish and maintain a position that will provide continued business leadership in the market.

Water Reactor Divisions will now be organized into six primary operating divisions as described below. Detailed organizational structures for each division are provided following the overall WRD structure.

- o The Nuclear Technology Division (NTD) maintains its systems technology leadership and is expanded to include the Offshore Power Systems activity and to include a marketing activity for NTD products and services. This change does not impact the Quality Assurance Program activities for Floating Nuclear Plants (FNP). The Quality Assurance Program activities under the Manufacturing License Application (NRC Docket 50-437) will remain separate from those covered by WCAP-8370 and are documented in the Floating Nuclear Plant Design Report, Chapter 17. Dr. R. J. Slember remains as General Manager, NTD.

*Good*

- o The Nuclear Commercial Operations Division (NCOD) is renamed Nuclear Operations Division (NOD). NOD is expanded to include the activities of all foreign plants under construction previously included in the Nuclear International Division, in addition to all domestic plants currently within the scope of NOD. Additionally, the Purchases and Traffic function is transferred to NOD from NTD. Mr. N. D. Woodson is appointed General Manager, Nuclear Operations Division.
- o The Nuclear Service Division (NSD) is renamed Nuclear Services Integration Division (NSID). NSID is expanded to include the activities of the former Strategic Operations Division (SOD). Mr. F. R. Bakos is appointed General Manager, Nuclear Services Integration Division.
- o The Nuclear Fuel Division (NFD) is expanded to include the Specialty Metals Plant, formerly the Specialty Metals Division (SMD). Dr. W. M. Jacobi remains as General Manager, NFD.
- o The Electro-Mechanical Division (EMD) and the Nuclear Components Division (NCD) retain their previous responsibilities and organizational structures. Mr. H. D. Ruppel is appointed General Manager, EMD and Mr. W. H. Griffith remains General Manager, NCD.

Figures 17-1 and 17-2 of Attachment A show the current WRD organizational structure and the functional relationships of the WRDs for the supply of nuclear power plant safety related products and services.

The detail of the organizational restructuring of each WRD is described below and shown in Figures 17-3 through 17-8 of Attachment A.

#### Nuclear Technology Division (NTD)

Within the Nuclear Technology Division, the Purchases and Traffic Department has been transferred to the Nuclear Operations Division and the responsibility for the management of all NTD-funded research and development and first-time engineering, previously held by the NSSS Development Department, is now a part of the Resources and Program Management Department. The remaining functions of NSSS Development are transferred as follows: Advanced PWR Development Program is now assigned to NTD Systems Engineering and other outside funded research and development is now assigned to Strategic Programs, a WRD Staff function. Marketing of NTD products and services, formerly part of NCOD, is now an NTD Staff function. Dr. E. J. Hampton, who is fully qualified per the commitments of Section 17.1.1.1 of WCAP-8370, is appointed Manager, NTD Product Integrity and Design Assurance Department, replacing Mr. H. H. Brunko, who will assume duties as an Executive Assistant to the NTD General Manager.

Dr. Hampton will continue as Acting Manager, Design Assurance Operations pending the appointment of his replacement. The balance of NTD, PI&DA remains unchanged.

Mr. Brunko, as Executive Assistant to the NTD General manager, will assume the responsibility to assure the consistent application of WRD and regulatory policies and procedures across WRD and to assess issues resulting from the reorganization.

The remaining elements of NTD remain unchanged. Figure 17-3 of Attachment A shows the current NTD organizational structure.

#### Nuclear Operations Division (NOD)

Within the Nuclear Operations Division, the previous Domestic Projects Department is renamed U. S. Projects and expanded to include the Purchases and Traffic functions previously in NTD. Additionally, several organizations responsible for foreign plant activities, previously part of Westinghouse Nuclear International, are now included in NOD. The marketing functions of NOD for NTD, NFD and NSID are transferred to each respective division. Marketing of major, multi-divisional integrated products and services remain in NOD. Figure 17-4 of Attachment A shows the current NOD organizational structure.

#### Nuclear Services Integration Division (NSID)

Within the Nuclear Services Integration Division, the previous Strategic Operations Division is renamed Instrumentation, Technology and Training Center (ITTC). Marketing of all NSID products and services, formerly part of NCOD, is now an NSID Staff function.

The remainder of NSID is outside of the scope of WCAP-8370. Figure 17-6 of Attachment A shows the current NSID organizational structure.

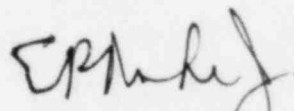
#### Nuclear Fuel Division (NFD)

The Nuclear Fuel Division is expanded to include the Specialty Metals Plant, formerly a division of WRD. The description of the NFD Quality Assurance Program Plan (WCAP-7800, Rev. 5A) is provided in letter NS-EPR-2651.

Appropriate instructions have been issued to insure that the controls described in WCAP-8370 and in present implementing documents remain in place. Management is now reviewing the methods for control to determine if any changes are needed as a result of these organizational changes. Necessary approvals and instructions to implement will be given as required.

If you have any questions concerning information contained in this change, please contact Dr. Hampton (412) 273-7983.

