Washington Public Power Supply System
Box 1223 Elma, Washington 98541 (206) 482-4428

Docket No. 50-508

August 27, 1984
G03-84-537

U. S. Nuclear Regulatory Commission, Region V
Attention: Mr. J. B. Martin, Regional Administrator
Office of Inspection and Enforcement
1450 Maria Lane, Suite 260
Walnut Creek, California 94596-5368

Subject: **NUCLEAR PROJECT 3**
CHANGES TO THE QUALITY ASSURANCE
PROGRAM DESCRIPTION

Reference: G03-83-472, G. D. Bouchey to J. B. Martin, dated June 13, 1983, same subject.

The reference transmitted changes to the WNP-3 Quality Assurance Program description. These changes related primarily to the description of the Supply Systems' organizational structure, although other minor changes and clarifications were made.

Subsequently, Amendments 4 and 5 to the WNP-3 FSAR were issued in December 1983 and June 1984, respectively, making further revisions in the Quality Assurance Program description. These changes also were primarily related to the Supply Systems' organizational structure with other minor changes and clarifications. These changes did not reduce Supply System commitments. Attachment 1 delineates the differences between the June 13, 1984 letter and FSAR Amendments 4 and 5.

Since the initiation and issuance of Amendment 5 to the FSAR, additional Supply System organizational changes have been made. These changes are detailed in Attachment 2 which presents a mark-up of FSAR Chapter 17 to show the changes which will be published in a future amendment.

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During the development of Attachment 2, it was determined that one change concerning record storage facilities required supplementary information. Previously, the Supply System indicated that we would comply with Regulatory Guide 1.88 for the storage of records. The WNP-3 Safety Analysis Report position on Regulatory Guide 1.88, Rev. 2 (October 1974), as identified in Table 1.8-1, previously indicated "no exceptions." The Supply System has re-evaluated its position concerning the above subject Regulatory Guide and we are invoking exceptions, which are detailed in Attachment 3. The exceptions will allow for the standardization of Supply System Record Storage Facilities and assure that they are consistent with the latest industry standards. The Supply System does not consider this revision to lessen the protection afforded the records by the storage facility, thus it is not a reduction in commitments.

Due to a misunderstanding regarding the new regulation in 10CFR50.55(f), the changes to the Quality Assurance Program description were not submitted to you within 90 days. The Supply System has taken the necessary steps to ensure that all future changes to the Quality Assurance Program description are submitted to you in accordance with 10CFR50.55(f).

If you have any questions, please contact Mr. L. J. Garvin, Project Quality Assurance Manager at (206) 482-4428 extension 5403.

GC Sorensen

G. C. Sorensen
Regulatory Programs Manager

DWC/cj

Attachments

cc: Mr. J. A. Adams, NESCO
Mr. L. Bast, Ebasco (Elma)
Mr. G. W. Knighton, NRC
Mr. V. Nerses, NRC
Mr. J. Porrovecchio, Ebasco (NYO)
Mr. N. S. Reynolds, (Bishop, Liberman, Cook, Purcell & Reynolds)
Mr. D. Smithpeter, BPA
Mr. S. F. Swearngin, BPA
Mr. A. A. Tuzes, CE
NRC Document Control Desk
Ebasco, Elma

STATE OF WASHINGTON)
)
County of Benton)

Subject: Changes to the QA Program Description

I, G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information and belief the statements made in it are true.

DATE 23 AUGUST, 1984

GC Sorensen
G. C. Sorensen, Manager
Regulatory Programs

On this day personally appeared before me G. C. SORENSEN to me known to be the individual who executed the foregoing instrument and acknowledge that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 23rd day of August, 1984.

Kathryn H. DuBois
Notary Public in and for the
State of Washington

Residing at Richland, wa

March 1988

ATTACHMENT I

CHANGES TO THE JUNE LETTER BY AMENDMENTS 4 & 5

All places where "Director of Operations" appears has been replaced with "Director of Projects."

All places where "Manager of Nuclear Safety and Regulatory Programs" appears has been replaced with "Manager of Regulatory Programs."

For each section, a heading identifying the responsible Director/Manager has been provided.

Section 17.1.1.1.3.1, revise to read "The Director of Power Generation reports to the Managing Director and is responsible for the safe and efficient operation of all Supply System operating power plants."

Section 17.1.1.1.3.2.e, delete " . . . including preoperational environmental monitoring and geology."

Section 17.1.1.1.3.2.g, revise to read "Overall Supply System engineering records management policy . . ."

Section 17.1.1.1.4 add, "also responsible for ensuring that the calibration of measuring and test equipment is performed in accordance with approved procedures which establish calibration frequencies, procedure used, recall method, identification requirements, tolerances and records required to establish equipment history and calibration data."

Section 17.1.1.1.6, last sentence, delete "The Director of Licensing and Assurance is supported by the following: . . .

Section 17.1.1.1.6.3, first sentence, revise to read, " . . . in the area of nuclear licensing."

Section 17.1.1.1.6.3, second sentence, revise to read " . . . for the projects include environmental compliance and licensing."

Section 17.1.1.2.1, revise to read "Provides support to the Program Director by directing the overall engineering, project management and construction activities through the Engineering Manager and the Construction Manager."

Section 17.1.1.2.2.1, revise to read, "The Engineering and Construction Manager will provide the following functions . . ."

Section 17.1.1.2.2.3, change "Completion Manager" to "Startup Manager"

Section 17.1.1.2.2.3 revise to read, "The Startup Manager reports to the Plant Manager and is responsible for directing and coordinating the test and startup activities (until fuel load) performed by the AE/CM, NSSS supplier, vendor, contractor and Supply System organizations, as well as interfacing with licensing to obtain all the necessary licensing and permits for test and startup."

Add section "17.1.2.2.5 Manager of Records Management

The Manager or Records Management reports to the Engineering and Construction Manager and is responsible for directing and coordinating all Records Management activities at WNP-3."

Section 17.1.1.4.1, second sentence, revise to read " . . . developed by the Manager of Regulatory Programs, . . ."

Section 17.1.1.6.2, revise to read "These measures are described in subsection 17.1.2 and 17.1.3."

Section 17.1.1.12.10, revise to read, "Source inspection will be accomplished by Ebasco's vendor surveillance . . ."

Section 17.1.1.17.b) Vendor Nonconformances, add after second paragraph,

a) "System Nonconformances (Quality Finding Reports)

A system has been established to assure quality discrepancies concerning documentation, procedures, instructions or program activities are identified, documented and corrected and that notification of action taken is transmitted to affected parties."

Section 17.1.1.17.b) Vendor Nonconformances, second paragraph, last sentence, revise to read, " . . . with contract requirements and the vendors QA program.

Section 17.1.2 added by Amendment 5.

Section 17.1.3 added by Amendment 5.

ATTACHMENT 2

TABLE 1.8-1 (Cont'd)

Regulatory Guide No	Rev	Date Issued	Title	Exceptions No	Exceptions Yes	FSAR Section	Remarks	
1.83	0 1	6/74 7/75	In-service Inspection of PWR Steam Generator Tubes	X		See CESSAR-F 5.4.2.2 Chapter 14	- - -	
1.84	0 17	6/74 12/80	Code Case Acceptability ASME Section III Design and Fabrication	X		See CESSAR-F 5.2.1.2	Note 2	
1.85	0 17	6/79 12/80	Code Case Acceptability ASME Section III Materials	X		See CESSAR 5.2.1 Table 5.2-2 10.3.6.2	Note 2	
1.86	0	6/74	Termination of Operating Licenses for Nuclear Reactors	N/A				3
1.87			N/A (BWR)					
1.88	2	10/76	Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records	X	X	17.1 CESSAR-F	Note 1 ANSI N45.2.9-1979 utilized by some construction contracts	3
1.89	0	11/74	Qualification of Class IE Equipment for Nuclear Power Plants	X		3.11.2.4 Table 7.1-1 Table 8.1-2	- - -	
1.90			N/A (BWR)					
1.91	1	2/78	Evaluation of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plant Structures	X		2.2, 3.1	- - -	

17.0 QUALITY ASSURANCE

Washington Public Power Supply System shall implement an overall Quality Assurance Program (QA Program) for the design, procurement, construction and operation of Supply System's Nuclear Project No. 3 (WNP-3) in accordance with the requirements of Appendix "B" of 10CFR50. As the applicant, the Supply System is responsible for the plant and will take appropriate actions to assure that it is designed, procured, constructed and operated in accordance with sound engineering principles and practices. Systems, components and structures that are safety-related, in the context of 10CFR20, 10CFR50 and 10CFR100, will be designed, specified, fabricated, installed, tested and operated in accordance with applicable regulatory requirements, codes, standards, specifications and procedures. The objective of the Supply System is to implement a QA Program that is responsive to the requirements of NRC Regulations, 10CFR50, Appendix "B", "Quality Assurance Criteria for Nuclear Power Plants" by assuring that quality-related efforts are performed in a controlled manner and are documented to provide objective evidence of compliance.

17.1 QUALITY ASSURANCE DURING DESIGN AND CONSTRUCTION - WASHINGTON PUBLIC POWER SUPPLY SYSTEM

17.1.1 ORGANIZATION

4

This Section describes the organizational relationships within the Supply System and assigns the authorities and responsibilities for the administration and implementation of the Quality Assurance Program. Assigned authorities and responsibilities demonstrate the organizational freedom of Quality Assurance. This organizational freedom is accomplished through Corporate and Project structures which provide independence from Supply System organizations responsible for "construction."

At the Corporate Level, the Director and staff of Licensing and Assurance, and at the Project (jobsite) Level, the Project QA Manager and staff, are completely free from responsibility of cost and scheduling during "construction." The Director, Licensing and Assurance, and the Project QA Manager have the freedom and authority to identify quality-related problems, initiate corrective actions (including stop work) and recommend or provide solutions and to verify the implementation of corrective actions.

Each nuclear power plant construction project is administered by a Project Program Director. The Program Director is directly accountable to the Director of Projects and is responsible for the safe, successful and timely completion of construction of the project. The Program Director accomplishes the project responsibilities by managing and directing the Engineering Organization (the AE), which is performing design; the Construction Management Organization, which manages the installation subcontractors on the project; and Project Supply System personnel. The Engineering Organization (the AE) and the Construction Management Organization may be a different or the same entity.

The organizations of the Supply System and Supply System Quality Assurance are presented on Figures 17.1-1, 17.1-2 and 17.1-3. The functional responsibilities for the implementation of the Supply System Quality Assurance Program are assigned as follows.

17.1.1.1 Corporate

17.1.1.1.1 Managing Director

The Managing Director of the Supply System has the ultimate responsibility for the Quality Assurance Program. The Managing Director shall assure that the program is implemented and maintained by assigning the appropriate authority and responsibility to the Director of Licensing and Assurance.

17.1.1.1.2 Deputy Managing Director

The Deputy Managing Director has delegated authority to implement policies of the Managing Director. The Deputy Managing Director ~~is accountable~~ reports to the Managing Director and is responsible for:

a) Coordinating and integrating the activities of Supply System organizations.

b) Supporting and advising the Managing Director on the performance of Supply System functions and evaluations of such.

c) Acting for the Managing Director, as required.

17.1.1.1.3 Director of Projects

The Director of Projects reports ~~and is accountable~~ (and is responsible) to the Managing Director for development and implementation of policies and programs supporting the design and construction phase.

