

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY ASSURANCE/QUALITY CONTROL GLOSSARY
FOR
SEABROOK STATION

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ACCEPT

To certify that a characteristic, component, material or process fully meets the design requirements.

ACCEPT-AS-IS

A Nonconformance Review Board disposition indicating material discrepancies do not substantially affect safety, performance and maintainability; and that the material can be used for its intended purpose.

AEC QUALITY GROUPS

The classifications defined by AEC Regulatory Guide 1.26 which covers "Quality Group Classifications and Standards" for Nuclear Power Plant structures, systems and components.

AGENCY

The regulatory body determined to have legal jurisdiction over the effective licensing and operational control of any structure system or component to be provided under contractual arrangement by United Engineers and Constructors Inc. The Agency designated may be a Legal Authority of the Federal Government, State or Municipality of the United States, a Foreign Country, or an Insurance Company authorized to write boiler and pressure vessel insurance under provisions of Section III, ASME Code.

ANS SAFETY CLASSES

The classifications adopted by the AEC, ANS Subcommittees 21, 22 and 23 which cover PWR, BWR and HTGR Nuclear Safety Criteria, respectively, for structures, systems and components.

ANSI STANDARDS

Standards developed under the sponsorship of the American Society of Mechanical Engineers (ASME) by the American National Standards Institute Committee N45 to establish requirements for overall quality assurance programs for nuclear power plants.

APPROVAL

An act of endorsing or adding positive authorization of both.

INFORMATION ONLY

APPROVED DOCUMENTS

Documents which bear evidence, by signature, initials, stamp or approval letter, that they have been reviewed and accepted by the designated parties.

APPROVED SUPPLIER FILE

The list of suppliers who have demonstrated satisfactory quality performance in previous or current orders or who have received acceptable ratings in Facility Surveys.

APPURTENANCES

A part which is attached to a component which has been completed and previously stamped. Design conditions shall be included in a Design Specification and a Stress Report is required. Data Reports and stamping are as required by the Code.

ARCHITECT/ENGINEER

The organization responsible for the design, engineering, and procurement of equipment for the Balance of Plant of a power plant and for the coordination of all contractor design interfaces.

AS-BUILT CONFIGURATION

The actual configuration of a component, structure or system after all construction has been completed.

AS-BUILT-DATA

Documented data that describe the condition actually achieved in a product.

ASME CODE CLASSES

The classifications defined by ASME Boiler and Pressure Vessel Code Section III, "Nuclear Power Plant Components." The ASME Code classes define specific requirements for the design, fabrication, inspection, testing and documentation of equipment and components.

ASSEMBLY

A combination of subassemblies for components, or both, fitted together to form a unit.

ASSEMBLY DRAWINGS

Drawings show the assembled relationship of any functional combination of parts and assemblies.

AUDIT

An activity to determine through investigation the adequacy of, and adherence to, established procedures, instructions, specifications, codes, and other applicable contractual and licensing requirements, and the effectiveness of implementation.

BALANCE OF PLANT (BOP)

All components and services of the nuclear power station except the NSSS, Work and Support Services and nuclear fuel provided by the reactor supplier.

BARE FILLER MATERIAL

Filler material without a flux covering. Bare Filler Material includes weld wire and consumable inserts.

BIDDERS LIST

A list of suppliers proposed by Purchasing, Construction, Engineering and the Owner, for procurement of a specific component, part, appurtenance, material, or labor-services. The Reliability and Quality Assurance and Engineering Departments and client approved the listing.

BUY REQUISITION

The document issued by Engineering and Construction which authorizes Purchasing to initiate a purchase order or contract. This document establishes the technical requirements giving sufficient detail to enable Purchasing to prepare the purchase order, contract or change order.

CALIBRATION

Comparison of a measurement standard or instrument of known accuracy with another standard or instrument to detect, correlate, record, or eliminate by adjustment, any variation in the accuracy of the item being compared.

CERTIFICATION

An act of determining, verifying, or attesting to the qualifications of personnel or materials.

CERTIFICATE OF CONFORMANCE

A written statement, signed by a qualified party, certifying that items or services comply with specific requirements.

CERTIFIED DOCUMENTS

Foreign documents guaranteed by the supplier to represent the approved as-built configuration of the procured item.

CERTIFIED MATERIALS TEST REPORT

A written and signed document from the materials manufacturer which certifies that the material described thereon complies with the applicable material specification, and provides results of the tests performed.

CERTIFIED TEST REPORT

A written and signed document, approved by a qualified party, that contains sufficient data and information to verify the actual properties of items and the actual results of all required tests.

CHARACTERISTIC

Any property or attribute of an item, process, or service that is distinct, describable, and measurable, as conforming or nonconforming to specified quality requirements. Quality characteristics are generally identified in specifications and drawings which describe the item, process or service.

CHECKS

The tests, measurements, verifications or controls placed on an activity by means of investigations, comparisons, or examinations, to determine satisfactory condition, accuracy, safety or performance.

CLASSIFICATION OF CHARACTERISTICS

An enumeration of the design requirements of a product, i.e., dimensions, materials, test requirements, etc., classified according to their degree of seriousness when the characteristic is nonconforming.

CLEANLINESS

A state of being clean in accordance with predetermined standards, freedom from dirt, scale, heavy rust, oil or other contaminating impurities.

CLIENT, OWNER, UTILITY

The organization that owns a nuclear power plant and is responsible for the operation, maintenance, safety and power generation of the nuclear power plant.

CODE

Section III, ASME Boiler and Pressure Vessel Code, "Nuclear Power Plant Components", its Addenda and Case Interpretations.

CODE OF FEDERAL REGULATIONS, TITLE 10, PART 50, APPENDIX B TO (10CFR50)

The document which delineates U.S. Atomic Energy Commission quality assurance criteria for nuclear power plants and fuel reprocessing plants. Licensing of production and utilization facilities is contingent on satisfaction of 10CFR50 requirements.

COGNIZANT ENGINEER

An Engineer experienced in nuclear power plant component applications and power plant systems having the responsibility for preparing equipment specifications.

COMPONENT

A piece of equipment such as a vessel, piping, pump, valve or core support structure, which will be combined with other components to form an assembly.

CONCRETE PLACEMENT

Includes all activities associated with the placement of concrete, including pre-placement, post placement, curing and form removal.

CONFIGURATION

The relative arrangement of equipment, systems and components as expressed in the drawings and specifications.

CONFIGURATION VERIFICATION

The documented inspection activity which verifies that the "as-built" configuration agrees with the specified configuration.

CONSTRUCTION

An all-inclusive term comprising materials, design, fabrication, examination, testing, inspection and certification required in the manufacture and installation of components, parts and appurtenances of a nuclear power plant.

CONSTRUCTION DRAWINGS

Drawings which show the association of structures, the interrelation of structural design elements and the supporting services, equipments, and utilities.

CONSTRUCTION MANAGER

The organization responsible for the planning, managing and coordination of the efforts of contractors at the construction site.

CONSTRUCTION PHASE

A period which commences with receipt of items at the construction site and ends when the components and systems are ready for turnover to Operations personnel.

CONSTRUCTION PROCEDURE

A procedure written by the Construction organization to describe in detail the erection sequence to be followed. Construction procedures as a minimum shall contain the following:

1. Step by step sequence of events.
2. Space for the Field Quality Control Group to indicate holdpoints.
3. Space for Field Quality Control Group personnel to sign-off holdpoint.
4. Accept and reject criteria.
5. Record of the acceptability or unacceptability of the results of the holdpoint.

CONSTRUCTOR

The organization responsible for the fabrication, installation, construction, inspection and testing of the structures, systems and components of a power plant.

CONSULTANTS

The individual or organization under contract to UE&C to furnish consulting services required for site preparation, engineering studies, or other functions required by the engineer or purchaser.

CONTAMINANTS

Foreign materials such as mill scale, dirt, oil, chemicals and any matter that renders a fluid, solid or surface impure and unclean according to preset standards of acceptable cleanliness.

CONTRACT

The agreement between UE&C and a supplier which defines the requirements and conditions for furnishing labor, services, material or equipment at the construction site.

CONTRACTOR

Any organization under contract for furnishing items or services. It includes the terms Vendor, Supplier, Subcontractor, Fabricator and subtier levels of these where appropriate.

CONTROLLED DOCUMENTS

Documents under limited distribution and accountable through signed receipt procedures both of original document and any revisions thereto.

CONTROLLED STORAGE AREA

A storage area whose access to is controlled and limited; where cleanliness and good housekeeping practices are enforced and measures are taken (where required) to provide adequate fire protection and prevent the entrance of destructive animals. The control, identification, care, inspection, handling and removal of items from a controlled storage area will be controlled by procedure. As a minimum, equipment designated as requiring Level A, B, C or D type storage will be stored in a controlled storage area.

CONTROL AND ELECTRICAL DIAGRAMS

Diagrams which provide an index for identifying electrical items within subsystems and define how these items are interconnected.

CONTROL AND INSTRUMENTATION DIAGRAMS

Diagrams which identify electrical items within subsystems and define how these items operate.

CORRECTIVE ACTION FOLLOW-UP

Those actions taken to verify the implementation of corrective action and the evaluation of its effectiveness.

CORRECTIVE ACTION PROCESS

The methods for verifying and determining the cause of an adverse condition and for initiating timely improvements and corrections to preclude repetition.

CORRECTIVE ACTION

Those actions taken to assure the prompt detection and correction to preclude recurrence of all conditions adversely affecting quality, including failures, malfunctions, incidents, trends, deficiencies, deviations, nonconformances and defective material.

COVERED WELDING ELECTRODES

Filler material which consists of a metal rod core with a flux covering. (Covered electrodes require greater care than bare filler material because it is necessary to control the moisture content of the flux covering and prevent any damage to the flux covering.)

CRITICAL SURFACE - Includes the following:

- a. Austenitic Stainless Steel
- b. Polished surfaces
- c. Machined mating surfaces
- d. Bearing surfaces
- e. Bearings and seals
- f. Weld end preps
- g. Valve seats, stems, and other valve surfaces and components
- h. Electrical contact surfaces.

DATA PACKAGE

A collection of documents, test reports and correspondence for each item which covers an individual phase such as Purchasing, Receiving, Installation, Testing, Turnover, etc.

DEFECTIVE MATERIAL

A material or component which has one or more characteristics that do not comply with specified requirements.

DESICCANT

Materials used to absorb quantities of water vapor as a means of assuring a dry environment in shipping containers or other packaging modes during shipment and storage or during and following installation prior to use.

DESIGN

The technical and management processes which lead to and include the issuance of design output documents such as drawings, specifications and other documents defining technical requirements of Structures, Systems and Components.

DESIGN BASELINE

An approved, compatible design, established at selected points of design maturity, which serves as a defined point of departure to which all changes relate.

DESIGN CHANGES

Any revision or alteration of the technical requirements defined by an approved and issued design document.

DESIGN CONTROL

The process used to verify that the design drawings and specifications, including fabrication and inspection procedures for both shop and field, meet the project requirements.

DESIGN CRITERIA

Documents which establish overall plant design requirements including NSSS and BOP interface; they establish the overall systems parameters and design requirements for major portions of the BOP as necessary for the interrelationship of systems, components and machines.

DESIGN DOCUMENTS

Engineering specifications, drawings, calculations and/or instructions.

DESIGN INFORMATION

The information provided to the Project Engineering Manager, consisting of dimensions, general arrangements, etc., of specifications, vessels or components.

DESIGN INPUT

The criteria, parameters, bases or other requirements upon which detailed design is based.

DESIGN REPORTS

A summarization of information generated in the development of a final design, which confirm evidence of design adequacy.

DESIGN SPECIFICATION

An engineering document describing function, design requirements, environmental conditions, Code classification, boundary definition, and containing sufficient detail to provide a complete basis for construction in accordance with the Code.

DESIGN VERIFICATION

The process of checking, confirming or substantiating the design to provide assurance that specified requirements have been met. Methods include design review, alternate calculations and testing.

DESIGNATION

Wherein a person or job title is mentioned in this Manual, it means that person or his designated representative.

DEVIATIONS - Those

nonconformances which affect the safety, performance or durability of the material;

discrepancies which can be repaired or reworked for which an approved procedure is not available;

nonconformances for which the responsible organization desires to have the Nonconformance Review Board (NRB) suggest a disposition;

nonconformances which cannot be reworked.

The NRB must act on all Deviations.

DISCREPANCIES

Nonconformances which do not affect the safety, performance or durability of the material. A discrepancy can be repaired or reworked providing an approved repair or rework procedure exists; or it can be "accepted as is" providing the nonconformance does not compromise design or contract criteria. Nonconformance Review Board (NRB) is not required to act on discrepancies.

DOCUMENTATION

Any written or pictorial information describing, defining, specifying reporting or certifying activities, requirements, procedures or results.

DOCUMENT PACKAGE

Collection of required data packages which, together, make up the required documents for each item in a system. These documents are in the data packages and are not required to be in one location in the file. They must be cross referenced. The Data Review-Receiving and the Data Review-Installation are primary sources of the cross reference.

DRAWINGS

The drawings or isometrics prepared and approved by the cognizant engineering activity. The engineering responsibility on any project may rest with the Engineering Department of UE&C or with another engineering organization employed by the Owner.

ENGINEERING DOCUMENTATION

The Drawings, Bills of Material, Special Process Procedures and Calculations.

EQUIPMENT

A combination of materials to form a part, component, subassembly, complete functional machine, structure or system.

ERECTION DRAWINGS

Drawings which show how structures or equipments are to be assembled and erected.

EXAMINATION

An element of inspection consisting of investigation of materials, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gauging and measurement.

EXTERNAL AUDIT

Audits conducted on those portions of another organization's Quality Assurance Program not under UE&C's direct control and not within UE&C's organization structure. Consultants, suppliers, vendors or sub-contractors are audited to ascertain their compliance with contractual requirements. Conducting facility surveys prior to placement of a contract or purchase order is also considered an external type audit.

EXTERNAL DESIGN INTERFACE

The relationship between the UE&C design group and design group(s) of the Owner, Contractors and Suppliers.

FABRICATION TRAVELER OR PROCESS CHECK LIST

A process control document identifying step-by-step sequences for work operations, inspections and tests, with provisions for recording completion of each process step.

FACILITY SURVEY

An audit of a supplier's facility to evaluate his capabilities and Quality Assurance Program prior to the award of a purchase order.

FIELD SITE

The location of construction and/or construction management activities.

FIELD QUALITY CONTROL STANDARDS

An instruction which is intended to supplement QC Procedures and which will provide additional, detailed direction to the Field Quality Assurance personnel. FQC standards are issued on a controlled basis.

FINAL INSPECTION

The last inspection before an item is turned over to the Client or for use.

FINAL INSPECTION CHECK LIST

A check list prepared by the Field Quality Control Group that details the inspection to be performed.

FINAL INSPECTION PUNCH LIST

A supplement to the Final Inspection Check List to record additional items requiring resolution.

FINAL INSPECTION TURNOVER AGREEMENT

Form recording turnover of equipment to Test and Startup Department at completion of final inspection.

FINAL SAFETY ANALYSIS REPORT (FSAR)

The Safety Analysis Report submitted to the AEC by the Client as part of the application for a plant operating license.

FOREIGN PRINTS

All documentation formally submitted by a vendor for UE&C approval.

GAUGE FACILITY

Environmentally controlled facility or area provided for maintaining primary and secondary calibration standards and for performing calibrations of measuring devices.

GENERATING STATION

A utility company complex, constructed and operated for the purpose of producing electric power.

GUIDELINES

Particular provisions which are considered good practice but which are not mandatory in programs intended to comply with established Standards. The term "should" denotes a guideline; the term "shall" denotes a mandatory requirement.

HANDLING

Physically moving items by hand or by machine assisted methods not including transport by carrier.

HOLDPOINT

A point in the manufacturing/fabrication/erection sequence beyond which work may not proceed until the Authorized Code Inspector/Purchaser/Owner, has witnessed or examined the work and given consent to proceed. See also Surveillance Point.

HOME OFFICE QUALITY ASSURANCE ENGINEER (QAE)

The assigned R&QA representative responsible for the implementation of Quality Programs on a specific project.

INDEPENDENT DESIGN REVIEW

The systematic technical audit of complex engineered systems and product designs at conceptual, preliminary and final design baselines occurring during the evaluation of a design by personnel independent of the design process, but technically competent in the same disciplines which have provided input to the design.

IN-PROCESS INSPECTION

The inspection of items during processing or construction to give an immediate and accurate reflection of the status and condition of all items being constructed.

INQUIRY

The document issued by Purchasing which requests proposals from Bidders and defines the technical requirements and contractual conditions of the purchase order or contract.

INQUIRY REQUISITION

The document issued by Engineering which authorizes Purchasing to issue an inquiry. The requisition establishes the technical requirements giving sufficient detail to enable Purchasing to prepare the inquiry.

INSPECTION

The process of measuring, examining, testing, gauging or otherwise comparing the characteristics of a unit of product, equipment, construction process or testing operation with applicable design or specification requirements.

INSPECTION PLANNING

The instruction document that defines and prescribes the manner and sequence of performing product and construction tests or in-service inspection.

INSPECTION REPORT

Documentation of an inspection or surveillance activity.

INSPECTOR (AUTHORIZED CODE)

A qualified inspector employed by a legally constituted agency of a Municipality or State of the United States or regularly employed by an Authorized Inspection Agency and having authorized jurisdiction at the site of manufacture or installation.

INSPECTOR

Normally refers to the UE&C inspector authorized to accept or reject materials, equipment, operations, test, etc. per UE&C Quality Assurance Procedures.

INSTRUCTION

Any organized program intended to train, direct, guide or prepare personnel for the performance and/or observation of inspection functions.

INTERNAL AUDIT

Audits conducted on specific elements or activities of established UE&C Quality Assurance Programs under its direct control and within its organizational structure including site operations within the scope of UE&C responsibilities as Construction Manager and/or Constructor. Where specific project procedures are not defined, the audit is an overall check of adequacy in accordance with project commitments.

INTERNAL DESIGN INTERFACE

The relationship between the UE&C design group and other UE&C Organizations.

ITEM

Any level of unit assembly, including structure, system, subsystem, subassembly, component, part or material.

LEVEL III EXAMINER

An individual appointed by UE&C as qualified and certified to Level III per SNT-TC-1A and responsible for administering UE&C's program for training, examining and certifying NDE personnel.

LIMITED WORK AUTHORIZATION (LWA)

The controlled release of a nonconforming item for rework, repair or other limited activity up through installation, providing the activity does not mask the defect.

LOT

Material which is purchased and furnished on a stock or batch basis. Individual items within a lot cannot be traced to an individual record.

MANAGEMENT CHECK

Measures taken by Corporate management to assess the overall adequacy and status of the quality assurance programs established for specific project application including the activities of the R&QA Department.

MANUAL OF PROCEDURES

The compilation of procedures prescribing the performance and control of detailed engineering and design activities on a project.

MANUFACTURER

One who fabricates or constructs any class of component, part or appurtenance to meet prescribed design requirements.

MANUFACTURING DRAWINGS

Pictorial representations of information required to manufacture special parts.

MATERIAL

A substance or combination of substances forming components parts, pieces, equipment, items, including machinery, castings, formed steel, aggregates and cement.

MEASURING DEVICES

Tools, gauges and instruments used for obtaining measurements during inspections or test operations.

MODIFICATION

A planned change in plant design or operation and accomplished in accordance with the requirements and limitations of applicable codes, standards, specifications, licenses and pre-determined safety restrictions.

"N" BUY REQUISITION

A written request initiating Purchasing Department activity towards placement of a purchase order or contract for material, components, parts, appurtenances or labor-services requiring compliance to Section III ASME Code.

"N" INQUIRY REQUISITION

A written request initiating Purchasing Department activity towards soliciting proposals from approved bidders.

"N" STAMP

Appropriate "N"-symbol stamps authorized by Section III ASME Code for use on nuclear fabrication or installation.

NONCONFORMANCE

A deficiency in characteristic, documentation or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformance include: physical defects, test failure, incorrect or inadequate documentation, or deviation from prescribed processing, inspection or test procedures.

NONCONFORMANCE REPORT (NCR)

A formal document which identifies, documents, segregates, controls, dispositions, requests corrective action and transmits notification of nonconformances.

NONCONFORMANCE REVIEW BOARD (NRB)

A group of selected individuals who determine the disposition action for all site construction deviation nonconformances.

NONDESTRUCTIVE EXAMINATION (NDE)

Those methods of examination intended to detect flaws and which produce images, displays or patterns requiring observation, interpretation, evaluation, and comparison with acceptance criteria. Such methods shall not damage or otherwise effect the end use of the product. See also Special Inspection Processes.

NSSS

Nuclear Steam Supply System.

NUCLEAR QUALITY ASSURANCE MANUAL

The Manual which establishes UE&C's policy and standard operating procedures for organizing and implementing a quality assurance program applicable to the scope of work governed by Section III ASME Code.

OBJECTIVE EVIDENCE OF QUALITY

Any recorded statement of fact pertaining to the quality of a product, process or operation which is founded on observations, measurement or tests which can be fully checked or verified.

PACKAGING

Shipping container or wrap used to form a package to exclude dirt and other contaminants and to facilitate handling and labeling.

PARTS

All items which have work performed on them requiring the presence of or verification by an Authorized Inspector and which are furnished to a component Manufacturer by other Manufacturers, or by the same component Manufacturer under a different Certificate of Authorization. Data Reports and stamping are as required by the Code.

PERFORMANCE OF NONDESTRUCTIVE EXAMINATION

Operation of equipment and/or application of materials for the purpose of nondestructive examination, by UE&C personnel. Such equipment or materials may include x-ray/gamma-ray devices, liquid penetrants materials and apparatus, magnetic particle units and materials, ultrasonic or eddy current instruments and related items.

PIPING DRAWINGS

Drawings which define the material, fabricating, routing, connecting, testing and other requirements for steam liquid, gas or pneumatic piping.

PIPING & INSTRUMENT (P & I) DIAGRAMS

An index for identifying mechanical items within subsystems and defining how the items are interconnected and operate.

PLANT

The equipment, piping, structures, buildings and property that comprise an installation or facility.

PLANT ARRANGEMENT DRAWINGS

A suggested arrangement of NSSS and BOP equipment within a nuclear power plant.

POWER DIVISION

The UE&C Organization with corporate responsibility for the design efforts of the Company on Nuclear Power Plants.

PRESERVATION

Measures to preserve the "as-manufactured" condition of items.

PREOPERATIONAL TESTING

Tests conducted prior to fuel loading to demonstrate the capability of structures, systems and components to meet functional and safety-related performance requirements.

PRE-PURCHASED ITEMS

All safety related items purchased by UE&C.

PRIMARY STANDARD

A reference standard of the highest accuracy order in a calibration system which establishes the basic accuracy values for the system. Standards with certified accuracies traceable to the National Bureau of Standards (NBS) are considered primary standards.

PRIME DESIGN DOCUMENTS

Design criteria, systems design descriptions, process flow diagrams, component layout drawings, installation drawings and top assembly drawings.

PROCEDURES

Documents that specify or describe how an activity is to be performed. They may include methods, equipment or materials to be used; responsibilities; and sequence of operations.

PROCESS

Specific fabrication, installation, construction, inspection or test routine with precise detailed plans to indicate each basic functional step necessary to perform the required operations.

PROCUREMENT DOCUMENTS

Contractually binding documents that identify and define the requirements which items or services must meet in order to be considered acceptable by the purchaser.

PROJECT

A planned series of activities including all actions necessary to provide, utilize and maintain a facility or portion thereof.

PROJECT CRITERIA

Basic engineering concepts of the project set forth in outline form to establish the technical requirements for the preparation of final drawings and specifications.

PROJECT ENGINEERING MANAGER

The Manager having the responsibility for all engineering of a nuclear power plant project.

PRELIMINARY SAFETY ANALYSIS REPORT (PSAR)

The Safety Analysis Report submitted by an applicant for a construction permit. (See SAR).

PURCHASE ORDER

The agreement between UE&C and a supplier which defines the requirements and conditions for furnishing material, components or equipment.

PURCHASER

The organization or organizations responsible for issuance and administration of a contract, subcontract or purchase order.

QUALIFICATION (PERSONNEL)

The characteristics or abilities gained through training or experience or both that enable an individual to be certified to perform a required function.

QUALIFIED PARTY

A person or organization competent and recognized as knowledgeable to perform certain functions.

QUALIFIED PROCEDURE

A procedure which incorporates all applicable codes and standards, manufacturer's parameters and engineering specifications which has been proven adequate for its intended purpose.

QUALITY

The degree of conformance of an item or material to the specified requirements.

QUALITY ADMINISTRATION

The Management and documentation which assure that specified Quality Assurance Measures are carried out.

QUALITY ASSURANCE

All those planned and systematic actions necessary to provide adequate confidence that an item or a facility will perform satisfactorily in service.

QUALITY ASSURANCE DOCUMENTATION

Records, documents, forms or tags which furnish evidence that a program was implemented within the framework of the work activity and scope to ensure quality, planned and systematic, over all "materials" of safety-related importance and/or regulated by applicable standards, codes, agency or clients.

QUALITY ASSURANCE MANUAL - CORPORATE STANDARDS

The document which establishes UE&C's policy and standard operating procedures for organizing and implementing the quality assurance program.

QUALITY ASSURANCE MASTER FILE

The designated file(s) where the record copy of the quality documents are kept prior to submittal to the YAEK Site Records Center. It can be in one or more locations and is a controlled access file.

QUALITY ASSURANCE PROCEDURES MANUAL

The compilation of procedures established to organize and implement a quality assurance program for a specific project.

QUALITY ASSURANCE PROGRAM

The overall program established to provide the formal directives and the documentation system necessary to assure that the design, procurement and construction activities of critical items have been carried out with the desired level of control to meet the design intent.

QUALITY CONTROL

Those quality assurance actions which provide a means to control and measure the characteristics of an item, process or facility to establish requirements.

QUALITY CONTROL PROCEDURE

A procedure provided by the Home Office Quality Assurance Engineer (QAE) to describe the inspection activities at the site. Quality Control Procedures as a minimum, contain forms for documenting inspections; accept and reject criteria; evidence of completion of the inspection operation; record of the acceptability or unacceptability of the results of the inspection activities.

QUALITY CONTROL RECEIVING INSPECTION NUMBER

A unique number issued at the time the item is received (in accordance with QCP-7). This number is placed on the item tag and the Receiving Inspection Report.

RECEIVING

Taking delivery of an item at a designated location.

REJECT

A nonconforming material disposition that states that the item is unsuitable for its intended purpose and economically or feasibly incapable of rework or repair.

SURVEILLANCE POINT

A point in the manufacturing/fabrication sequence beyond which work may not proceed until UE&C has witnessed or examined the work and given consent to proceed.

SYSTEM

A group of subsystems united by some interaction or interdependence performing many duties but functioning as a single unit.

SYSTEMS DESIGN DESCRIPTION

The document that describes the process conditions that the system will be subjected to during its intended life.

SYSTEM PERFORMANCE TEST

A test performed on a completed system including electric, instrumentation, controls, fluid and mechanical subsystems under normal or simulated normal process conditions such as temperature, flow, level and pressure.

TEST EXAMINER - NDE

An individual appointed by UE&C as qualified and certified to Level III per SNT-TC-1A and responsible for administering UE&C's program for training, examining and certifying nondestructive testing personnel.