Very truly yours  
Westinghouse Electric Corporation



E. P. Rahe, Jr., Manager  
Nuclear Safety  
Nuclear Technology Division

/md  
Attachments

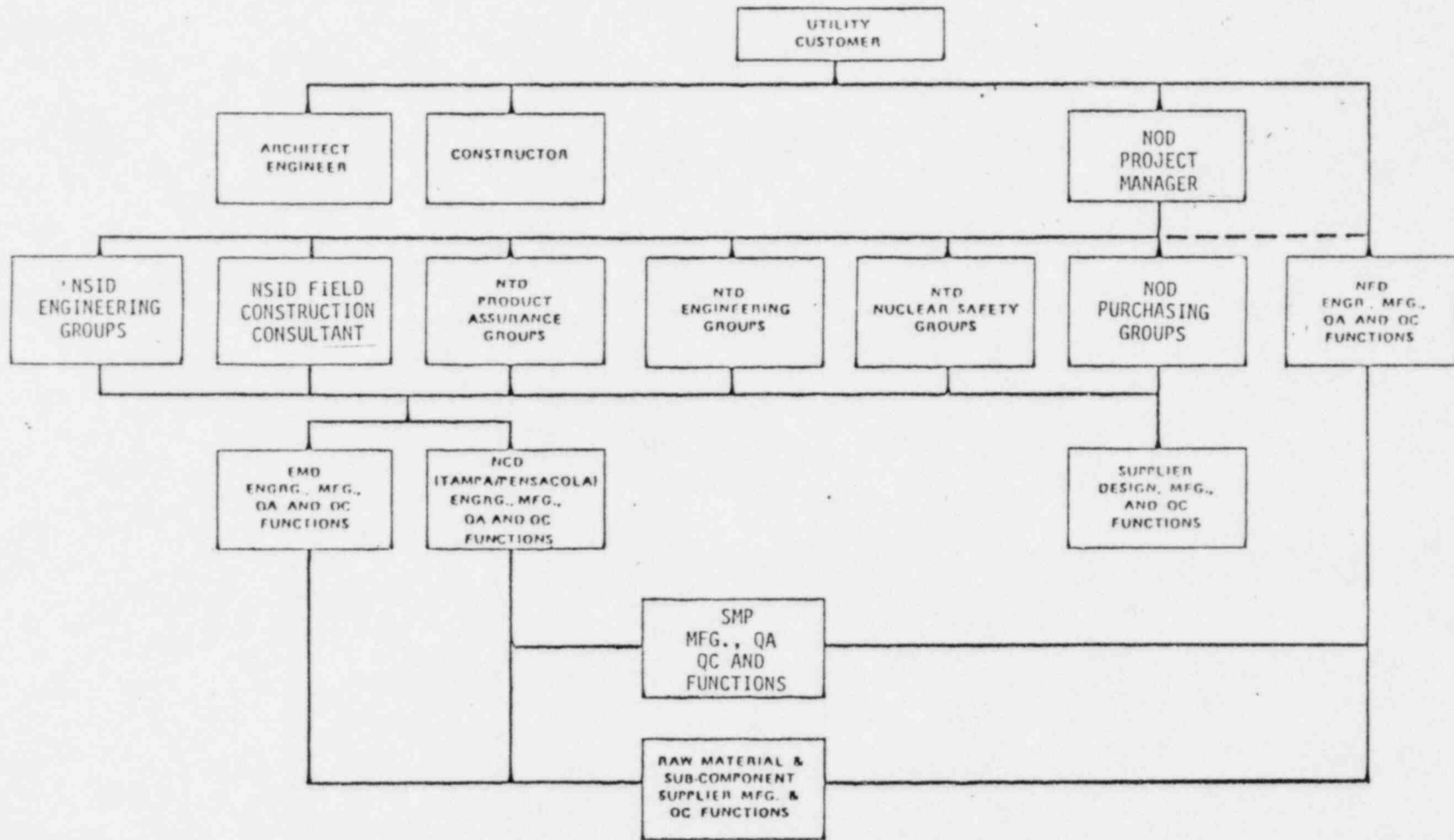