The Director of Projects carries out his responsibilities through the Program Directors. (See next page) 17.1.1.1.4

17.1.1.1.~~6~~ ~~Director of Power Generation~~ Assistant Managing Director, Operations

The ~~Director of Power Generation~~ Assistant Managing Director, Operations reports to the Managing Director and is responsible for the safe and efficient operation of all Supply System operating power plants.

17.1.1.1.5 Director, ~~Technology~~ Engineering

The Director, ~~Technology~~ Engineering, reports to the Managing Director and is responsible for:

a) Providing technical and engineering support to the project.

b) Assisting the Project Engineering organization in providing technical direction to the Architect Engineer.

c) Assisting the project in performing technical overview of Supply System activities.

d) ASME Code consultation to the project, including interfacing with ASME.

e) Performing and managing selected technical programs, having applicability to several projects.

f) Providing independent technical evaluations when requested by the Managing Director.

g) Overall Supply System engineering records management policy. Implementation of the policy with regards to functions described in this manual is the responsibility of all Directorates, as applicable.

17.1.1.1.~~6~~7 Director, ~~of~~ Support Services

The Director, ~~of~~ Support Services, reports to the Assistant Managing Director, Operations, and is responsible for the development and implementation of policies and programs which support design, construction and operation of Supply System plants, ~~in the areas of safety and security.~~ Areas in which the Director of Support Services provides support for the projects include industrial safety and fire protection, administration, ~~and~~ security, and radiological programs. He is also responsible for ensuring that the calibration of measuring and test equipment is performed in accordance with approved procedures which establish calibration frequencies, procedures used, recall methods, identification requirements, tolerances and records required to establish equipment history and calibration data.

Supply System Standards Laboratory

17.1.1.1.~~1~~4 Chief Financial Officer

Move to previous page after Para. 17.1.1.3

The Chief Financial Officer reports to the Managing Director and is responsible for the development of Corporate material management and procurement policy and the procurement and control of Corporate multiple project and specialized materials and related services required to support the design and construction of Supply System nuclear power plants.

17.1.1.1.8 Director, Licensing and Assurance

The Director, Licensing and Assurance, reports ~~and is accountable~~ and is responsible to the Managing Director for the overall development, implementation and verification of the Supply System Quality Assurance and Nuclear Safety and Regulatory Programs to ensure compliance with regulations, codes and standards. These responsibilities include:

a) Interpretaton of ASME Code Quality Assurance requirements and Quality Assurance manual requirements.

b) Definition, approval, revision and controlled distribution of Supply System Quality Assurance manuals to ensure that the manuals adequately describe requirements.

c) Approval of all corporate and project quality affecting implementing procedures and instructions and Project Quality Assurance Instructions.

d) Determining the adequacy and effectiveness of program implementation.

e) Apprising the Managing Director of the effectiveness of the Quality Assurance and Nuclear Safety and Regulatory Programs by periodic reporting of activities, trends and problems, through established corrective action systems.

f) Exercising the authority vested in the Quality Assurance organization to cause the acceptance or rejection of materials and components based on conformance verification to engineering requirements and the requirements of the ASME Code.

g) Ensuring that Quality Assurance and Nuclear Safety and Regulatory policies and programs provide Project Quality Assurance and Licensing Managers the freedom to inform the Director of Licensing and Assurance of significant conditions affecting quality.

h) Maintaining cognizance of changing regulatory requirements and providing controlled interface between the Supply System and Regulatory agencies so as to assure that commitment documents receive the necessary degree and depth of reviews prior to transmittal.

i) Exercising authority to stop nonconforming work of any Supply System Contractor or Supplier organization; and notification of the Authorized Nuclear Inspector (ANI) of the work stoppage for ASME activities. 4

j) Ensuring the adequacy, clarity and appropriateness of Supply System Quality Assurance and Nuclear Safety and Regulatory oriented communications and commitments directed to Supply System direct contracts and the Authorized Inspection Agency.

k) Ensuring that significant conditions affecting quality or Nuclear Safety and Regulatory Programs, which are identified by Project Quality Assurance and which are addressed to the Licensing and Assurance Directorate for resolution, are adequately investigated and/or corrected.

l) Providing licensing support functions in such areas as acquisition and maintenance of nuclear power plant construction permits and operating licenses.

m) Administering Corporate and Project Quality Assurance and Nuclear Safety and Regulatory Program activities.

n) Establishment and maintenance of adequate and qualified Licensing and Assurance staffing (onsite as well as offsite) levels based on work load analysis.

The Director, Licensing and Assurance has effective communication channels with all Supply System senior management positions and has no duties or responsibilities unrelated to quality/safety assurance and licensing. To accomplish the above defined role, the Director, Licensing and Assurance operates through the Manager, ~~of~~ Construction Quality Assurance, the Manager of Audits, ~~and~~ the Manager, ~~of~~ Regulatory Programs, and Manager, Operational Assurance Programs.

17.1.1.1.8.1 Manager, Construction Quality Assurance

The Manager, Construction Quality Assurance reports to the Director, Licensing and Assurance and is responsible for the development and implementation of the Quality Assurance program during the Nuclear Power Plant Design and Construction phases. He is also responsible for Procurement QA; plant modifications; qualification and certification of Supply System nondestructive examination and inspection personnel and other personnel requiring certification; surveillance of nondestructive examination and inspection activities; and has the lead role for acquiring and maintaining ASME Certificates of Authorization. Included in his responsibilities are:

a) Ensuring that ASME Code requirements are properly interpreted and included in the Quality Assurance program requirements.

b) Interfacing with the Authorized Nuclear Inspector (ANI), Authorized Inspection Agency and the Enforcement Authority.

c) Ensuring that a written agreement with an Authorized Inspection Agency is obtained to provide for ANI Services; and that the ANI is provided free access.

d) Ensuring that all nondestructive examination personnel involved in examination activities are certified in accordance with ASNT and/or the ASME Code. 4

e) Acquisition and maintenance of ASME Certificates of Authorization and/or Owners Certificates.

f) ~~Ensuring the appropriate~~ Providing for certification of Supply System personnel who perform quality affecting activities.

g) Developing and maintaining the Supply System ASME Quality Assurance Program Manual.

h) Reviewing and approving Project Quality Assurance Instructions.

i) Reviewing and concurring with offsite design documents (such as drawings and specifications) to assure conformance to the QA Program requirements.

j) Reviewing proposed changes to the Quality Assurance Program, defined in SAR documents, for Director, Licensing and Assurance approval.

k) Providing technical services to other Licensing and Assurance departments, as requested.

l) Providing Initial Quality Assurance Indoctrination and Training for Supply System personnel.

m) Quality Assurance functions associated with plant modifications that are comparable to activities occurring during the initial construction phase.

n) Vendor qualification, review and concurrence with vendor furnished programs and procedures, source verification (e.g., surveillances, inspections and audits at Vendor's Facilities) and receiving inspection of vendor furnished items received at the Corporate warehouses, ~~through~~ the Manager, Procurement Quality Assurance.

17.1.1.1.8.2 Manager, ~~of~~ Audits

The Manager, ~~of~~ Audits, reports to the Direct~~ion~~or, Licensing and Assurance, and is responsible for maintaining an organization of qualified auditors responsible for verifying implementation of the Quality Assurance Program as follows:

a) Performing Quality Assurance audits of internal Supply System organizations and external organizations (e.g., AE/CM); except for Management Audits.

b) Developing audit schedules and selecting qualified personnel to perform the activities of this function.

c) Certification of Audit Team Leaders.

d) Training of audit personnel.

e) Participating in audits and providing overview of AE activities.

f) Periodic review of Corporate and Project audit reports to identify any quality trends which may constitute a need for corrective action.

g) Maintenance of audit records.

17.1.1.1.8.3 Manager, ~~of~~ Regulatory Programs

The Manager, ~~of~~ Regulatory Programs, reports to the Director, Licensing and Assurance, and is responsible for the development and implementation of policies and programs which support design, construction and operation of Supply System plants in the area of Nuclear Licensing. Areas in which the Manager of Regulatory Programs provides support for the projects include environmental compliance and licensing. The Manager, ~~of~~ Regulatory Programs is responsible for establishment and maintenance of Supply System/regulatory interfaces and assuring that nuclear licensing transmittals receive an adequate, competent and timely review prior to making commitments.

17.1.1.2 WNP-3 Site

17.1.1.2.1 Program Director

The ~~WNP-3~~ Program Director ~~is responsible and accountable~~ and is responsible reports to the Director of Projects, for the safe, successful and timely completion of the project. This role is accomplished through the management and direction of the Architect Engineer and Construction Management organization and Supply System personnel.

Organizations performing quality-related activities which report to the Program Director include Engineering and Construction, Project Resources and

{INSERT PARAGRAPH ON NEXT PAGE.}

Where personnel are responsible for carrying out Project functions but report administratively to other Directorates, the Program Director establishes their functional priorities and manages their contribution to the achievement of the project plan, schedule and cost goals.

INSERT AT BOTTOM
OF PREVIOUS PAGE

17.1.1.2.2 ← See insert next page

17.1.1.2.~~2~~3 Engineering and Construction ~~Manager~~ Manager,

~~Provides support to~~ the Program Director by directing overall engineering, project management and construction activities through the Engineering Manager and the Construction Manager. ← Replace with new paragraph on next page

The Engineering and Construction ~~Manager will provide~~ shall be responsible for the following functions: Manager,

a) Review and approve equipment and construction specifications and changes thereto, to assure that the contractual requirements delineated in the bidding documents and the general and special conditions sections provide the requirements necessary to administer the contract effectively;

b) ~~Administer the Ebasco contract~~ Owner direction and overview of the AE-CM contract, and contracts managed thereunder, to assure that activities affecting quality are performed in accordance with the requirements specified in the procurement documents, and when nonconformances are identified, approved corrective action is implemented in a timely and effective manner.

c) Be responsible for the quality of the work, implementation of schedules, cost control techniques, policies and objectives of the Supply System.

17.1.1.2.4 and 17.1.1.2.5 ← See inserts on page after next

17.1.1.2.~~5~~6 ~~Project Engineering~~ Assistant Program Director, Engineering reports to the Director, Engineering and is matrixed to the Manager, Engineering and Construction, and is responsible for the following: ~~shall be responsible for performing the following:~~

The Assistant Program Director ~~Project~~ Engineering

a) Review and approve prepurchased equipment and construction specifications and changes thereto to assure that the Supply System, regulatory, code and standard requirements are included and are technically adequate.

b) As a member of the Nonconformance Review Board, approve and/or evaluates ~~determine~~ the disposition of nonconforming items, material or conditions found during site activities, for compliance to established requirements.

c) Provide personnel to the Supply System Project Quality Assurance Group to assist in vendor surveillance activities and to perform surveillance and audits of site contractors and AE/CM Home Office activities.

d) Provide technical information and/or direction for accomplishment of QA/QC functions when requested by the Project QA Manager.

17.1.1.2.7 ← See insert on page after next.

~~17.1.1.2.4 Startup Manager~~

~~The Startup Manager reports to the Plant Manager and is responsible for directing and coordinating the Test and Startup activities (until fuel load) performed by the AE/CM, NSSS Supplier, Vendor, Contractor, and Supply System organizations, as well as, interfacing with Licensing to obtain all the necessary licensing and permits for test and startup.~~

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17.1.1.2.2 Manager, Project Resources

The Manager, Project Resources, reports to the Program Director, and is responsible for providing support to Project personnel in matters relating to:

a) Authorizing contract preparation, awarding contracts, clarifying and enforcing contract requirements and executing contract modifications.

b) Processing of Supply System direct purchases of material, equipment and services.

c) Assuring training of assigned personnel.

d) Administration of the AE/CM contract and overview of the AE/CM administration activities.

e) Administrative support to the project.