TESTING

The determination or verification of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental or operating conditions.

TRACEABILITY

A means of tracing the history of materials or items, through identification markings and documentation, back to a designated point in the manufacturing/fabricating sequence and back to raw material properties.

TURNOVER

Administrative procedure by which components or systems are jurisdictionally transferred from one organization or group to another.

TURNOVER AGREEMENT

A document signed by participating organizations acknowledging the satisfactory completion of equipment Turnover.

UNIQUE IDENTIFICATION

A serial number, mark number or any specific identification number which will provide the basis for traceability of the individual item to a specific inspection or record.

RELEASED FOR CONSTRUCTION DRAWINGS

Drawings which have been approved by the cognizant Engineering organization and the Owner and have been certified correct by a Professional Engineer.

REPAIR

A nonconforming material disposition which permits the reprocessing of material to bring it into an acceptable condition that still departs from established requirements.

REPORT

A written document detailing the results of an inspection, test, surveillance or audit action.

REWORK

A nonconforming material disposition that a nonconforming item can, through subsequent part replacement, reprocessing or completing operations, be brought into conformance to the drawings and specification requirements.

SAFETY ANALYSIS REPORT (SAR)

A report, responsive to the requirements of paragraph 50.34 of 10CFR50, which contains sufficient information about the design of the nuclear power plant for the AEC to be reasonably assured that the operation of the facility will not endanger the health and safety of the public.

SAFETY RELATED

Any nuclear system, structure, subassembly, component or design characteristic that prevents or mitigates the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The term "safety related" includes systems, components, etc. designated as Safety Class 1, 2, 3, Class 1E (electrical) and Seismic Category I.

SECONDARY STANDARDS

Standards with accuracies established by comparison to primary standards and used to calibrate measuring devices.

SEGREGATED STORAGE AREA

That storage area, preselected by Construction and approved by Field Quality Assurance, to which "rejected" or "hold" items are moved (if physically possible) pending resolution. It is a "controlled" storage area.

SNT-TC-1A

Recommended Practices for qualifying and certifying NDE personnel. These documents are published by the American Society for Nondestructive Testing.

SOURCE SURVEILLANCE

A review, observation, or inspection for the purpose of verifying that an action has been accomplished as specified at the location of material procurement or manufacture.

SPECIAL INSPECTION PROCESSES

Those nondestructive tests or special inspection methods which are used to detect discrepancies without destroying the usefulness of the part.

SPECIAL MANUFACTURING PROCESSES

Those metallurgical, chemical material cleaning, welding, plating and other processes where assurance of the process quality is dependent largely on the inherent skill of the operator and cannot be assured by the inspection of articles alone. See also Special Processes.

SPECIAL PROCESS PROCEDURES

The procedures for the processes that are technical in nature and require written instruction or special qualifications for their application.

SPECIAL PROCESSES

Fabrication and inspection processes which require special equipment and/or personnel with special skills and training.

SPECIFICATION

A concise statement of a set of requirements to be satisfied by a product, a material or process indicating the procedure by means of which it may be determined whether the requirements given are satisfied.

SPECIFIC TITLES

Where specific titles are mentioned, it is understood that duties may be performed by Assistants or Delegates.

SPOOL PIECE

A shop fabricated piping subassembly received at the site.

SPOOL SHEET

A drawing or sketch detailing the geometry and referencing the materials and process of fabrication and examination for a spool piece. These are prepared with sufficient detail to cover pre-fabrication and erection information and approved by the cognizant engineering activity prior to release for fabrication.

STANDARD

The result of a particular standardization effort approved by a recognized authority.

STARTUP ENGINEERS

Designated individuals, who are responsible for planning, coordinating and technically directing the performance of assigned startup test activities.

STORAGE

The act of holding items at the construction site or in an area other than its permanent location in the plant.

STORAGE FACILITY

Warehouse or yard area designated and prepared for holding material and equipment prior to installation.

"STORED" MATERIALS

Acceptable materials on site for construction and located in controlled storage areas awaiting utilization.

STRUCTURAL DESIGN CRITERIA

The document that describes the criteria to be employed in establishing project structural design.

SUBCONTRACTOR

Any individual or organization contracted by UE&C to perform part or all of its contract, work activity or scope.

SUBSYSTEM

A group of assemblies or components or both combined to perform a single function.

SUPERVISING DISCIPLINE ENGINEER

Supervisor of Cognizant Engineers working in a particular discipline on a nuclear power plant project.

SUPPLIER

An organization which provides materials, equipment or services. A supplier may be either a vendor, contractor or a subcontractor.

SURVEILLANCE

A review, observation, or inspection for the purpose of verifying that an action has been accomplished in accordance with applicable drawings, specifications and contractual requirements.

SURVEILLANCE ACTIVITIES

Surveillance activities are defined as activities other than actual performance.

USE-AS-IS

A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse conditions and that the item under consideration will continue to meet all engineering functional requirements including performance, maintainability, fit and safety.

VENDOR

Manufacturer, supplier or subcontracting organization providing materials and equipment for the fabrication or construction of permanent plant facilities.

VENDOR DOCUMENTATION

All documents which a vendor is required to generate and maintain in accordance with drawing, specification and Section III ASME Code requirements, and to provide to UE&C in accordance with the purchase order requirements.

VENDOR HISTORY FILE

Records and evaluations of suppliers who have performed work on previous UE&C projects. The file is maintained by the Vendor Surveillance Group and includes copies of Facility surveys of the suppliers' plants; Audit and surveillance trip reports; Reports concerning problems encountered with suppliers in the past; Suppliers' Quality Assurance Manual, if available; other documents pertinent to the suppliers' history.

VENDOR SURVEILLANCE CHECK PLAN

A Document prepared by the QAE for a given purchase order which identifies documentation requirements, manufacturing/inspection points to be witnessed by the Vendor Surveillance representative and the attributes that Field Quality Control Group should inspect during Receiving Inspection.

VERIFICATION

An act of confirming, substantiating and assuring that an activity or condition has been implemented in conformance with the specified requirements.

WELD FILLER MATERIAL

Material that is consumed in making a weld joint and becomes a part of the weld metal. Filler material includes covered electrodes and bare filler material.

WELD HISTORY RECORDS

A form documenting critical weld parameters, inspections and weld repairs.

WELD MAP

An isometric or line drawing used by the Piping Supervisor and the Field Supervisor - Quality Control as a status record and system check list for operations and system documentation. It identifies weld joint numbers, spool piece and component serial numbers and other information and data as needed for traceability.

YEAC SITE RECORDS CENTER

The permanent records center located in the Construction Office Building maintained by YEAC Site QA personnel, which is the final repository for all QA records.

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-2

ASME SECTION III, DIVISION 2

QUALITY ASSURANCE PROGRAM

for

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

DECEMBER 2, 1977

INFORMATION ONLY

Prepared by

D. E. McGarrigan
Supervising Engineer
Project Quality

Approved by

J. R. Dmytryk
Project Construction
Manager

Reviewed by

R. H. Leonard
Manager - Quality Engineering

Approved by

G. F. Cole
Project Manager

RECEIVED
U. E. & C. INC.

FEB 24 1981

SEABROOK
STATION

Approved by

J. B. Silverwood
Manager
Reliability & Quality Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Project Manager	Manager R&QA	Project Const. Manager
1	5/18/78	i, ii, 1, 2, 6-10 Exhibit 1, Pg. 3	DeMann	<u>BT</u>	<u>gbs</u>	<u>DRD</u>
2	4/12/79	8, 12, 16	<u>HS</u>	<u>BT</u>	<u>gbs</u>	<u>DRD/WJK</u>
3	11/26/79	3	<u>Blattmore</u>	<u>BT</u>	<u>gbs</u>	<u>DRD</u>
4	1/26/81	3, 5, 7, 8 & 9	<u>Blattmore</u>	<u>BT</u>	<u>gbs</u>	<u>DRD/WJK</u>

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PROJECT QUALITY CONTROL PROCEDURE QCP-2

IDENTIFICATION OF CHANGES

This procedure has been revised as listed below for the reasons given:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
IV.CA2300, A	3	Added, "Design Drawings" to UE&C Documents
IV.CA4430, A	5	Changed title of FGCP-15, per field request S/L CE-449, 1/22/81
IV.CA4510, B	7	Added Perini Procedures QAP 10.4 per ACN-30 (8/8/80)
IV.CA4600, A	8	Added UE&C Procedure FGCP-6, per field request S/L CE-449 1/22/81
IV.CA4720, A	9	Deleted FAM-0001 replaced with FACP-1, per field request S/L CE-449 1/22/81

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY CONTROL PROCEDURE QCP-2

ASME SECTION III DIVISION 2
QUALITY ASSURANCE PROGRAM

I. SCOPE

This Procedure is UE&C's Quality Assurance Program for the performance of the ASME Section III Division 2 activities.

II. GENERAL

A. Purpose

1. The purpose of this procedure is to describe the ASME Section III Division 2 Quality Assurance Program for the Seabrook Site.
2. To describe UE&C methods of implementing the requirements of the ASME Section III Division 2 dated January 1975 (the Code) and the requirements of the State Special (Ref. Letter dated March 18, 1976) on the Project.
3. To provide an interfacing document for the United Engineers and Constructors Inc. (UE&C) Procedures and Subcontractor Procedures that affect the Code activities.

B. Referenced Documents

1. ASME Section III Division 2 dated January 1975 with no addenda.
2. State Special Letter of March 18, 1976 from State Authority of New Hampshire to Public Service of New Hampshire (PSNH).
3. Reference Documents shown in Paragraph IV of this Procedure.
4. Construction Specifications
 - a) 9763-006-1-1 General Concrete Construction, Steel Erection and Circulating Water Pipe Installation
 - b) 9763-13-2 Containment Concrete Work
 - c) 9763.006-14-1 Furnishing, Detailing, Fabricating and Delivering Reinforcing Bars

- d) 9763-14-2 Installation of Reinforcing Bars in Containment Structure
- e) 9763.006-15-1 Containment Liner
- f) 9763.006-15-2 Containment Equipment Hatch and Personnel Locks
- g) 9763.006-69-1 Concrete Batch Plant
- h) 9763.006-80-2 Specification for Construction Containment

5. Design Specification

- a) 9763.006-80-1 Containment Design Specification

III. RESPONSIBILITIES

- A. YAEC as the Client's Designate has responsibilities as defined in the Code as OWNER with exception of CA 2200 a and g which are performed by Public Service of New Hampshire.
- B. UE&C as the Architect/Engineer has the responsibilities as defined in the Code as DESIGNER or ENGINEER. In UE&C Documents the word ENGINEER means DESIGNER in accordance with the Code definition.
- C. UE&C as Construction Manager has the responsibilities as defined in the Code as CONSTRUCTOR.
- D. Royal Indemnity Company, as the Inspection Agency for both PSNH and UE&C has the responsibilities as defined in the Code as AUTHORIZED INSPECTOR and Agency.
- E. Perini and Pittsburgh Testing Laboratory (PTL) are defined as SUBCONTRACTORS TO UE&C. Perini is also a MATERIAL MANUFACTURER when it concerns the Concrete Batch Plant.
- F. Pittsburgh-Des Moines Steel Company (PDM) as the Containment Liner Fabricator has the responsibilities as defined in the Code as a FABRICATOR.

IV. PROCEDURE

The Quality Assurance Program for the Project encompasses most of the QA Program for the Code activities. To eliminate repetition, this Procedure will reference the applicable Project Quality Assurance Procedures or Construction Procedures in accordance with the Code paragraph CA 3310, and CA 4420. If no Project Quality Assurance Procedures or Construction Procedures exist, UE&C's method of complying

with the Code requirement will be included in this Procedure. The following are the applicable Code paragraphs.

CA 2000 - General Definition, Responsibility and Duties of Parties participating in component construction.

- A. See Responsibilities Paragraph III of this Procedure.

CA 2300 - Designer Responsibility

- A. UE&C Documents

Design Specification

Design Drawings

Construction Specifications

QCP 10-1 Site Surveillance

CA 2400(c) - Review of QA Program of Material Manufacturer

- A. UE&C Documents

QA 7-1 Control of Purchased Material - Vendor Evaluation

CA 3000 - Principal Code Documents

- A. See Appendix 1 and Appendix 2 of this Procedure

- B. QA-3 Design Control

- C. FGCP-1 Development and Preparation of Field Construction Procedures

CA 3252 - Design Report

- A. UE&C Procedure

GEDP-40 Preparation of the Containment Design Report

CA 3340 - Construction Report

- A. UE&C Procedure

FGCP-22 The Construction Report for Concrete Containments per ASME, Section III, Division 2 Work

CA 4130 - Organization

A. UE&C Procedures

QA 1 R&QA Responsibilities and Organization

QA 2-1 Quality Assurance Program

B. Perini Procedures

QAP 1.0 Quality Assurance Organization

C. PTL Procedures

PTL QA Manual (Organization Chart)

CA 4200 - Quality Assurance Program

A. UE&C Procedure

QCP-2 ASME Section III Division 2 Quality Assurance
Program

CA 4225 - Training and Personnel Qualifications

A. UE&C Procedure

QA 2-2 Education and Training.

B. Perini Procedure

QAP 2.0 Qualification and Certification of QA Personnel

C. PTL Procedures

QC-PQ-2 Personnel Qualifications

CA 4300 - Design Control

A. UE&C Procedure

QA-3 Design Control

CA 4410 - Procurement Document Control

A. UE&C Procedures

QA-4 Procurement Document Control

--- Centralized Field Purchasing Procedure (Job 9763
Seabrook, New Hampshire)

B. Perini Procedure

AP 4.0 Perini Purchasing

C. FTL Procedure

QC-PR-1 Procurement Document Control and Receiving
Inspection

CA 4420 - Instructions, Procedures and Drawings

A. UE&C Procedure

QA-5 Instructions, Procedures and Drawings

B. Perini Procedure

AP 5.0 Preparation, Review and Approval of Project
Implementation Procedures

C. PTL Procedure

QC-DC-1 Document Specification and Drawing Control

CA 4430 - Document Control

A. UE&C Procedures

QA-6 Document Control

FGCP-2 Drawing, Specification and Document Control

FGCP-15 Design Change Notices, Field Change Requests,
Engineering Change Approvals, Site Approved
Changes and Requests for Information

B. Perini Procedure

QAP 6.0 Receipt and Control of Documents

C. PTL Procedure

QC-DC-1 Document Specification and Drawing Control

CA 4440 - Control of Purchased Materials, Parts and Services

A. UE&C Procedures

QA 7-1 Control of Purchased Material - Vendor Evaluation

QA 7-2 Control of Purchased Material - Vendor
 Surveillance

QCP 7-1 Receiving Inspection of UE&C Purchased Items

FGCP-3 Receiving, Inspection and Storage of Nuclear and
 Safety-Related Equipment and Material

B. Perini Procedures

QAP 7.0 Supplier Qualification and Surveillance

QAP 13.0 Receipt and Storage Inspection of Concrete
 Materials

QAP 13.1 Receiving and Storage Inspection of Material and
 Equipment

FGCP-3 Receiving, Inspection and Storage of Nuclear and
 Safety-Related Equipment and Material

C. PTL Procedures

QC-PR-1 Procurement, Document Control and Receiving
 Inspection

QC-SUB-1 Subcontractor Control

CA 4450 - Identification and Control of Materials and Parts

A. UE&C Procedures

QA-8 Identification and Control of Materials, Parts
 and Components

QCP-8 Material Control

QA-14 Inspection, Test and Operating Status

B. Perini Procedures

QAP 8.0 Identification and Status Control

C. PTL Procedure

QC-LT-1 Lab Testing of Construction Materials

CA 4460 - Control of Construction Processes

A. UE&C Procedure

QA-4 Procurement Document Control

B. Perini Procedures

FCCP-1 Concrete Batch Plant Operation

FCCP-2 Formwork and Handling, Placing, Curing, Finishing,
and Repairs of Concrete

FCCP-2 Mechanical Splicing of Reinforcing Bars by the
Cadweld Method

QAP 10.0 Qualification and Certification of Concrete
Production Facilities

QAP 10.12 Qualification of Cadweld Methods and Personnel

CA 4510 - Inspection

A. UE&C Procedure

QA 10 Inspection Control

B. Perini Procedures

QAP 10.1 Testing of Concrete Material and Concrete

QAP 10.2 Reinforcing Placement Inspection

QAP 10.3 Cadwelding Inspection

QAP 10.4 Concrete Batching and Delivery Inspection

QAP 10.5 Concrete Preplacement and Postplacement Inspection

QAP 10.10 Structural Concrete Repair Inspection

C. PTL Procedures

QC-FSTC-1 Field Sampling Testing and Inspection of Concrete

QC-LT-1 Laboratory Testing of Construction Materials

CA 4513.2 - Checklists

The use of checklist is covered in the procedures referenced under Code paragraphs CA 4440, CA 4510, CA 4600 and CA 4900. It is necessary for those verifying quality to sign, initial or stamp

and date these checklists. The only checklists which require the individuals level of capability are those for nondestructive examination.

CA 4530 - Control of Measuring and Test Equipment

A. UE&C Procedure

QA-12 Control of Measurement and Test Equipment

B. Perini Procedure

QAP 12.0 Calibration Control of Inspection and Test Equipment

C. PTL Procedure

QC-CAL-3 Tool, Gauge and Instrument Control

CA 4600 - Handling, Storage, Shipping and Preservation

A. UE&C Procedures

QA-13 Handling, Storage and Shipping Control

QCP-13 Handling and Storage Control

FGCP-6 General Prevention Maintenance and Minimum Storage Requirements for In-place storage of permanent plant equipment

FGCP-9 Preventive Maintenance and Protection of Nuclear or Safety-Related Equipment

B. Perini Procedures

FGCP-3 Receiving, Inspection and Storage of Nuclear and Safety-Related Equipment and Material

QAP 13.0 Receipt and Storage Inspection of Concrete Materials

QAP 13.1 Receiving and Storage Inspection of Material and Equipment

C. PTL Procedure

QC-LT-1 Lab testing of Construction Materials

CA 4720 - Nonconforming Material Components, Parts or Appurtenances

A. UE&C Procedure

QA-15 Nonconforming Material, Parts or Components
FACP-1 Project Instruction for Handling Contractor
 Nonconformance Reports

B. Perini Procedure

QAP 15.0 Reporting of Nonconformances

C. PTL Procedure

QC-CRN-1 Control and Reporting of Nonconformances

CA 4730 - Corrective Action

A. UE&C Procedures

QA-16-1 Corrective Action
QA-16-2 Work Stoppage

B. Perini Procedures

QAP 16.0 Corrective Action
QAP 1.1 Initiation of Stop Work Action

C. PTL Procedures

QC-CRN-1 Control and Reporting of Nonconformances
QC-IA-1 Internal Audits

CA 4800 - Quality Assurance Records

A. UE&C Procedures

QA-17 Quality Assurance Records
QCP-17-1 Records Review
QCP-17-2 Quality Assurance Reports

B. Perini Procedure

QAP 17.0 Records and Filing

C. PTL Procedure

QC-DC-1 Document, Specification and Drawing Control

CA 4900 - Audits

A. UE&C Procedure

QA-18 Quality Assurance Audits

B. Perini Procedure

QAP 18.0 Surveillance and Audit of Safety-Related
Activities

C. PTL Procedure

QC-IA-1 Internal Audits

CA 5000 - Authorized Inspection

See Appendix 2

CA 5261.1 - Dimensions of Material

The Authorized Inspector shall assure himself that dimensions of material comply with the requirements of the Construction Specifications using the indirect control methods allowed by Code paragraph CA 4514.

APPENDIX 1

CONSTRUCTION REPORT

1.0 SCOPE

This Appendix applies to UE&C responsibilities as Constructor for compiling the Construction Report (CR) for each reinforced concrete containment and certification by the Designer and the Authorized Nuclear Inspector as required by the Code.

2.0 PURPOSE

The CR serves to confirm and verify that the complete concrete containment and its parts and appurtenances complies full with the requirements of the Construction Specification(s), the Design Drawings and the Code. The provisions of this procedure describe the data, information, and controls including responsibilities required for preparation of final report reflecting the as-built condition of the reinforced containment.

3.0 RESPONSIBILITIES

- 3.1 The UE&C Resident Construction Manager (RCM) is responsible for assembling required data, preparation of CR, and submittal for certification(s).
- 3.2 The Designer is responsible for the review evaluation including any supplemental analysis needed to substantiate his evaluation, verification of referenced drawings, and subsequent certification.
- 3.3 The Authorized Nuclear Inspector will review the CR and separately certify that the Report is valid and complies with the requirements of the Code.

4.0 PROCEDURE

- 4.1 During the course of construction activities, the UE&C Resident Construction Manager maintains a progressive file periodically noting the following information:
 - 4.1.1 Key dates of major containment construction activities for both UE&C and Subcontractor operations. (e.g., starting date for construction, procurement and receipt of items and materials, batching and placing of concrete, testing, etc.)
 - 4.1.2 Listing of supplied DIV-1 or DIV-2 components, parts and appurtenances incorporated into the containment,

APPENDIX 1

identified by applicable Construction Specification.
The listing includes associated quality control records.

- 4.1.3 Listing of design, shop, field, and as-built drawings and construction specifications with inclusive revisions up to completion of construction and testing.
- 4.1.4 A complete and detail record of containment acceptance testing.
- 4.1.5 Listing of nonconformance reports (deviations to Construction Specifications and Drawings) affecting containment construction with a brief description of the nature of the deviation, resolution, and date of corrective action.
- 4.1.6 Nonconforming condition to Code provisions.

This shall include:

- 1. Evidence of initiation and control by Site Contractor.
- 2. UE&C Resident Construction Engineering Evaluation.
- 3. Owners participation in resolution and concurrence in the disposition.
- 4. Authorized Inspectors concurrence with the NCR disposition.
- 5. Authorized Inspectors verification that required corrective action has been taken.

All correspondence, reports and data relating to the nonconformances and their dispositions will be filed by UE&C Resident Construction Engineer for review by inspecting agencies.

- 4.1.7 Listing of conditions and dates noted by the Authorized Nuclear Inspector and resolution with date of corrective action.
- 4.2 At the completion of construction activities and a successful Structural Integrity Test, the Resident Construction Manager

APPENDIX 1

prepares the final CR for submittal to the Designer. The contents of the CR Includes summarization of data noted in 4.1.1 through 4.1.6.

- 4.3 The Designer evaluates the CR and certifies that the Report confirms the containment, including parts, materials, and appurtenances conforms to the requirements of the Construction Specification(s) and drawings, except as noted and the Code.
 - 4.3.1 Prior to certification, the Designer assures himself that the list of drawings provided by the Constructor in the Report corresponds to the listing established and maintained by the Owner.
 - 4.3.2 Any supplemental analysis needed to substantiate the as-built conditions or technical evaluations, for conformance to Code requirements is provided by the Designer.
- 4.4 Following certification by the Designer, the CR is submitted by the Resident Construction Manager to the Authorized Nuclear Inspector (ANI) for review and separate certification action. After the ANI's certification, the CR shall be submitted to the Owner for approval.

APPENDIX 2

AUTHORIZED NUCLEAR INSPECTOR AND AGENCY

1.0 SCOPE

This APPENDIX is applicable to UE&C operations for work under the Code requiring the services of an Authorized Inspection Agency.

2.0 GENERAL

- 2.1 The Authorized Nuclear Inspector (ANI) has complete access to areas of the construction site that concern the construction of the containment. He is free to observe inspectors or conduct independent inspections, at his option, on work subject to Code requirements including access to subcontractors operations.
- 2.2 During the planning stage ANI and the UE&C Field Superintendent-Quality Assurance will establish guidelines for Code inspection notification.
- 2.3 For Home Office activities the Authorized Nuclear Inspection Specialist coordinates with the Manager of Reliability and Quality Assurance or his designee for conducting periodic monitoring of Home Office activities.

3.0 RESPONSIBILITIES

- 3.1 The duties of the ANI as outlined in the Code are detailed in Paragraph 4.0.
- 3.2 The Field Superintendent-Quality Assurance is responsible to:
 - 3.2.1 Coordinate UE&C activities connected with Code requirements with the Authorized Nuclear Inspector.
 - 3.2.2 Coordinate the provision of suitable job-site facilities for the Authorized Nuclear Inspector with the concurrence of the Resident Construction Manager.
 - 3.2.3 Keep the ANI informed on the progress of the work and give reasonable advance notice when required tests or inspections will be performed.
 - 3.2.4 Conduct inspections and verify operations identified in Specifications and Procedures; and maintain records of results of such inspections.

APPENDIX 2

- 3.2.5 Coordinate the preparation and assembly of the Modified Data Report (Exhibit 1). Collect applicable ASME Data Reports supplied by other Fabricators and attach to the Exhibit 1 for certification by the ANI.
- 3.2.6 Distribute copies of completed Data Reports to appropriate parties. (See paragraph 6.0)
- 3.2.7 Provide nameplate with appropriate marking data and arrange to have it permanently attached to the containment as approved by the ANI. (See Paragraph 5.0)

4.0 PROCEDURE

- 4.1 The Authorized Nuclear Inspector shall have access to drawings, specifications, procedures, process sheets, repair procedures, records, test results and check lists as required to perform his duties in accordance with the Code.
- 4.2 Mandatory inspection points established by the Authorized Nuclear Inspector shall be incorporated into construction procedures and report forms. These inspection point are signed off by the ANI and are not bypassed without his Documented consent. At his option he will also witness and sign off other operations identified on inspection check lists and other forms.
- 4.3 As a minimum the ANI performs witnesses or otherwise verifies the following:
 - 4.3.1 That the scope of work by UE&C is as stated in the Design Specification.
 - 4.3.2 Ascertains that the Design and Construction Specifications and Design Report are on file and properly certified.
 - 4.3.3 Monitors compliance to approved procedures during the construction of the containment.
 - 4.3.4 Reviews records for concrete operations including repairs (i.e., batching, mixing, placing, curing, etc.); test and examination procedures and personnel qualification to assure use of proper procedures and personnel. He may require requalification of procedures or personnel for just cause.

APPENDIX 2

- 4.3.5 Checks incoming material and items for compliance to Procurement Documents and the applicable requirements of the Code, including certified reports of tests, certified mill test reports, certificates of compliance, and markings.
- 4.3.6 Satisfies himself that the containment is being constructed within the tolerances required in the Construction Specifications, drawing and the Code.
- 4.3.7 Witnessing or verifying in-process examinations and tests to determine compliance.
- 4.3.8 Verifies corrective action for nonconformance to the code provisions as part of his in-process activities.
- 4.3.9 Witnessing structural integrity test.
- 4.3.10 Ascertains that the Construction Report is on file and properly certified by the Designer. The Authorized Nuclear Inspector will review and separately certify that the Construction Report information is valid and conforms to Code requirements, and that the Designer's review and certification of the Construction Report has taken account of all Code requirements.
- 4.3.11 Certifies Modified Data Reports.
- 4.4 After the ANI has witnessed the structural integrity test on the containment, the applicable Data Report is prepared and signed by the UE&C FS-QA and Designer and presented to the ANI for his signature.
- 4.5 Following certification of the Modified Data Report by the ANI, each containment is marked per provisions of Paragraph 5.0.