FIGURE 17-1. NSSS Functional Relationship Chart

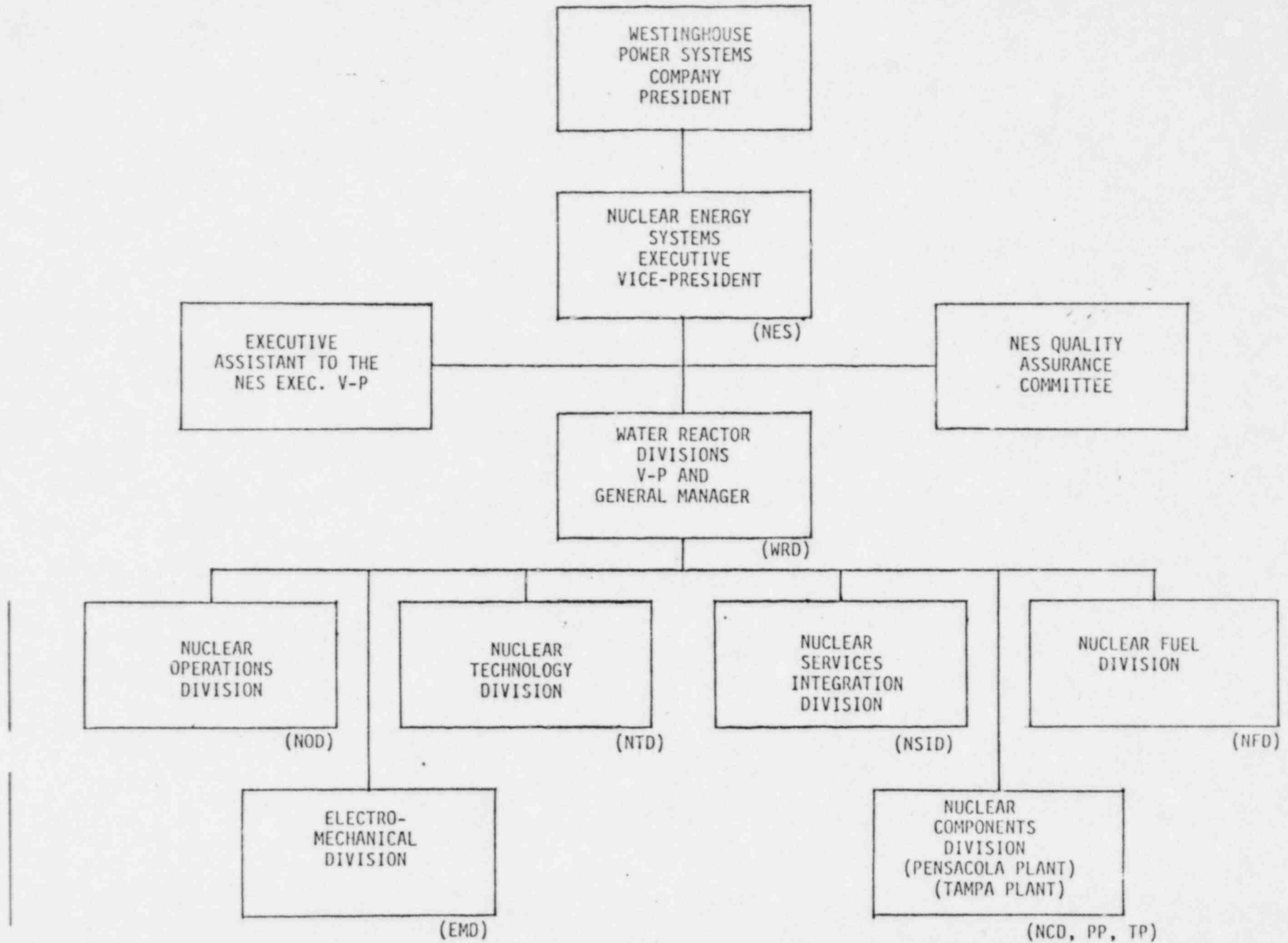
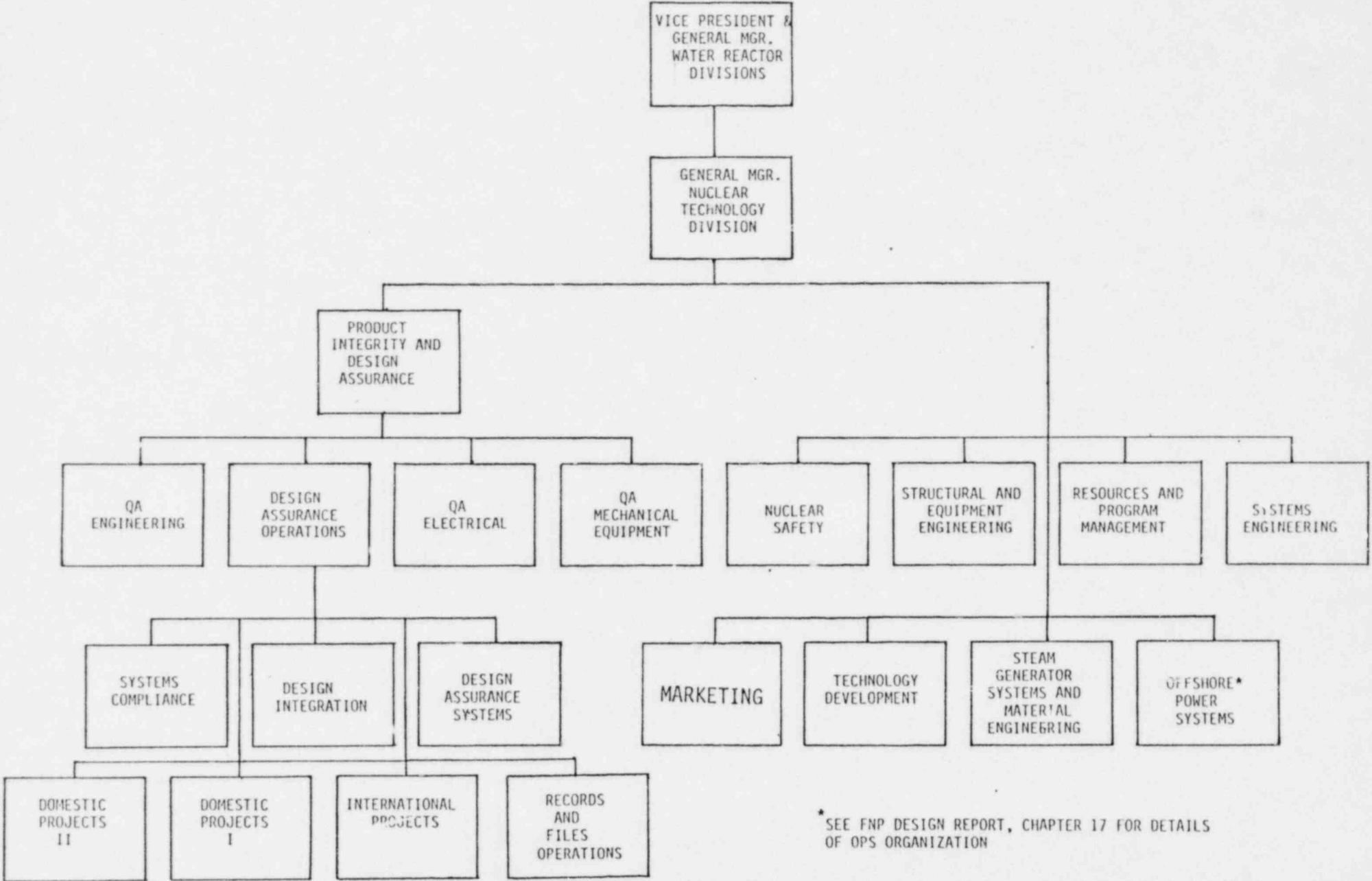


Figure 17-2. Nuclear Energy Systems Organization for Water Reactor Division/Plant(s)