The Manager, Engineering and Construction, reports to the Program Director, and is responsible for directing overall engineering and construction activities ~~through~~ directly through the Manager, Construction and Manager, Records Management, and indirectly through the Assistant Program Director, Engineering and Licensing Project Manager.

INSERT UNDER PARAGRAPH 17.1.1.2.3 ON PREVIOUS PAGE

INSERT ON PAGE 17.1-7

17.1.1.2.4 Manager, Construction

The Manager, Construction, reports to the Manager, Engineering and Construction, and is responsible for overview of Ebasco CM and site Contractors activities in completing the construction of the project within approved schedule and construction budget in conformance with established requirements.

17.1.1.2.5 Manager, Records Management

The Manager, Records Management, reports to the Manager, Engineering and Construction, and is responsible for directing and coordinating records management activities on the Project.

17.1.1.2.7 Licensing Project Manager

The Licensing Project Manager reports to the Manager, Regulatory Programs, matrixed to the Manager, Engineering and Construction, and is responsible for the following:

a) Assures licensing submittals receive adequate technical reviews.

b) Maintains and controls the interface with the NRC to assure constructive, effective, and disciplined dialogue with NRC reviewers

c) Reviews all submittals to the NRC for consistency with previous correspondence as well as corporate and project policies and procedures.

INSERT ON PAGE 17.1-7

~~17.1.1.2.5 Manager of Records Management~~

~~The Manager of Records Management reports to the Engineering and Construction Manager and is responsible for directing and coordinating all Records Management activities at WNP-3.~~

17.1.1.2.6/8 Project Quality Assurance Manager

The Project Quality Assurance Manager reports to the Manager of Construction Quality Assurance and is responsible for verifying implementation of the Supply System's Quality Assurance Program at the WNP-3 Project. The Project Quality Assurance Manager provides assistance to the Program Director to integrate the Quality Assurance with other Project organizations' activities.

The minimum qualifications for Project Quality Assurance Manager include a BS Degree in Engineering, or a related field, and 10 years experience in Nuclear Quality Assurance or technically related activities. Directly related experience may be substituted for academic requirements where the candidate's record of performance clearly demonstrates an ability to fill the position without question.

The Project Quality Assurance Manager is independent from the Supply System organizations responsible for engineering, procurement and construction.

The Project Quality Assurance Manager has the freedom and authority to identify quality problems, initiate, recommend or provide corrective actions, verify the implementation of the corrective action and control further processing, delivery or installation of a nonconforming item, or a deficiency or unsatisfactory condition until proper disposition has been made, including stopping work for quality reasons.

The Project Quality Assurance Manager shall be responsible for:

a) verification of the implementation of the Design and Construction Quality Assurance Requirements Manual
b) Stop Work Authority
c) identification and reporting of nonconformances
d) verification by audits and surveillances that the AE, CM, selected contractor and other project organizations are implementing applicable quality requirements
e) assuring that adequate staffing is obtained to implement QA actions at the project
f) the assignment of adequately trained and qualified/certified personnel to perform quality verification activities
g) overview AE/CM approval of contractor's procedures and instructions
h) reporting to the Program Director and Director, Licensing and Assurance, significant conditions adverse to quality
i) reporting QA problems and trends to the Manager of Construction Quality Assurance for use in developing standards for Licensing and Assurance management systems to preclude repetition of QA problems.

17.1.1.3 Delegation of Authority

The Supply System maintains ultimate responsibility for the Quality Assurance Program and has delegated certain Quality Assurance functions to the following major organizations:

a) Ebasco Services, Incorporated (Ebasco) Architect-Engineering, Construction Management and Quality Assurance Services

Ebasco has been contracted to provide the Architect-Engineering, Construction Management and Quality Assurance activities for WNP-3. As AE and Construction Manager, Ebasco is responsible for generation and administration of specifications for procurement of prepurchased equipment and construction activities. These contract specifications are sent to the Supply System for review and approval prior to award of contracts. The Ebasco QA responsibility includes Home Office QA and vendor surveillance. (See Subsection 17.1.2.)

Ebasco is responsible for conducting formalized Quality Assurance Audits of contractors and manufacturers.

b) Combustion Engineering, Incorporated (CE)
Nuclear Steam Supply System Supplier

CE has been contracted to provide the Nuclear Steam Supply System which includes the responsibility of QA/QC Activities within their scope of supply. (See Subsection 17.1.3.)

Figure 17.1-4 illustrates the ~~relationship between the~~ WNP-3 Supply System ~~Ebasco, CE and other~~ contractor interfaces.

17.1.1.4 Quality Assurance Program

The Supply System's Program is based upon and provides for the assignment of Quality Classifications to structures, components and systems as identified in Table 3.2-1 of this FSAR. Structures, components and systems are classified as Quality Class I, II-Augmented, II and G in accordance with their design basis and functional or regulatory requirements. The Supply System Quality Assurance classification are as follows.

Quality Class I

Any safety-related structure, system, subassembly, component or design characteristic for which the requirements of Appendix B, 10CFR50 are applied. The Supply System has and may elect to designate a non-safety-related structure, system, subassembly, component, or design characteristic Quality Class I.

Quality Class II-Augmented (IIA)

Those non-safety-related structures, systems, subassemblies, components, or design characteristics which are required to meet applicable commercial standards and for which additional QA requirements are stipulated to ensure that all design, construction, and testing provisions are met and documented. The additional QA requirements are delineated in the applicable FSAR sections. 4

Quality Class II

Any non-safety-related structure, system, subassembly, component or design characteristic which, as a result of being defective, could cause a safety hazard to plant personnel, an extended reduction in unit output, an unscheduled unit trip, or equipment damage. Quality Class II items/services are required to meet applicable commercial standards.

Quality Class G

Any non-safety-related system, structure, subassembly, component or design characteristic which is required to meet applicable commercial standards.

Safety-related

Those structures, systems, subassemblies, components, or design characteristics which are necessary to assure the following:

a) The integrity of the reactor coolant pressure boundary,

b) The capability to shut down the reactor and maintain it in a safe shutdown condition, or

c) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of 10CFR100.

Structures, systems, and components which are designated ANS Safety Class 1, 2, or 3 and electrical Class 1E are safety-related.

The Supply System's Design and Construction Quality Assurance Requirements Manual contains the written policies and Quality Assurance requirements (QAR's) on which the WNP-3 Site Quality Assurance Program is based. These requirements are derived from and conform to the requirements of ANSI N45.2 and 10CFR50, Appendix B. A matrix of the Supply System QA requirements and corresponding criteria from 10CFR50, Appendix B appears in the table below followed by a description of the scope covered by these procedures.

	10CFR50, Appendix B Criteria	Supply System QAR
I	Organization	QAR-1
II	Quality Assurance	QAR-2
III	Design Control	QAR-3
IV	Procurement Document Control	QAR-4
V	Instructions, Procedures and Drawings	QAR-5
VI	Document Control	QAR-6
VII	Control of Purchased Material, Items and Services	QAR-7
VIII	Identification and Control of Material, Parts and Components	QAR-8
IX	Control of Special Processes	QAR-9
X	Inspection	QAR-10
XI	Test Control	QAR-11
XII	Control of Measuring and Test Equipment	QAR-12
XIII	Handling, Storage, Shipping and Preservation	QAR-13
XIV	Inspection, Test and Operating Status	QAR-14
XV	Nonconforming Materials and Items	QAR-15
XVI	Corrective Action	QAR-16
XVII	Quality Assurance Records	QAR-17
XVIII	Audits	QAR-18

4

a) Organization, QAR-1

Establishes an organizational structure that will direct the resources of the Supply System and its contractors to engineer, design, procure, fabricate, manufacture, install, construct and test the Supply System Nuclear Project to maximize safety, reliability and efficiency.

b) Quality Assurance Program, QAR-2

Defines the Quality Assurance Program established by the Supply System for design and construction. Included in this program is a system for classifying structures, systems, components, design characteristics and procurement documents to determine the Quality Assurance activities associated with each item.

c) Design Control, QAR-3

Establishes a system of independent reviews to assure applicable quality, regulatory, code and design basis requirements are properly translated into design and procurement documents for each structure, system and component. The documented review provides a check for design adequacy, inspectability and compatibility with intended usage. 4

d) Procurement Document Control, QAR-4

Establishes a system to assure that procurement documents and changes thereto incorporate the technical and quality assurance requirements necessary to assure the quality and integrity of procured material, equipment and services.

e) Instructions, Procedures and Drawings, QAR-5

Establishes a system defining the requirements and responsibilities controlling the preparation, review, approval and release of instructions, procedures and drawings which implement quality requirements.

f) Document Control, QAR-6

Establishes a system to control the issuance of documents, including changes thereto, which prescribe activities affecting quality.

g) Control of Purchased Material, Items and Services, QAR-7

Establishes a system to assure material, equipment and services are procured in accordance with the requirements specified in the procurement documents.

h) Identification and Control of Materials, Parts and Components, QAR-8

Establishes a system for the identification and control of material, parts, components, equipment and partially completed assemblies to assure that items incorporated into the plant are of proper configuration and, when necessary, traceable to all supporting quality assurance documentation.

i) Control of Special Process, QAR-9

Establishes a system for the control of special processes.

j) Inspection, QAR-10

Establishes a system which assures the program requirements for inspection are delineated in the specifications and contracts and assures that inspection and surveillance activities are performed in accordance with pre-determined requirements delineated in written instructions in a planned and systematic manner.

k) Test Control, QAR-11

Establishes a system to assure that plant testing activities are performed in accordance with pre-determined requirements approved and delineated in written instructions. 4

l) Control of Measuring and Test Equipment, QAR-12

Establishes a system for the control, calibration and adjustment of tools, gauges, instruments and other inspection, measuring, testing and maintenance devices at specified periods to assure the usage of proper type, range and accuracy necessary to verify conformance to established requirements.

m) Handling, Storage, Shipping and Preservation, QAR-13

Establishes a system to control the handling, storage, shipping, cleaning and preservation of material, parts, components and equipment in accordance with written and approved procedures, instructions and recommendations, to assure that the design integrity and function of the item are maintained.

n) Inspection, Test and Operating Status, QAR-14

Establishes a system to indicate the inspection, test and operating status for all structures, systems or components to preclude the inadvertent bypassing of their inspection and test requirements and to prevent their inadvertent operation.

o) Nonconforming Material and Items, QAR-15

Establishes a system to assure that nonconformances are identified, documented, segregated or otherwise controlled to prevent inadvertent use or installation and that notification of action taken is transmitted to the affected parties.

p) Corrective Action, QAR-16

Establishes a system to assure that significant conditions adverse to quality are identified, the cause determined, documented, brought to the attention of upper management, corrected as soon as possible and that measures are taken to preclude repetition.

q) Quality Assurance Records, QAR-17

Establishes a system for the control and maintenance of all records sufficient and necessary to provide objective evidence of the activities affecting quality.

r) Audits, QAR-18

Establishes a system of audits to be performed in a planned and systematic manner to verify compliance and effectiveness of the Supply System Quality Assurance Program. 4

Supply System Licensing and Assurance is responsible for establishing Quality Assurance policy, goals, and objectives through the development and administration of the Supply System QA Program. This program is defined in the Supply System Design and Construction Quality Assurance Requirements Manual developed by the Manager of Regulatory Programs, and reviewed and approved by the Director, Licensing and Assurance and endorsed by the Managing Director.