5.0 NAMEPLATE & MARKING

- 5.1 Following the approval and certification of the Construction Report and the Modified Data Report by the Authorized Nuclear Inspector, the concrete containment is identified with a marked nameplate with the following data:
 - a) Year completed
 - b) Location or site

APPENDIX 2

- c) Design Pressure (PSI) at coincident temperature (°F)
 - d) UE&C Serial Number 9763-1, and 9763-2.
 - e) United Engineers & Constructors Inc.
- 5.2 Such marking is in characters not less than 3/32 inches high and arranged substantially as shown in Exhibit 2.
- 5.3 The marking data is applied to a separate stainless steel nameplate attached to the containment by a method as approved by the Designer and the Authorized Nuclear Inspector. The data may be stamped or etched on the nameplate.

6.0 FILING OF REPORTS

- 6.1 Copies of completed Modified Data Reports (Exhibit 1) are distributed to:
- a) Authorized Inspection Agency
 - b) Public Service New Hampshire/YAEL
 - c) State of New Hampshire, Department of Labor
 - d) UE&C, Project Engineering Manager
 - e) Field Quality Control Files
- 6.2 One copy of the Modified Data Report package along with a facsimile "rubbing" from the nameplate is transmitted to the UE&C-R&QA Files at the Home Office for permanent corporate retention.

7.0 INSPECTION AGENCY

- 7.1 The Inspection Agency (inspection specialist) shall review and concur with modifications to the ASME Section III Division 2 Quality Assurance Program before the modifications are put into effect. These concurrences shall be documented on a letter which is maintained by UE&C's Field Superintendent-Quality Assurance.
- 7.2 Advance Change Notices (ACN) to UE&C QA and QC Procedures shall be reviewed and concurred with by the Inspection Specialist. This concurrence will be shown on the ACN form after UE&C approval.

EXHIBIT 1

CONSTRUCTOR'S DATA REPORT FOR CONCRETE CONTAINMENT

1. Constructor _____
2. Owner(s) _____
3. Applicable ASME Code: Section III, Division 2 1975 and No. Addenda.
(year)
4. Type of Component _____
 - (a) Design Pressure _____ psi Design Temperature _____ deg. F
 - (b) Test Pressure _____ psi Date tested _____Constructor's Serial No. _____
5. Type of Construction _____
6. Nominal Component Dimensions _____
 - (a) Component Inside Diameter _____ ft. _____ in.
 - (b) Component Height (from top of foundation to springline) _____ ft. _____ in.
 - (c) Dome Height _____ ft. _____ in.
 - (d) Concrete Wall Thickness _____ ft. _____ in.
Dome Thickness _____ ft. _____ in.
 - (e) Type of Dome _____
(Spherical, ellipsoidal, flat, etc)
7. Type of Foundation _____
(Soil or rock bearing, piles, etc.)
8. List of Documents
 - (a) Design Specification No. _____ Revision _____
 - (b) Design Report Date _____

EXHIBIT 1 (cont'd)

- (c) Construction Specifications (list below all Construction Specifications)

(Specification title)	(No.)	(Rev.)

- (d) Construction Report No. _____ Date _____

9. Liner

- (a) Materials _____ Minimum Yield Strength _____ psi
(ASTM or ASME designation)

- (b) Liner Fabricated by _____

- (c) Liner Erected by _____

- (d) Bottom Thickness _____ in. Wall Thickness _____ in.

Dome Thickness _____ in.

- (e) Liner Serial No. _____

10. List of Penetrations

(Attach to this form a complete list of penetrations including personnel locks and equipment hatch. State the type, size and serial no. of each.)

11. Remarks: _____

EXHIBIT 1 (cont'd)

We certify that the statements made in this report are correct and that all details of materials, construction, and workmanship of this component conform to the ASME Section III, Division 2-1975, the Construction Specifications, and the State of New Hampshire State Special Waiver per their letter of March 18, 1976.

Date _____ Signed _____ by _____
(Constructor)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the State of New Hampshire and employed by Royal Indemnity Company, have inspected the concrete containment described in this Constructor's Data Report and state that to the best of my knowledge and belief this component has been constructed in accordance with ASME Section III, Division 2-1975, the Construction Specifications, and the State of New Hampshire State Special Waiver per their letter of March 18, 1976.


By signing this certificate neither the Authorized Inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this report. Furthermore, neither the Authorized Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date _____ Signed _____ Commissions _____
(Authorized Inspector) National Board, States

Seabrook
QCP-2
Rev. 0
12-2-77

EXHIBIT 2

Nameplate

psi		of
(Site)	(Yr. Const.)	
(Serial No.)		
 united engineers & constructors inc.		

QUALITY CONTROL PROCEDURE QCP-4

FOR

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

INFORMATION ONLY

J. B. Silverw
Manager, R&QA

[illegible]

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY ASSURANCE PROCEDURE QCP-4
FOR
PROCUREMENT DOCUMENT CONTROL

I. SCOPE

This procedure applies to the control of site generated procurement documents for items identified as Seismic Category I or Safety Class 1, 2, 3 and Class IE in Tables 3.2-1 and 3.2-2 of the FSAR.

II. GENERAL

A. Purpose

1. To impose the applicable portions of Standard IV in the Quality Assurance Manual-Corporate Standards on this project.
2. To establish measures to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the procurement documents.
3. Describe UE&C's procurement document control activities which meet the requirements of Appendix B to 10CFR50 - Criterion IV, ANSI N43.2, ANSI N45.2.13 and ASME Section III, Division 1 and 2.

B. Reference Documents

QCP-7 - Control of Purchased Material - Vendor Evaluation and Selection

III. RESPONSIBILITIES

A. Purchasing Department

1. The Field Purchasing Agent (FPA) is responsible for procurement of items and services in accordance with the approved requisition, specification and Bidder's list.

2. The FPA is responsible for the control and retention of procurement documents.

B. Construction Department

Responsible for initiation of material requisitions for site purchased material.

C. Field Quality Assurance

1. The Field Superintendent-Quality Assurance (FS-QA) is responsible for assuring that control of procurement documents has been implemented.
2. The FS-QA is responsible for reviewing requisitions for Code and Specification requirements and approving bidders lists.
3. The title FS-QA in this procedure indicates the FS-QA or his designee.

D. Reliability and Quality Assurance Department

The Home Office QAE, Vendor Surveillance Group or Audit Group participates in the evaluation of potential suppliers when requested by the FS-QA.

IV. FIELD PURCHASING PROCEDURE

- A. The requisitioner prepares a Field Purchase Requisition, signs it, and forwards it with a recommended bidders list to the FS-QA for his review and approval.
 1. The requisition shall be sufficiently detailed to enable the FPA to prepare the Inquiry and shall include, as required:
 - a) Sketches or drawings
 - b) Specifications
 - c) Description and quantity of items to be purchased (i.e. Bill of Material, etc.)
 - d) QA/QC Requirements
 - e) Recommended Bidders List
 - f) Use of Material

- B. The FS-QA reviews the Field Purchase Requisition to determine that it, as required:
1. Identifies the scope of work to be performed and items/material to be purchased including complete description of any catalog/part numbers.
 2. Specifies, the specific drawings, specifications, industry codes, regulations, procedures, or instructions that describe the items or services to be furnished.
 3. Identifies any tests, or inspections including acceptance requirements, and any special instructions and requirements for such activities as designing, identification, fabrication, cleaning, erecting, packaging, handling, shipping, and extended storage.
 4. Identifies those records which shall be controlled, maintained, or delivered to UE&C prior to installation or use of the material or equipment.
 5. Identifies requirements for traceability, if different from code or specification.
 6. Identifies the documentation such as drawings, specifications, procedures, and inspection test records; personnel qualifications; and material, chemical, and physical test results required to be prepared, maintained, and made available to UE&C, for review and approval.
 7. Requires that the supplier/contractor, prior to providing the materials or services, have a documented quality assurance program, applicable quality assurance program requirements of nationally recognized industry codes and standards, and any special quality assurance requirements. A copy of the QA Manual shall be requested to be sent to the site. Appropriate requirements shall be applied to lower tier supplier/contractor procurements. The applicable quality assurance program elements shall be specified in the suppliers procurement documents.
 8. Prescribes retention and disposition requirements for QA records not delivered to UE&C.
 9. Provides for access, at each tier of procurement, to the supplier's/contractor's facilities and records for inspection or audit by UE&C, PSNH/YAEC or other parties such as regulatory agencies authorized by PSNH. The provisions should include a statement of the minimum time of advance notice, the method of communication of such notice, and the identification of the events, such as witness and hold points.

- 10) Identifies the applicable 10CFR50, Appendix B, Criteria.
 - 11) Imposes the requirements of 10CFR50, Part 21 on "N" and "S" Purchase Orders if required.
- C. When the FS-QA determines that any of the suggested bidders are not an approved vendor, he informs the FPA in writing. However, the bidders list and requisition may be approved by advising the FPA, in writing, that a facility survey will be required on the apparent successful bidder, which shall be conducted prior to award of the purchase order. A Facility Survey is performed through the joint efforts of the Field Purchasing Group, FS-QA and the Home Office Audit Group, as required. This survey shall determine if the supplier's QA program meets the requirements of 10CFR50, Appendix B, ASME Code (NCA 3800) and other regulatory requirements.
- D. The FPA tabulates the proposals from Bidders and, with technical recommendation of the requisitioner, FS-QA and RCM, evaluates the proposals and recommends a supplier.
- 1) The process for supplier evaluation and selection is described in QCP-7.
 - 2) When required by contractual agreements, YAEC approves the tabulation and supplier.
- E. An award meeting with the selected supplier may be arranged, as required, to resolve questions and clarify the requirements. The meeting is attended by supplier representative, the requisitioner, FPA, FS-QA and RCM. The requisitioner issues another Field Purchasing Requisition to reflect the changes agreed upon at the award meeting. The requisition shall be reviewed by the FS-QA in accordance with IV.A.2 and approved.
- F. The FPA issues the Field Purchase Order with a copy sent to the FS-QA.
- G. When Change Orders are requested, they are approved by the FS-QA with the same review as in IV.A.1 and IV.B.
- H. When engineering and/or quality requirement changes requested by the supplier or contractor are made, a review by the FS-QA shall be made to determine:
- 1) That the engineering changes have been approved.
 - 2) The effects such changes may have on the quality of the item or service to be furnished.
 - a) Changes that affect quality shall be incorporated into the purchase order by issuance or revision of a change order.

V. DOCUMENTATION

- A. The FPA is responsible for maintaining the purchase order files for the Field Purchasing activities.
- B. Documentation in the QA purchase order files shall include the following:
 - 1. Purchase Orders
 - 2. Change Orders
 - 3. Required Documentation

QUALITY CONTROL PROCEDURES QCP-7

FOR

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

ARY 24, 1982

INFORMATION ONLY

D. C. Lambert
Field Superintendent -
Quality Assurance

R. A. Rebel
Resident Construction Mgr.

R. C. Lesnfsky
Quality Assurance
Engineer

A. M. Ebner
Project Manager

J. B. Silverwood
Manager, R&QA

[illegible]

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY ASSURANCE PROCEDURE QCP-7

FOR

CONTROL OF PURCHASED MATERIAL - VENDOR EVALUATION AND SELECTION

I. SCOPE

This procedure applies to the evaluation and selection of vendors of UE&C Field Purchased items.

II. GENERAL

A. Purpose

1. To describe UE&C's vendor evaluation and selection activities which meet the requirements of Appendix B to 10CFR50 Criterion VII, ANSI N45.2 and ANSI N45.2.13.

B. Referenced Documents

QCP-4 - Procurement Document Control
QA-17 - Quality Assurance Records
QA-18 - Quality Assurance Audits

III. RESPONSIBILITIES

- A. The UE&C Field Purchasing Department has the responsibility for coordinating all vendor evaluation activities between UE&C Construction, Field Quality Assurance, and the prospective vendor(s) including arranging for facility surveys, as required.
- B. The FS-QA, in conjunction with the assistance of the Home Office QAE, as required, is responsible for providing a quality evaluation of prospective vendors based on previous history, review of submitted documentation or the results of a facility survey.

- C. The Manager - Audits is responsible for providing assistance to the FS-QA in evaluations of vendors and the performance of facility surveys.
- D. The Supervising Engineer - Quality Systems is responsible for maintaining Vendor History Files, Approved Vendor Lists and informing the Manager - Audits in writing of vendors to be added to the audit schedule.

IV. PROCEDURE

A. Pre-Inquiry Activities

1. Before an inquiry is submitted to prospective vendors for bidding, the FS-QA provides input information to the Suggested Bidders List, and approves the Bidders List, as described in procedure QCP-4.
2. Approval of the Suggested Bidders List is based on past experience with the vendor on similar items within the last three years.
3. If R&QA has had no previous experience with a prospective vendor within the last three years, the FS-QA will approve inclusion of the vendor on the Suggested Bidders List. This approval is for inquiry purposes only. It does not constitute approval to place an order. Approval for award of a purchase order or contract is subject to the requirements of paragraph IV.B., below.
4. Vendors who are not listed in the ASME listing of companies holding nuclear certificates and other vendors with whom UE&C has had no experience within the last three years will be required, as part of the inquiry, to submit their QA program with their proposal.

B. Pre-Award (Post-Inquiry) Activities

1. Invitations to bid are sent to prospective vendors by the Field Purchasing Department.
2. Upon receipt of the vendor's QA manual in accordance with IV.A.4, the FS-QA will evaluate the vendors responsiveness and ability to meet the specified quality requirements utilizing one or more of the following methods. Any adverse findings will be transmitted to the Purchasing Department.

- a) If UE&C has been performing quality assurance surveillance at a supplier's plant for hardware or services similar to the requirements of that being procured, the capabilities demonstrated by the supplier, including current quality records, shall be evaluated by the FS-QA for the applicability to the new Purchase Specification.
 - b) If UE&C has satisfactory historical quality performance data on similar items developed from past procurement actions, within the last three years, the FS-QA may use this as a basis of evaluation. (ASME Non-Code Material).
 - c) If the supplier is included in the latest revision of the ASME "list of Company Holding Nuclear Certificates", the FS-QA may use this as a basis of evaluation.
 - d) The FS-QA may use the supplier's current quality records supported by documented information which can be objectively evaluated. This will include an evaluation of the supplier's QA Program Manual and Procedures, as appropriate, employing a suitable checklist.
 - e) Material Manufacturers or Material Suppliers of "Small Products" as defined in NX-2610(c) or material which is allowed to be supplied with a Certificate of Compliance, who are exempt from NA-3700/NCA-3800 as allowed by NX-2610(b) are acceptable provided one or more of the following measures are taken to assure that the material is furnished in accordance with the Material Specification and the special requirements of the applicable subsection:
 - 1. Evaluation of the Material at the location of manufacture.
 - 2. Evaluation of the material upon receipt.
 - 3. Surveys and audits of the material manufacturer or material supplier.
3. When an adequate evaluation of a vendor cannot be made solely on the basis of the methods described in IV.B.2, the FS-QA notifies Purchasing who schedules a facility survey.
4. When a facility survey is not made, the FS-QA may provide a memorandum documenting the basis for acceptance of a vendor in lieu of a facility survey.

5. Facility Surveys will be performed in accordance with the Manufacturer's Facility Survey checklist, (Attachment No.1) or a checklist covering the special requirements of the item to be purchased. Results of the survey will be distributed as shown in Figure 18-6 of procedure QA-18.
6. Facility Surveys will be performed on all material manufacturers/material suppliers of ASME Code materials who do not possess Quality System Certificates and who have not been surveyed/qualified for use on the Seabrook Project within the last year except as described in IV.B.2(e).
7. Facility Surveys may not be performed on those prospective vendors which have been eliminated by other evaluations (quality assurance, technical or commercial).
8. Prior to the placement of a purchase order or contract, the Purchasing Department may schedule pre-award and award meetings with a prospective supplier to discuss the requirements of the order, the supplier's planning for its accomplishment and to resolve any differences. The FS-QA is advised of these meetings and attends when warranted by the scope and criticality of the item or when quality-related topics require discussion or resolution.

C. Post-Award Activities

1. The FS-QA will evaluate the vendor's QA Manual submitted after award employing appropriate checklists and identifying the areas of noncompliance with Appendix B to 10CFR50 or contract requirements. He will coordinate the R&QA review of submitted special procedures (Welding, NDE, Metallurgical Processing, etc.). He will document the results to the Resident Construction Manager and FPA, identifying specific areas requiring revision or correction.
2. Evaluation of vendor's performance will be in accordance with QA-18.

V. DOCUMENTATION

- A. A file is established for each applicable purchase order and maintained in the Site Quality Assurance file as described in QCP-17-1. Documentation in this file includes procurement

A. (Continued)

documents, facility surveys, inspection reports, a controlled copy of the QA/QC manual bearing (UE&C) approval, and other associated documentation.

- B. The Vendor History File is a permanent file maintained in the R&QA library by the Supervising Engineer - Quality Systems. The file is continually updated by the inclusion of current documentation which will enable the evaluation of suppliers as future procurement sources.

- C. The Approved Vendors List is maintained by the Supervising Engineer - Quality Systems. It contains a list of the approved vendors used by UE&C within the last three years.

	Yes	No	N/A	Applicable QA Proc. & Para.
5. Are design interfaces between purchaser and supplier identified and controlled? How? _____				
6. Is there a procedure for review, approval, release and distribution of design interface documents, including revisions?				
7. Is the adequacy of design verified and checked? How? _____				
8. Is the verification and checking process performed by individuals or groups other than those who performed the original design?				
9. Does the QA group participate in design review activities?				
10. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying and checking processes, does the test program include suitable qualification testing of a prototype unit under the most adverse design conditions?				
11. Does program provide for analysis of (a) reactor physics? (b) stress? (c) thermal? (d) hydraulics? (e) accident analysis? (f) compatibility of Materials? (g) accessibility for inservice inspection, maintenance and repair?				
12. Are acceptance criteria for inspections and tests delineated in design documents?				

	Yes	No	N/A	Applicable QA Proc. & Para.
5. Which departments must approve suppliers				
(a) Procurement?				
(b) Manufacturing?				
(c) Engineering?				
(d) Quality Assurance?				
6. Is documentary evidence of quality reviewed to verify that it is sufficient to identify the specific requirements, such as codes, standards or specifications met by the purchased material?				
7. Is source inspection conducted at supplier facilities?				
8. Are products inspected in accordance with written procedures upon delivery?				
9. How is subvendor material traceability verified? _____				
Remarks _____				

VIII. IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS				
1. Is identification by heat number, part number, serial number or other appropriate means maintained on the item or on records traceable to the item throughout fabrication?				
2. Are traceability requirements defined and is material traceable to origin?				
3. Is material identification transferred when material is subdivided?				
4. Are incorrect or defective material, parts and components identified and controlled to prevent its use?				
Remarks _____				

[illegible]

1. Are written inspection plans provided to inspection personnel to define
 - (a) test and inspection equipment required?
 - (b) detailed operations to be performed?
 - (c) requirements and acceptance limits for determining quality conformance or rejection?

2. Are inspections performed by individuals other than those who performed the activity being inspected?
3. Is a shop traveller or equivalent system used in indicating inspection points?
4. Does assembly sequence include inspection points at the proper intervals?
5. How are results of inspections documented?

6. Are mandatory hold points indicated on the proper documents to prevent by-passing? If so documents. _____

7. Are purchase orders, drawings, specifications, receiving inspection plans, etc. available at receiving inspection location?
8. Does program provide for receiving, in-process and final inspection?
9. When inspection of processed material or products is impossible or disadvantageous, is indirect control provided by monitoring processing methods, equipment and personnel?

XI. TEST CONTROL •

1. Are tests performed in accordance with written test procedures?
2. Are acceptance limits included in the test procedures?

8. Are outside laboratories used for calibration services? (If so, please list name of laboratory).

Remarks

XIII. HANDLING, STORAGE AND SHIPPING

1. Do written procedures exist defining requirements for material
 - (a) handling?
 - (b) storage?
 - (c) preservation?
 - (d) packaging?
 - (e) issuing?
 - (f) shipping?
2. Are materials stored in controlled access areas?
3. Are records kept of all material checkouts?
4. Are stored materials periodically inspected to insure protection is maintained?
5. For special material storage requirements, is environmental control available for
 - (a) temperature?
 - (b) humidity?
 - (c) cleanliness?
 - (d) inert gas purge?
6. Is evidence of customer's approval and release required by Shipping Department before shipments are made?

Remarks

Yes	No	N/A	Applicable QA Proc. & Para.

Yes	No	N/A	Applicable QA Proc. & Para.

- Remarks _____
-
- _____
-
- _____

CAPABILITIES

PART I PREVIOUS EXPERIENCE

LIST MAJOR CONSTRUCTION PROJECTS STARTED, IN PROCESS OR COMPLETED WITHIN THE PAST FIVE (5) YEARS WITH WHICH THE FIRM HAS BEEN ASSOCIATED.

YEAR	CUSTOMER	PROJECT AND LOCATION	TYPE WORK PERFORMED	LEVEL OF QC AND INSPECTION - AEC ARMY, NAVY, NASA, STATE OR OTHER CODES
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
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_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

PART II CODE QUALIFICATIONS

<input type="checkbox"/> ADEQUATE	<input type="checkbox"/> NOT ADEQUATE	<input type="checkbox"/> SEE ATTACHMENT NO.
ASME SECTION III <input type="checkbox"/>	ANSI B31.1 <input type="checkbox"/>	SHT - TC - 1A <input type="checkbox"/>
ASME SECTION VIII <input type="checkbox"/>	ANSI B31.7 <input type="checkbox"/>	
ASME SECTION IX <input type="checkbox"/>	IEEE <input type="checkbox"/>	
ASME SECTION XI <input type="checkbox"/>	NEMA <input type="checkbox"/>	
	AWS <input type="checkbox"/>	

TO BE COMPLETED BY UE&C Q.C. REPRESENTATIVE

AFTER LEAVING VENDOR'S FACILITY

1. What, in your opinion, should be the rating for this facility?

_____ Acceptable for Nuclear Work

_____ Unacceptable (Explain below)

_____ Acceptable for designated
P.O.(s) but not for Nuclear
Work.

_____ Conditionally Acceptable
(Explain below)

2. In which areas do you find this facility strong?

a. _____

b. _____

c. _____

d. _____

3. In which areas to you find them weak?

a. _____

b. _____

c. _____

d. _____

4. Comments on quality and workmanship of production items observed during this survey.

5. Conclusion:

Date _____

Signature _____

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 52
EFFECTIVE DATE 9/21/81
QA N/A
QCP 7-1
REV. 6
DATE 1/16/81

PROCEDURE TITLE Receiving Inspection of UE&C Purchased Items

PREPARED BY A. H. Ayers

DATE 9/16/81

CHANGE

1. Page 6 of 7, Para. VI.D

Delete the following:

QAE-R&S establishes a log of DPTA report numbers, assigning a unique number to each DPTA. The log lists: DPTA No. (sequential), referenced RIR No., PO/CO No., Item name and vendor/location.

Change Para. VI.D to read:

QAS R&DS establishes and maintains a receiving inspection report log assigning a unique number to the receiving inspection report for the QAE R&S.

2. Para. VI.J:

Change: QAS-R&D to QAS R&DS

Delete: The log lists: Item name, PO/CO No., Vendor/Location, storage location, NCR No., Hold Tag Date, reason for hold and date of removal.

INFORMATION ONLY

REASON FOR CHANGE (1) Changing responsibility. (2) To delete the duplication in logs. and (3) Maintain material control.

*Concurred with above change for inspection specialist.
J. Ruyter, P.E. 9/21/81*

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. REGA	DATE	APPROVED RCM	DATE
<i>Chamberlain</i>	<i>9/17/81</i>	<i>F. J. O'Connor</i>	<i>9/21/81</i>	<i>J. Ruyter</i>	<i>9/21/81</i>	<i>J. Ruyter</i>	<i>9/21/81</i>	<i>Wheeler</i>	<i>9/21/81</i>

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Receiving Inspection of UE&C Purchased Items

PREPARED BY B. E. O'Connor DATE 8/25/81

CHANGE

Page 6 of 7, Para. VI.C.14 - Revise to read as follows:

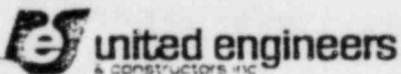
Verification that documentation has been supplied by the vendor for the performance of insulation resistance test for motors, generators, control and power cable, to assure conformance with procurement documents.

CHG. NO. 49
 EFFECTIVE DATE 8/25/81
 QA N/A
 QCP 7-i
 REV. 6
 DATE 1/16/81

REASON FOR CHANGE To clarify intent of the procedure (Re: Finding #2, H/O Audit NH-450)

J. Arizawa, ANI #26/F1
(for inspection specialist)

REVIEWED BY FSGA	DATE	REVIEWED BY PROJECT GAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED SR. Const. MGR.	DATE
<i>Chamberlain</i>	<i>8/25/81</i>	<i>B. E. O'Connor</i>	<i>8/25/81</i>	<i>W. Hart</i>	<i>8/25/81</i>	<i>P. Vassallo</i>	<i>8/25/81</i>	<i>J. R. Dwyer</i>	<i>8/24/81</i>



JRM 454T - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 43
EFFECTIVE DATE 7/9/81PROCEDURE TITLE Receiving Inspection of UE&C Purchased Items

QA N/A

QCP 7-1

REV. 6

DATE 1/16/81

PREPARED BY B. E. O'Connor DATE 6/10/81CHANGEChange Para. VI.A - QAE R&C to QAE R&S**INFORMATION ONLY**RECEIVED
U E & C INC.

JUL 23 1981

SEABROOK
STATIONREASON FOR CHANGE Correct typing error and correctly define responsibility

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	
<i>W Lambert</i>	<i>4/10/81</i>	<i>BC Luntz</i>	<i>4/10/81</i>	<i>P. Loh</i>	<i>4/10/81</i>	<i>BB Schmitt</i>	<i>4/24/81</i>	<i>R. S. S. S.</i>	<i>7/10/81</i>

UNITED ENGINEERS & CONSTRUCTORS, INC.

QUALITY CONTROL PROCEDURE QCP-7-1

RECEIVING INSPECTION OF UE&C

PURCHASED ITEMS

FOR

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

January 27, 1976

INFORMATION ONLY

Prepared by

R.A. Miller

R. A. Miller
Supv. Engineer - Field QA

Approved by

J.R. Dmytryk
J. R. Dmytryk
Project Construction Manager

Reviewed by

R.H. Leonard

R. H. Leonard
Quality Assurance Engineer

Approved by

G.F. Cole
G. F. Cole
Project Manager

RECEIVED
U.E. & C. INC.