\* SEE FNP DESIGN REPORT, CHAPTER 17 FOR DETAILS OF OPS ORGANIZATION

Figure 17-3 Nuclear Technology Division Quality Program Organization

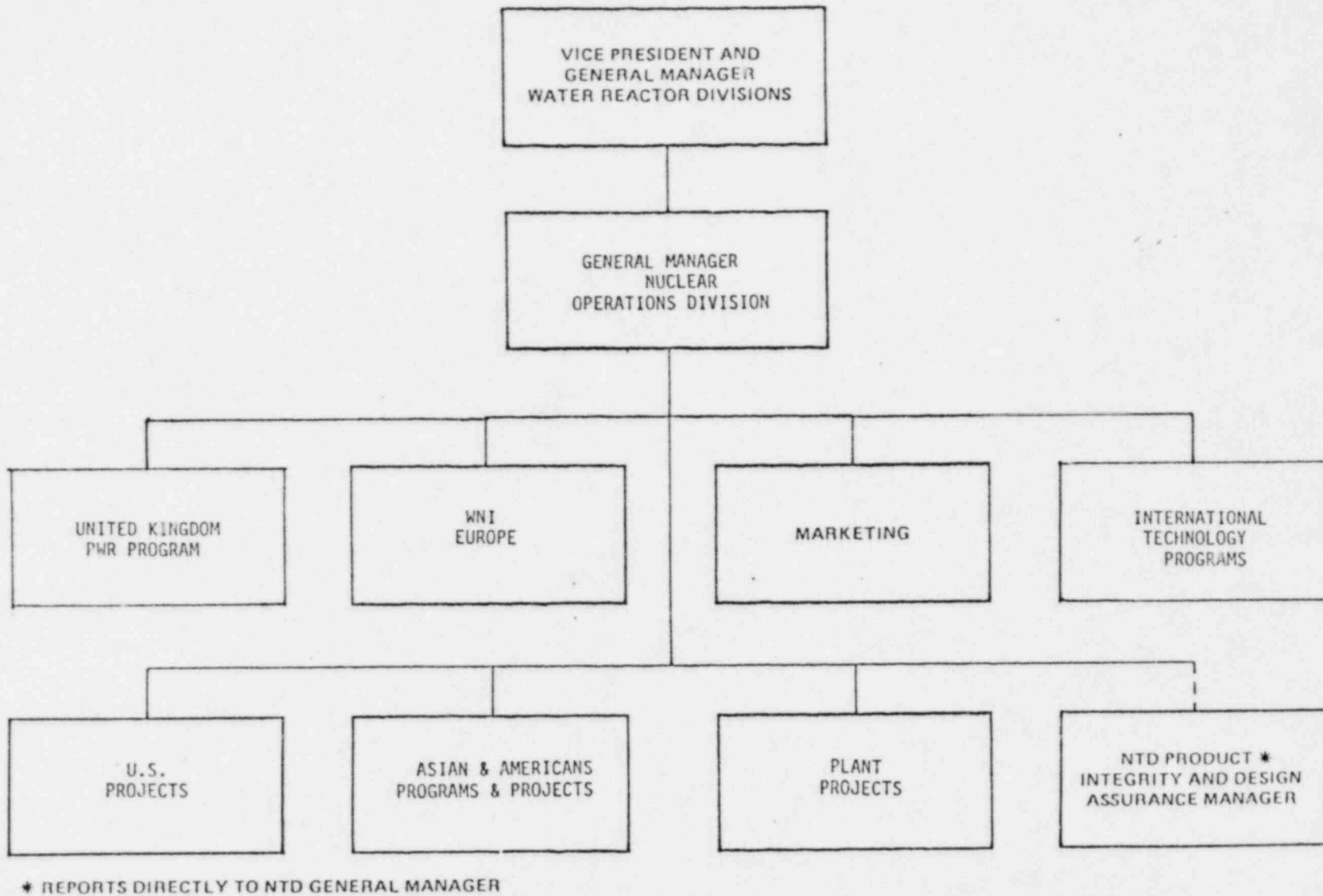