Supply System QA personnel have the authority and responsibility to perform any actions necessary, including Stop Work Authority, to accomplish their mandate as delineated in the Design and Construction Quality Assurance Requirements Manual. In matters of conflict regarding Quality Assurance policies or the Quality Assurance organization's authority to enforce them at the working level, the Director, Licensing and Assurance has direct access to all levels of upper management, including the Managing Director, for satisfactory resolution.

To assure that Supply System personnel performing quality related activities are knowledgeable of QA procedures and requirements and will be proficient in implementing them, training is established and documented as required by the applicable Supply System Quality Assurance Procedures/Instructions. This training consists of:

a) Initial formal indoctrination and training on the purpose, scope and implementation of applicable codes and standards, including 10CFR50, Appendix B. This initial training phase also includes specific detailed instruction on the Supply System's QA procedures and instructions, Project Management procedures and other activities which directly relate to the employees job functions. Supply System supervisory personnel also indoctrinate and train personnel performing quality related activities in the principles and techniques of the activity being performed.

b) Ongoing instruction by lecture, reading assignment, discussion and pre-planned presentation, supplemented by outside courses as deemed useful.

The Supply System's QA Program will comply with the requirements contained in 10CFR50, Appendix B, the guidance contained in NRC Regulatory Guides, ANSI Standards and the NRC documents entitled, "Guidance on Quality Assurance Requirements During Design and Procurement Phase of Nuclear Power Plants", Revision 1 (Gray Book) and "Guidance on Quality Assurance Requirements During the Construction Phase of Nuclear Power Plants", (Green Book) exceptions to the Regulatory Guides during design and construction are stated in FSAR Table 1.8-1. Exceptions to the Regulatory Guides during Operations are described in Section 17.2. Regulatory Guide 1.58 will provide the basis for compliance by the Supply System to the QA requirements of Appendix B to 10CFR50 for personnel qualifications. 4

Contractors shall be required by contract specifications to provide certification of their personnel who are qualified in accordance with ASNT-TC-1A to Ebasco for approval by Ebasco ASNT-TC-1A Level III individual(s).

The Supply System QA Program's scope, implementation and effectiveness is audited by the Supply System's Corporate QA audit organization. Audit reports and correspondence generated are presented/routed to the Supply System's Upper Management, and Project Management, so that management can regularly assess the effectiveness of the Quality Assurance Program.

On an annual basis, the Supply System's management will arrange for independent audit and evaluation of the adequacy, scope, implementation and effectiveness of the Supply System QA Program. This will be accomplished by knowledgeable personnel outside the Licensing and Assurance Organization to assure an objective program assessment. Results from this independent review will be reported to the Managing Director.

The Supply System requires its Quality Class I contractors, including Ebasco and CE, to establish and implement Quality Assurance Programs consistent with the applicable criteria of 10CFR50, Appendix B. The Quality Assurance Programs of Ebasco and CE are reviewed for compliance with Appendix B by the Supply System. All Quality Class I contractor's Quality Assurance Programs are reviewed by Ebasco and/or the Supply System.

Control of quality related activities including management and technical interfaces between the contractor, the A/E, the Nuclear Steam System Supplier, and the Owner during the phaseout of Design and Construction System turnover will be exercised by Ebasco in its role as Construction Manager in accordance with the QA program described in Subsection 17.1.2.

All quality related turnover activities performed by the construction contractors/AE/CM/ Supply System will be governed by Design and Construction Quality Assurance Requirements Manual for the period through Provisional Acceptance. Quality related activities performed after Provisional Acceptance will be governed by the Operational QA program described in Section 17.2, with the exception of work returned to the construction contractors/AE/CM, in accordance with Test and Startup procedures/instructions, which will be governed by the QA programs described herein.

The details of the Ebasco and CE QA Programs are described in Subsections 17.1.2 and 17.1.3 respectively. 4

17.1.1.5 Design Control

The Supply System has organized and followed a system of design review and approval by QA, Engineering, Licensing, Operations and Project Management of Supply System and Ebasco generated procurement documents for the Supply System Quality Class I systems, structures, subassemblies, components and design characteristics.

In all cases, prior to submittal to either the Supply System or Ebasco for review and/or approval, the design contractors, including Ebasco, are responsible for verifying that the design meets the requirements of the specification, is commensurate with good design practices and that the components can be readily inspected. This verification is achieved by the performance of design reviews, the use of alternate or simplified calculation methods, or by the performance of a suitable testing program as described in the Contractor Quality Assurance Program. The verification or checking process is performed by individuals or groups other than those who performed the original design. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verification or checking processes,

it includes suitable qualification testing of a prototype unit under the most adverse design conditions. Design control measures are applicable to items such as the following: reactor physics stress, thermal hydraulic, radiation and accident analysis, compatibility or material; accessibility for in-service inspection, maintenance and repair, and the delineation of acceptance criteria for inspections and tests.

Supply System Project Engineering has the primary responsibility for the technical review and approval of Supply System and Ebasco generated prepurchased equipment and construction specifications.

Each discipline (mechanical, electrical, nuclear and civil), as applicable, reviews the specifications to assure technical adequacy. The depth of this review is outlined in an engineering design review checklist utilized by the reviewing engineer for each Supply System Quality Class I specification. The design review checklist outlines a review of:

a) Design requirements, including the appropriate section of the FSAR and NRC Regulatory Guides;

b) Codes and Standards requirements;

c) Classification of characteristics; 4

d) Materials selection adequacy;

e) Testing requirements;

f) Welding requirements;

g) Identification and serialization; and,

h) Preservation, packaging and handling.

Supply System Licensing reviews the specifications to assure conformance to SAR and other regulatory requirements.

Supply System Plant Management reviews the specifications to assure that the item being specified can be inspected, operated and maintained.

Supply System Project Management reviews and approves the specifications to assure that the general and special conditions sections contain adequate requirements for contract administration.

Supply System QA, and/or Ebasco QA (Site and/or Home Office) reviews and approves the specification to assure that adequate requirements are included in the specifications. The QA review assures that:

a) The specifications contain the necessary QA requirements;

b) The test and special processes are properly identified and contain appropriate acceptance/rejection criteria;

c) The applicable QA codes and standards are specified; and

d) Quality classifications are identified.

QA signs the design review route sheet for comment and approves concurrence issues of the specifications to assure that the QA requirements are included and that the specifications have been through the required Supply System design review.

Design changes, including field changes, are subject to design control measures commensurate with those applied to the original design and are approved by the organization that performed the original design. Documentation pertaining to Design Control of Supply System Quality Class I procurement documents will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable, systematic manner.

The details of the design control measures implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively,

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents be reviewed and approved to verify that requirements have been included which provide for the development and implementation of a Quality Assurance Program for Supply System Quality Class I items and activities which specifically comply with 10CFR50, Appendix B criteria. In addition, the contractors and vendors of Supply System Quality Class I items and activities are required to have their Quality Assurance Program comply with applicable parts of ANSI N45.2 and additional requirements as delineated in the procurement documents. 4

The procurement documents specify that the contractors and vendors of Supply System Quality Class I items are activities develop and implement design and interface control procedures which assure:

a) Translation of regulatory requirements and design bases correctly into the design documents;

b) Incorporation of appropriate quality standards with deviations and changes being controlled;

c) Application of design control measure;

d) Proper design verification or checking methods such as design reviews, alternate calculations, or qualification testing is performed. Where a test program is used to verify the adequacy of a design, a qualification test of a prototype unit under the most adverse design conditions will be used.

e) Individuals or groups responsible for design verification or checking are other than those who performed the original design;

f) Design and specification changes, including field changes are subject to the same controls applicable to the original design;

g) Design documents and revisions thereto are distributed to responsible individuals in a timely manner and controlled to prevent inadvertent use of superseded material;

h) Errors and deficiencies which adversely affect safety-related structures, systems and components in the design process are documented and that appropriate corrective action has been taken;

i) Design documents, design reviews, records and changes thereto are collected, stored and maintained in a systematic and controlled manner;

j) Standard "off the shelf" commercial or previously approved materials, parts and equipment (that are essential to the safety-related functions of the structures, systems and components) are selected and reviewed for suitability of application.

1) Supply System or Ebasco Generated Specifications and Drawings

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Supply System or Ebasco Engineering prepares Client Comment, Revised Client Comment and Bidding Documents for WNP-3 in accordance with all applicable Codes and Standards and QA Procedures utilizing engineering data generated from technical memorandums, project criteria documents, SAR commitments and/or Supply System requirements. Calculations and specification data are independently reviewed and checked by engineers experienced in the appropriate engineering discipline.

The Supply System or Ebasco Engineering prepares specifications and associated drawings which are reviewed and approved internally. The Client Comment Issue of AE prepared specifications and associated drawings are then sent to the Supply System for review and approval.

Client Comment Issues are reviewed at the Supply System and are assigned to a Reviewing Engineer for technical review and to QA, Licensing, Plant Management, and Project Management for their associated review. Each engineering discipline, as applicable, performs the technical review in accordance with Supply System design review procedures/instructions. Project Management is responsible for the overall review and approval of the Client Comment Issue. Project Engineering is responsible for the technical review and resolution of comments resulting from that review.

For Ebasco generated specifications, the comments are resolved with Ebasco. Pages and drawings which are affected by Supply System review are corrected by Ebasco and returned to the Supply System for concurrence. These pages and drawings are reviewed to assure that comments have been resolved and incorporated, and the original Supply System reviewers acceptance is secured on comments which have been rejected. Rejected comments which are not acceptable will be resolved to the satisfaction of the Supply System.

Bidding Documents are then assembled from the Revised Client Comment Issue and approved via sign off on the Bid Issue Approval Sheet by Project Management.

For Supply System generated specifications, the technical review is accomplished in a manner similar to Ebasco prepared specifications except the review, corrections and revisions are between Supply System Corporate Engineering and Project Engineering.

2) Contractor and Vendor Generated Drawings and Specifications 4

When a contractor or a vendor initiates a design, he is required to perform design review activities in accordance with internal design review procedures which must include measures for controlling design interfaces. Upon completion of this review, his design drawings and specifications are forwarded to Ebasco for interface review.

Ebasco conducts a review of the drawings and specifications in accordance with Ebasco procedures which includes measures to control the receipt, approval and transmittal of vendor drawings and an approval of the procedures and specifications required to be submitted to Ebasco in accordance with the procurement documents.

Vendor drawings, specifications and other documents are transmitted to the Supply System staff in accordance with the contract submittal requirements. Supply System personnel review these transmittals on a selective basis and transmit any comments to Ebasco for inclusion.

Supply System reviews of transmittals for Supply System direct purchases are performed in accordance with Corporate Procedures/Instructions.

17.1.I.6 Procurement Document Control

Procurement of materials, parts, components and construction activities for WNP-3 is accomplished through prepurchased equipment and construction specifications and contracts prepared by the Supply System or Ebasco for the Supply System. The award of contracts is based on an evaluation of bidder proposals. Approval to award a contract is obtained from the Supply System Board of Directors and Executive Committee personnel.

Proposals which take exception to technical or quality requirements are evaluated by Supply System Engineering, Ebasco Engineering, and/or Ebasco Home Office Engineering and/or QA, Ebasco Project QA and Supply System QA. Exceptions to contracts must present acceptable alternatives to the specification requirements.

The Supply System QA Program requires that the Supply System and Ebasco develop and implement measures which assure that procurement documents are prepared, reviewed, approved and issued under controlled conditions. In addition, addenda issued prior to bid opening and control change orders issued after bid awards, require a review and approval commensurate to that performed on the original procurement document. These control measures were established and in effect prior to the writing of this document. These measures are described in Subsections 17.1.2. and 17.1.3.