FEB 19 1981

SEABROOK
STATION

Approved by

J.B. Silverwood
J. B. Silverwood, Manager
Reliability & Quality
Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr.	Mgr. R&QA	Project Const. Mgr.
1	9/1/76	1,2, Figure 1	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>ARC</i>
2	4/25/77	1,ii, Fig. 1,2, App. A	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>RD/km</i>
3	7/10/78	1,ii, Fig. 1, App. A	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>RD/km</i>
4	9/28/79	1,ii,1,3, Figs 1-4 App. A	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>RD/km</i>
5	3/28/80	1,2, Fig. 1, App. A	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>RD/km</i>
6	1/16/81	1 thru 7, Fig. 1 & 2	<i>Dman</i>	<i>BTC</i>	<i>QBS</i>	<i>RD/km</i>

1/16/81
Revision 6

OCP 7-1 CURRENT PAGE LISTING

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5	1/16/81
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Figure 1	1/16/81
Figure 2	1/16/81
Figure 3	9/28/79
Figure 4	9/28/79

1/16/81
Revision 6

QUALITY CONTROL PROCEDURE - QCP-7-1

IDENTIFICATION OF CHANGES

<u>Section</u>	<u>Page</u>	<u>Reason</u>
I. SCOPE	1	Eliminated reference to non-safety related documents
II.B.1	1	Added section 6
II.B.2	1	1. Added NRC Reg. Guide 1.38 2. Subsequent listings (2 thru 9) changed to (3 thru 10)
II.C.1.a	2	Revised paragraph to include attributes of Receiving Inspection Checklist.
II.C.1.b	2	First sentence changed for clarity.
II.C.2	2	Deleted "which will.....Inspection checklist".
II.C.4	2	Revised paragraph to provide for Engineering storage requirement spec. and or ANSI N45.2.2 requirements.
II.D	3	Added Applicable forms.
III.A	3	Changed sub-heading to Authorized Nuclear Inspector (ANI).
III.C	3	Revised sub-section to incorporate Field Superintendent responsibilities.
IV.	3	Deleted sentence under <u>Procedure</u> referencing Appendix A Flowchart.
IV.A	3-4	Sub-section provides QA Receiving Inspection Procedures which replaces Appen. A Flowchart.
V.	4	Provides for Material/Receiving requirements and replaces Appen. A Flowchart.

1/16/81
Revision 6

VI.	4-6	Provides for Receiving Inspection requirements and replaces Appen. A Flowchart.
VII.	7	Provides for Documentation requirements.
Figure 1		Changed AI to ANI
Figure 2		Revised to conform to (VI.C)
Appendix A		Eliminated Flowchart

UNITED ENGINEERS & CONSTRUCTION INC.

QUALITY ASSURANCE PROCEDURE QCP-7-1

FOR

RECEIVING INSPECTION OF UE&C PURCHASED ITEMS

I. SCOPE

This procedure applies to receiving inspection performed for the Seabrook Station by UE&C Field Quality Assurance on Seismic Category I or Safety Class 1, 2, 3 and 1E items purchased by UE&C. This procedure also provides for the assurance that adequate storage facilities are prepared prior to receiving equipment/material on site.

II. GENERAL

A. Purpose

To establish a system of receiving inspection which, in conjunction with the UE&C Vendor Surveillance System, will safeguard against the untimely discovery and inadvertent use of items that do not conform to the requirements of the procurement documents.

B. Reference Documents

1. ANSI N45.2.2 - 1972, Sections 5 and 6 "Packaging, Shipping Receiving, Storage and Handling of items for Nuclear Power Plants".
2. NRC Regulatory Guide 1.38.
3. QA-7-2 - "Control of Purchased Material - Vendor Surveillance".
4. QA-14 - "Inspection, Test and Operating Status".
5. QA-15 - "Nonconforming Material, Parts or Components".
6. QCP-8 - Material Control".
7. QCP-13 - "Storage Control".
8. QCP-17-1 - "Records Review for Seabrook Station".
9. QCP-17-2 - "Quality Assurance Records for Seabrook Station".

10. FGCP-3 - "Receiving, Inspection and Storage of Nuclear and Safety-Related Equipment and Material".

C. Requirements

1. Unless the package marking prohibits unpacking, the contents of all shipments, as applicable, shall be visually inspected to verify that the specified packaging and shipping requirements have been maintained. When items are contained in transparent separate moisture-proof bags or envelopes, visual inspection without unpacking the contents is acceptable.
 - a. All items including spare parts shall be processed through Receiving Inspection to assure compliance with the applicable attributes of the Receiving Inspection Checklist.
 - b. All damaged containers shall be opened to ascertain if contents have been damaged. If a determination of the significance of the container damage cannot be resolved by Receiving and Receiving Inspection personnel, the FS-QA shall make this determination.
 - c. Spare parts containers shall be opened and the contents checked for quantities and damage.
2. Statistical sampling inspection methods shall be used for groups of similar items. Attributes sampling shall be based on the Single Sampling Plan for Normal Inspection, AQL 1.0%, General Inspection Level II of MIL-STD-105D. Other AQL's may be used only with written approval of the FS-QA.
3. Care shall be taken to avoid contamination of the items during inspection. The inspections shall be performed in an area at least equivalent to the storage level requirement for the item.
4. The storage requirements are contained in the applicable Engineering Specifications and/or ANSI N45.2.2. UE&C FQA shall assure that appropriate storage area(s) are approved for equipment/material prior to performing the required receiving inspection. If the area is not approved, the UE&C FQA will notify the Resident Construction Manager. The notification will be by telecon followed by a memo.

D. Forms

1. Figure 1, Receiving Inspection Report
2. Figure 2, Receiving Inspection Checklist
3. Figure 3, Inspection Call Sheet
4. Figure 4, Data Package Transmittal & Acceptance

III. RESPONSIBILITIES

A. Authorized Nuclear Inspector (ANI)

In conjunction with QAE-R&S, establishes code receiving inspection hold points and participates in these inspections as he desires.

B. UE&C Materials Department (MD)

Receives items in accordance with Procedure FGCP-3 and notifies QAE-R&S of receipt of items through the issue of an Inspection Call Sheet.

C. Field Superintendent Quality Assurance (FS-QA)

The FS-QA is responsible for the overall implementation of this procedure and obtaining resolutions to non-conforming conditions. The Quality Assurance Supervisor - Receiving and Storage (QAS-R&S) is responsible for coordinating all receiving activities (planning, performing, dispositioning, etc.) and assigning qualified/certified personnel to perform receiving inspection activities.

IV. PROCEDURE

A. Planning

1. The QAS-R&S assigns inspection planning to the QAE-R&S, who in turn, initiates planning for items prior to their arrival at the site when possible. He also verifies that storage facilities are prepared prior to performing receiving inspection.
2. The QAE-R&S reviews appropriate data (i.e. Vendor Surveillance Check Plan (VSCP), Vendor Surveillance Report (VSR), latest Purchase Order with Change Orders (PO/CO), Engineering Specifications, etc.) in order to assure compliance with applicable requirements.

3. QAE-R&S prepares a Receipt Inspection Report (RIR) and Receipt Inspection Checklist (RIC) and establishes ASME Code inspection hold points with the ANI on all N PO's.
4. Prior to performing receiving inspection, the QAE-R&S checks to assure the latest PO/CO has been utilized in the preparation of the RIR & RIC.

V. MATERIAL RECEIVING

- A. MD receives items in accordance with FGCP-3.
- B. Items are maintained in their as-shipped condition until QA receiving inspection is performed.
- C. MD prepares an Inspection Call Sheet (ICS) covering plant construction items received and forwards copy to FQAG..
- D. The ICS serves as notification that item(s) has been received at the site and is ready for QA Receiving Inspection.
- E. QAS-R&S determines which items are subject to QA Receiving Inspection, includes this information on the ICS and sends copies to MD and QAE-R&S.
- F. QAE-R&S applies appropriate tags to all items requiring QA Receiving Inspection within three (3) working days.
- G. Purchased items are identified at all times during inspection and storage by a system of tags to permit status identification and traceability to applicable documentation, in accordance with QA-14. Items not requiring QA Receiving Inspection are processed by MD in accordance with FGCP-3.

VI. RECEIVING INSPECTION

- A. QAE-R&C is assigned to perform inspection using the applicable pre-planning inspection documents.
- B. All equipment/material shall be Receipt Inspected by using the applicable attributes of the Receiving Inspection Checklist.
- C. The following attributes will be those inspected for as applicable.

1. Shipping Damage

Fire

Visual inspection for charred paper, wood, or paint, indicating exposure to fire or high temperature.

Exposure	Visual inspection for weather beaten, frayed, rusted or stained containers indicating prolonged exposure during transit.
Environment	Visual inspection for water marks, damp or dirty areas, or salt film indicating exposure to sea water or winter road salt.
Tie Down	Visual inspection for broken, loose or twisted shipping ties and worn material under the tie down straps or chains indicating improper blocking and tie down during shipment or excessive shock.
Rough Handling	Visual inspection for splintered, torn or crushed containers indicating improper handling.

2. Identification/Marking - Verification that identification and markings are in accordance with the following:
 - a. The Procurement Documents if the material/equipment has not been source inspected.
 - b. The Shipping Documents if the material/equipment has been source inspected.
3. Protective Covers and Seals - Visual inspection to assure that covers and seals meet their intended functions.
4. Cleanliness - Visual inspection to assure that accessible internal and external areas are free of loose pieces, dirt, soil, mill scale, weld spatter, oil, grease or stains. Areas not accessible for observation will be judged on the basis of the cleanliness of the adjacent observed areas.
5. Dimensions - Dimensional inspection to assure that critical dimensions such as base plate mounting holes, overall external dimensions, configuration and orientation of nozzles, etc., conform with applicable procurement documents.
6. Coating/Preservatives - Verification that coatings and preservatives are in accordance with specifications, purchase orders or manufacturers' manuals.

7. Shipping & Physical Damage - Visual inspection to assure that accessible internal and external areas are free of detrimental gouges, dents, scratches and burrs.
 8. Weld Preparation - Verification that weld preparations are in accordance with applicable procurement documents and drawings.
 9. Lubricants/Oils - Verification of presence of correct lubricants and oils, if required by either procurement documents or manufacturer's instructions.
 10. Inert Gas Blanket - Verify, as applicable, that specified inert gas blanket is present and at the acceptable pressure.
 11. Desiccant - Verification that the required desiccant is present and functional.
 12. Workmanship - Visual inspection to assure that material/equipment complies with applicable drawings and industry standards.
 13. Chemical/Mechanical/Physical Properties - Verify that material properties conform to the procurement documents. This includes a check of test reports against referenced codes and standards, and also a check of documentation to the heat/lot/batch numbers appearing on the material. For reinforcing steel, confirmatory tensile tests shall be performed when required by the specification.
 14. Electrical Insulation - Performance of insulation resistance test for motors, generators, control and power cable to assure conformance with procurement documents.
- D. QAE-R&S establishes a log of DPTA Report Numbers, assigning a unique number to each DPTA. The log lists: DPTA No. (Sequential), referenced RIR No., PO/CO No., item name and vendor/location.
- E. QAE-R&S performs the QA receiving inspection in accordance with the preplanned RIR & RIC. QAE-R&S notifies ANI in sufficient time to participate in any code inspections. RIR, Data Pkg. and DPTA sent to QAE-R for review and execution of DPTA.
- F. QAS-R&S receives and reviews completed Receiving Inspection data for correctness.

- G. QAE-R&S completes and signs RIR after nonconforming conditions have been resolved or documented. When ANI has reviewed the site data package and declined or participated in the inspection, he signs RIR's covering accepted code items.
- H. QAE-R&S reviews copy of complete RIR and DPTA giving final status of items.
- I. QAE-R&S attaches "Hold" tags on all items found unacceptable during the receiving process.
- J. Nonconformance reports are written and items are segregated in accordance with QA-15, NCR numbers are recorded on "Hold" tag. QAS-R&D maintains a log for all nonconforming received items in "Hold" status. The log lists: item name, PO/CO No., vendor/location, storage location, NCR No., Hold tag date, reason for hold and date of hold removal.
- K. QAE-R&S applies "Release" tags (removing "Hold" tags) to all items found acceptable both physically and documentarily.
- L. Released items are stored and issued to contractors by MD in accordance with FGCP-3. Storage inspection is performed in accordance with QCP-13.

VII. DOCUMENTATION

- A. QAE-R receives documentation from QAE-R&S and files in accordance with requirements of QCP-17-2.



RECEIVING INSPECTION REPORT
PUBLIC SERVICE CO. of NEW HAMPSHIRE - SEABROOK STATION

FORM 4539-9783
REV 9/79

PO NO 9 7 6 3 - 10 11 12 13 14 15 16 17

CO NO

SAFETY CLASS 1

DATE REC'D 18 19 20 21 22 23 24 25

REPORT NO. R 1 2 3 4 5 6 7 8 9

VENDOR / LOCATION 1 1 ITEM NAME 1 3 SPEC / DWG NO. (incl. Rev) 1

SEC. XII - ASME CODE YES 1 NO 1 CODE RECEIVING INSPECTION REQUIRED YES 2 NO 2 DATE INSPECTED 3 LOCATION (if off-site) 3

REPORT PLANNED BY 1 TITLE 1 DATE 1

26	(A) ITEM IDENTITY 1 OR 3	28	40	(B) HEAT OR SERIAL NUMBER 3	53	64	QUANTITY 38	UNITS 89	STATUS 91	LINE 93	REMARKS 3 C
										1	
										2	
										3	
										4	
										5	
										6	
										7	
										8	
										9	
										10	
										11	
										12	
										13	
										14	

- 3 ITEM(S) RECEIVED WITH A PROPERLY EXECUTED QUALITY SHIPMENT RELEASE, INDICATING THAT SURVEILLANCE HAS BEEN SATISFACTORILY COMPLETED.
- 2 A DATA PACKAGE TRANSMITTAL & ACCEPTANCE REPORT HAS BEEN WRITTEN AND TRANSMITTED TO THE QAE - RECORDS WITH THE DATA PACKAGE RECEIVED WITH THE ITEM(S).
- 2 APPLICABLE INSPECTIONS LISTED ON THE RECEIVING INSPECTION CHECKLIST HAVE BEEN COMPLETED.

4 ANY NONCONFORMING CONDITIONS HAVE BEEN RESOLVED OR ARE DOCUMENTED ON NCR NO. (S) 4

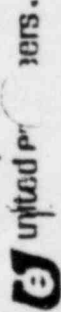
4 ITEMS ARE PROPERLY TAGGED

FOAE 3 DATE 3

FOAE 4 DATE 4

AUTHORIZED INSPECTOR 5 DATE 5

SEABROOK
OCP-7-1
1/16/81
FIGURE 1



4530 0103

Orig. 2176

REV

RECEIVING INSP. , CHECKLIST

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

AIR NO.

[illegible]

Seabrook
QCP-7-1
1/16/81
Figure 2

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

DATE REC.	PO/CO NOS. ① SPIN NOS.	ITEM NO.	QTY.	ITEM NAME	VENDOR/LOCATION	MD VISUAL CHK. FOR SHIPPING DAMAGE		QA REC. INSP. REQUIRED	REMARKS
						ACCEPT	HOLD		
①	①	①	①	①	①	①	①	②	②

① COMPLETED BY UEGC CONSTRUCTION-MATERIAL DEPARTMENT AND SENT TO FOAE.
 ② COMPLETED BY FOAE WHO DETERMINES WHICH ITEMS ARE SUBJECT TO QA RECEIVING INSPECTION AND MARKS R (REQUIRED) OR NR (NOT REQUIRED) IN "QA REC. INSP. REQUIRED" COLUMN.

SEABROOK
QCP-7-1
9/28/76
FIGURE 3

SEABROOK
QCP-7-1
9/28/79
FIGURE 3

FORM 4337-#763REV. 6/79REPORT NO. ①DATA PACKAGE TRANSMITTAL & ACCEPTANCEPUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

VENDOR/LOCATION ① RIR NO. ①
PO NO. ① CO NO. ① DATE DATA PKG. REC. ②
ITEM NAME ① DATE DATA PKG. REVIEWED ②
SPEC./DWG NO. (INCL. REV. NOS.) ①

THE ATTACHED DATA PACKAGE WAS RECEIVED WITH THE ITEM(S) LISTED ON RIR NO. ②.
PLEASE REVIEW THE CONTENTS OF THIS DATA PACKAGE, COMPLETE THIS FORM AND RETURN ONE COPY TO THE
QAE-RECEIVING & STORES WHEN DATA PACKAGE IS ACCEPTED.

1. DOCUMENTATION IN DATA PACKAGE IS TRACEABLE TO ITEM(S) RECEIVED.

QAE-RECORDS ② DATE ②

2. ALL DOCUMENTATION IS LEGIBLE AND STAMPED BY THE UE&C VENDOR SURVEILLANCE REPRESENTATIVE. A
CHECK OF THE DATA PACKAGE HAS BEEN MADE IN ACCORDANCE WITH QCP-17-1 AND FOUND COMPLETE.

QAE-RECORDS ② DATE ②

3. ANY DOCUMENTATION NOT STAMPED BY THE UE&C VENDOR SURVEILLANCE REPRESENTATIVE HAS BEEN
CHECKED FOR ACCEPTABILITY OF CONTENT AS WELL AS LEGIBILITY AND COMPLETENESS. CHECKER HAS
INITIALED & DATED UNSTAMPED, ACCEPTABLE DOCUMENTS.

QAE-RECORDS ② DATE ②

4. DATA PACKAGE ACCEPTED.

QAE RECORDS ② DATE ②

① COMPLETED BY FQAE

② COMPLETED BY QAE-R AND COPY RETURNED TO QAE-R&S

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Receiving Inspection of Westinghouse NSSS Items

PREPARED BY A. H. Ayers

DATE 9/16/81

CHANGE

1. Page 5 of 5, Para. VI.F.

Change: QAE REceiving Group to QAS R&DS

Delete: The log lists: Item Name, Shop Order No., Spin No., Vendor/Location, NCR No., Hold Tag Date, QR/SQR No., reason for Hold and date of Hold removal.

2. Page 4 of 5, Para. IV.A.7

Delete: QAE-R&S obtains the next sequential number from the RIR log. Each W RIR shall have a unique number .

Change Para. IV.A.7 to read: QAS R&DS establishes and maintains a receiving inspection report log assigning a unique number to the receiving inspection report for the QAE R&S.

INFORMATION ONLY

REASON FOR CHANGE (1) Changing responsibility (2) To delete the duplication in logs. and (3) Maintain material control.

Concurred with above change for inspection specialist - J. Anguino, A.N.T. 9/21/81

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED RCM	DATE
<i>DC Lambert</i>	<i>7/3/81</i>	<i>BEG/Emm</i>	<i>7/21/81</i>	<i>[Signature]</i>	<i>7/21/81</i>	<i>[Signature]</i>	<i>7/21/81</i>	<i>[Signature]</i>	<i>7/21/81</i>

for DEIR

CHG. NO. 53

EFFECTIVE DATE 9/21/81

QA N/A

QCP 7-2

REV. 2

DATE 3/2/81



IN 4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 44
EFFECTIVE DATE 7/9/81
QA N/A
GCP 7-2
REV. 2
DATE 3/2/81

PROCEDURE TITLE Receiving Inspection of Westinghouse NSSS Items

PREPARED BY B. E. O'Connor DATE 6/10/81

CHANGE

Para. VI.J: Delete Last sentence:

QAE-R files accepted site data package etc.

Para. V.II: 2nd sentence - delete "and IC's".

RECEIVED
U E & C. INC.

JUL 23 1981

SEABROOK
STATION

REASON FOR CHANGE Clarify procedure to remove duplicate statement. QAE-R responsibility covered in Para. VII.B.

Inspection Call Sheets (ICS's) not part of Data Package.

REVIEWED BY FSGA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR R & QA	DATE	APPROVED	DATE
<i>L. Lambert</i>	<i>6/10/81</i>	<i>AC Trumbly</i>	<i>6/14/81</i>	<i>D. G. L.</i>	<i>6/21/81</i>	<i>R. B. Johnson</i>	<i>6/24/81</i>	<i>E. R. Dwyer</i>	<i>7/7/81</i>

QUALITY CONTROL PROCEDURE QCP-7-2

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

September 10, 1976

INFORMATION ONLY

100-443888-100

Approved by: J.R. Dmytryk
Project Construction Manager

Approved by: G.F. Cole
Project Manager

Approved by: *A.B. Silverwood*
A.B. Silverwood, Manager
Reliability & Quality
Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr.	Mgr. R&QA	Project Const. Mgr.
1	9/28/79	i, ii, 1, Fig. 1, 2, App. A	W. L. Lintner	L. H.	J. B.	J. B.
2	3/2/81	1 thru 5 & Fig. 3	W. L. Lintner	L. H.	J. B.	J. B.

3/2/81

OCP 7-2 CURRENT PAGE LISTING

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4.	3/2/81
5.	3/2/81
Figure 1	9/28/79
Figure 2	9/28/79
Figure 3	3/2/81

3/2/81

Quality Control Procedure QCP-7-2
Identification of Changes
Revision 2

<u>Section</u>	<u>Page</u>	<u>Reason</u>
II.D.5	1	Added reference to QCP-7-1
II.C.1.a	2	All items to be processed through Receiving Inspection
II.C.1.b	2	Changed "Significantly Damaged" to "All damaged"
II.D	3	Added reference to attached forms
IV, V, VI and VII	3-5	Replaced Appendix A flow chart with narrative for better definition.
Figure 3		Added Inspection Call Sheet

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY ASSURANCE PROCEDURE QCP-7-2
FOR
RECEIVING INSPECTION OF WESTINGHOUSE
NSSS ITEMS

I. SCOPE

This procedure applies to the Receiving Inspection performed at Seabrook Station by UE&C Field Quality Assurance on Westinghouse, NSSS Items received at the site.

II. GENERAL

A. Purpose

To establish a system of Receiving Inspection which in conjunction with the W Vendor Surveillance system will safeguard against the untimely discovery and inadvertent use of items that do not conform to the requirements of the procurement documents. Receiving Inspection shall include inspections for item identification and marking, documentation, preservation and sealing, shipping and other physical damage and cleanness.

B. Reference Documents

1. "W Procedures and Specifications Pertinent to Field Operations Involving W Equipment or Systems" - August 30, 1974.
2. ANSI N45.2.2-1972, Section 5 - "Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants".
3. QA-14 - "Inspection, Test and Operating Status".
4. QA-15 - "Nonconforming Material. Parts or Components".
5. QCP-7-1 - "Receiving Inspection of UE&C Purchased Items".
6. QCP-8 - "Material Control".
7. QCP-13 - "Storage Control".

8. QCP-17-1 - "Records Review for Seabrook Station".
9. QCP-17-2 - "Quality Assurance Records for Seabrook Station".
10. FGCP-3 - "Receiving, Inspection & Storage of Nuclear and Safety Related Equipment and Material".

C. Requirements

1. Unless the package marking prohibits unpacking, the contents of all shipments, as applicable, shall be visually inspected to verify that the specified packaging and shipping requirements have been maintained. When items are contained in transparent, separate moisture-proof bags or envelopes, visual inspection without unpacking the contents is acceptable.
 - a. All items including spare parts shall be processed through Receiving Inspection to assure compliance with the applicable attributes of the RIC.
 - b. All damaged containers shall be opened to ascertain if contents have been damaged. If a determination of the significance of the container damage cannot be resolved by Receiving and Receiving Inspection personnel, the FS-QA shall make this determination.
 - c. Spare parts containers shall be opened and the contents checked for quantities and damage.
2. Statistical sampling inspection for the inspection items listed on the W RIC (Figure 2) may be used on groups of similar items. Attributes sampling shall be based on the Single Sampling Plan for Normal Inspection, AQL 1.0%, General Inspection Level II of MIL-STD-105D which will be referenced in Part B of the W RIC. Other AQL's may be used only with written approval of the FS-QA.
3. Care shall be taken to avoid contamination of the items during inspection. The inspections shall be performed in an area at least equivalent to the storage level requirement for the item.
4. Desiccants used primarily for the protection of equipment in transit shall be removed prior to storage. Where slight moisture accumulation may occur during the interim storage of the equipment, W shall authorize its use. Where used, desiccants shall be monitored with indicator cards or equal.

5. All valves shall have an identification metal tag and must be substantially sealed before placement in storage. If not received in this condition, W will supply metal tag and/or sealing requirement instructions.

D. Forms

1. Figure 1, Receiving Inspection Report
2. Figure 2, Receiving Inspection Checklist
3. Figure 3, Inspection Call Sheet

III. RESPONSIBILITIES

- A. Westinghouse supplies the necessary purchase orders, change orders, drawings, specifications, special requirements, required for the receiving inspection of W NSSS items. W is to give technical assistance as necessary and arrange for the return of any W NSSS items to vendors for rework, repair or replacement.
- B. UE&C Material Department - Receives W NSSS items in accordance with procedure FGCP-3 and notifies Field QA through the issue of ICS.
- C. Reliability and Quality Assurance Department - Field QA formulates receiving inspection plans, tags received W NSSS items to indicate inspection status, performs receiving inspection per pre-planned W RIR, reviews W quality releases for completeness and arranges for disposition of W NSSS inspected items.

IV. PROCEDURE

A. Planning

1. W supplies the necessary information required to perform QA receiving inspections to QAS-R&S for review and planning. W also specifies, by written notice to QAS-R&S, any special receiving inspection requirements, ASME Code or W receiving inspection hold points at this time.
2. QAS-R&S reviews any special requirements included by W and refers them to FS-QA for disposition and approval to proceed.
3. If the W special requirements exceed the minimum requirements of ANSI N45.2.2 for source inspected items and require an

appreciable amount of time to perform, the FS-QA obtains the approval of the YAEC Field QC & Audit Manager before proceeding on special order.

4. Whenever possible, review and planning is done prior to arrival of items at site.
5. QAS-R&S assigns QAE-R&S to initiate QA receiving inspection planning, furnishing him with the information supplied by W.
6. QAE-R&S reviews information supplied and initiates a W RIR and a W RIC.
7. QAE-R&S obtains the next sequential number from the RIR log. Each W RIR shall have a unique number.
8. QAE-R&S retains preplanned W RIR's and W RIC's, together with W supplied information, on file until items are available for inspection. Immediately prior to forwarding the inspection documents to the FQAE assigned to perform the receiving inspection, the QAE-R&S checks to assure that the latest W information has been received and reviewed when preparing the W RIR's and RIC's.

V. MATERIAL RECEIVING

- A. MD receives items in accordance with FGCP-3 and attaches the correct UE&C Item Number tag to each item.
- B. MD prepares an ICS (Figure 3 - QCP-7-1) covering W NSSS items received and forwards copy to FQAG.
- C. Items are maintained in their as-shipped condition until QA receiving inspection is performed.
- D. The ICS serves as notification that an item(s) has been received at the site and is ready for QA receiving inspection.
- E. QAE-R&S reviews ICS and assigns QAE to tag items.
- F. W NSSS items are identified at all times during inspection and storage by a system of tags to permit status identification and traceability to applicable documentation in accordance with QA-14.
- G. FQAE applies appropriate tags to all items requiring QA receiving inspection within three (3) working days.

VI. RECEIVING INSPECTION

- A. QAS-R&S assigns a QAE to perform inspection.
- B. QAE is given ICS with corresponding W RIR's, W RIC's and W supplied information.
- C. QAE performs the QA receiving inspection in accordance with pre-planned W RIR and W RIC, following explanatory information given in Paragraph 5.2 of ANSI N45.2.2.
- D. QAS-R&S receives and reviews W RIR's, W RIC's and W supplied information from QAE. QAE-R receives W QR/W SQR from QAE and files per QCP-17-1.
- E. QAE completes and signs W RIR after resolution of all nonconforming conditions.
- F. Nonconformance reports are written and items are segregated in accordance with QA-15. NCR number(s) are recorded on "Hold" tag. QAE Receiving Group maintains a log for all nonconforming received items in "Hold" status. The log lists: Item name, shop order no., Spin no., Vendor/Location, NCR No., Hold tag date, QR/SQR No., reason for hold and date of hold removal.
- G. QAE reviews copy of complete W RIR giving final status of items.
- H. QAE completes "Hold" tags on all items found unacceptable either by MD or Field QA because of physical or documentary nonconformances.
- I. QAE applies "Release" tags (removing "Hold" tags) to all items found acceptable both physically and documentarily.
- J. Released items are stored and issued to contractors by MD in accordance with FGCP-3. Storage inspection is performed in accordance with QCP-13. QAE-R files accepted site data package per USCP and completed DPTA's, RIR's, RIC's & ICS's.