Figure 17-4. Nuclear Operations Division Quality Assurance Program Organization



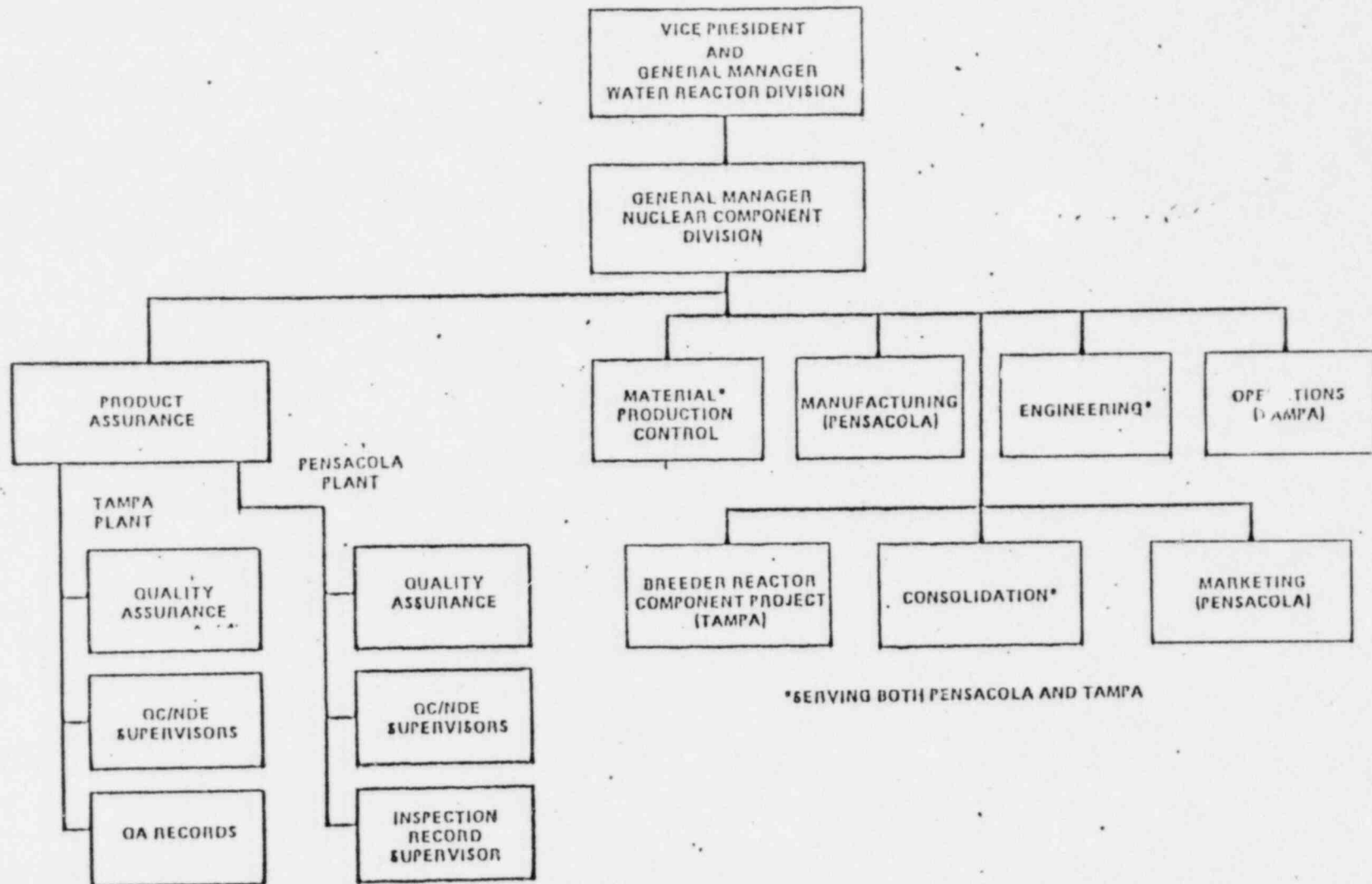
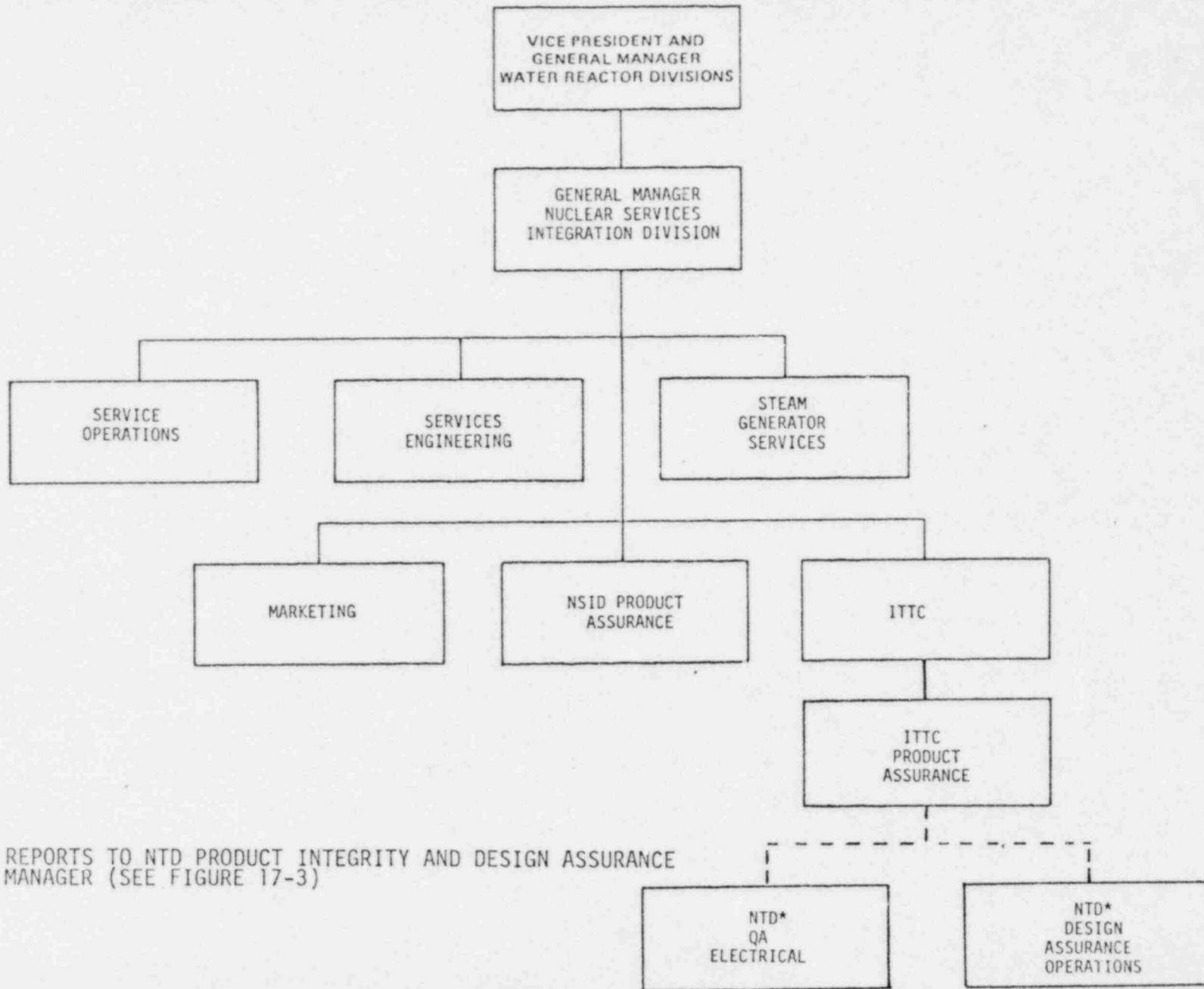