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents (excluding purchase requisitions and purchase orders) be reviewed and approved by Supply System and Ebasco (of Ebasco generated) QA personnel. These reviews verify the inclusion of applicable quality requirements. The procurement documents require that contractors and vendors of Supply System Quality Class I items have a QA Program which meets the applicable requirements of 10CFR50, Appendix B and ANSI N45.2. 4

The Supply System QA Program requires that the Supply System and Ebasco generated procurement documents (excluding purchase requisitions and purchase orders) be reviewed and approved by Supply System and Ebasco (if Ebasco generated) Engineering personnel. These reviews verify the inclusion of applicable design, regulatory, code, material, testing, metal joining, part identification, spare parts, cleaning, preservation, packaging, handling, storage, shipping, installation and other design procurement related requirements.

Supply System generated purchase requisitions and purchase orders will be reviewed and approved by Supply System QA and Engineering in accordance with the Supply System QA Program. Ebasco generated purchase requisitions and purchase orders will be reviewed and approved in accordance with measures established in Subsection 17.1.2. The Supply System will review implementation of these measures by audits and surveillances.

The review and approval of Supply System and Ebasco generated procurement documents is documented. This documentation is filed and maintained in a controlled, traceable, retrievable and systematic manner.

Documentation requirements are specifically delineated in the procurement documents indicating to the bidder, contractors and vendors which documents must be submitted for information or approval.

Procurement documents include requirements which assure the right of access by Supply System and/or Ebasco personnel to the contractor's operations or the vendor's facilities and records. QA requirements are incorporated in procurement documents in accordance with their quality class and complexity. Bidders on Supply System Quality Class I documents are requested to submit with their bids a comprehensive QA Plan describing their QA system, policies, responsibilities and procedures which will be, or are being, implemented to control quality throughout all phases from design to final shipment, erection, fabrication, installation, testing or startup, as applicable.

After bid openings and prior to contract award, bids are reviewed to determine the acceptability of the bidder's QA programs. This evaluation may consist of an examination of their QA plans and evaluation of past quality performance based on previous experience with the Supply System or Ebasco and/or a review of the A/E bid evaluations. QA evaluations, if deemed necessary, are performed in accordance with approved procedures. After the documented bid evaluation, the Supply System Project Manager is notified as to the acceptability of the bidder's QA program.

Supply System QA reviews and approves the Architect-Engineer's and the NSSS Contractor's respective QA program. The Architect-Engineer in turn approves the QA programs of other contractor's and supplier's as part of their contract with the Supply System.

The details of the procurement document control measures implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.7 Instructions, Procedures and Drawings 4

Supply System Design and Construction Quality Assurance Requirements Manual delineates the methods by which the Supply System complies with the criteria of 10CFR50, Appendix B. Implementation of Supply System QA Program assures control of the activities affecting quality. A listing of the QA procedures comprising Supply System Design and Construction Quality Assurance Requirements Manual is recorded in Subsection 17.1.1.4.

The Supply System QA Program requires Ebasco to have based the development of their QA Program and the procedures for its implementation on the requirements of 10CFR50, Appendix B. Ebasco generated procurement documents require that instructions, procedures and drawings relative to the work being performed will be maintained in the work area and available for reference by the personnel performing the work.

Contractors and vendors, including Ebasco and CE, are required to have written instructions, procedures, policies and/or drawings which govern their quality related activities and which include appropriate quantitative and qualitative acceptance/rejection criteria. Contractors and vendors, including Ebasco and CE, are required to impose similar documentation requirements on their subcontractors.

The details of the measures which Ebasco and CE implement to assure the development and issuance of instructions, procedures and drawings are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.8 Document Control

Document Control is implemented by the Supply System, Ebasco and CE in accordance with the requirements delineated in their respective QA Manuals.

These requirements provide measures to assure that appropriate written instructions, procedures, policies, drawings and procurement documents including changes thereto, are properly reviewed and approved prior to release. Changes to these applicable documents require a review and/or approval commensurate to that performed on the original document. Changes to design documents are described in Subsection 17.1.1.5. These reviews and/or approvals verify the inclusion of adequate quality requirements and evaluate the impact of the changes on other project activities. Issuance of controlled documents is performed by personnel assigned distribution authority by the QA Program. This controlled issuance is designed to distribute controlled documents in a timely manner to the locations where the applicable activity is being performed and to prevent the use of obsolete or superseded documents.

The Supply System QA Program provides for the controlled updating of the Supply System Design and Construction Quality Assurance Requirements Manual through a process that specifically requires holders of a controlled copy of the Supply System QA Program Manual to return a receipt verifying that the manual has been updated, the superseded pages were removed and returned and/or destroyed.

Procurement documents generated by the Supply System, Ebasco and CE require that contractors and vendors, including their subcontractors, of Supply System Quality Class I items have document control procedures in accordance with 10CFR50, Appendix B. 4

The Supply System QA Program document control measures, as delineated in the procurement documents, requires that quality related documentation be available prior to the performance of the activity to which they relate.

The Supply System QA Program document control measures pertain as a minimum to contract specifications, contract drawings, QA Program Manual procedures, operating procedures, quality related instructions and various process, test and inspection procedures as delineated in the contract specifications.

The details of the document control measures implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.9 Control of Purchased Material, Equipment and Services

As described in Subsection 17.1.1.6, procurement for WNP-3 is accomplished through procurement documents. These documents contain sections which describe the general conditions, special conditions and technical specifications which the contractor is required to meet. The requirements of these sections assure purchased material, equipment and services, whether purchased directly or through contractors, conforms to design requirements. Measures to control these activities include a review and approval of procurement documents; source evaluation and selection, vendor surveillance, inspections and audits by the Supply System or Ebasco; and receiving inspection of these items upon receipt at the site.

QA requirements are incorporated in procurement documents in accordance with

their quality class and complexity. Bidders on the Supply System Quality Class I contracts are required to submit with their bids a comprehensive QA plan describing their QA systems, policies, responsibilities and procedures which will be, or are being implemented to control quality throughout all phases from design to final shipment erection, fabrication, installation, testing or startup, as applicable.

The Supply System QA Program requires surveillance of contractors and vendors be performed in accordance with written procedures and that surveillance activities be planned to verify and document that the contractors and vendors are conforming to the requirements of the procurement documents.

In addition, the Supply System QA Program requires that receiving inspection of items at the site be performed in accordance with written procedures, and that receiving inspection activities be planned to verify and document that for the material, equipment or component being received documentation is available at the site prior to installation or use.

The Supply System QA Program requires that received items will be stored and handled on a controlled basis with nonconforming items being processed in accordance with the requirements described in Subsection 17.1.1.17.

Documentation pertaining to the control of purchased material, equipment and services will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable systematic manner. 4

The details of the measures which Ebasco and CE implement to assure the control of purchased material, equipment and services are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.10 Identification and Control of Materials, Parts and Components

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements for the development and implementation of measures for the identification and control of materials, parts and components. These reviews and approvals assure that identification and marking requirements have been adequately delineated and that the location and method of identification and marking do not adversely effect the function or quality of the subject item.

Procurement documents require a positive system of identification and control of materials, parts, components and partially completed subassemblies while in storage, warehousing and holding areas and during their fabrication, manufacturing, installation and construction.

These identification and control measures establish a means by which items can be traced to and conformance verified with their applicable documentation.

Verification that the items have been properly identified is to be performed during vendor surveillance activities prior to shipment of the items. Identification is further verified during receiving inspection at the site to assure that identification status was not adversely affected during shipping and to provide a verification check if the vendor surveillance verification was waived.

Documentation pertaining to the identification and control of materials, parts and components will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable, systematic manner.

The details of the measures which Ebasco and CE implement to assure the identification and control of materials, parts and components are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.11 Control of Special Processes

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of measures for the control of special processes. These requirements specify applicable codes, standards, specifications and any special requirements necessary for the control of the delineated special processes.

In addition, the procurement documents specify that special processes will be performed and controlled in accordance with written procedures which delineate those special processes procedures which will be submitted to Ebasco or Supply System for information or review and comments. 4

The procurement documents will require that procedures be developed to control such special processes as:

a) Welding

b) Cleaning

c) Heat Treating

d) Nondestructive Examination

e) Repairing

Essential ingredients of these procedures shall include:

a) Equipment utilized in the performance, inspection and control of special processes that require qualification shall be qualified to its intended usage prior to being installed or used.

b) Personnel performing any special processes shall be qualified in accordance with applicable standards prior to the performance of work.

c) Data collected in conjunction with the control of special processes shall include the type of operation, results, acceptability, action taken when deficiencies were noted and the identification of the inspector and/or data recorded.

Special processes procedures, qualification documentation, inspection and test results will become part of the objective evidence of the quality of the applicable item and will be filed and maintained in a traceable, retrievable, systematic manner.

The details of the measures which Ebasco and CE implement to assure that control of special processes are described in Subsections 17.1.2 and 17.1.3, respectively.

17.1.1.12 Inspection

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of inspection measures. These requirements specify that inspections will be performed by contractor personnel who are independent from the individual or group responsible for performing the activity being inspected.

The procurement documents specify that inspection activities will be performed and controlled in accordance with written procedures, instructions and/or checklists. These procedures, instructions and/or checklists are required to include:

a) Identification of quality characteristics to be inspected.

b) Identification of those contractor individuals or the organization responsible for performing the inspection operation.

c) Acceptance/rejection criteria. 4

d) Description of the method of inspection.

e) Evidence of completion of inspection.

f) Record of the results of the inspection operations.

The procurement documents further require that procedures, instructions and drawings relative to the work being performed will be maintained in the work area and available for reference by the personnel performing the work.

Contractors and vendors are required by the procurement documents to specify the qualification requirements for inspection personnel and to assure that each inspector's qualifications are maintained current. The contractors and vendors are further required to perform inspection of modifications, repairs and replacement items, which are made after the initial inspections, in a manner commensurate with the original inspection requirements or to the Supply System and/or Ebasco approved alternatives.

Inspection equipment is required to be calibrated as described in Subsection 17.1.1.14.

Ebasco has been delegated the responsibility to perform source inspection, site receiving inspection of prepurchased items and surveillance of site construction inspection activities.

Supply System is responsible for source inspection and site receiving inspection of Supply System direct purchases. The Supply System has and may assume responsibility for source inspection/site receiving inspection of Ebasco administered prepurchased items/services.

Pre-inspection planning for prepurchased vendors developed by Ebasco QA will define inspection requirements, sequence of inspections, inspection methods, acceptance criteria and provide a tabulation of results for documented evidence that the particular quality characteristic inspected actually conforms to the specifications.

The Supply System QA will perform surveillance on Supply System direct procurements and perform an overview of the CM and contractor organizations for the purposes of evaluating their performance and verification of implementation of corrective action.

Source inspection will be accomplished by Ebasco's vendor surveillance group using inspection plans developed by Supply System and Ebasco from the procurement documents. This inspection will assure adequate control of processes to assure that the required quality is obtained when inspection is not possible or disadvantageous. 4

The NSSS Supplier (CE) is responsible for source surveillance of its subvendors. The Supply System will provide surveillance, through the Home Office and Site Organizations, over both CE and its subvendors.

Inspection planning data sheets will become part of the objective evidence of the quality of the applicable items inspected and will be filed and maintained in a traceable, retrievable, systematic manner.