VII. DOCUMENTATION

- A. QA Record Group furnishes copies of completed W RIR's and W RIC's to W upon request.
- B. QAE-R receives documentation from QAE-R&S and files the accepted W QR or W SQR and the completed W RIR's, W RIC's and ICS's in accordance with the requirements of QCP-17-2.



RECEIVING INSPECTION REPORT - (W) NSSS ITEMS
PUBLIC SERVICE CO of NEW HAMPSHIRE - SEABROOK STATION

FORM 4516-9763
REV 9/75

SY NO. 9 7 6 3 - N S S -
10 11 12 13 14 15 16 17

CO NO. 1

SAFETY CLASS 1

DATE RECD 18 19 20 21 22 23 24 25

REPORT NO. 1 R 1 2 3 4 5 6 7 8 9

1 OR 3 OF

VENDOR / LOCATION 1

ITEM NAME 1

QR / SQR NO. (Incl. Sup.) 1

SEC III - ASME CODE

YES 1 NO 1

CODE RECEIVING INSPECTION REQUIRED

YES 2 NO 2

DATE INSPECTED 3

LOCATION (if off-site) 3

REPORT PLANNED BY 1

TITLE 1

DATE 1

ITEM IDENTITY (1) OR (3)										SPIN NUMBER (3)										QUANTITY (3)										UNITS (3)										A/H (3)										ADDITIONAL DESCRIPTION (3) (C)									

RECEIVING INSPECTION CHECKLIST FOR W NSSS ITEMS

PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- SEABROOK STATION

[illegible]

SEABROOK
QCP-7-2
9/28/79
FIGURE 2.

DATE REC.	PO/CO NOS. ⑩ SPIN NOS.	ITEM NO.	QTY.	ITEM NAME	VENDOR/LOCATION	MD VISUAL CHK. FOR SHIPPING DAMAGE		QA REC. INSP REQUIRED	REMARKS
						ACCEPT	HOLD		
①	①	①	①	①	①	①	①	②	②
<p>① COMPLETED BY UE&C CONSTRUCTION—MATERIAL DEPARTMENT AND SENT TO FOAE.</p> <p>② COMPLETED BY FOAE WHO DETERMINES WHICH ITEMS ARE SUBJECT TO QA RECEIVING INSPECTION AND MARKS R (REQUIRED) OR NR (NOT REQUIRED) IN "QA REC. INSP. REQUIRED" COLUMN.</p>									

SEABROOK
 QCP-7-2
 3/2/81
 FIGURE 3

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

 CHG. NO. 54
 EFFECTIVE DATE 9/21/81
 QA N/A
 QCP 7-3
 REV. 0
 DATE 3/2/81

 PROCEDURE TITLE Receiving Inspection of JE&C Purchased Non-Safety Items.

 PREPARED BY A. H. Ayers DATE 9/16/81
CHANGE
Page 5 of 5, Para. VI.E
Delete the following:
The receiving group establishes and maintains a log of DPTA Report numbers, assigning a unique number to each DPTA. The log shall list:

1. DPTA No. (Sequential)
2. RIR No.
3. PO/CO No.
4. Item Name
5. Vendor/Location

Change para. VI.E to read: QAS R&DS establishes and maintains a receiving inspection report log assigning a unique number to the receiving inspection report for the QAE-R&S.
REASON FOR CHANGE To delete the duplication efforts in keeping logs and maintain material control.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED RCM	DATE
<i>[Signature]</i>	<i>9/18/81</i>	<i>[Signature]</i> for DEM	<i>9/21/81</i>	<i>[Signature]</i>	<i>9/21/81</i>	<i>[Signature]</i>	<i>9/21/81</i>	<i>[Signature]</i>	<i>9/21/81</i>

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Receiving Inspection of UE&C Purchased Non-Safety Items

PREPARED BY B. E. O'Connor DATE 8/11/81

CHANGE Revise Para. VI.C in its entirety as follows:

C. Items found to be unacceptable shall be handled in the following manner:

1. The QAE/R&S shall affix a "Hold Tag" to the item.
2. Items received with documentation discrepancies shall be handled by the Field QA Group in accordance with QCP-17-1.
3. For items received which are unacceptable for reasons other than documentation, a nonconformance report is written in accordance with QA-15, the NCR number recorded on the "Hold Tag" and the item(s) segregated if practical.

CHG. NO. 48
EFFECTIVE DATE 8/11/81
QA N/A
QCP 7-3
REV. 0
DATE 3/2/81

INFORMATION ONLY

**RECEIVED
U. E. & C. INC.**

SEP 04 1981

**SEABROOK
STATION**

REASON FOR CHANGE To clarify the procedure and to maintain control of nonconforming items per QA-15.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT GAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED Sl. Const. Mgr.	DATE
<i>Whambert</i>	<i>8/11/81</i>	<i>BEO'Connor</i>	<i>8/11/81</i>	<i>[Signature]</i>	<i>8/11/81</i>	<i>[Signature]</i>	<i>8/11/81</i>	<i>[Signature]</i>	<i>8/11/81</i>

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

 PROCEDURE TITLE Receiving Inspection of UE&C Purchased Non-Safety Items

 PREPARED BY B. E. O'Connor DATE 6/8/81

CHANGE

Page 4 of 5 - Para. C - Revise as follows:

 CHG. NO. 42
 EFFECTIVE DATE 7/9/81
 QA N/A
 QCP 7-3
 REV. 0
 DATE 3/2/81

C - Items found to be unacceptable for physical or documentation deficiencies, shall be handled as follows:

1. The QAE shall affix a "hold" tag to the item.
2. Items received with documentation discrepancies shall be handled by the Field QA Group in accordance with QCP 17-1.
3. For items received which are unacceptable for reason(s) other than documentation, the C.M. shall be made aware of the problem(s) via a speedletter and requested to take the necessary action to resolve the condition within 60 working days.
4. The QA Receiving Group shall maintain the associated data (i.e. RIR, RIC, DPTA, etc.) in a suspense file with a tickler system until C.M. resolves the condition.
5. If the condition is not resolved within the 60 day limit, the QAE shall initiate an NCR in accordance with QA-15. If the condition is resolved in the required time, Item VI-B shall apply.

VII - Documentation

The QA Records Group receives, reviews and processes documentation in accordance with QCP 17-1 and 17-2.

 REASON FOR CHANGE To maintain UE&C/QA control of vendor documentation problems

 RECEIVED
 U.E. & C. INC.

JUL 23 1981

 SEABROOK
 STATION

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>K. Oram</i>	<i>6/10/81</i>	<i>B. E. O'Connor</i>	<i>6/10/81</i>	<i>[Signature]</i>	<i>6/10/81</i>	<i>[Signature]</i>	<i>6/10/81</i>	<i>[Signature]</i>	<i>7/13/81</i>


QUALITY CONTROL PROCEDURE QCP-7-3


PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

ch 2, 1981

INFORMATION ONLY

D.E. McGarrigan
Project QA Manager


J.R. Dmytryk
Project Construction Manager


G.F. Cole
Project Manager

B. Silverwood
B. Silverwood, Manager
Reliability & Quality Assurance

[illegible]

QCP-7-3 CURRENT PAGE LISTING

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1	3/2/81
1.	3/2/81
2.	3/2/81
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5.	3/2/81
Figure 1	3/2/81
Figure 2	3/2/81
Figure 3	3/2/81
Figure 4	3/2/81

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY ASSURANCE PROCEDURE QCP-7-3

FOR

RECEIVING INSPECTION OF UE&C PURCHASED NON SAFETY ITEMS

I. SCOPE

This procedure applies to receiving inspection performed for the Seabrook Station by UE&C Field Quality Assurance on those non-safety related items identified in Appendix B of UE&C QA-7-2.

VI. GENERAL

A. Purpose

To establish a system of receiving inspection which, in conjunction with the UE&C Vendor Surveillance System, will safeguard against the untimely discovery and inadvertent use of items that do not conform to the requirements of the procurement documents.

B. Reference Documents

1. QA-7-2 - "Control of Purchased Material - Vendor Surveillance".
2. QA-15 - "Nonconforming Material, Parts or Components".
3. QCP-17-1 - "Records Review for Seabrook Station".
4. QCP-17-2 - "Quality Assurance Records for Seabrook Station".
5. FGCP-3 - "Receiving, Inspection and Storage of Nuclear and Safety-Related Equipment and Material".

C. Requirements

1. Unless the package marking prohibits unpacking, the contents of all shipments, as applicable, shall be visually inspected to verify that the specified packaging and shipping requirements have been maintained. When items are contained in transparent separate moisture-proof bags or envelopes, visual inspection without unpacking the contents

is acceptable.

- a. All items including spare parts shall be processed through Receiving Inspection to assure compliance with the applicable attributes of the Receiving Inspection Checklist.
 - b. All damaged containers shall be opened to ascertain if contents have been damaged.
2. Statistical sampling inspection methods shall be used for groups of similar items. Attributes sampling shall be based on the Single Sampling Plan for Normal Inspection, AQL 1.0%, General Inspection Level II of MIL-STD-105D. Other AQL's may be used only with written approval of the FS-QA.
 3. Care shall be taken to avoid contamination of the items during inspection. The inspections shall be performed in an area at least equivalent to the storage level requirement for the item.
 4. The storage requirements are contained in the applicable Engineering Specifications. UE&C FQA shall assure that appropriate storage area(s) are approved for equipment/material prior to performing the required receiving inspection. If the area is not approved, the UE&C FQA will notify the Resident Construction Manager. The notification will be by telecon followed by a memo.

D. Forms

1. Figure 1 - Receiving Inspection Report
2. Figure 2 - Receiving Inspection Checklist
3. Figure 3 - Inspection Call Sheet
4. Figure 4 - Data Package Transmittal & Acceptance

III. RESPONSIBILITIES

A. UE&C Materials Department (MD)

Receives items in accordance with Procedure FGCP-3 and notifies FQAG of receipt of items through the issue of an Inspection Call Sheet.

B. Field Superintendent Quality Assurance (FS-QA)

The FS-QA is responsible for the overall implementation of this procedure and obtaining resolutions to non-conforming conditions. The Quality Assurance Supervisor - Receiving and Storage (QAS-R&S) is responsible for coordinating all receiving activities (Planning, performing, dispositioning, etc.) and assigning qualified/certified personnel to perform receiving inspection activities.

IV. PROCEDURE

A. Planning

The assigned QAE reviews appropriate data (i.e. VSCP, VSR, PO/CO, etc.) to determine the applicable requirements of the items to be received and prepares an RIR and RIC accordingly.

- B. Prior to performing receiving inspection, the QAE-R&S checks to assure that the latest PO/CO has been utilized in preparation of the RIR and RIC.

V. MATERIAL RECEIVING

- A. MD receives items in accordance with FGCP-3.
- B. Items are maintained in their as-shipped condition until QA receiving inspection is performed.
- C. MD prepares an ICS covering plant construction items received and forwards a copy to FQAG.
- D. The ICS serves as notification that an item(s) has been received at the site and is ready for QA Receiving Inspection.
- E. QAS-R&S determines which items are subject to QA Receiving Inspection, includes this information on the ICS and sends copies to MD and QAE-R&S.
- F. QAE-R&S applies the appropriate tag to items within three (3) working days. The appropriate tags are:
1. "Hold" - Physical or Documentary Deficiency.
 2. "QA Inspection not Required" - Item is acceptable and is

released to the MD.

VI. RECEIVING INSPECTION

A. The QAE shall perform Receiving Inspection for the following attributes as applicable:

1. Shipping and/or physical damage.
2. Identification and/or marking.
3. Protective Covers and Seals.
4. Cleanliness
5. Workmanship including Dimensions.
6. Visual Inspection
7. Documentation Review

Note: The degree of inspection will be dependent upon the type of item being inspected. (i.e. valves, pumps, motors, etc.). The completed RIC will delineate the specific items inspected for each attribute in the Remarks/Finding column.

B. Items found to be acceptable shall have a "QA Inspection Not Required" tag affixed denoting release to MD.

C. Items found to be unacceptable shall be handled in the following manner:

1. The QAE shall affix a "Hold" tag to the item.
2. C.M. shall be made aware of the problem and requested to take the necessary action to resolve the condition within 60 working days. This will be accomplished via speed letter.
3. The QA Receiving Group shall maintain the associated data (i.e., RIR, RIC, DPTA, etc.) in a suspense file with a tickler system until C.M. resolves the condition or the 60 day limit has been met.
4. If the condition is not resolved within the 60 day limit, a QAE shall initiate an NCR in accordance with QA-15. If the condition is resolved in the required time, Item VI.B

applies.

- D. The QAS-R&S reviews all completed RIR's for correctness.
- E. The QA Receiving Group establishes and maintains a log of DPTA Report Numbers, assigning a unique number to each DPTA. The log shall list:
 - 1. DPTA No. (Sequential)
 - 2. RIR No.
 - 3. PO/CO No.
 - 4. Item Name
 - 5. Vendor/Location

VII. DOCUMENTATION

The QA Records Group receives documentation and processes in accordance with QCP-17-2.



RECEIVING INSPECTION REPORT

PUBLIC SERVICE CO. of NEW HAMPSHIRE - SEABROOK STATION

FORM _____ PD NO. 9 7 6 3 - _____ CO. NO. _____ SAFETY CLASS _____ DATE REC'D _____
REV _____ 10 11 12 13 14 15 16 17 _____ 18 19 20 21 22 23 24 25 _____
VENDOR / LOCATION _____ ITEM NAME _____ SPEC / DWG NO. (Incl. Rev) _____
SEC. III - ASME CODE YES _____ NO _____ CODE RECEIVING INSPECTION REQUIRED YES _____ NO _____ DATE INSPECTED _____ LOCATION (if off-site) _____
REPORT PLANNED BY _____ TITLE _____ DATE _____

26	(A)	ITEM IDENTITY (1 OR 3)	39	40	(B)	HEAT OR SERIAL NUMBER (3)	53	54	QUANTITY (3)	56	UNITS (3)	58	STATUS (3)	61	62	(3)	LINE (3)	63	64	(3) (C)	REMARKS
																	1				
																	2				
																	3				
																	4				
																	5				
																	6				
																	7				
																	8				
																	9				
																	10				
																	11				
																	12				
																	13				
																	14				

- (1) COMPLETED BY FQAE AT PLANNING STAGE
(2) COMPLETED BY ANI AT PLANNING STAGE
(3) COMPLETED BY FQAE PERFORMING RECEIVING INSPECTION
(4) COMPLETED BY FQAE AFTER RECEIVING INSPECTION IS COMPLETED AND PHYSICAL DISCIPLINE IS MADE.
(5) SIGNED BY ANI WHEN HE HAS RECEIVED THE SITE DATA PACKAGE AND DECLINED OR PARTICIPATED IN INSPECTION AND CODE ITEM(S) IS ACCEPTED.
- IN FILLING IN INFORMATION IN BLOCKED AREAS, START WITH BLOCK FURTHEST LEFT AND PROCEED FROM LEFT TO RIGHT.

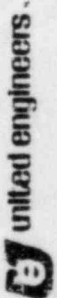
- (A) ITEM IDENTITY NUMBER IS OBTAINED FROM THE SPECIFICATION OR THE STANDARD EQUIPMENT LIST - FUNCT. ID COLUMN.
(B) OBTAIN HEAT OR SERIAL NUMBER FROM ITEM(S) RECEIVED.
(C) INCLUDE SIZE AND OTHER IDENTIFYING INFORMATION IN REMARKS COLUMN
E.G. PIPE - SCHEDULE, WT., ID; VALVES - SIZE; WELD ROD - TYPE, SIZE, LOT NO., ETC.

- (3) ITEM(S) RECEIVED WITH A PROPERLY EXECUTED QUALITY SHIPMENT RELEASE, INDICATING THAT SURVEILLANCE HAS BEEN SATISFACTORILY COMPLETED.
(2) A DATA PACKAGE TRANSMITTAL & ACCEPTANCE REPORT HAS BEEN WRITTEN AND TRANSMITTED TO THE QAE - RECORDS WITH THE DATA PACKAGE RECEIVED WITH THE ITEM(S).
(2) APPLICABLE INSPECTIONS LISTED ON THE RECEIVING INSPECTION CHECKLIST HAVE BEEN COMPLETED.

- (4) ANY NONCONFORMING CONDITIONS HAVE BEEN RESOLVED OR ARE DOCUMENTED ON NCR NO.(S) _____
(4) ITEMS ARE PROPERLY TAGGED

FQAE _____ DATE _____
AUTHORIZED INSPECTOR _____ DATE _____

SEABROOK
QCP-7-3
3/2/81
FIGURE 1



40 — 04

RIR NO

Seabrook
QCP-7-3
3/2/81
Figure 2

INSPECTION CALL SHEET

PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- SEABROOK STATION

DATE REC.	PO/CO NOS. (W) SPIN NOS.	ITEM NO.	QTY.	ITEM NAME	VENDOR/LOCATION	MD VISUAL CHK. FOR SHIPPING DAMAGE		QA REC. INSP. REQUIRED	REMARKS
						ACCEPT	HOLD		
(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	

(1) COMPLETED BY UE&C CONSTRUCTION-MATERIAL DEPARTMENT AND SENT TO FOAE.
 (2) COMPLETED BY FOAE WHO DETERMINES WHICH ITEMS ARE SUBJECT TO QA RECEIVING INSPECTION AND MARKS R (REQUIRED) OR NR (NOT REQUIRED) IN "QA REC. INSP. REQUIRED" COLUMN.

Seabrook
 QCP-7-3
 3/2/81
 Figure 3

Seabrook
QCP-7-3
3/2/81
Figure 3

FORM _____

REV. _____

REPORT NO. 1DATA PACKAGE TRANSMITTAL & ACCEPTANCEPUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

VENDOR/LOCATION 1 RIR NO. 1
PO NO. 1 CO NO. 1 DATE DATA PKG. REC. 2
ITEM NAME 1 DATE DATA PKG. REVIEWED 2
SPEC/DWG NO. (INCL. REV. NOS.) 1

THE ATTACHED DATA PACKAGED WAS RECEIVED WITH THE ITEM(S) LISTED ON RIR NO. 2
PLEASE REVIEW THE CONTENTS OF THIS DATA PACKAGE, COMPLETE THIS FORM AND RETURN ONE COPY TO THE
QAE-RECEIVING & STORES WHEN DATA PACKAGE IS ACCEPTED.

1. DOCUMENTATION IN DATA PACKAGE IS TRACEABLE TO ITEM(S) RECEIVED.

QAE-RECORDS 2 DATE 2

2. ALL DOCUMENTATION IS LEGIBLE AND STAMPED BY THE UE&C VENDOR SURVEILLANCE REPRESENTATIVE. A
CHECK OF THE DATA PACKAGE HAS BEEN MADE IN ACCORDANCE WITH QCP-17-1 AND FOUND COMPLETE.

QAE-RECORDS 2 DATE 2

3. ANY DOCUMENTATION NOT STAMPED BY THE UE&C VENDOR SURVEILLANCE REPRESENTATIVE HAS BEEN
CHECKED FOR ACCEPTABILITY OF CONTENT AS WELL AS LEGIBILITY AND COMPLETENESS. CHECKER HAS
INITIALED & DATED UNSTAMPED, ACCEPTABLE DOCUMENTS.

QAE-RECORDS 2 DATE 2

4. DATA PACKAGE ACCEPTED.

QAE RECORDS 2 DATE 2

1 COMPLETED BY FGAE

2 COMPLETED BY QAE-R AND COPY RETURNED TO QAE-R&S



4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Material ControlPREPARED BY B. E. O'ConnorDATE 12/14/81

CHANGE

(1) Add new paragraph IV.F.14 as follows:

"A written Limited Work Authorization Request is not required when the conditions in IV.C.10.b.2 of QA 15 are applicable."

(2) Page 4 of 5, Paragraph IV.F.2, 3rd line:

Add . . ., desiring the LWA, except as noted in IV.F.14.

CHG. NO. 58
EFFECTIVE DATE 12/22/81
QA N/A
QCP 8
REV. 4
DATE 9/28/79

REASON FOR CHANGE To clarify procedure when a written approved LWA is required, and to make QCP-8 compatible with QA 15. (Response to Finding No. 1 of NH 484; 11/30 - 12/4/81)

*Copied -
Off NH/12 12/22/81
for inspection specialist*

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT GAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED RCM	DATE
<i>D. Chabot</i>	<i>12/15/81</i>	<i>C. W. Hawans</i> for DEM	<i>12/16/81</i>	<i>A. M. Cramer</i> for	<i>12/21/81</i>	<i>P. V. Vassallo</i>	<i>12/21/81</i>	<i>L. J. J. J.</i>	<i>12/22/81</i>

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 56
EFFECTIVE DATE 9/24/81
QA N/A
QCP 8
REV. 4
DATE 9/28/79

PROCEDURE TITLE Handling & Storage Control

PREPARED BY B. E. O'Connor DATE 9/24/81

CHANGE

(1) Page 1 of 5, Para. II.B: Add - reference:

FACP 4 - Construction Interface Requirements for Release of Material
from UE&C FQA.

(2) Page 5 of 5, Para. IV.F.10, Last sentence add:

. . . , when YAEC/QA has conducted surveillance of the work performed.
In all other cases, UE&C Field QA Group shall verify and close the
LWA, upon notification from the RCM that work is completed.

REASON FOR CHANGE (1) Add applicable Construction Procedure reference.

(2) Clarify responsibility of YAEC/QA for closing of Limited Work Authorization

Accepted for Inspection Specialist.

J. Amadio A.I.T.
9/29/81

REVIEWED BY RQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. RQA	DATE	APPROVED RCM	DATE
<i>Chambers</i>	<i>9/24/81</i>	<i>B.E. O'Connor</i>	<i>9/24/81</i>	<i>L.P.H.</i>	<i>9/25/81</i>	<i>P. Vannelli</i>	<i>9/29/81</i>	<i>W. Hill</i>	<i>11/25/81</i>

J.E.C.M.

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Material Control

PREPARED BY B. E. O'Connor

DATE 9/2/81

CHANGE

(1) Para. IV.F.3, (2nd Sentence):

Change UE&C Supervisor - Administration & Records (QAS A&R)
to UE&C Supervisor Records & Deficiency Systems (QAS R&DS)

(2) Para. IV.B.3, (2nd Sentence):

After Receiving Inspection,
the number of the new NCR shall be added to the original "Hold" tag or
additional "Hold" tag(s) shall be attached to the item, denoting the new
NCR(s).

CHG. NO. 51
EFFECTIVE DATE 9/2/81
QA N/A
QCP 8
REV. 4
DATE 9/28/79

REASON FOR CHANGE (1) To correctly define responsibility.

(2) Allow attachment of multiple "Hold" tags to items on more than one NCR.

S. J. Van Nieuwenhuizen
for Inspection Specialist

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED Sr. Const. Mgr.	DATE
<i>W. Lambert</i>	<i>9/2/81</i>	<i>B.E.O'Connor</i>	<i>9/2/81</i>	<i>W. Lambert</i>	<i>9/3/81</i>	<i>T.P. Landolt</i>	<i>9/3/81</i>	<i>J.R. Smyth</i>	<i>9/3/81</i>
		<i>for D.E.M.</i>							



IM 4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 45
EFFECTIVE
DATE 7/9/81QA N/AQCP 8REV. 4DATE 9/28/79PROCEDURE TITLE Material ControlPREPARED BY B. E. O'Connor DATE 6/10/81CHANGEPara. IV.7 - After and - change distribution to "distribute".IV.F.7 - Change QAS - A&R to QAS - R&SIV.F.8 - Change QAS - A&R to QAS - R&SIV.F.13 - Change QAS - A&R to QAS - R&DSRECEIVED
U. E & C. INC.REASON FOR CHANGE To correctly define responsibility

JUL 23 1981

SEABROOK
STATION

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>W. B. Bunt</i>	<i>6/10/81</i>	<i>R. C. Linn</i>	<i>6/10/81</i>	<i>P. J. L.</i>	<i>6/10/81</i>	<i>R. B. Linn</i>	<i>6/10/81</i>	<i>R. B. Linn</i>	<i>7/2/81</i>

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-8
MATERIAL CONTROL

FOR

SEABROOK STATION

March 14 1979

INFORMATION ONLY

Prepared by:

Marta Stevens
M. Stevens

Quality Assurance Engineer

Revisions					
NO.	Date	Prep. by	Approved By		
			QA	C.M.	P.M.
1	6/26/75	<i>Alman</i>	<i>SGR</i>	<i>SK</i>	<i>SK</i>

Approved by:

J. R. Dmytryk
J. R. Dmytryk
Construction Manager

Approved by:

G. F. Cole
G. F. Cole

Project Manager

Approved by:

J. B. Silverwood
J. B. Silverwood, Manager

Reliability & Quality Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr	Mgr. R&QA	Project Con. Mgr
2	9/14/76	3,4,5, Figure 1	<i>Smann</i>	<i>SK</i>	<i>SGR</i>	<i>SK</i>
3	5/6/77	i, ii, 1,2,4,5	<i>Smann</i>	<i>SK</i>	<i>SGR</i>	<i>SK</i>
4	9/28/79	1,2,3,4,5	<i>Al Whitman</i>	<i>SK</i>	<i>SGR</i>	<i>SK</i>

9/28/79

QCP-8 CURRENT PAGE LISTING

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3	9/28/79
4	9/28/79
5	9/28/79
F-1	9/14/76

ATTACHMENT 1 TO PROJECT QUALITY CONTROL PROCEDURE QCP-8IDENTIFICATION OF CHANGES

This procedure has been revised as listed below for the reasons given:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
II.B.9	1	Deleted "General Construction Procedure" and replaced with reference document FGCP-3
II.B.10	1	Added reference document QA-14
III.C.2	2	Added "(FQAE's)"
IV.D.1	3	Identified the referenced document "FGCP-3"
IV.D.3.b	3	<ol style="list-style-type: none"> 1. Added "when practical" since segregated storage is not always practical because of a components physical size etc. 2. Editorial change
		Paragraphs IV.E and IV.F renumbered IV.F and IV.G
IV.E	3	Added new paragraph IV.E "Material Hold"
IV.F	4	Editorial
IV.F.6	4	Rewritten for clarity
IV.F.7	4	<ol style="list-style-type: none"> 1. Delete "Resident Engineer" from distribution responsibility 2. Change YAEC FLD "QC" to "QA"
IV.F.8	5	Detailed the provisions for material on hold.
IV.F.11	5	Clairify the duplication and distribution responsibility
IV.F.12	5	Rewritten to detail the removal of the "LWA" and "Hold" tags.
IV.F.13	5	<ol style="list-style-type: none"> 1. Deleted because of conflict with QA-14 paragraphs IV.H.1 2. IV.F.13 was IV.F.14

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-8
FOR
MATERIAL CONTROL

I. SCOPE

This procedure provides instructions for material control during UE&C's Level I Receiving & Storage activities and Level II Surveillance of Civil/Structural activities of items identified as Safety Class 1, 2, 3, Class IE and Seismic Category I in Tables 3.2-1 and 3.2-2 of the PSAR.