Figure 17-5. Nuclear Component Division Quality Assurance Program Organization





\* REPORTS TO NTD PRODUCT INTEGRITY AND DESIGN ASSURANCE MANAGER (SEE FIGURE 17-3)

Figure 17-6. Nuclear Service Integration Division Quality Assurance Program Organization

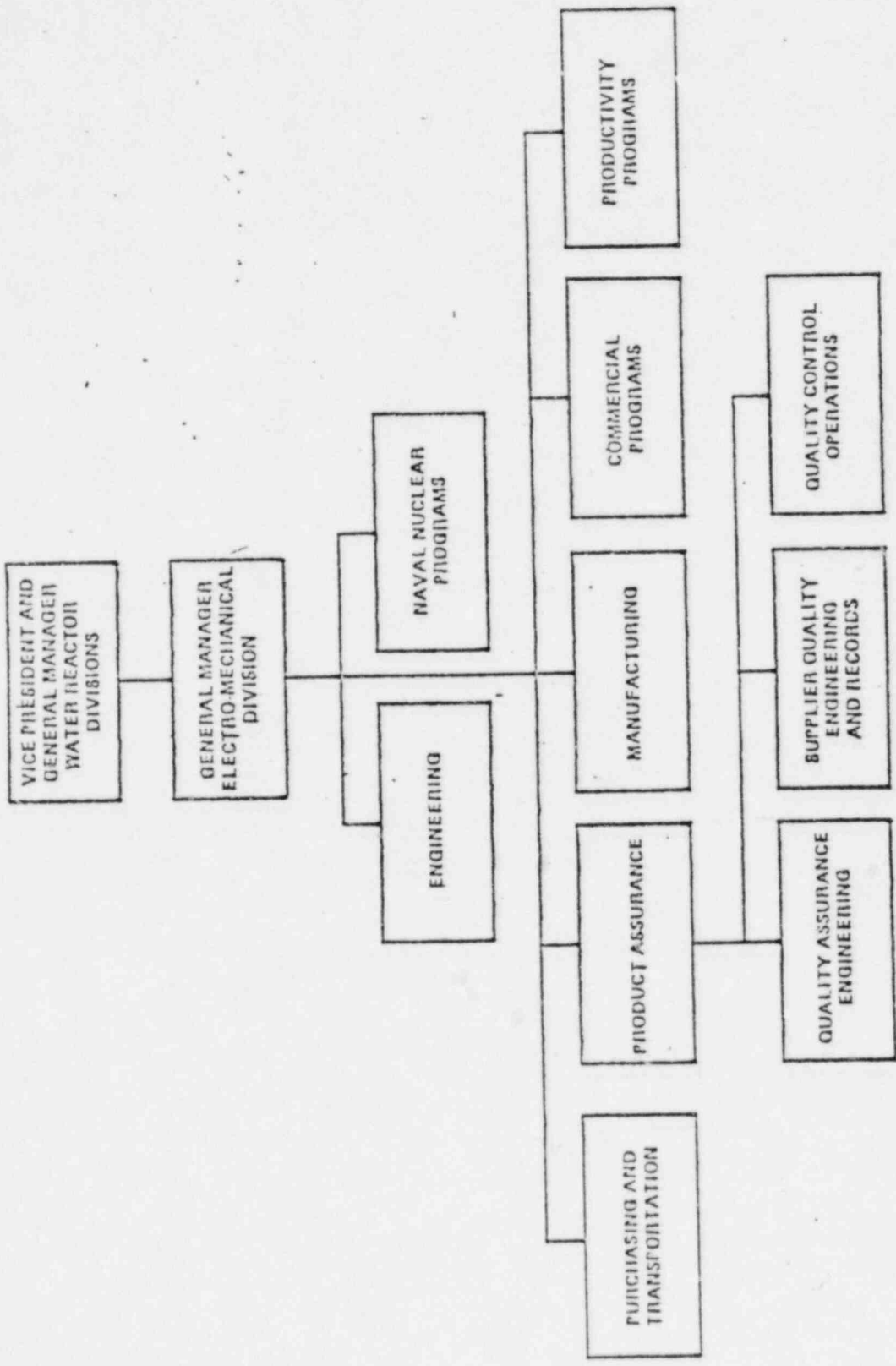


Figure 17-7. Electro Mechanical Division Quality Assurance Program Organization

## ATTACHMENT B

### 17.1.1.1 Nuclear Technology Division

Nuclear Technology Division, as shown on Figure 17-3, has Water Reactor Division lead responsibility with regard to development of Nuclear Safety and Product Assurance Policy, systems design and integration of equipment design.

The engineering function of Nuclear Technology Division is provided by several departments. These groups are responsible for performing the various technical functions associated with overall system design and design of equipment and for following and concurring with the remainder of the design cycle in the Nuclear Components Division, Electro-Mechanical Division and Nuclear Services Integration Division.

The Nuclear Safety Department is responsible for providing the Nuclear Steam Supply System safety performance requirements, safety system criteria, safety analysis methods, and safety evaluations to provide the required analytical and statistical evaluation of postulated accident controls. Further, the department is charged with providing the licensing activity to support the applicant in obtaining the construction permit and operating license for the nuclear power plant.