The details of the inspection measures implemented by Ebasco and CE and described in Subsections 17.1.2 and 17.1.3, respectively.

17.1.1.13 Test Control

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements governing tests to be performed by vendors and contractors. The test requirements shall include adequate test prerequisites, instructions for testing (including environmental conditions, if applicable), proper instrumentation, documentation and evaluation by qualified, responsible individual or group. The procurement documents require that testing be performed in accordance with written procedures, instructions and/or plans which define the overall inspection and test requirements, the acceptance/rejection criteria and the data to be recorded.

The Supply System QA Program further requires that site testing be monitored in accordance with testing inspection plans which provide for:

a) An itemized list of the status identification system to be employed (i.e., tags, numbering system).
b) An itemized list of the documents to be reviewed or referenced to verify the testing and inspection status of the system or component to be tested.
c) An itemized list of the tests to be performed.
d) An itemized list of the testing devices to be utilized.
e) A detailed list of acceptance criteria together with adequate space to reflect actual results.

Construction testing will be performed by the contractors to ensure that installed equipment meets applicable codes, standards and design requirements. 4

The contractors will be required to prepare inspection and test procedures which define overall inspection and test requirements, test equipment to be used, criteria for acceptance and data to be recorded. These plans shall be approved by Ebasco. Integrity tests (i.e., hydrostatic, continuity, resistance, etc. and flushing tests) will be performed in accordance with these approved procedures. The contractor will be required to provide control of installed equipment in accordance with an accepted equipment tagging procedure. Upon completion of contractor installation and testing of a given system, all associated inspection and test records will be turned over to Ebasco and the Supply System for review and concurrence.

System inspections will be performed by the Supply System Startup Group to ensure that equipment is installed in accordance with design requirements and that the system installation is complete. Following resolution of any discrepancies, contractor tags will be removed, Supply System tags installed and control of the system will then be transferred to the Supply System for testing purposes. Contractor test documentation will become a part of the overall permanent plant testing records.

Test control documentation will become part of the objective envidence of the quality of the applicable items tested and will be filed and maintained in a traceable, retrievable and systematic manner.

The details of the test control measures implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.14 Control of Measuring and Test Equipment

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of measures to control measuring and test equipment. These requirements specify:

a) Contractor's and vendor's procedures describe the calibration technique, calibration frequency, maintenance and control of all measuring and test instruments, tools, gauges, fixtures, reference standards, transfer standards, and nondestructive examination equipment which are to be used in the measurement, inspection and monitoring of components, systems and structures.

b) Allowable deviations from calibration standards (tolerances) will be specified in the contractor's and vendor's procedures.

c) Inspection, measuring, testing and maintenance devices are calibrated and adjusted at scheduled intervals against certified standards having known valid relationships to national standards, where such standards exist.

d) Calibration intervals for each device are based on the type of equipment, required accuracy, intended usage and other conditions affecting inspection, measurement, testing and maintenance control. 4

e) Calibration standards are maintained, calibrated and used in an environment having temperature and humidity controls that are compatible with required accuracy and operating characteristics of the standards.

f) Records are maintained that indicate the calibration history and the next scheduled calibration date for each controlled device.

g) Each inspection, measuring, testing and maintenance device is properly identified with serial numbers, or other suitable identification and has its last and next scheduled calibration dates clearly indicated.

h) Devices that have not been properly maintained or calibrated in accordance with specified schedules have been identified and removed from service.

i) An investigation will be conducted and documented to determine the validity of previous inspections performed when measuring and test equipment are found to be out of calibration.

Documentation pertaining to the control of measuring and test equipment will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable and systematic manner.

The details of the measures which Ebasco and CE implement to assure the control of measuring and test equipment are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.15 Handling, Storage, Shipping and Preservation

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of appropriate cleaning, preservation, handling, storage shipping and preservation measures.

These requirements specify that procedures will be developed based on the requirements of the procurement documents, with consideration to the need for special tools, equipment and qualified personnel.

Cleaning, preservation, handling, storage, shipping and preservation requirements are incorporated into the procurement documents to assure that the item's designed integrity and ability to function are maintained.

Items delivered to the site are stored, handled and preserved in accordance with procurement documents and equipment manufacturer's requirments. Manufacturer's instructions may be modified provided adequate engineering justification is provided and documented. These functions are performed in accordance with approved procedures and instructions on a scheduled basis and corrective action is taken when required. The overall program is under the surveillance of Ebasco's Site QA. 4

Documentation pertaining to the cleaning, preservation, handling, storage and shipping of the items will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable and systematic manner.

The details of the measures which Ebasco and CE implement to assure control of the cleaning, preservation, handling, storage and shipping of the items are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.16 Inspection, Test and Operating Status

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of inspection, test and operating status measures. These requirements specify that procedures will be developed to assure that specified inspections and tests are performed and that the acceptability of the items with regard to their inspection, test and operating status are known throughout the manufacturing, installation and startup testing phases. In addition, the procedures are required to specifically delineate the methods by which the inspection, test and operating status of an item will be identified and the controls which will be implemented to control the use of the identification methods. The implementation of the status identification system will be designed to preclude the inadvertent bypassing of required inspections or tests, unless formally waived, and to prevent the inadvertent operation of the equipment.

Documentation pertaining to the inspection, test and operating status of items will become part of the objective evidence of the quality of the applicable items, and will be filed and maintained in a traceable, retrievable and systematic manner.

The details of the measures which Ebasco and CE implement to assure implementation of an inspection, test and operating status system are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.17 Nonconforming Materials and Items

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents be reviewed and approved to verify that requirements have been included which provide for the development and implementation of measures to assure control of nonconforming materials and items. The Quality Assurance Programs of the Supply System, Ebasco, CE, other contractors, subcontractors and vendors will provide for the identification, documentation, segregation, review, disposition and notification to affected organization of nonconforming materials, parts, components, services or other program activities at any stage of manufacturing, fabrication, erection, or construction to prevent their inadvertent use or installation. Written procedures will provide for the handling, processing, dispositioning and reinspection of nonconforming materials, parts, components, services or other program activities.

Nonconforming items shall be identified and marked with a "HOLD" tag (when possible); removed to a "HOLD" area, roped off, or otherwise segregated to prevent their inadvertent use or installation. 4

17.1.1.17.1 Detection and Documentation of Nonconformances

The detection and documentation of nonconformances detected is as follows

17.1.1.17.1.1 Site Nonconformances

All Supply System project personnel shall have the authority to either issue a Hold Tag or assure that the appropriate Contractor/Supplier issue its Hold Tag to stop work or control further processing of nonconforming item(s) which may be in direct violation of the following:

a) The FSAR
b) Engineering, construction, or material specifications
c) Applicable codes and standards
d) Project Quality Assurance Procedures
e) Contractor's Quality Assurance Procedures

If determined to be a nonconformance it will be documented in accordance with an approved procedure. Site nonconformances detected by the Supply System, Ebasco, and those nonconformances detected by construction contractors which require Owner/AE dispositions are processed by Ebasco in accordance with the QA program described in Subsection 17.1.2. Ebasco's QA program describes the dispositioning process including the criteria which requires approval of the Nonconformance Review Board (NRB); and the membership of the NRB, which includes Supply System Project Engineering.

17.1.1.17.1.2 Vendor Nonconformances

Nonconforming material, parts, components, services, or other program activities detected by Supply System and/or Ebasco during vendor surveillance activities will be brought to the attention of the Vendor's Quality Assurance personnel for their initiation of nonconformance control using their procedure. Failure of the vendor to take appropriate actions will result in appropriate corrective actions initiated by the Supply System or Ebasco.

Nonconformances detected during fabrication/manufacturing by the vendor will be identified and controlled in accordance with the vendor's QA program. All vendor nonconformances dispositioned "Use-as-is" or "Repair" are made part of the permanent inspection records and reported to the Supply System in accordance with contract requirements and the vendor's QA program.

a) System Nonconformances (Quality Finding Reports)

A system has been established to assure quality discrepancies concerning documentation, procedures, instruction or program activities are identified, documented and corrected and that notification of action taken is transmitted to affected parties.

17.1.1.17.1.3 Review of Nonconformances

Ebasco QA is responsible for assuring that nonconformance documents generated by the Supply System, vendors, contractors or Ebasco, which identify significant or possibly significant deviations as outlined in 10CFR50.55(e) or 10CFR21, have been properly evaluated and processed.

The details of the measures which Ebasco and CE implement to assure the control of nonconforming materials, parts or components are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.18 Corrective Action

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of measures to assure that conditions adverse to quality are identified, evaluated, corrected, documented and reported to the appropriate levels of management. In addition, the cause of significant conditions adverse to quality are required to be identified, evaluated, corrected to preclude repetition, documented and reported to the appropriate levels of management.

The procurement documents require the contractor or vendor to take timely corrective action when requested by the Supply System and/or Ebasco. This requirement is in addition to their own procedure for implementing corrective action which the procurement documents specify.

Documentation pertaining to corrective actions will become part of the objective evidence of the quality of the applicable items and will be filed and maintained in a traceable, retrievable, systematic manner.

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The details of the corrective action measures implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively.

17.1.1.19 Quality Assurance Records

The Supply System QA Program requires that Supply System and Ebasco generated procurement documents contain requirements which provide for the development and implementation of measures to assure that documentation necessary to provide objective evidence of the activites affecting quality are generated, reviewed, approved, filed and maintained in accordance with Appendix B of 10CFR50.

Procurement documents require that contractors or vendors:

a) Have written measures to control the filing and retrieval of QA Records.

b) Have QA records which provide sufficient information to permit identification between the records and the item or activity to which they apply.

c) Have QA records which are legible, complete and authenticated and dated by authorized personnel.

d) Maintain control over the QA records to assure that revisions are performed by authorized personnel under controlled conditions in accordance with written procedures. Revisions will include the date of the revision and identification of the person making the revision. 4

e) Maintain their QA records in a retrievable, identifiable and systematic manner.

f) Have their QA records accessible for review by the Supply System and/or Ebasco.

g) Have QA record storage facilities which are constructed and located to prevent destruction by fire, flooding, or theft and to prevent deterioration from temperature or humidity conditions.

Ebasco has been given the responsibility to receive, store and maintain QA records for the Supply System at the site.

QA records will be kept at the site in a storage facility constructed and located to prevent the contents from being destroyed by fire, flooding or theft, or deterioration by temperature or humidity conditions. The storage facility will comply with the Supply System position on Regulatory Guide 1.88 Rev. 2 issued October 1976 detailed in Section 17.2. Ebasco has been given the responsibility to review QA records to assure their correctness and completeness. QA records shall be submitted to Ebasco in accordance with the requirements of the procurement documents. QA records are utilized to verify that activities affecting quality have occurred, and that they have been performed in compliance with specified requirements. Analysis of conditions adverse to quality are performed as indicated in Subsections 17.1.1.17 and 17.1.1.18. These analyses utilize QA records as one means of disclosing discrepancies and nonconforming conditions. Furthermore, QA records provide the basis upon which dispositioning and verification of resolutions are accomplished.

Safety-related equipment will not be installed until it is assured that the onsite documentation for that equipment does meet the applicable specification and/or code requirements, or that a certification, stating this documentation is available and will be furnished and signed by an authorized representative of the manufacturer, is received and acceptable. In the event that neither the complete documentation package or adequate certification is available, or hardware deficiencies exist, but exceptional construction or handling considerations justify that safety-related equipment be stored in place or installed, the following conditions shall be met:

a) An engineering evaluation will be made to determine the degree of risk associated with storing in place or installing such equipment.

b) As the engineering evaluation dictates, management will determine whether the equipment will simply be stored in place or whether it may be set in place, aligned, bolted, grouted and connected. The decision will be documented and any hold points or limitations clearly identified in accordance with approved CM procedures. Any equipment so installed will be properly tagged regarding degree of nonconformance and in no case will such equipment be placed in service or used for any preoperational testing until the nonconformance conditions are rectified and such is documented.