II. GENERAL

A. Purpose

1. This procedure establishes a system for identification and control to assure that only acceptable items are released to contractors, and are traceable to supporting Quality Assurance documentation.
2. This procedure imposes the applicable portions of Corporate Standard VIII of the QA Manual and Seabrook QA Procedure QA-8.

B. Reference Documents

- | | | |
|-----|----------|--|
| 1. | QA-2-1 | "Quality Assurance Program" |
| 2. | QCP-7-1 | "Receiving Inspection - UE&C Purchased Items" |
| 3. | QCP-7-2 | "Receiving Inspection - Westinghouse NSSS Items" |
| 4. | QA-8 | "Identification and Control of Materials, Parts and Components" |
| 5. | QCP-10-1 | "Site Surveillance" |
| 6. | QCP-13 | "Storage Control" |
| 7. | QA-15 | "Nonconforming Materials, Parts, or Components" |
| 8. | QCP-17-1 | "Records Review" |
| 9. | FGCP-3 | "Receiving, Inspection and Storage of Nuclear and Safety-Related Equipment and Material" |
| 10. | QA-14 | "Inspection, Test and Operating Status" |

III. RESPONSIBILITIES

A. Contractor

Contractors engaged in safety-related site activities are responsible for:

1. Initiating a system for the identification and control of contractor purchased items in accordance with their UE&C approved procedures.

III. RESPONSIBILITIES (Cont'd)

2. Initiating a system for the identification and control of UE&C purchased items which the contractor is responsible to install in accordance with their UE&C approved procedure and the equipment specification.

B. Construction Managers (UE&C)

The UE&C Construction Department, through the Resident Construction Manager, is responsible for providing the material control interface between the Field Quality Assurance Group and the Contractors.

C. Field Quality Assurance Group (UE&C)

1. The UE&C Field Superintendent-Quality Assurance (FS-QA) is responsible for the implementation of this QCP through the Field Quality Assurance Group.
2. Field Quality Assurance Engineers (FQAE's) are responsible for assuring that items within their areas of responsibility are correctly identified and controlled.

D. Yankee Atomic Electric Company (YAEC)

The YAEC FQC & Audit Group is responsible for performing surveillance and audit of UE&C's activities.

IV. PROCEDURE

A. Receiving Inspection Activities

1. Prior to the performance of Receiving Inspection, the UE&C Material Department shall perform the receipt functions as specified in Quality Control Procedure QCP-7-1 and 7-2.
2. Items requiring Receiving Inspection shall be inspected in accordance with QCP-7-1 and 7-2.
3. As noted in QCP-7-1 and 7-2, damage or other discrepancies found by the Material Department or during Receiving Inspection shall be reported in accordance with QA-15. A "Hold" tag shall be placed on the item, and the numbers of the applicable NCR's shall be noted on the "Hold" tags.

B. Storage Inspection

1. Material shall be inspected while in storage in accordance with QCP-13.

IV. PROCEDURE (Cont'd)

2. Discrepancies noted at this time shall be reported in accordance with QA-15.
3. If discrepancies are noted during the Storage Inspection, a "Hold" tag shall be attached to the item and an NCR shall be written. If the item already had a "Hold" tag attached as a result of Receiving Inspection, the number of the new NCR shall be added to the original "Hold" tag.

C. Records Review

1. A Records Review shall be performed in accordance with QCP-17-1. This may be accomplished at any time after the documentation is received but prior to release of the item.
2. If a documentation NCR is required, a "Hold" tag shall be attached to the item and the number of the NCR shall be noted on the "Hold" tag. Disposition shall be in accordance with QA-15.

D. Material Release

1. Items with a "Release" tag may be withdrawn at any time, subject to standard construction requisitioning per UE&C Field General Construction Procedure, FGCP-3.
2. When items are on hold status due to a nonconformance, the Field Quality Assurance Group shall remove the "Hold" tags as soon as the NCR is cleared and attach a "Release" tag to the item in accordance with QA-15.
3. Partial release of items and/or lots on hold status may be accomplished as follows:
 - a. Unique documentation for the item and/or lot as defined by piece, part batch or serial number must be acceptable as indicated by a signed Receiving Inspection Report.
 - b. The acceptable items and/or lots shall be tagged "Release" and separated from the remaining items and/or lots when practical. The removed "Hold" tags shall indicate partial release status and shall be filed until the entire lot is fully released.

E. Material Hold

1. Items which do not conform with specified requirements shall be identified as nonconforming by application of a "Hold" tag and when practical shall be stored in a segregated area to prevent their use until disposition is determined and accomplished. When it is not practical to separate an item because of its physical size or when there is concern that the item or its identification could be lost the item shall be clearly tagged to prevent its inadvertent use.

IV. PROCEDURE (Cont'd)

F. Limited Work Authorization (LWA)

1. Items shall not be moved out of the Receiving-Storage areas or further processed while in a "Hold" status. Items in "Hold" status must be changed to a "Limited Work Authorization" (LWA) status before they may be moved, reworked or repaired to comply with an NCR disposition, or otherwise processed on a limited controlled basis.
2. To change item status from "Hold" to "LWA"; a "Limited Work Authorization Request", Figure 1, shall be initiated by the UE&C Department or Site Subcontractor desiring the LWA.
3. The requester shall obtain a LWA number from the LWA Log maintained by the UE&C Supervisor-Administration & Records (QAS-A&R). This Log shall list the LWA No. (sequential), the item name/identity, date of request, related NCR no.(s) and LWA status.
4. The requester shall complete parts A&B of the LWA request, signing, dating and forwarding the form to the FS-QA for his review and approval.
5. The FS-QA shall review the LWA request and:
 - a. Approve the LWA as written, or
 - b. Approve the LWA with modifications, or
 - c. Deny the LWA giving reason for denial
6. The FS-QA shall sign and date the LWA. If the LWA is approved and the items involved are for use by Subcontractors other than Civil/Structural, then the FS-QA shall obtain the dated signature of the YAEC FLD QA and Audit Mgr. indicating his concurrence with the LWA. If the LWA is denied, the FSQA shall return the LWA to the requester for his consideration and possible modification for resubmittal.
7. FS-QA shall duplicate all approved LWA's and distribution to:
 - a. YAEC FLD QA and Audit Mgr.
 - b. LWA requester
 - c. Department or Subcontractor who will perform rework or repair (if applicable)
 - d. Resident Construction Mgr.
 - e. Material Department
 - f. RE
 - g. QAS-A&R
 - h. Site QA files

IV. PROCEDURE (Cont'd)

F. Limited Work Authorization (LWA) (cont'd)

8. QAS-A&R shall give a copy of the LWA to the FQAE who shall add the completed "LWA" tag permitting further processing of the covered item(s) in accordance with QA-14. The "Hold" tag will remain on the item until the NCR has been dispositioned and the item reinspected and accepted by the FQAE.
9. On LWA's covering rework or repair performed in the Receiving-Storage areas or LWA's releasing items to C/S Subcontractors, the UE&C FLD QA Group shall follow and close the LWA.
10. On LWA's covering the release of items in all other areas, the YAEC FLD QA and Audit Mgr. shall have the LWA followed and closed when completed.
11. Part D of the LWA form shall be completed by the person closing the LWA by signing, dating and returning LWA to the FS-QA. The FS-QA shall duplicate and distribute the completed LWA's as before. (Para. IV.F.7)
12. When LWA's are closed by either UE&C Field QA or YAEC Field QA, the "LWA" tag shall be removed by the UE&C FQAE. Should the LWA satisfy the required disposition of an NCR and the items are reinspected and accepted by UE&C FQAE, then the NCR can be closed and the "Hold" tag removed and replaced by a "Release" tag.
13. The QAS-A&R shall enter "closed" on the LWA Log as LWA's are completed. He shall review the Log monthly to assure that all open LWA's are active and still required.

G. Change of Status

1. The status of an item may be changed at any time on the basis of inspection, surveillance or written instructions from UE&C Quality Assurance, YAEC Field Quality Control & Audit or Contractor QC.
2. New nonconformance discovered after release of an item, shall be handled in accordance with QA-15.

V. CIVIL/STRUCTURAL SURVEILLANCE

- A. Individual contractors have the Level I responsibility for maintaining material control over the containment liner, the concrete placement and structural steel erection and reinforcing bar installation. Their procedures shall be approved by UE&C.
- B. As part of the UE&C Surveillance activities in accordance with QCP-10-1, the QAE shall monitor the Contractor's Material Control activities.



SEABROOK
QCP-8
9/14/76
FIGURE 1

FORM 4544-9763

LIMITED WORK AUTHORIZATION REQUEST

REV. ORIG.

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

LWA NO. _____

DATE _____

A. ITEM NAME/IDENTITY _____

QTY. COVERED BY LWA _____ SPEC./DWG.(INCL.REV.) _____ PO/CONT. _____ CO _____

RELATED NCR'S. - UE & NCR NO(S) _____ SUBCONTRACTOR NCR NO(S) _____

REWORK OR REPAIR TO BE PERFORMED BY _____

DEPARTMENT OR ORGANIZATION _____

B. REASON FOR LWA REQUEST _____

LIMIT TO AMOUNT OF WORK WHICH WILL BE PERFORMED _____

REQUESTED BY _____

SIGNATURE

TITLE

ORGANIZATION

DATE _____

C. ☐ STATUS OF ITEM(S) HAS BEEN REVIEWED INCLUDING ALL NCR'S COVERING ITEM(S) AND LWA IS APPROVED. INSPECTION HOLD POINTS SHALL NOT BE BYPASSED AND WORK SHALL NOT PROGRESS BEYOND THE FOLLOWING POINT TO PERMIT ACCESSIBILITY TO ITEM(S): _____

☐ LWA DENIED FOR THE FOLLOWING REASON: _____

FSQA _____

SIGNATURE

DATE

YAEC FLD QC & AUDIT MGR _____

CONCURRENCE

SIGNATURE

DATE

(FOR OTHER THAN CIVIL/STRUCTURAL ITEMS)

D. ☐ LWA CLOSED BY ACCEPTANCE OF ITEM(S) THROUGH CLOSING OF NCR NO(S) _____

CLOSED BY _____

SIGNATURE

TITLE

ORGANIZATION

DATE _____

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-10-1

SITE SURVEILLANCE

FOR

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

March 30, 1976

INFORMATION ONLY

Prepared By:

R.A. Miller

R.A. Miller
Supervising Engineer-Field QA

Approved By:

J.R. Dmytryk
J.R. Dmytryk
Project Construction Manager

Reviewed By:

R.H. Leonard

R.H. Leonard
Quality Assurance Engineer

Approved By:

G.F. Cole
G.F. Cole
Project Manager

RECEIVED
U.E. & C. INC.

FEB 24 1981

SEABROOK
STATION

Approved By:

J.B. Silverwood
J.B. Silverwood, Manager
Reliability & Quality Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Project Manager	Manager R&QA	Proj. Con. Manager
1	5/6/77	1,11,1,2,3,4,5,6,7	<i>D. man</i>	<i>572</i>	<i>8BS</i>	<i>285</i>
2	11/3/78	1,11,5	<i>De man</i>	<i>572</i>	<i>8BS</i>	<i>285</i>
3	9/28/79	2,4,5,6,7-4	<i>De man</i>	<i>572</i>	<i>8BS</i>	<i>285</i>
4	1/30/81	3,4,6 & 7	<i>De man</i>	<i>572</i>	<i>8BS</i>	<i>285</i>

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1/30/81

QUALITY CONTROL PROCEDURE QCP-10-1

IDENTIFICATION OF CHANGES

REVISION 4

This procedure has been revised as listed below for the reason given:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
IV.A.4.f	3	Revised paragraph to clarify provisions for "AI hold points".
IV.A.4.m	4	Added paragraph per ACN No. 25, (3/17/80).
IV.E.1	6	Added follow-up surveillance to verify corrective action and provide for CNR implementation of "Unsatisfactory" conditions.
IV.F	7	Deleted in its entirety. Surveillance areas to be selected from Test Lab procedures.

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY CONTROL PROCEDURE QCP-10-1
FOR
SITE SURVEILLANCE

I. SCOPE

This Procedure applies to UE&C's Level 2 Program for the surveillance of Subcontractors' UE&C approved Level 1 Programs covering the containment structure and other safety related civil/structural activities including concrete manufacture and placement, soil compaction, rebar installation, structural steel erection, testing laboratory and consultant activities.

II. GENERAL

A. Purpose

To establish the method of conducting surveillance of the inspection programs covering the Seismic Category I and Safety Class 1, 2 and 3 items, structures and activities listed under SCOPE.

B. Reference Documents

1. QA-16-1 "Corrective Action"
2. QA-16-2 "Work Stoppage"
3. QA-17-2 "Quality Assurance Records"

III. RESPONSIBILITIES

A. Site Subcontractors and Consultants

1. Provide a Quality Assurance Program to assure that the work performed is in accordance with QA requirements of the contract.
2. Perform Level 1 inspections of the work that they perform.
3. Generate and transmit all required documentation.
4. Resolve all unacceptable, nonconforming conditions.

B. Reliability and Quality Assurance Department

1. Plan and conduct surveillance of the Level 1 inspection activities of the subcontractors.
2. Report unacceptable, nonconforming conditions.
3. Provide documentation and follow up of surveillance activities.

IV. PROCEDURE

A. Surveillance Planning

1. The QA Supervisor-Civil/Structural (QAS-C/S) shall assign QA engineers (QAE's) to plan surveillance when possible prior to the start of the construction and related Level 1 activities to be surveyed.
2. For background and reference in developing surveillance plans, the QAE-Records (QAE-R) shall make available to the QAE copies of the purchase order/contract governing the subcontractor's activities and the drawings/specifications, codes and standards referenced in the contract.
3. The QAE-R shall make available the QAE copies of the subcontractor's UE&C approved construction procedures and UE&C approved Level 1 inspection program and procedures. These documents serve as the basis for the surveillance plan. Any questions concerning the subcontractor's approved Level 1 program and procedures shall be referred to the FSQA who will resolve them with the project QAE.
4. In planning a surveillance program, the QAE shall provide for a check of the implementation of the subcontractor's UE&C approved Level 1 inspection program and procedures. The surveillance program shall indicate verification in the following areas as applicable:
 - a. Personnel - Personnel performing NDE and Level 1 inspections are trained, qualified, certified and independent of the activity being inspected. Concrete testing and inspection personnel shall be qualified in accordance with Appendix VII ASME Code, Section III, Division 2, 1975 edition.
 - b. Document Control - The necessary drawings, specifications, procedures, work instructions, and inspection-test plans are available at work locations, in use and of proper issue.

- c. Receiving Inspection - Items received by subcontractors are checked for proper preservation, shipping damage, and adequacy and traceability of documentation. Items not source inspected are checked for physical properties, dimensions, weld preparations, lubricants and oils.
- d. Identification of Material, Parts and Components - Items used for the activity are those specified that have been approved and released for construction.
- e. Control of Special Processes - Current, qualified, approved procedures are followed to perform work activities, inspections and NDE's. Special processes are performed by qualified, certified personnel.
- f. Inspection and Test - Inspection and test hold points shall be observed and "Authorized Inspector hold points" shall not be bypassed. Visual surveillance is made of inspection and test activities in progress in area under surveillance.
- g. Control of Measuring and Test Equipment - Necessary tooling, measuring and test equipment are available, in use and properly calibrated.
- h. Storage and Handling - Equipment storage and handling in area under surveillance is adequate to prevent damage and meets approved procedures and maintenance schedules are being complied with.
- i. Inspection and Test Status - Item status is properly identified by tagging or other suitable means to preclude bypassing of required inspections and tests.
- j. Nonconformances & Corrective Action - NCR's and CAR's are issued when required, properly dispositioned and followed through to resolution.
- k. Quality Assurance Records - Legible, adequate, accurate, traceable records are generated in the surveillance area and are maintained and filed per approved procedure. Sampling of inspection, test and NDE reports indicates their accuracy and adequacy.
- l. Audits - Audits of Level 1 inspection activities are performed to preplanned checklists and required corrective action is taken.

m. Housekeeping - Assure that the quality of an item is not degraded as a result of housekeeping practices and techniques during construction processing.

5. A Master Surveillance Checkplan, Fig. 1, shall be prepared by the QAE and reviewed and approved by the QAS-C/S for the surveillance of the Subcontractor Level 1 activities. When changes are made in the purchase order/contract, referenced documents or the subcontractor's Level 1 inspection program and procedures which affect surveillance, the corresponding Master Surveillance Check Plan shall be revised by the QAE to keep it up to date.

B. Surveillance Scheduling

1. The QAE shall select surveillance activities from the Master Surveillance Check Plans and list them on the Surveillance Report, Fig. 2. Surveillance activity selection is based on current construction-inspection activities, open items requiring follow-up from previous surveillance, and the frequency and results of prior surveillance.
2. The QAS-C/S shall maintain a log of Surveillance Reports listing date of report, initials of QAE, report no. (sequential), unit no., report title, subcontractor, PO/Cont. No., C.O.
3. The QAS-C/S shall maintain a log of Contractor Notification Reports listing date of report, using the REQUEST system report no. (sequential), unit no., brief description of finding, subcontractor, PO/Cont. No., C. O. and report status open or closed.
4. The QAS-C/S shall establish a Surveillance Status Log, Fig. 3 for each contract listing by number all the activities on the Master Surveillance Check Plan. As surveillances are performed, the activities surveilled are logged on the Surveillance Status Log. Monthly, the QAS-C/S shall review the log to assure adequate coverage and control of activities under surveillance.
5. The QAS-C/S shall determine the frequency and extent of surveillance coverage based on the type and amount of activity currently in progress and from analysis of the frequency and results of past surveillance and Contractor Notification Reports.

C. Surveillance

1. Surveillance shall be performed by qualified QAE's to verify that the Level 1 inspections are being performed in accordance with the subcontractor's UE&C approved program and procedures. The QAE shall

review and be familiar with the contents of the documents in Paragraphs IV.A.2 and IV.A.3 and the results of previous surveillance of the activity prior to performing the surveillance. This review shall also assure that the requirements of the Master Surveillance Check Plan activities selected for surveillance have been updated to meet any revisions or waivers to controlling documents.

2. Activities to be checked are those recorded on the prepared Surveillance Report. For each surveillance activity listed, the QAE shall check the appropriate column (SAT/UNSAT) and shall include supporting information in the "Remarks/Findings" column. Where necessary for clarity, item, system or activity and the area or building location shall be identified in this column.
 - a. If any unsatisfactory condition or nonconforming item is immediately corrected, this shall be checked "UNSAT" and the corrective action taken recorded in the "Remarks/Findings" column.
 - b. If any unsatisfactory condition is not immediately corrected the details of the condition shall be noted in the "Remarks/Findings" column and a Contractors Notification Report shall be initiated by the QAE, reviewed by the QAS-C/S and issued to the contractor. The contractor will be advised by copy of the Contractor Notification Report to take corrective action. All Contractor Notification Reports will include a response date for subcontractors corrective action.
 - c. If a nonconforming item is not immediately corrected, the QAE shall request the subcontractor to initiate his own NCR. If an NCR is not issued by the subcontractor when requested the QAE shall issue a Contractor Notification Report to the contractor. Should the Contractor Notification Report prove ineffective, the QAS-C/S shall issue a CAR per QA-16-1. The subcontractor's NCR, UE&C Contractor Notification Report Number or UE&C CAR Number shall be noted in the "Remarks/Findings" column of the Surveillance Report.
 - d. When the CNR, or CAR is issued the Surveillance Report item is also considered closed. When immediate action is taken by Subcontractor to correct the unsatisfactory condition or nonconforming item, the Surveillance Report item is considered closed. Follow-up in accordance with IV.E is required to verify effectiveness.

e. When an unsatisfactory condition or nonconforming item is of such consequence that work stoppage must be considered, the provisions of QA-16-2 shall be followed.

3. If during surveillance, the QAE notices an unsatisfactory condition or nonconforming item related to an activity not the Surveillance Report, he shall document the finding by adding the information to the report.
4. If during "walk-around" surveillance, the QAE notices an unsatisfactory condition or nonconforming item which is not immediately corrected, the QAE shall issue a Contractor Notification Report to the contractor. Should the Contractor Notification Reports, which identified nonconforming items, prove ineffective the QAS-C/S shall issue a CAR per QA-16-1.

D. Report Distribution

1. Copies of surveillance reports and Contractor Notification Reports are distributed as follows:
 1. YAEC Site Manager
 2. Yankee Field Quality Control and Audit Manager
 3. UE&C Resident Construction Manager
 4. UE&C Unit Superintendent or Area Superintendent
 5. Subcontractor's Superintendent
 6. Subcontractor's Quality Assurance Representative
 7. UE&C Field Superintendent-Quality Assurance
 8. The original report is sent to the FS-QA who forwards the report to the QAE-R for retention in the vault.

E. Follow-up

1. A follow-up surveillance will be made of previous unsatisfactory items by adding the items to the report for the next surveillance of the activity or by a special surveillance.

The scheduling of a follow-up surveillance to verify corrective action shall be governed by both the frequency of the work operation and the nature of the unsatisfactory condition but should be reasonably soon after the contractor's date forecasted on the CNR. The CNR is to be closed out when the QAE is confident that the corrective action has been properly implemented. Any unusual delay in this verification must be noted in Section E of the CNR form.

2. Monthly, the QAS-C/S shall review and evaluate the surveillance reports, and Contractor Notification Reports issued in that period for adequacy of the reports, acceptability of results, effectiveness of corrective action, timeliness of resolutions and quality trends. He shall initiate Corrective Action Requests per QA-16-1 when indicated or shall review the matter with FSQA for consideration of the issue of a Stop Work order per QA-16-2.



PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

3 / 30 / 76

TITLE _____ PAGE _____
PO/CONT. NO. _____ CO _____ SUBCONTRACTOR _____
SPECIFICATION NO. _____ REV. _____
PREPARED BY _____ TITLE _____ DATE _____

[illegible]

FIGURE 1



FORM 4540-9703
REV. 0818, 4/76

SURVEILLANCE REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

pg. _____

UNIT NO.

REPORT NO.

LOCATION

DATE _____

DATE _____

SUBCONTRACTOR

TITLE

TITLE

PO/CONT. NO.

RECORDED BY

EVALUATED BY

[illegible]

SEABROOK

QCP-10-1

3/30/76

FIGURE 2

SURVEILLANCE STATUS LOG

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PAGE

UNIT NO.

MASTER SURVEILLANCE CHECK PLAN TITLE

PO/CONT. NO.

CO

SUBCONTRACTOR

PREPARED BY

TITL

[illegible]

SEABROOK

QCP-10-1

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FIGURE 3



CONTRACTOR NOTIFICATION REPORT # _____

Date _____

Page _____ of _____

A To _____ Title _____ Subcontractor _____ PO/Contract _____ C.O. _____ Contractor QA Notified _____	Unit No. _____ Surveillance Report _____
	Item No. _____

The unsatisfactory condition/nonconformance described below has been identified. Please take immediate appropriate action to control this condition and to document your actions and resolutions in accordance with the provisions of your contract.

YOUR RESPONSE IS EXPECTED BY _____

B <u>DESCRIPTION OF FINDING:</u> The following condition is	<input type="checkbox"/> A Nonconformance
	<input type="checkbox"/> An Unsatisfactory Condition

UE&C QAE _____	DATE _____	UE&C QAS-C/S _____	DATE _____
----------------	------------	--------------------	------------

C SUBCONTRACTOR'S RESPONSE:

NCR IN PROCESS (NO. _____) PRECEDURE REVISION INITIATED (IPC NO. _____)

OTHER (Include Date of Corrective Action) _____

 SIGNATURE _____ DATE _____
 (ADDRESSEE)

D REVIEW OF SUBCONTRACTOR'S RESPONSE:
☐ Adequate
☐ Inadequate: UE&C CAR

ACTION PROPOSED BY THE SUBCONTRACTOR TO RESOLVE THE CONDITION DESCRIBED IS _____

UE&C QAS-C/S _____	DATE _____
--------------------	------------

E ACTION VERIFIED: THE CORRECTIVE ACTION DESCRIBED HAS BEEN IMPLEMENTED AND SATISFACTORILY MEETS THE INTENT OF THE REQUEST:

UE&C QAE _____	DATE _____	UE&C QAS-C/S _____	DATE _____
----------------	------------	--------------------	------------

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY CONTROL PROCEDURE QCP-10-2
SURVEILLANCE OF
BLASTING OPERATIONS
FOR

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

July 5, 1977

INFORMATION ONLY

Prepared by:

J. H. Malvin
J. H. Malvin
Quality Assurance Engineer

Approved by:

J. R. Dmytryk
J. R. Dmytryk
Construction Manager

Reviewed by:

R. H. Leonard
R. H. Leonard
Supervising Engineer,
Seabrook Project Quality

Approved by:

G. F. Cole
G. F. Cole
Project Manager

Approved by:

J. B. Silverwood
J. B. Silverwood, Manager
Reliability & Quality Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Project Manager	R&QA	Project Cons. Mgr.
1	9/5/79	1, 3, 4, 5	<i>J. H. Malvin</i>	<i>G. F. Cole</i>	<i>J. B. Silverwood</i>	<i>J. R. Dmytryk</i>

9/5/79

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ATTACHMENT TO QUALITY CONTROL PROCEDURE QCP-10-2

IDENTIFICATION OF CHANGES

REVISION 1

This procedure has been revised as listed below for the reason given:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
IV.A.5 & IV.D.1	3 & 4	Incorporate ACN #8
General		Titles updated to reflect current site organizational chart.

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY CONTROL PROCEDURE QCP-10-2
FOR
SURVEILLANCE OF BLASTING OPERATION

I. SCOPE

The procedure applies to UE&C's Level 2 Surveillance Program of UE&C's Construction Level I Inspection Program of Blasting Operations performed by contractors.

II. GENERAL

A. Purpose

To establish the method of conducting surveillance of the inspection program of the Blasting Operations.

B. Reference Documents

1. QA-16-1 - Corrective Action
2. QA-16-2 - Work Stoppage
3. QA-17-2 - Quality Assurance Records
4. FCCP-10 - Procedure for the Control and Documentation of Blasting Operations

III. RESPONSIBILITIES

The Reliability & Quality Assurance Department will:

1. Plan and conduct surveillance of the Level I inspection activities.
2. Report unacceptable, nonconforming activities.
3. Provide documentation and follow up of surveillance activities.

IV. PROCEDURE

A. Surveillance Planning

1. The QAE - Civil/Structural (QAE-C/S) shall assign QA Engineers (QAE's) to plan surveillance prior to the start of blasting activities.