The Offshore Power Systems Department is responsible for all activities associated with Floating Nuclear Plants. The quality assurance activities associated with FNP are provided in the FNP Design Report, Chapter 17. When OPSD performs engineering services for other nuclear plant items, the requirements of this Quality Assurance Program Plan apply.

Within Nuclear Technology Division, responsibility for quality assurance activities is assigned to the Product Integrity and Design Assurance Department. This includes having lead responsibility for developing, documenting and executing the Quality Assurance Program, and demonstrating compliance with the 18 criteria of 10CFR Appendix B. The Manager of Product Integrity and Design Assurance reports directly to the

division general manager and is parallel with the other major departments within the division, as shown in Figure 17-3. Thus, matters pertaining to product and system quality can be related directly from the Product Integrity and Design Assurance manager to the division general manager, independent of other functional activities. The qualification requirements for the Product Integrity and Design Assurance Manager are:

1. A bachelor's degree in a technical field;
2. At least ten years experience in engineering or manufacturing with at least one of these years in quality assurance activities;
3. At least five years experience in management of technical or manufacturing organizations;
4. Working knowledge of applicable quality-related codes, standards, regulatory and statutory requirements; and
5. Demonstrated ability to prescribe, apply and assess compliance with applicable requirements.

Training relevant to quality assurance activities and pertinent to the position is described in Section 17.1.2.

The Product Integrity and Design Assurance Manager directs, controls and evaluates the Nuclear Technology Division Quality Assurance Program. This is accomplished through the development, coordination and publication of divisional policies and procedures, conduct of instruction and training programs on quality matters, and investigation and assessment of the program's effectiveness through the internal auditing program. Personnel from the Product Integrity and Design Assurance Department work with representatives from the other functional departments to assure that activities affecting quality are properly defined, implemented and controlled.

Discussion and resolution of quality matters with the applicant and/or his agent is coordinated with the cognizant project manager and/or

Product Integrity and Design Assurance Project Regional Manager. Product Integrity and Design Assurance personnel provide information in response to customer inquiries and audits of Nuclear Technology Division quality assurance activities.

The Product Integrity and Design Assurance Department, as described by the department charter, has been assigned the responsibility and authority to identify quality problems in quality-related functions of design, procurement, manufacturing, and testing; to take prompt positive action to limit incipient problems; to initiate, recommend or provide solutions to the problems to responsible management; to verify implementation of the necessary corrective action; to initiate action to: stop work or hold the release of equipment until proper disposition of unsatisfactory conditions is made.

The Product Integrity and Design Assurance Department is divided into: Design Assurance Operations, QA Engineering, QA Electrical Equipment and QA Mechanical Equipment. The efforts of each group are directed by individual managers.

Design Assurance Operations consists of Design Integration, Design Assurance Systems, Systems Compliance, Project Regional Managers and Records and Files Operations. Design Integration has central responsibility for engineering management and control of Principal Design Documentation, Design Bases Documentation and Change Control and the integration of the design documentation and design changes to ensure proper functional design impacts. It is a central point for the transmittal and receipt of technical information to and from other Water Reactor Divisions; identifies and secures necessary approvals and recommendations from appropriate NTD functional engineering organizations; it reviews and evaluates change controls and other design documentation for proper impact, completeness and consistency with established policies and standards; and it tracks and secures disposition of open items both within NTD and with other Water Reactor Divisions. Design Integration does not affect the responsibilities of the functional engineering organizations, which retain design cognizance in their respective areas of responsibility.

Design Assurance Systems has responsibility for: 1) the maintenance of the Water Reactor Divisions Quality Assurance Plan, WCAP-8370; 2) preparation, promulgation and maintenance of division(s)-level policies/procedures; 3) bid proposal review; 4) nondestructive examination and other quality training; and 5) coordinating audits by U. S. Nuclear Regulatory Commission and the ASME.

Systems Compliance has responsibility for: 1) the investigation and analysis of the Division's procedures for compliance with the criteria of 10CFR50, Appendix B as well as other industry and corporate Quality Standards; 2) internal auditing for compliance to established procedures; and 3) coordinating audits by the applicant and others.

The Project Regional Managers are responsible for customer liaison on matters affecting product quality and for the coordination of Product Integrity and Design Assurance activities with the Water Reactor Divisions Project Manager. These regional managers are responsible for monitoring timely implementation and completion of actions on the part of Water Reactor Divisions and suppliers which are related to the quality of the product for NSSS customers. In addition, these managers provide itinerant Product Integrity and Design Assurance support to the Water Reactor Divisions manufacturing divisions through audit and product surveillance.

Records and Files Operations is responsible for: 1) centralized filing operations; 2) Corporate Records Center interface for the Nuclear Center Complex; 3) support to the Projects Department; 4) records systems; 5) forms control; 6) maintenance and control of quality assurance records and computer files; and 7) microfilming of supplier QA data packages.

QA Engineering is responsible for: 1) providing input to Equipment Specifications, drawings and related procurement documents; 2) evaluating supplier quality assurance programs; and 3) auditing of and transmittal to the customer of supplier quality assurance records data packages.

QA Mechanical Equipment and QA Electrical are responsible for surveillance of suppliers of mechanical and electrical equipment. As part of



their surveillance responsibilities, QA Mechanical Equipment and QA Electrical monitor the activities of suppliers, verify conformance to the procurement quality requirements, audit the supplier's quality systems, and release equipment for shipment. Surveillance personnel are trained and qualified to review supplier tests and inspections, and are qualified to SNT-TC-1A requirements in the review, or performance, of nondestructive examinations. Both resident and itinerant quality assurance representatives are employed in surveillance activities. To provide the most effective coverage of suppliers, managers are assigned responsibility for performing equipment surveillance based upon types of equipment. Responsibility for overseas supplier evaluation and surveillance is normally delegated to other Westinghouse WRD organizations, such as Nuclear Operations Division, however, such delegation is coordinated by QA Mechanical Equipment and QA Electrical. Additionally, QA Electrical is responsible for Quality Engineering for the planning aspects of the systems applied to Electrical Equipment and for providing input to Equipment Specifications, drawings and related procurement documents.