The details of the Quality Assurance record measures that are implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3 respectively.

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17.1.1.20 Audits

The Supply System QA Program requires the contractors and vendors and their subcontractors to develop and implement a comprehensive system of planned and documented audits. These audit activities are required to be performed in accordance with written procedures or checklists. Audit measures are to assure that:

a) Audits are performed by appropriately trained personnel not having responsibility in the areas being audited.

b) Audits are conducted periodically based on a preplanned schedule.

c) Audits include an objective evaluation of quality related practices, procedures, instructions, work areas, activities items and documentation. In addition, audits include an evaluation of the effectiveness of implementing compliance to specified requirements.

d) Audit results are documented and reported to the appropriate levels of management who review and evaluate these reports to determine quality trends and program effectiveness.

e) Management action is taken to correct deficient areas.

f) Follow-up audits are performed to verify corrective action and to evaluate the effectiveness of implementation.

Audits determine the adequacy of, and adherence to, the Supply System, Ebasco and other contractors QA programs and the effectiveness of their implementation. This is determined by:

a) The Director, Licensing and Assurance, and the Project QA Manager review reports of audits performed by the Supply System's Corporate QA on Ebasco Home Office and WNP-3 organizations; NSSS Home Office, and Supply System.

b) The Project QA Manager reviews reports of audits performed by Ebasco and Supply System Site QA on Ebasco, contractor and vendor activities.

Each applicable criteria of 10CFR50, Appendix B, is scheduled to be audited by Ebasco in accordance with the program described in Subsection 17.1.2. The Manager, Audits is responsible for auditing the AE/CM and Supply System site organizations performing quality affecting activities for compliance to the applicable criteria of 10CFR50, Appendix B. Supply System project QA will conduct unscheduled audits on the AE/CM and contractor activities as necessary. 4

The Supply System audit results are documented and reported to the appropriate levels of management for implementation of corrective action. The responses to the Supply System audit findings are verified for implementation and effectiveness during follow-up audits.

Documentation pertaining to audits will become part of the objective evidence of quality of the applicable items and will be filed and maintained in a traceable, retrievable, systematic manner.

The detail of the audit activities implemented by Ebasco and CE are described in Subsections 17.1.2 and 17.1.3, respectively.

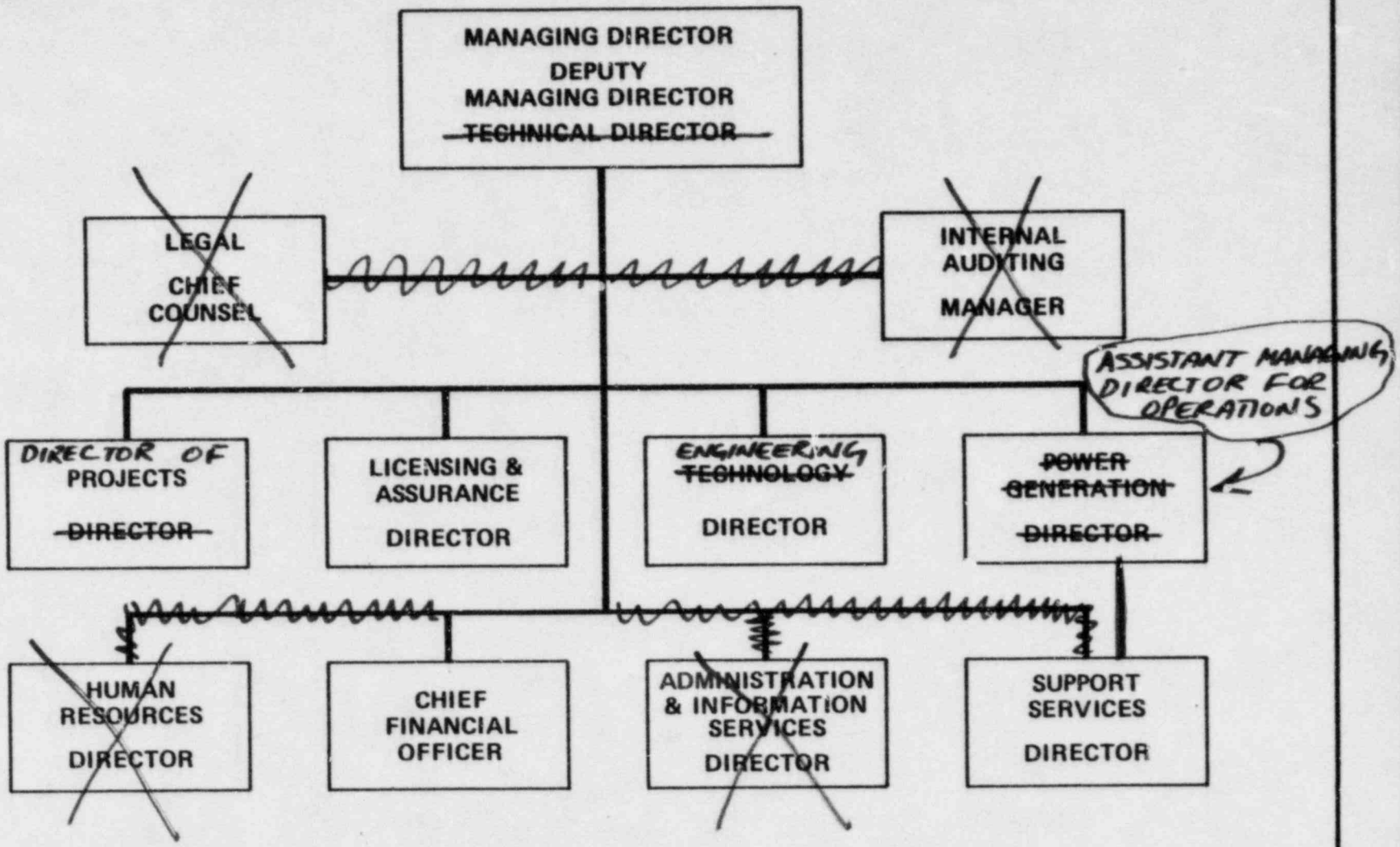
17.1.2 QUALITY ASSURANCE DURING DESIGN AND CONSTRUCTION - EBASCO SERVICES

The Ebasco Quality Assurance Program for WNP-3 is fundamentally the same as the Ebasco Corporate Quality Assurance Program which is in ETR 1001 "Ebasco Quality Assurance Program Manual." The Nuclear Regulatory Commission initially approved Ebasco Report ETR 1001, Revision 0, March 14, 1975, as a Topical Quality Assurance Program on May 12, 1975. Subsequent corporate modifications to ETR 1001 are included in the project unique version on a regular basis following review and approval of the Nuclear Regulatory Commission, e.g., Revision 11 to ETR 1001 was accepted on May 17, 1982. 5

Due to specific site and project requirements, departures from the corporate Quality Assurance Program as established in ETR 1001 are necessary. These modifications are considered superficial in nature and are included in the manual only as clarification for specific site needs, e.g., project unique titles. Such changes to ETR 1001 are controlled in accordance with Company Procedure Number Seven. Ebasco considers that these changes do not downgrade the established requirements of the Ebasco Corporate Quality Assurance Program as applied to the WNP-3 Project. Each page of the WNP-3 project unique ETR 1001 is clearly identified as modified for the project.

17.1.3 QUALITY ASSURANCE DURING NSSS DESIGN AND PROCUREMENT - COMBUSTION ENGINEERING

The Combustion Engineering (NSSS Vendor) Quality Assurance Program is detailed in ~~Topical Report CENPD-210A, Revision 3, approved by letter dated November 16, 1977.~~ CESSAR-F Chapter 17. 5 ←

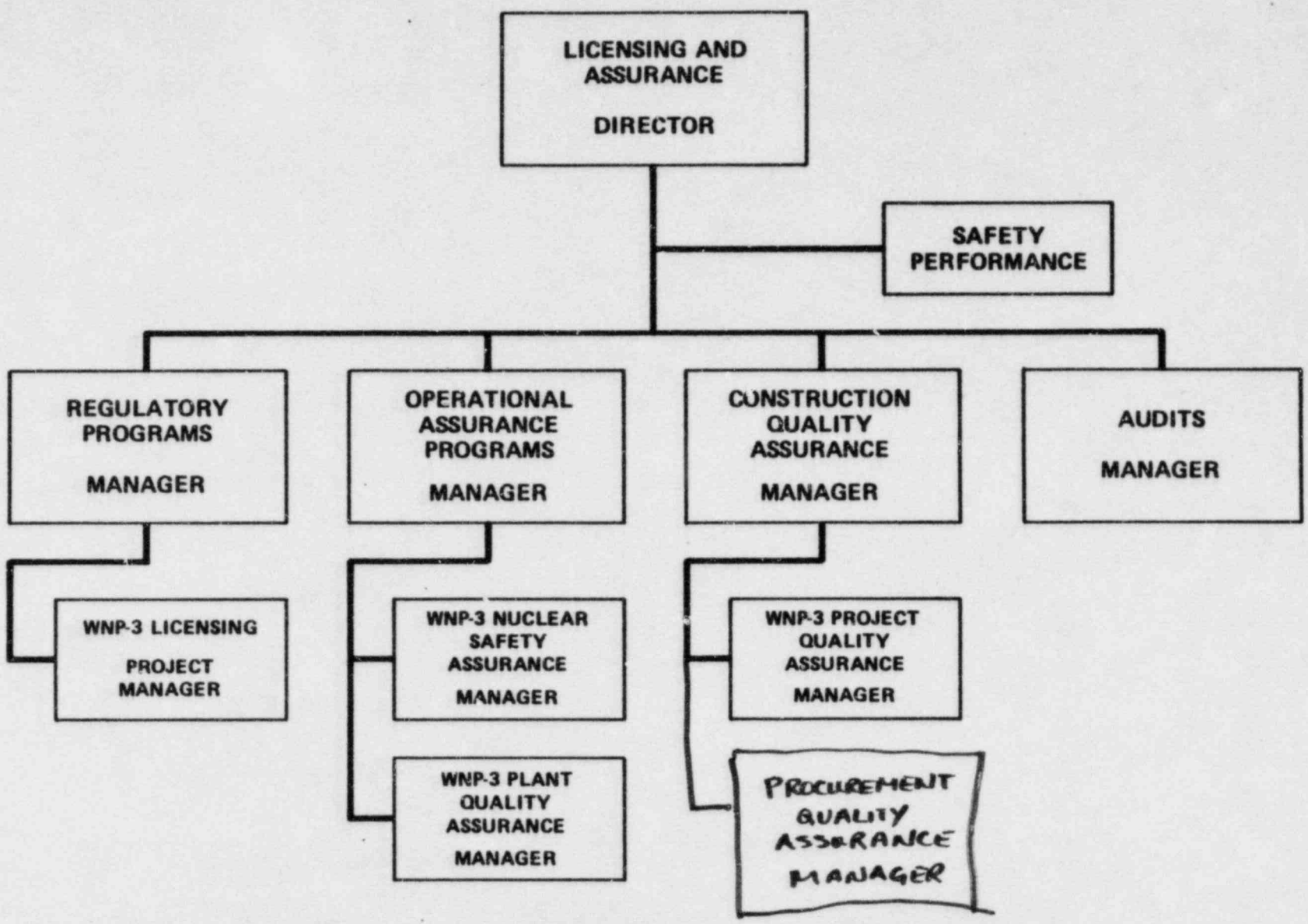


CORPORATE ORGANIZATION

FIGURE 17.1-1

AMENDMENT NO. 4 (12/83)