IV. PROCEDURE (Continued)

A. Surveillance Planning (Continued)

2. For background and reference in developing surveillance plans, the QAE-Records (QAE-R) shall make available to the QAE copies of the purchase order/contract governing the contractor's activities and the drawing/specifications, codes, and standards referenced in the contract.
3. The QAE-R shall make available to the QAE copies of the Level I inspection program and procedures. This document serves as the basis for the surveillance plan. Any questions concerning the Level I program and procedures shall be referred to the FSQA who will resolve them with the Project Resident Construction Manager.
4. In planning a surveillance program, the QAE shall provide for a check of the implementation of the UE&C Level I inspection program and procedures. The surveillance program shall indicate verification in the following areas as applicable:
 - A. Personnel - Personnel performing Level I inspections are trained, qualified professionals independent of the activities being inspected. Contractor's powder men and blasting consultant are approved by the Construction Manager.
 - B. Document Control - The necessary drawings, specification, procedures, work instructions and inspection - test plans are available at work locations, in use and of proper revision.
 - C. Inspection and Test - Inspection and test hold points are observed and performed. Visual surveillance is made of inspection and test activities in progress in area under surveillance.
 - D. Storage and Handling - Explosive storage and handling is adequate to prevent accident and damage and meets approved procedures.
 - E. Inspection Status - Status is properly identified by inspection signature on blasting pattern to preclude by passing of required inspections.
 - F. Quality Control Records - Legible, adequate, accurate, traceable records are generated in the surveillance area and are maintained and filed per approved procedure. Sampling of inspection and test reports indicate their accuracy and adequacy.

IV. PROCEDURE (Continued)

A. Surveillance Planning (Continued)

5. A Master Surveillance Check Plan, Figure 1 shall be prepared by the QAE for the surveillance of the Level I activity. When changes are made in the purchase order/contract, reference documents or the Level I inspection program and procedures which effect surveillance, the corresponding Master Surveillance Check Plan, shall be revised by the QAE to keep it up to date. The Master Surveillance Check Plan will be reviewed and approved by the FS-QA or his designee after either the initial preparation or a revision.

B. Surveillance Scheduling

1. The QAE shall select surveillance activities from the Master Surveillance Check Plan and list them on the Surveillance Report, Figure 2. Surveillance activity selection is based on current construction - inspection activities, open items requiring follow-up from previous surveillance and the frequency and results of prior surveillance.
2. The QAE - C/S shall maintain a log of surveillance reports listing Report No. (sequential), Location, report title and date.
3. The QAE - C/S shall establish a Surveillance Status Log, Figure 3, listing by number all the activities on the Master Surveillance Check Plan. As surveillances are performed, the activities surveyed are logged on the surveillance status log. Monthly, the QAE - C/S shall review the log to assure adequate coverage and control of activities under surveillance.

C. Surveillance

1. Surveillance shall be performed by qualified QAE's to verify that the Level I inspections are being performed in accordance with the approved program and procedures. The QAE shall review and be familiar with the contents of the documents in Paragraphs IV.A.2 and IV.A.3 and the results of previous surveillance of the activity prior to performing the surveillance. This review shall also assure that the requirements of the Master Surveillance Check Plan activities selected for surveillance have been updated to meet any revisions or waivers to controlling documents.

IV. PROCEDURE (Continued)

C. Surveillance (Continued)

2. Activities to be checked are those recorded on the prepared Surveillance Report. For each surveillance activity listed, the QAE shall check the appropriate column (Sat/Unsat) and shall include supporting information in the "Remarks/Findings" column. When necessary for clarity, the elevation, building location or other identifying features shall be identified in this column.
 - a. If an unsatisfactory condition or nonconforming item is immediately corrected, this shall be checked "Unsat" and the corrective action taken recorded in the "Remarks/Findings" column.
 - b. If an unsatisfactory condition is not immediately corrected, the details of the condition shall be noted in the "Remarks/Findings" column. The contractor or UE&C Level I Inspector is advised to take corrective action by copy of the Surveillance Report.
 - c. If a nonconforming item is not immediately corrected, the QAE shall issue a CAR per QA-16-1. The UE&C number shall be noted in the "Remarks/Findings" column.
 - d. When an unsatisfactory condition or nonconforming item is of such consequence that work stoppage must be considered, the provisions of QA-16-2 shall be followed.
3. If during surveillance, the QAE notices an unsatisfactory condition or nonconforming item related to an activity not on the Surveillance Report, he shall document the finding by adding the information to the report.

D. Report Distribution

Copies of surveillance reports are distributed as follows:

1. YAEC Site Manager
2. Yankee Field Quality Control and Audit Manager
3. UE&C Resident Construction Manager
4. UE&C Resident Construction Engineer
5. Blasting Contractor's Superintendent
6. Field Superintendent - Quality Assurance
7. QAE - C/S
8. QAE - retains original of report until all items are closed. After this, the report is marked closed, redistributed to above recipients and the original sent to the QAE-R for file per QAP-17-2.

IV. PROCEDURE (Continued)

E. Follow-up

1. The QAE shall verify that effective corrective action has been taken on the unsatisfactory findings of the surveillance. This shall be accomplished by conducting a follow-up surveillance of the open items or by adding the open items to the report for the next surveillance of the activity. When an unsatisfactory condition or nonconforming item is found, the condition or item shall be checked after correction on the next two consecutive surveillances of the activity as a minimum.
2. Monthly, the QAE - C/S shall review and evaluate the surveillance reports issued in that period for adequacy of the reports, acceptability of results, effectiveness of corrective action, timeliness of resolutions and quality trends. He shall initiate Corrective Action Requests per QA-16-1 when required and shall review the matter with the FSQA for consideration of the issue of a Stop Work Order per QA-16-2.

F. Civil-Structural Blasting Activities Surveillance Requirements

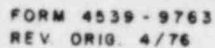
The blasting activities subject to surveillance by the UE&C Field QA group shall assure but are not limited to the following:

1. UE&C Superintendent of Operations or his designee has approved all initial blasting plans and changes.
2. UE&C Resident Construction Engineer or Site Engineering Geologist has reviewed and initialed all initial blasting plans and changes.
3. UE&C Blasting Inspector has approved all Detailed Blasting patterns and assured that holes are loaded in conformance to it.
4. The contractors methods of explosive storage and on site transportation have been approved.
5. The construction and location of any required on site magazines has been approved.
6. All required approvals are documented by the Superintendent of Operations by letter.
7. Contractors Blasting Reports are developed, compiled and forwarded weekly to the UE&C Superintendent of Operations.
8. The UE&C Blasting Inspector has evaluated the potential effect of blasting on placed concrete.

IV. PROCEDURE (Continued)

F. Civil-Structural Blasting Activities Surveillance Requirements (Cont'd)

9. The Superintendent of Operations has stored, filed and maintained:
 - a. Initial Blasting Plans & Revisions
 - b. Approval Letters
 - c. Blasting Reports
 - d. Blasting Inspectors Reports



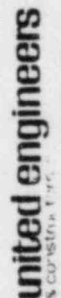
MASTER SURVEILLANCE CHECK PLAN

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

TITLE _____ PAGE _____
PO/CONT. NO. _____ CO _____ SUBCONTRACTOR _____
SPECIFICATION NO. _____ REV. _____
PREPARED BY _____ TITLE _____ DATE _____

[illegible]

FIGURE 1



SURVEILLANCE REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PG.

UNIT NO.

TOYLE

REPORT NO.

PO/CONT. NO.

CO _____ SUBCONTRACTOR

LOCATION

REPORTED BY

TITLE

DATE _____

EVALUATED BY

TITLE

DATE _____

[illegible]

FIGURE 2



PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PAGE _____

UNIT NO.

MASTER SURVEILLANCE CHECK PLAN TITLE

PO/CONT. NO.	CO	SUBCONTRACTOR
--------------	----	---------------

PREPARED BY	TITLE

[illegible]

FIGURE 2

QC P-10-2
7/5/77



QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Fire Protection Surveillance (Appendix 1)

PREPARED BY Robert D. Tancibok DATE 2/1/82

CHANGE

(1) - Appendix 1, Para. 4.C.3: Change Figure 2 to 1

(2) - Para. 4.D.1 - Change lower case "f" for Figure 2 to upper case "F" and change Figure 2 to Figure 1.

(3) - Para. 4.D.1.C - Change Figure 3 to 2

(4) - Fireproofing Surveillance Report - Figure 1 - Delete Figure 2 at bottom of form.
(2 sheets)

(5) - Contractor Notification Report Form - Figure 2 - Delete Figure 3 at bottom of form.

(6) - Appendix 1, para. 4.B.2 - Change to read as follows: The QAS C/S shall maintain a log of surveillances listing report number (sequential), date of report, initials of QAE, Unit Number, building and elevation.

(7) - Appendix 1, Para. 4.C.3 - Add sentence as follows: The QAE shall attach a list to the surveillance report which will include the following information: building and beam and/or column numbers of complete work.

INFORMATION ONLY

REASON FOR CHANGE 1 thru 5 - Correct typos and editorial errors.

6 & 7 - To include location requirements with the report.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED RCM	DATE
<i>W. Chamberlain</i>	<i>2/1/82</i>	<i>B. D. Tancibok</i>	<i>2/1/82</i>	<i>H. H. H. H. H.</i>	<i>2/1/82</i>	<i>T. P. Vancalle Jr.</i>	<i>2/1/82</i>	<i>H. H. H. H. H.</i>	<i>2/1/82</i>



4 4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

CHG. NO. 61
EFFECTIVE DATE 1/15/82PROCEDURE TITLE Fire Protection SurveillanceQA N/APREPARED BY R. D. TancibokDATE 1/15/82QCP 10-3REV. 1

CHANGE

DATE 5/26/80

A. Revise scope of procedure to add:

Appendix 1 to this procedure applies to UE&C's surveillance
program covering the site contractor's activities related to
application of fireproofing in Category I structures.

B. Insert Appendix 1, attached, as part of the procedure for Surveillance
of Fireproofing Activities.

REASON FOR CHANGE Surveillance requested by PSNH/YAEC. Contract is not safety-related.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAS	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED RCM	DATE
<i>[Signature]</i>	<u>1/15/82</u>	<i>[Signature]</i>	<u>1/15/82</u>	<i>[Signature]</i>	<u>1/15/82</u>	<i>[Signature]</i>	<u>1/15/82</u>	<i>[Signature]</i>	<u>1/15/82</u>

QUALITY CONTROL PROCEDURE QCP-10-3

FOR

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

MARCH

INFORMATION ONLY

PREPARED BY:

J. A. SCHMIDT

APPROVED BY:

J.R. DMYTRYK
PROJECT CONSTRUCTION MANAGER

REVIEWED BY:

D. E. MC GARRIGAN

APPROVED BY:

G.F. COLE
PROJECT MANAGER

APPROVED BY:

J.B. SILVERWOOD, MANAGER
RELIABILITY & QUALITY ASSURANCE

[illegible]

SEABROOK
QCP-10-3
5/26/80

QCP-10-3 CURRENT PAGE LISTING

REVISION 1

<u>Page</u>	<u>Date</u>
Cover Sheet	5/26/80
1	5/26/80
1	3/1/79
2	5/26/80
Figure 1	3/1/79
Attachment 1	5/26/80

IDENTIFICATION OF CHANGES

Seabrook
QCP-10-3
5/26/80

PROJECT QUALITY CONTROL PROCEDURE

REVISION 1

<u>Section</u>	<u>Page</u>	<u>Reason</u>
D.	2	Clarify requirements to satisfy audit NH-330
IV A.4	2	"Figure 2" was properly changed to "Attachment 1"
IV C.1	2	"Figure 2" was properly changed to "Attachment 1"
IV C.4	2	"Figure 2" was properly changed to "Attachment 1"
Attachment 1		"Figure 2" was properly changed to "Attachment 1"

UNITED ENGINEERS & CONSTRUCTORS INC.
QUALITY CONTROL PROCEDURE QCP-10-3

FOR

FIRE PROTECTION SURVEILLANCE

I. SCOPE

This procedure applies to UE&C's surveillance program for the completed civil/structural activities of the Fire Protection Systems at the Seabrook Site.

II GENERAL

A. Purpose

To establish the method of conducting surveillance of those items within the buildings and zones identified in Section F-2 of the PSNH "Fire Protection System Evaluation and Comparison to Branch Technical Position APCSB 9.5-1 Appendix A".

B. Reference Documents

1. PSNH - "Fire Protection System Evaluation and Comparison to Branch Technical position APCSB 9.5-1 Appendix A".

III. RESPONSIBILITY

A. UE&C

1. The Field Superintendent - Quality Assurance (FS-QA) is responsible for the implementation of this procedure.
2. The Field Quality Assurance Group (FQAG) is responsible for surveillance coverage, reporting and informing the Resident Construction Manager of nonconforming items.
3. The Resident Construction Manager (RCM) is responsible for notifying the FQAG when structures are complete and ready for surveillance and resolving non-conformances via subcontractor.

IV. PROCEDURE

A. Surveillance Planning

1. When notified by the RCM the FS-QA will assign appropriate personnel to perform the surveillance.

2. Surveillance personnel will be provided with the Fire Hazard Analysis sheets which identify items requiring surveillance.
3. Surveillance personnel shall review applicable construction drawings and specifications to determine specific requirements for items to be surveyed.
4. Surveillance personnel will initiate the Fire Protection Surveillance Report (FPSR) in accordance with the instructions in Attachment 1.

B. Performing Surveillance

1. Surveillance shall be performed on completed structures to assure compliance to approved drawings and specifications.
2. Surveillance will be accomplished by physical observation of the items and review of applicable documentation substantiating compliance to requirements.

C. Surveillance Reporting

1. Upon completion of surveillance, the FQAG will document the surveillance on the FPSR in accordance with the instructions in Attachment 1.
2. In the event unsatisfactory conditions are identified, the FQAG will notify the RCM of same by way of a speed letter. The RCM will resolve the unsatisfactory conditions and notify the FQAG when a follow-up surveillance can be performed.
3. When all items of a structure are completed and determined to be satisfactory, the FPSR shall be completed.
4. Completed FPSR's, for a given zone, will be compiled with the applicable analysis sheet from Section 2 of the PSNH-Fire Protection System Evaluation and Comparison and maintained by the QAE-Records until distribution in accordance with "Report Distribution" of Attachment 1.

D. Inprocess Surveillance

The need for inprocess surveillance of Fire Protection items will be satisfied by the surveillance performed on the Contractors involved in the safety related civil/structural activities required by QCP-10-1. No specific surveillance points for the Fire Protection items need be shown on the master surveillance check plan.

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION
SECTION A

UNIT No. _____

Building _____

Fire Area or Zone _____

Area Name _____

Location _____

Drawing _____

SECTION B

Surveillance Item	Fire Rating	Remarks	Status		Date
			Sat.	Unsat.	
Walls					
a) North					
b) South					
c) East					
d) West					
Floor					
Ceiling					
Doors					
Others					

SECTION C

Surveillance results for all the above required items is satisfactory.

Signature _____

UE&C Surveillance Representative

Date _____

ATTACHMENT 1

INSTRUCTIONS FOR COMPLETING THE FIRE PROTECTION SURVEILLANCE REPORT

Section A

Complete all applicable items in this section from the Fire Hazard Analysis Sheets provided.

Section B

Surveillance Item - Identify all items requiring surveillance by listing the materials to be used next to the surveillance item. Denote items not requiring surveillance as "NR".

Fire Rating - Enter the Fire Rating Hours for the specific items to be surveilled as noted on the Fire Hazard Analysis Sheets.

Remarks - Enter any pertinent information applicable to the item such as the following:

- a. Brief description of the item and why it is satisfactory or unsatisfactory.
- b. Statement the original unsatisfactory items were corrected.
- c. Additional information that may be of concern to the reader.

Status - Enter your initials in the satisfactory/unsatisfactory column as applicable and the date the surveillance was performed for each surveillance item. Items that are initially unsatisfactory and subsequently corrected will reflect two (2) sets of initials and dates.

Section C

When all items requiring surveillance are considered satisfactory the UE&C Surveillance Representative will sign and date the Report.

Report Distribution

After the completion of an entire building location, copies of completed FPSR's are distributed as follows.

1. Original completed FPSR's with applicable analysis sheets and drawings.
 - a. YAEC Document Control Center
2. Copies of completed FPSR's excluding analysis sheets and drawings.
 - a. YAEC Site Manager
 - b. Yankee Field Quality Assurance Manager
 - c. UE&C RCM

APPENDIX 1

SURVEILLANCE OF FIREPROOFING ACTIVITIES

1.0 SCOPE

This appendix applies to UE&C's Surveillance Program covering the site contractor's activities related to application of fireproofing in Category I Structures.

2.0 PURPOSE

To establish the method of conducting surveillance of the site contractor's activities related to application of fireproofing on beams and columns in Category I Structures.

3.0 RESPONSIBILITIES

- 3.1 The UE&C Resident Construction Manager is responsible for all activities performed by the contractor.
- 3.2 The Site Contractor is responsible for applying fireproofing in accordance with UE&C drawings, specifications and any other contract documents.
- 3.3 The UE&C Field Superintendent - Quality Assurance is responsible for the implementation of this procedure and applicable sections of the Project Quality Assurance Procedures.

4.0 PROCEDURE

A. Surveillance Planning

- 1. The Q.A. Supervisor - Civil/Structural (QAS-C/S) shall assign Q.A. Engineers (QAE's) to plan surveillance when possible prior to the start of fireproofing activities.
- 2. For background and reference the QAE-Records (QAE-R) shall make available to the QAE copies of the Purchase Order/Contract governing the contractor's activities and the drawings, specifications, codes and standards referenced in the contract.

3. The QAE-R shall make available to the QAE copies of the contractor's UE&C approved construction procedures. These documents along with the UE&C Specification shall serve as the basis for this surveillance.

B. Surveillance Scheduling

1. The QAE shall determine the frequency and extent of surveillance based on the type and amount of fireproofing activity currently in progress and from analysis of the frequency and results of past surveillances.
2. The QAS-C/S shall maintain a log of surveillances listing report number (sequential), date of report, initials of QAE, unit number, building, and beam and or column number.

C. Surveillance

1. Surveillances shall be performed to assure compliance to approved procedures, drawings and specifications.
2. Surveillance will be accomplished by physical observation of substrate preparation, application and curing of fireproofing material.
3. Surveillance shall be performed by qualified QAE's utilizing the Fireproofing Surveillance Report, Figure 2.

D. Surveillance Reporting

1. Activities to be checked during surveillance are those recorded on the Fireproofing Surveillance Report form, figure 2. For each surveillance activity listed, the QAE shall check the appropriate column (sat/unsat).
 - a. Satisfactory conditions discovered during surveillance shall be recorded as such on the Fireproofing Surveillance Report.
 - b. Unsatisfactory conditions discovered during surveillance which are immediately corrected shall be checked "unsat" and the corrective action taken recorded in the remarks area of the Fireproofing Surveillance Report.
 - c. If any unsatisfactory condition is not immediately corrected the details of the condition shall be noted in the remarks area and a Contractor Notification Report, Figure 3, shall be initiated by the QAE, reviewed by the QAS-C/S and issued to the contractor. The contractor will be advised by copy of the Contractor Notification Report to take Corrective Action.

E. Surveillance Report Distribution

1. Copies of Fireproofing Surveillance Reports and Contractor Notification Reports are distributed as follows:
 1. YAEC Site Manager
 2. YAEC Field Quality Control and Audit Manager
 3. UE&C Resident Construction Manager
 4. UE&C Unit Superintendent or Area Superintendent
 5. Contractor's Superintendent
 6. UE&C Field Superintendent - Quality Assurance
 7. The original report is sent to the FS-QA who forwards the report to the QAE-R for retention in the vault.

F. Follow-Up Surveillance

1. A follow-Up Surveillance will be made of previous unsatisfactory items during the next surveillance of that activity.

The scheduling of a follow-up surveillance to verify corrective action shall be governed by both the frequency of the work activity and the nature of the unsatisfactory condition but should be reasonably soon after the contractor's date forecasted on the CNR. The CNR is to be closed out when the QAE is confident that the corrective action has been properly implemented.

2. Monthly, the QAS-C/S shall review and evaluate the Surveillance Reports, and Contractor Notification Reports issued in that period for adequacy of the reports, acceptability of results and quality trends. The QAS-C/S shall initiate Corrective Action Requests per QA-16-1 when necessary and shall review the matter with the FSQA for consideration of issue of a Stop Work Order per QA-16-2.

FIREPROOFING SURVEILLANCE REPORT NUMBER _____

UNIT # _____	BUILDING _____	ELEVATION _____	BEAM/COLUMN # _____
REF. DWG. _____	REV. _____	REF. DWG. _____	REV. _____

	SAT	UNSAT	REMARKS	INITIALS	DATE
A Verify that the product is handled and stored in a manner to prevent the inclusion of foreign matter or water.					
B Verify that the fireproofing material is not applied during rainy weather or if either the substrate or ambient temperatures are below 35 degrees fahrenheit.					
C Verify that temporary enclosures are provided to prevent spray from contaminating surrounding areas. Verify that adjacent surfaces and equipment are adequately protected from damage by overspray or fall-out of fireproofing material.					
D Verify that undersurfaces of overhead decking is masked to provide protection against overspray, and to provide a clean, sharp terminal edge to the fireproof coating when directed by the construction manager.					
E Verify that applied fireproofing material is as required by specification.					
F Verify that fireproofing materials are mixed in strict accordance with the manufacturer's printed instructions and with equipment that is approved by the fireproofing material manufacturer.					
G Verify that the fireproofing material is not sprayed over materials that will be damaged by it, such as copper, aluminum and stainless steel.					
H Verify that metal lath is wrapped approximately 1½ inches around edges and flat surfaces of column flanges as indicated for referenced UL requirements.					
I Verify that fireproofing material is applied, in strict accordance with the manufacturer's printed instructions, to thicknesses required by UL for the fire ratings indicated.					

FIREPROOFING SURVEILLANCE REPORT NUMBER

FIGURE 2



Seabrook
QCP-10-3
1/15/82
Figure 2

CONTRACTOR NOTIFICATION REPORT # _____

Date _____

- FIREPROOFING -

Page _____ of _____

A	To _____ Title _____	Unit No. _____ Surveillance Report _____
	Subcontractor _____	Item No. _____
	PO/Contract _____ C.O. _____	
	Contractor Personnel Notified _____	

The unsatisfactory condition described below has been identified. Please take immediate appropriate action to control this condition and to document your actions and resolutions in accordance with the provisions of your contract.

YOUR RESPONSE IS EXPECTED BY _____

B	<u>DESCRIPTION OF CONDITION:</u>

UE&C QAE _____	DATE _____	UE&C QAS-C/S _____	DATE _____
----------------	------------	--------------------	------------

C	<u>SUBCONTRACTOR'S RESPONSE:</u>
	(Include Date of Corrective Action)

SIGNATURE _____ (ADDRESSEE)	
DATE _____	

D	<u>REVIEW OF SUBCONTRACTOR'S RESPONSE:</u>	<input type="checkbox"/> Adequate
	ACTION PROPOSED BY THE SUBCONTRACTOR TO RESOLVE THE CONDITION DESCRIBED IS	<input type="checkbox"/> Inadequate:

UE&C QAS-C/S _____		DATE _____

E	<u>ACTION VERIFIED:</u>	THE CORRECTIVE ACTION DESCRIBED HAS BEEN IMPLEMENTED AND SATISFACTORILY MEETS THE INTENT OF THE REQUEST:
	_____	_____
UE&C QAE _____		DATE _____
UE&C QAS-C/S _____		DATE _____

QUALITY CONTROL PROCEDURE QCP-12

INFORMATION ONLY

SEABROOK STATION

FEB 19 1961

**SEABROOK
STATION**

DMYTRYK
CONSTRUCTION MANAGER

G. F. COLE
PROJECT MANAGER

J. B. SILVERWOOD, MANAGER
RELIABILITY & QUALITY ASSURANCE

[illegible]

OCP-12 CURRENT PAGE LISTING

<u>Page</u>	<u>Date</u>
Cover Page	1/16/81
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ii	1/16/81
1	1/16/81
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3	1/16/81
Attachment 1	5/17/80
Attachment 2 page 1 of 5	1/16/81
Attachment 2 page 2 of 5	1/16/81
Attachment 2 page 3 of 5	1/16/81
Attachment 2 page 4 of 5	1/16/81
Attachment 2 page 5 of 5	1/16/81

QUALITY CONTROL PROCEDURE - QCP-12
IDENTIFICATION OF CHANGES

<u>SECTION</u>	<u>PAGE</u>	<u>REASON</u>
II.B.3	1	Referenced document was superseded.
II.B.3	1	Changed from II.B.4
II.B.4	1	Changed from II.B.5
II.B.5	1	Added new reference documents SAI-28, SAI-11 & SAI-7 at 5, 6 & 7.
III.B	1	Inserted "as required" following "schedule".
IV.A.1	2	Deleted words following "Supervisor". Schedule requirements stated in IV.B.1.
IV.A.2	2	Deleted "scheduled".
IV.B.4	2	Deleted paragraph, not applicable.
IV.C.2	2	Revised to provide definition of Unsatisfactory items.
IV.C.3	2	Revised per field request to facilitate surveillance reporting.
IV.D.1	3	1. Provide instructions for "Unsatisfactory" items. 2. Added reference to QA-15 requirement per YAEK letter SB-9992 dated 7/23/80.
IV.D.3	3	Revised to agree with Attachment #2 <u>cover sheet</u> .
IV.E.d	3	1. Added Test & Start-up Engineering Supervisor to distribution. 2. Subsequent listing d, e, f & g changed to e, f, g & h.
Attach. 2	1	Added "FSQA & date" to cover sheet.
Attach. 2	1 thru 5	Revised format to provide a comprehensive checklist.
Attach. 2	2 & 4	Changed references FGCP-7 to SAI-28.
Attach. 2	5	Was page 4, Part IV Changed to Part VI.

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-12

FOR

SURVEILLANCE OF UE&C GAUGE FACILITY

I. SCOPE

This procedure applies to the surveillance of the UE&C gauge facility activities associated with the calibration and control of Measuring and Testing Equipment (M & TE) used on nuclear and/or safety related equipments or systems.

II. GENERAL

A. Purpose

To establish a method of performing surveillance of the activities associated with the site gauge facility at the Seabrook Station.

B. Reference Documents

1. QAP-12 "Control of Measuring and Testing Equipment."
2. UE&C (Composite) Nuclear QA Manual, Section III ASME Div.-1 Procedure 8-A - "Control of Measuring and Test Equipment for Seabrook Units 1 & 2."
3. QA-15 "Nonconforming Materials, Parts or Components."
4. QCP-17-2 "Quality Assurance Records."
5. SAI-28 "Control and Calibration of Measuring and Test Equipment."
6. SAI-11 "Indoctrination and Training of Test Personnel."
7. SAI-7 "Personnel Qualification and Certification."

III. RESPONSIBILITIES

- A. The Field Superintendent - Quality Assurance - (FSQA) is responsible for the overall implementation of this procedure.
- B. The Quality Assurance Supervisor - Receiving and Storage (QAS-R&S) is responsible for assigning personnel to perform surveillance, coordinate surveillance consistent with gauge facility activities, provide the QAEs with a surveillance schedule, as required and oversee the implementation of the surveillance activities.

C. The Resident Construction Manager - (RCM) or his designee is responsible for resolving conditions adverse of quality.

IV. PROCEDURE

A. Surveillance Planning

1. The QAS-R&S shall coordinate the surveillance effort in conjunction with the gauge facility supervisor.
2. The QAS-R&S shall assign QAE(s) to perform the surveillance.
3. The QAE shall review the references and be cognizant of their content.
4. The QAE shall also review any procedures, NBS Manuals, Mfg. instructions, etc. that may be pertinent to the calibration activities.
5. The QAE shall assign a number to the report as determined by the GFSC - Log - (Attachment 1).