The Resource and Program Management Department provides the Nuclear Technology Division procurement interface with other Water Reactor Divisions, except for NFD.

#### 17.1.1.2 WRD Manufacturing Facilities

The WRD Manufacturing Divisions (shown in Figures 17-7 and 17-5) design, specify and manufacture nuclear plant equipment within the WRD Manufacturing Divisions' scope of supply, as indicated below, based upon functional design requirements provided by the Nuclear Technology Division. The WRD Manufacturing Divisions are: Electro-Mechanical Division - manufacturer of rod drive mechanisms, reactor coolant pumps, loop stop, gate and check valves, etc., and Nuclear Component Division (Pensacola Plant - manufacturer of reactor internals, associated equipment and other NSSS components/Tampa Plant - manufacturer of steam generators, pressurizers and other NSSS components).



The Product Assurance organizations at the manufacturing divisions assure that measures are provided and implemented to verify the quality aspects of the design, manufacture, purchase, inspection, test, packaging, shipment and site installation of the products as applicable. Product Assurance functions include: review of drawings, specifications and procedures; source surveillance and audit of suppliers; performance of inspections, examinations and records results; preparation of documentation associated with the release of product and of quality assurance records for retention; and schedule of and participation in internal audits. In addition, each department is responsible for applicable controls as outlined in the quality program manual(s). Manufacturing is responsible for generation and control of manufacturing information, production planning and control, fabrication functions including welding, processes qualification and control, qualification of manufacturing personnel. Design control is described in Section 17.1.3.

The Product Assurance Manager reports to the Division General Manager and is responsible for the implementation of the quality assurance program. He has the authority to enforce full compliance with all quality requirements relative to safety, reliability, operation and maintenance. Product Assurance is vested with the authority and responsibility to stop production until acceptable solutions have been provided. The qualification requirements for the position of Product Assurance Manager are:

1. B. S. Degree in Engineering, or equivalent;
2. Eight (8) years experience in a technical field with a minimum of five (5) years in supervisory capacity;
3. Working knowledge of quality assurance techniques, applicable quality related codes, regulations and standards.

Training relevant to quality assurance activities and pertinent to position is described in Section 17.1.2.

#### 17.1.1.3 Nuclear Operations Division

The Nuclear Operations Division (NOD), as shown in Figure 17-4, integrates the marketing, projects and purchasing functions.

The U. S. Projects Department of NOD, through a designated Project Manager, has the primary responsibility within WRD for coordination of supply of equipment and services to the applicant. The Purchasing and Transportation Group provides the Water Reactor Divisions' procurement interface with suppliers. Purchasing and Transportation administers, as required, the transportation of components from suppliers' facilities to the site. This includes the responsibility for providing consulting service to engineering for the purpose of assuring that material and equipment is protected against the hazards of mechanical damage and weather during shipment. The Manager of Product Integrity and Design Assurance, Nuclear Technology Division, is assigned the responsibility for this Nuclear Operations Division Product Assurance Program.

The Quality Assurance Program for the remaining organizational elements of NOD is contained in separate documents.

#### 17.1.1.4 Nuclear Fuel Division

The Nuclear Fuel Division (NFD) has the responsibility for the design and manufacture of nuclear fuel assemblies and associated reactor core components such as control rods, burnable poison assemblies, source assemblies, plugging devices and tubing. This division is also responsible for specifying and procuring appropriate shipping containers. The organization of this division and a description of the Nuclear Fuel Division Quality Assurance Program are contained in Reference 1 (see 17.1.19).

#### 17.1.1.5 Nuclear Services Integration Division

The Nuclear Services Integration Division's (NSID) major responsibilities are concerned with services to operating plants. Nuclear Services Integration Division is the lead Water Reactor Division for all services

(including customer interfaces and quality assurance matters) provided to operating plants. NSID also provides technical advisory services during the design and construction phases of the nuclear power plant. The technical advisory services include initiation of reports of nonconformances of equipment during construction as contained in Section 17.1.15.

Instrumentation, Technology and Training Center (ITTC), as shown on Figure 17-6, has responsibility for design and program management of control board, integrated protection and control systems, instrumentation and process control systems, and other electrical equipment based on functional requirements provided by the Nuclear Technology Division.

Within ITTC, responsibility for quality assurance activities is assigned to the Product Assurance Group. This includes having lead responsibility to assure that the ITTC Quality Assurance Program is adequately defined, documented and implemented. The Manager of Product Assurance reports directly to the Manager, ITTC and is parallel with the other major groups within the department. Thus, matters pertaining to quality assurance can be related directly from the Product Assurance Manager to the Department General Manager, independent of other functional activities. The qualification requirements for the Product Assurance Manager are the same as the NTD Product Integrity and Design Assurance Manager as noted in Section 17.1.1.1. NTD Design Assurance Operations and NTD QA Electrical provide support to ITTC Product Assurance reporting on a matrix basis to ITTC Product Assurance.

The NSID quality assurance program for operating plant services is contained in a separate document(s).

#### 17.1.1.6 Functional Responsibility

The functional responsibilities of designing and fabricating fuel and equipment and the integrated quality assurance responsibilities for both safety and non-safety equipment are shown in Table 3.2-1, Chapter 3, (which is contained in the Safety Analysis Report). The identification of safety-related equipment is also covered in this table.