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
Nuclear Projects 3 & 5
FINAL SAFETY ANALYSIS REPORT

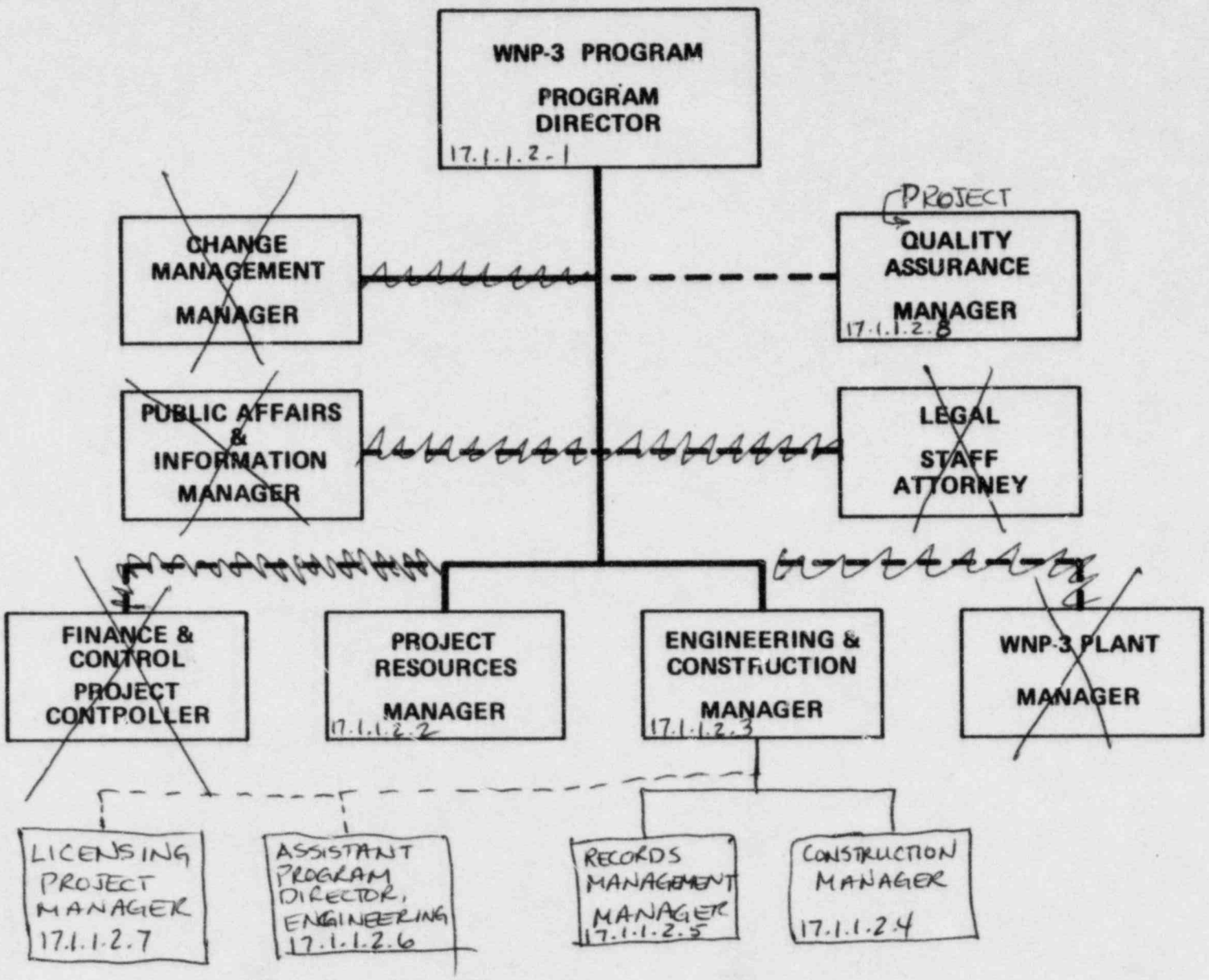


LICENSING AND ASSURANCE DIRECTORATE

FIGURE 17.1-2

AMENDMENT NO. 4 (12/83)

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
Nuclear Projects 3 & 5
FINAL SAFETY ANALYSIS REPORT

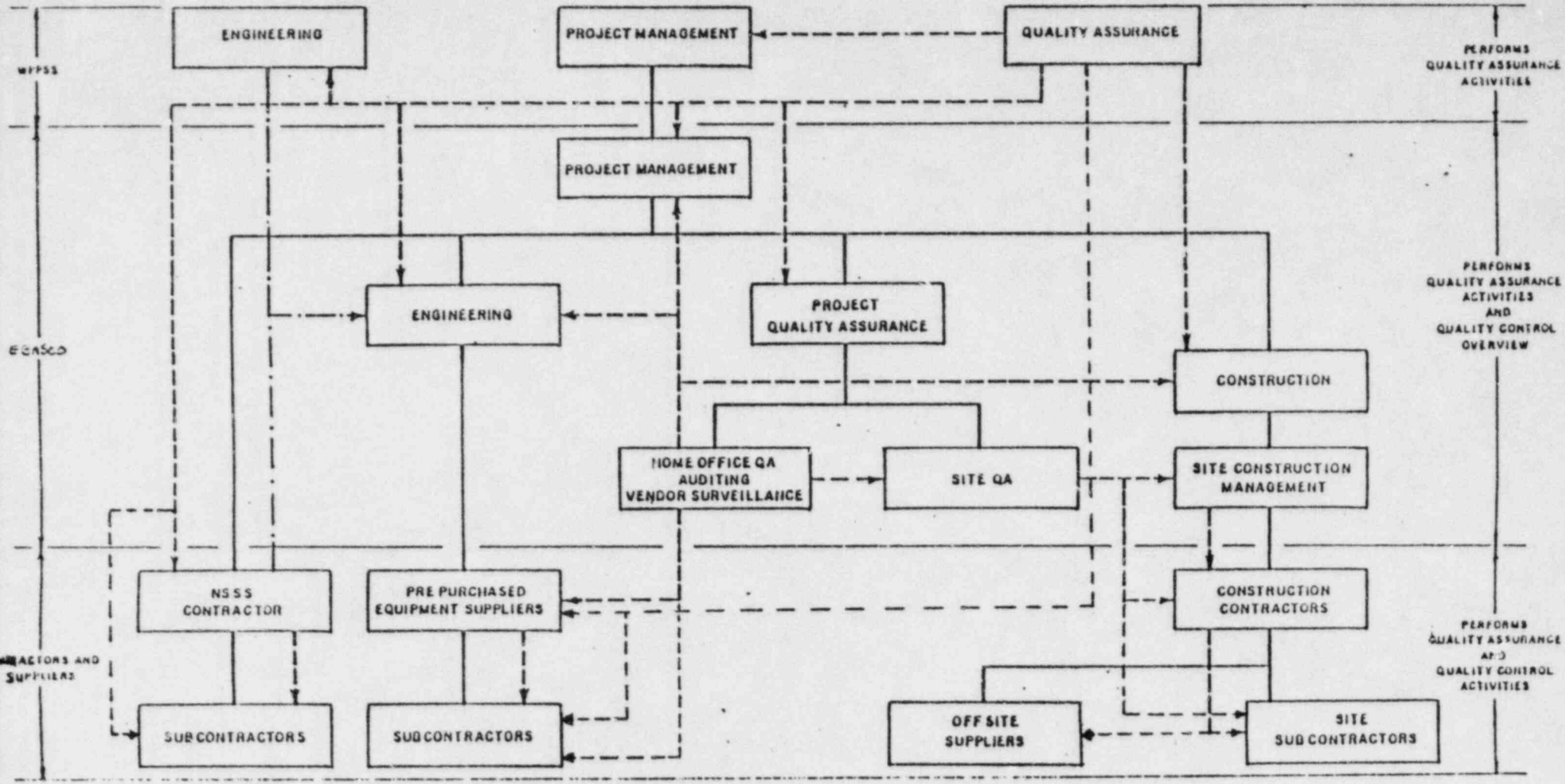


WNP-3 PROGRAM DIRECTORATE

FIGURE 17.1-13

AMENDMENT NO. 4 (12/83)

ADDING THIS FIGURE



WASHINGTON PUBLIC POWER SUPPLY SYSTEM Nuclear Projects 3 ~~&5~~ FINAL SAFETY ANALYSIS REPORT	WNP-3 SUPPLY SYSTEM / CONTRACTOR INTERFACES	FIGURE 17.1-4

ADDING THIS FIGURE

ATTACHMENT 3

REGULATORY GUIDE 1.88, REV. 2 (OCTOBER 1976) - "COLLECTION, STORAGE, AND MAINTENANCE OF NUCLEAR POWER PLANT QUALITY ASSURANCE RECORDS"

The Supply System will implement the Regulatory Position of Regulatory Guide 1.88, Rev. 2 (October 1976), subject to the following:

1. Regulatory Position C.2 of Regulatory Guide 1.88, Rev. 2 (October 1976) endorses the 4-hour fire rating requirements for a single records storage facility as described in Section 5.6 of ANSI N45.2.9-1974. The Supply System modifies this 4-hour rating requirement of ANSI N45.2.9-1974 to 2-hour fire rating requirement. Accordingly, the Supply System will comply with a substitute to the third, fourth, and fifth paragraphs of Section 5.6 of ANSI N45.2.9-1974 which reads:

   Design and construction of a single record storage facility shall meet the criteria of (a) through (i) below:

   (a) reinforced concrete, concrete block, masonry, or equal construction;

   (b) floor and roof with drainage control. If a floor drain is provided, a check valve (or equal) shall be included;

   (c) doors, structure and frames, and hardware shall be designed to comply with the requirements of a minimum 2-hour fire rating;

   (d) sealant applied over walls as a moisture or condensation barrier;

   (e) surface sealant on floor providing a hard wear surface to minimize concrete dusting;

   (f) foundation sealant and provisions for drainage;

   (g) forced air ciculation with filter system;

   (h) fire protection system;

   (i) only those penetrations used exclusively for fire protection, communication, lighting, or temperature/humidity control are allowed; all such penetrations shall be sealed or dampered to comply with the minimum 2 hour fire protection rating.

   The construction details shall be reviewed for adequacy of protection of contents by a person who is competent in the technical field of fire protection and fire extinguishing.

   If the facility is located within a building or structure, the environment and construction of that building can provide a portion or all of these criteria.

2. Section 3.2.2 of ANSI N45.2.9-1974 is revised to read, "Index - The Quality Assurance Records shall be indexed. The indexing system(s) shall include, as a minimum, record retention times and the location of the records within the record system. The indexing system(s) shall provide sufficient information which can be used to identify item(s) or activity(ies)".

3. Section 5.4.3 of ANSI N45.2.9-1974 is revised to read, "Special Processed Records - Provisions shall be made for special processed records (such as radiographs, photographs, negatives and microfilm) to prevent damage from excessive light, stacking, electromagnetic fields and temperature. These provisions will be delineated in procedures and/or instructions which will incorporate, or take into consideration, available manufacturers' recommendations".