B. Surveillance

1. The QAE shall perform surveillance on a frequency based on the degree of calibration being performed. However, surveillance will be performed at a minimum of twice a month.
2. Surveillance shall be performed by visual observation and review of records generated by the gauge facility.
3. As a minimum surveillance will include the attributes identified on the Gauge Facility Surveillance Checklist - (Attachment 2).

C. Surveillance Reporting

1. The QAE shall enter the dates surveillance was performed, on the checklist cover sheet.
2. The QAE shall check the appropriate column (S or U) for each item on the checklist or enter N/A. Minor deficiencies corrected during the surveillance will be marked "Sat" and so noted in the summary (Sect. V) of the Gauge Facility Surveillance Checklist. Deficiencies which are not corrected during surveillance will be noted as "Unsat".
3. If the column reflects U the QAE will explain the condition of the Checklist on Continuation Sheet, Part VI.

D. Report Processing

1. Unsatisfactory conditions will be brought to the attention of the gauge facility supervisor for corrective action by having him sign Section VI of the checklist and providing him a copy. If the condition is not corrected within 10 working days the QAG shall issue a NCR in accordance with requirements of QA-15 or CAR depending upon the nature of the unsatisfactory condition.
2. After all items are resolved the QAE will indicate the corrective action taken on the continuation sheet.
3. The reports are then signed by the QAE, the QAS R&S and the FSQA for his review and sign off.

E. Report Distribution

1. Completed reports shall be distributed to:
 - a. YAEC/PSNH Site Manager
 - b. YAEC Field Quality Assurance Manager
 - c. UE&C RCM
 - d. UE&C Test and Start-up Engineering Supervisor
 - e. UE&C Gauge Facility Supervisor
 - f. UE&C FS-QA
 - g. UE&C Project QAE
 - h. UE&C QAE-R for Filing



ATTACHMENT #1

GAUGE FACILITY SURVEILLANCE CHECK LIST LOG

GFSC LOG

5

ATTACHMENT #2

GAUGE FACILITY SURVEILLANCE CHECKLIST

COVER SHEET

Report No. _____

Date Performed: From _____ To _____

Report Status

Open _____ Closed _____ NCR _____

QAE _____ Date _____

QAS - R&S _____ Date _____

FSQA _____ Date _____

- A. Records are maintained for each individual piece of equipment showing established schedules and procedures for the calibration of M&TE and standards shall contain:
1. Calibration intervals
 2. Calibration dates

- 9

Seabrook
QCP-12
Revision 1
1/16/81
Page 5 of 5
Report No. _____

ATTACHMENT #2

VI. SURVEILLANCE CHECKLIST CONTINUATION SHEET

Item

Unsatisfactory Condition

Discussed with _____ Title _____ Date _____
Name

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Handling and Storage Control

PREPARED BY D. C. Lambert

DATE 5/18/81

CHANGE _____

CHG. NO. 38
EFFECTIVE DATE 5/31/81
QA N/A
QCP 13
REV. 11
DATE 3/9/81

Revise Items I.C and I.D to I.D and I.E.

Add new item I.C as follows:

Movement from receiving/warehouse storage to shipping areas for handling by site contractors.

INFORMATION ONLY

REASON FOR CHANGE Include surveillance/inspection to insure proper handling of items removed from the receiving/warehouse areas for turnover to site contractors.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PW	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>D. C. Lambert</i>	<i>5/18</i>	<i>R. C. Lambert</i>	<i>5/18</i>	<i>B. Lee</i>	<i>5/18</i>	<i>R. C. Lambert</i>	<i>5/18</i>		



QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Handling and Storage Control

PREPARED BY B. E. O'Connor

DATE 5/26/81

CHANGE

Change the following paragraphs as follows:

IV.A.1 - Administration and Records, QAS A&R to: Receiving and Storage (QAS R&S)

IV.A.6 - QAS A&R to QAS R&S

IV.B.2 - QAS A&R to QAS R&S

IV.B.5 - QAS A&R to QAS R&S

IV.D.7 - Administration and Records to Receiving and Storage (QAS R&S)

IV.F.2 - QAS A&R to QAS R&DS

RECEIVED
U. E. & C. INC.

JUL 23 1981

SEABROOK
STATION

REASON FOR CHANGE Correctly define current responsibilities. (Response to finding #6, Audit Report NH-408.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>W. Lambert</i>	<i>6/1/81</i>	<i>RC Linsley</i>	<i>4/19/81</i>	<i>R. T. Co.</i>	<i>6/1/81</i>	<i>JB Silverman</i>	<i>4/26/81</i>	<i>R. D. Dwyer</i>	<i>7/1/81</i>

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-13

HANDLING & STORAGE CONTROL

FOR

SEABROOK STATION

August 20, 1974

Prepared by: R.C. Holzwarth
R. C. Holzwarth
QA Engineer

No.	Date	Prep. By	Approval		
			QA	C.M.	P.M.
Reissue					
1	2/11/75	775	SR	SR	SR
2	6/26/75	898	SR	SR	SR

Approved by: J.R. Dmytryk
J. R. Dmytryk
Construction Manager

Approved by: G.F. Cole
G. F. Cole
Project Manager

INFORMATION ONLY

Approved by: B. Silverwood
B. Silverwood, Manager
Reliability & Quality Assurance

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr.	Mgr. R&QA	Proj. Con. Manager
3	5/6/77 Reissue	All	8 man	SR	SR	SR
4	12/14/77	1,2,7	8 man	SR	SR	SR
5	4/18/78	1,ii, 6, App.A(1-4)	8 man	SR	SR	SR
6	7/28/78	1,ii,1-3,Figs. 1-4,7	8 man	SR	SR	SR
7	7/23/79	1,2,4 thru 8 App. A Figure 10	8 man	SR	SR	SR
8	11/9/79	1 thru 8 10 & App. B	8 man	SR	SR	SR
9	2/21/80	1-5,7,9 Fig.8, App.A	8 man	SR	SR	SR
10	6/20/80	9, App. A-1	8 man	SR	SR	SR
11	3/9/81	1-3,5-8 & 10, Fig.1,2, 7A,10&11 Appen. A&B	8 man	SR	SR	SR

QCP-13 CURRENT PAGE LISTING

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ii	3/9/81
iii	3/9/81
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Appendix B-3	3/9/81
Appendix B-4	3/9/81

PROJECT QUALITY CONTROL PROCEDURE QCP-13

IDENTIFICATION OF CHANGES

<u>Section</u>	<u>Page</u>	<u>Reason</u>
I	1	1. After "Inspection" added "and or Level II Surveillance" per ACN-31 2. After "Surveillance" added "Program at Seabrook"
I.D	1	Revised paragraph per YAEC/Field request
II.B.11	2	Changed FGCP-7" to SAI-28" per field request
II.C.2.a	3	Added "and by Construction Management during Start-up" per field request
IV.A	5	1. Changed subtitle to " <u>Inspection/ Surveillance Planning*</u> " per ACN-31 2. Added reference *Note: at bottom of page, per ACN-31
IV.A.2	5	Following "FGCP-16 (Handling)" added "FGCP-10 (Handling Equipment Maintenance)" per ACN-31
IV.A.3.a.4	6	Revised paragraph per field request
IV.B.3	7	Added (figure 7A) to paragraph per field request
IV.B.7	8	Added new paragraph per ACN-31
IV.E.6	10	1. In second sentence deleted "immediately the" and subsituted "during inspection the" 2. Deleted last sentence per field request

<u>Section</u>	<u>Page</u>	<u>Reason</u>
IV.F.2	10	Fourth line "effectively" changed to "effectivity" per field request
Figure 1		<ol style="list-style-type: none"> 1. Change item No. 13 to conform to provisions in corporate standards. 2. Revised item No. 14 to agree with appendix A, page 1.(**) per field request. 3. Added previously omitted item No. "16"
Figure 2		Revised item Nos. 14 thru 16 and added No. 17 to facilitate Level B storage inspection.
Figure 7A		Incorporated per field request
Figure 10		Inserted "load" after "the" per field request on item No. 7
Figure 11		Item No. 4 deleted "and dynamic load tests" per field request.
Appen. A Level A	1	<ol style="list-style-type: none"> 1. Added spec. 170-6 2. Added "(RM-CP-296)" to spec 172-1
Appen. A Level B	2	<ol style="list-style-type: none"> 1. Added "236-11 Air Handling Filters MS" per ACN-32 2. Additional I&C components were added to current requirements
Appen. A Level C	3	Spec. No. 248-25 was changed to 248-65
Appen. A. Level D	4	Eliminated "sets and" spec. 201-1 listing
Appen. B Level A	1	General update to reflect realistic requirements
Appen. B Level B	3&4	General update to reflect realistic requirements

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-13

FOR

HANDLING & STORAGE CONTROL

I. SCOPE

This procedure applies to UE&C Level 1 inspection and or Level II Surveillance Program at Seabrook Station covering the handling and storage of UE&C purchased items classified Seismic Category I or Safety Class 1, 2, 3 and 1E and the Westinghouse NSSS items which are received at the site, handled and stored by UE&C. UE&C Field QA provides verification and evaluation of the Level 1 inspections. UE&C provides the construction management and inspection of the handling of these items during:

- A. Off-loading at receiving area.
- B. Movement from receiving to normal or segregated storage areas.
- C. Movement from receiving-storage areas to shipping area for items to be returned to vendors.
- D. Storage requirements would cease at time of turnover to the Startup Department and preventive maintenance would cease after acceptance of the equipment by PSNH Operations.

II. GENERAL

A. Purpose

To establish a system for the inspection, handling and storage activities to minimize or avoid handling and storage damage and preserve the quality of the items and their containers.

B. Reference Documents

- 1. Westinghouse "WNSD-NSSS Component Receiving and Storage Criteria". (Foreign Print 52018)
- 2. Reg. Guide 1.38 - "QA Requirements for Packaging, Shipping, Receiving, storage, and Handling of Items for Water-Cooled Nuclear Power Plants".

3. FGCP-3 - "Receiving, Inspection & Storage of Nuclear & Safety Related Equipment and Material".
4. FGCP-8 - "General Housekeeping During Construction of Nuclear Plants".
5. FGCP-10 - "Maintenance, Inspection, Testing & Operation of Construction Equipment".
6. QA-15 - "Nonconforming Material, Parts or Components".
7. ANSI N45.2.2 - 1972 "Packaging, Shipping, Receiving, Storage and Handling of Items of Nuclear Power Plants".
8. QA-16-1 - "Corrective Action".
9. QA-17-2 - "Quality Assurance Records".
10. QA-2-2 - "Indoctrination, Training Qualification and Certification".
11. SAI-28 - "Control and Calibration of Measuring and Test Equipment".
12. FGCP-9 - "Preventive Maintenance and Protection of Nuclear of Safety-Related Equipment".
13. FGCP-16 - "Handling of Nuclear and Safety Related Material and Equipment".
14. FGCP-17 - "Welding Materials Received, Stored and Issued at the Construction Site. Nuclear, Safety-Related and Non-Safety Related".
15. ANSI N45.2.3-1973 - "Housekeeping during the Construction Phase of Nuclear Power Plants".
16. QCP-8 - "Material Control".
17. QA-14 - "Inspection, Test and Operating Status".
18. FGCP-6 - "General Preventive Maintenance and Minimum Storage Requirements for Permanent Plant Equipment".

C. Requirements

1. To prevent unauthorized maintenance of stored items or removal of items from UE&C controlled storage areas, the Resident Construction Manager and the Field Superintendent - Quality

Assurance shall establish a list of personnel authorized to supervise the movement of items in Level D storage areas and a list of personnel authorized access to level A, B, & C storage areas.

2. Items removed from a storage area for installation shall be protected during staging and installation as shown in Appendix B. Items not listed in appendix B shall not be removed from a storage area to a less protected area for or during installation without provision for maintaining conditions at least equivalent to the minimum storage requirements. These conditions shall be maintained by the appropriate site contractor until the item is placed in service. Prior to the relocation of equipment from a storage area to the point of installation, the designated installed location will be inspected to assure that environmental conditions conform to manufacturers and/or "in-place storage" instructions of installed equipment. Preventive maintenance of this equipment will be performed by UE&C site construction division.
 - a. Satisfactory protection and clean environmental conditions compatible with the nature of the equipment shall be maintained by the contractors concerned, until the equipment is placed in service. The Area Superintendent in accordance with FGCP-8, is responsible for assuring that the Contractor carries out his responsibilities. Preventive maintenance shall be performed by UE&C construction division on the equipment during the period of construction and by Construction Management during Startup.
3. UE&C Purchased "filler weld material" as defined in FGCP-17 shall be a controlled system by which material will be received, stored and distributed for on-site erection and fabrication. The UE&C Welding Superintendent shall have direct responsibility for implementing the procedure. He will delegate specific responsible activities to Contractors' Welding Supervisors or Technicians through their Construction Managers.
 - a. Storage Areas designated by UE&C, containing the major supply of acceptable welding material shall be partitioned and locked.
 - b. Holding Areas in the fabrication and erection location from which welding materials are distributed.
 - c. Holding Areas (Issuing) is attached and adjacent to the fabrication holding areas with sufficient locked space for maintaining electrode heaters during off-shift hours.

- d. Welding Material consists of: coated electrodes, gas tungsten arc wire, metal arc wire including flux core, submerged arc wire, and flux.
- 4. Items which do not conform with specified requirements shall be identified as nonconforming by application of a "Hold" tag and where physically possible shall be stored in a segregated area to prevent their use until disposition is determined and accomplished.
- 5. To prevent surface contamination in storage and handling, stainless steel and nickel base alloys shall not come in contact with carbon steel, lead, zinc, copper and other nonferrous, low melting elements and alloys.
- 6. The requirements of Appendices A3.5.2 (tapes and adhesives) and A3.6.3 (desiccants) of ANSI N45.2.2-1972 limiting sulfur and halogen content shall be met. In addition, the further limitation stated in paragraph C3 of Reg. Guide 1.38 shall be observed.
- 7. In the event that a fire should occur in a storage area or at any time, each item known to have been heated to an ambient temperature of over 150°F or subject to water damage or smoke contamination shall be withheld from installation or use until it has been thoroughly examined and the item has been verified to be in conformance with specified requirements.
- 8. In the event of flooding or other unforeseen natural circumstance affected items shall be withheld from installation or use until they have been examined and verified to be in conformance with specified requirements.

III. RESPONSIBILITIES

- A. Westinghouse Electric Corp. & UE&C Suppliers - Provide any special handling equipment and handling and storage instructions required for the site handling and storage of items of their supply.
- B. UE&C Construction Division - Provide the construction management for handling and storage activities. Provide for handling and storage procedures and controlled storage facilities. Supervise handling and storage activities; supervise and document item storage maintenance and test and item issue. Perform preventive maintenance on items in storage areas and "in place" storage in the plant, including code items. Maintain inventory and storage location information for all ASME Code items.

- C. Reliability & Quality Assurance - Review handling and storage procedures, plan, schedule, perform and document inspections of the handling, storage and preventive maintenance activities.
- D. Site contractors are required, through the procurement documents, to perform storage, and handling, including in place storage, in accordance with written procedures which have been submitted to UE&C for review and approval.

IV. PROCEDURE

A. Inspection/Surveillance Planning*

- 1. The Quality Assurance Supervisor - Administration & Records (QAS-A&R) shall assign QAE's to plan inspections of site handling and storage activities.
- 2. In formulating these plans, the QAE shall review FGCP-3 (Storage), FGCP-6 (minimum storage requirements), FGCP-16 (Handling), FGCP-10 (Handling Equipment Maintenance) and the UE&C approved procedures employed by the subcontractor performing handling or storage activities in the receiving/stores areas. The QAE shall also review any handling or storage instructions received with items from UE&C suppliers to be stored either on site or off site and Westinghouse NSSS suppliers for items stored on site.
- 3. The following standard inspection reports covering the requirements of ANSI N45.2.2-1972, Sections 6 and 7, shall serve as a checklist for:

a. Storage

- 1) Storage Level Requirements (Figs. 1-4 incl.) inspections performed to assure that the controlled storage areas meet the level requirements of FGCP-3.
- 2) Storage Areas (Fig. 5) inspections performed to assure that access control, housekeeping, fire protection, etc. are adequate.
- 3) Storage Methods (Fig. 6) inspections performed to assure that the control of item access, arrangement, identification and coverings is adequate.

*Note: Inspection as used in this procedure means Inspection/Surveillance.

- 4) Control of Items in Storage Inspections performed to assure that item condition is maintained in storage facilities (fig. 7). "In-place inspections of plant preventive maintenance functions shall use figures 7A and 7B.
- 5) Issue of Items from Storage (Fig. 8) inspections performed to assure that item disbursement is adequately controlled.

b. Handling

- 1) Handling Methods & Procedures (Fig. 9) inspections performed to assure that the handling instructions, tools and fixtures are available and used.
 - 2) Hoisting Equipment (Fig. 10) inspections performed to assure that the equipment is used within rated or re-rated limits and is adequately maintained and tested.
 - 3) Inspection of Equipment and Rigging (Fig. 11) inspections performed to assure that an inspection program for handling equipment and rigging has been established and is being implemented.
 - 4) Personnel, Records & Miscellaneous (Fig. 12) inspections performed to assure that qualified personnel operate equipment, records are maintained and stainless steel and code items are properly handled.
4. The OAE shall prepare special inspection reports on Form 4513-9763, develop special forms or shall add the special inspection requirements to the standard inspection reports of Para. IV.A.3a.& b. These inspections shall cover any special handling or storage requirements received from the UE&C or Westinghouse suppliers and any interim measures necessary to assure adequate inspection of the equipment.
 5. The OAE shall maintain the prepared standard and special inspection reports of file until released for use. Both the standard and special reports shall be kept under review by the QAE to assure that they are in conformance

with the latest applicable issue of the specified standards, procedure and supplier instructions.

6. The QAS-A&R shall review and approve the prepared inspection reports and shall maintain a log of inspection reports listing: Report No. (Sequential), Subject, Storage/Handling Location and Level of Storage (if applicable).

B. Inspection Scheduling

1. Inspection of storage areas shall be performed prior to use to determine if the designated areas comply with the storage level requirements in Figures 1 thru 4. Inspections shall be performed a minimum of once every three months covering the items listed on Standard Inspection Reports IV.A.3. (a.1) thru (a.3).
2. The QAS-A&R shall determine the actual frequency and extent of the inspection coverage based on the activity, number of items handled or in storage, supplier instructions, and analysis of the results of past inspections per FGCP-9. Preventive maintenance should be initiated within seven (7) days and completed within thirty (30) days after OA/OC Receipt Inspection.
3. The FS-QA will be notified by a copy of the storehouse requisition when equipment is required by a Contractor for installation. Prior to relocation of equipment from a storage area to the point of installation, the designated installed location will be inspected to assure that environmental conditions conform to manufacturer's and/or "in-place storage" instructions of installed equipment (Figure 7A).
4. Inspections of the handling of items requiring special considerations and/or equipment shall be conducted when the movement of these items occurs.
5. For inspection purposes, the QAS-A&R shall divide the controlled and in-place storage areas into sections and shall schedule the periodic storage inspections to be performed by storage area or section using the applicable standard and special inspection reports.
6. Special storage and preventive maintenance performed under the supervision of the Construction Division and inspected by Field QA shall be scheduled to meet the requirements of the suppliers' instructions or as

directed by the cognizant engineer. The scheduled intervals for performing periodic inspections of stored item maintenance do not have to coincide with the maintenance schedule.

7. Inspection of rigging equipment and accessories will be performed on a frequency consistent with construction inspections/maintenance.

C. Inspection

1. Inspections shall be performed by qualified QAE's to assure that the handling and storage activities are being performed in accordance with FGCP-3 (Storage), FGCP-16 (Handling), Reg. Guide 1.38 and suppliers' special handling and storage instructions. The QAE shall review and be familiar with the contents of these documents and the results of previous inspections. This review shall give additional assurance that the requirements of the inspection items listed on the inspection report have been updated to meet any revisions in the controlling documents.
2. Inspection items to be checked are those listed on the assigned standard or special inspection report(s). For each inspection item-listed, the QAE shall check the appropriate column (sat./unsat.) and shall include any supporting information in the "Remarks/Findings" column.
 - a. If an unsatisfactory condition or nonconforming item is immediately corrected, this shall be checked "unsat" and the details of the condition and the corrective action taken recorded in the "Remarks/Findings" column.
 - b. If an unsatisfactory condition is not immediately corrected, the details of the condition shall be listed in the "Remarks/Findings" column. The Construction Division is advised to take corrective action by copy of the inspection report.
 - c. If a nonconforming item is not immediately corrected, the QAE shall tag the item and issue a NCR per QA-15, noting the NCR number in the "Remarks/Findings" column.
 - d. When a NCR or CAR is issued the surveillance report of the unsatisfactory item is closed. When immediate

action is taken by Subcontractor the unsatisfactory item is closed. Follow-up in accordance with paragraph IV.F is required to verify effectiveness. Follow-up inspections can be documented on Inspection Report form 4513.

3. If during inspection, the QAE notices an unsatisfactory condition or nonconforming item related to an inspection item not on the assigned inspection report, he shall document the finding by adding it to the report as detailed in Paragraph IV.C.2.

D. Report Distribution

Copies of inspection reports shall be distributed to:

1. YAEC Site Manager
2. Yankee Field Quality Control and Audit Manager
3. Westinghouse representative (by request-NSSS items only)
4. UE&C Resident Construction Manager
5. UE&C Material Department
6. Field Superintendent - QA
7. Quality Assurance Supervisor - Administration & Records (QAS-A&R)
8. QAE - retains original report until all items are closed. The report is then marked closed, redistributed to above recipients and the original sent to QAE-Records for file per QCP-17-2.

E. Preventive Maintenance Inspection

1. The PM Supervisor shall notify the FS-QA that preventive maintenance is required on a piece of equipment.
2. The QAS R&S shall assign QAE's to perform inspections of preventive maintenance activities to assure compliance to FGCP-9 and PM requirements identified on the PM Record.
3. Prior to performing initial inspections the QAEs shall review the PM Records to assure that the PM

checks required by Specification and/or manufacturers instructions are identified on the PMR.

4. The QAE shall initial and date the PMR validating his acceptance of the required checks by signing, initialling or stamping the QA/QC Rep. space provided under "Required Inspection Frequency".
5. Subsequently each scheduled inspection shall be validated in the same manner in the space provided under "Inspection Dates".
6. Unsatisfactory conditions will be brought to the attention of the PM Supervisor for correction. If not corrected during inspection the QAE shall initiate an NCR and the number will be entered in the appropriate block on the PM Record.

F. Inspection Follow-up

1. The QAE shall verify that effective corrective action has been taken on the unsatisfactory findings of the inspection. This shall be accomplished by conducting a follow-up inspection of the open items or by adding the open items to the report for the next inspection of the area, item or activity.
2. Monthly, the QAS-A&R shall review and evaluate the inspection reports issued in that period for adequacy of the reports, acceptability of the results, effectivity of the corrective action, timeliness of resolutions and quality trends. He shall initiate Corrective Action Requests per QA-16-1 when indicated.

G. Personnel Qualifications

The QAE who performs the verifications and evaluation of the Level 1 inspections shall be certified to ANSI N45.2.6 Level II in accordance with OA-2-2 and ASME Section, 3, Division 2.

INSPECTION ON REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- SEABROOK STATION

pg. 1

2

SUBJECT Storage Level Requirements REPORT NO. A

STORAGE/HANDLING LOCATION

REPORT PLANNED BY	TITLE	DATE
REPORTED BY	TITLE	DATE
EVALUATED BY	TITLE	DATE

[illegible]

SUBJECT _____ STORAGE Level Requirements _____ REPORT NO _____
STORAGE/HANDLING LOCATION _____ LEVEL OF STORAGE A
REPORT PLANNED BY _____ TITLE _____ DATE _____
REPORTED BY _____ TITLE _____ DATE _____
EVALUATED BY _____ TITLE _____ DATE _____

[illegible]

FIGURE 1

INSPECTION REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- SEABROOK STATION

PG 1

SUBJECT	Storage Level Requirements	REPORT NO
STORAGE HANDLING LOCATION	LEVEL OF STORAGE	B
REPORT PLANNED BY	TITLE	DATE
REPORTED BY	TITLE	DATE
EVALUATED BY	TITLE	DATE

[illegible]

INSPECTION REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE -- SEABROOK STATION

REPORT NO. _____
LEVEL OF STORAGE B

SUBJECT	Storage Level Requirements
1. <u>General</u>	1. <u>General</u>
2. <u>Specific</u>	2. <u>Specific</u>
3. <u>Other</u>	3. <u>Other</u>

STORAGE, HANDLING LOCATION

REPORT PLANNED BY:

REPORTED BY

EVALUATED BY

DATE _____

DATE _____

DATE _____

TITLE

TITLE

TITLE

ITEM	NO
------	----

INSPECTION ITEM:

ENVIRONMENTAL CONDITIONS (continued)

16.	Adequate Lighting.
-----	--------------------

17.	Power supply available for equipment/component space heaters if required.
-----	--

SAT
UNSAT

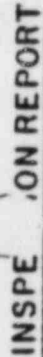
REMARKS, FINDINGS

DATE _____

INSP
BY

SEABROOK
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3/9/81

FIGURE 2



PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

 STORAGE/HANDLING LOCATION |

DATE _____

DATE _____

DATE _____

1000

INSPECTION ITEM

SAT.

REMARKS/FINDINGS

DATE _____
BY _____
INSP. _____

AB
MSA

BUILDING OR EQUIVALENT ENCLOSURE

Fire Resistant

Tear Resistant

Weather-tight

Well Ventilated

VANDALISM PROTECTION

Security System

Limited Access

FLOODING PREVENTION

Suitable Location

Adequate Construction

Floor Paved or Equal

Floor Well Drained

ITEM STORAGE

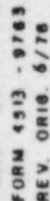
11. As applicable, items placed on pallets or

shoring to permit air circulation.

12. Where applicable, space heaters are energized.

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FIGURE 3



FORM 4513 - 9763
REV. 0810. 6/78

SUBJECT _____

STORAGE/HANDLING

REPORT PLANNED BY _____

REPORTED BY _____

EVALUATED BY

INSPECTION REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT	Storage Level Requirements
1. <i>General</i>	
2. <i>Specific</i>	
3. <i>Other</i>	

STORAGE/HANDLING LOCATION

REPORT PLANNED BY _____

REPORTED BY _____

EVALUATED BY

REPORT NO.

LEVEL OF STORAGE D

DATE _____

DATE _____

DATE _____

TITLE

TITL

TITLE

ITEM	NO.
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99	99
100	100

INSPECTION ITEM

STORAGE AREA

1. Outdoor Area Marked & Designated for Storage

VANDALISM PROTECTION

2. Security System

3.	Limited Access
----	----------------

FLOODING & DAMAGE PREVENTION

4.	Storage area reasonably removed from actual construction area and traffic to minimize possible damage from construction equipment.
----	--

5.	Storage area well drained
----	---------------------------

6.	Storage area preferably gravel covered or paved.
----	--

ITEM STORAGE

7.	As applicable, items placed on pallets or
----	---

	shoring to permit air circulation and to avoid trapping water.
--	--

8.	If applicable, temporary power supply available/space heaters energized.
----	--

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FIGURE 4

FORM 4513 - 9763
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PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

EV. UNIT. 9778
SUBJECT Storage Areas

REPORT NO.

STORAGE/HANDLING LOCATION

LEVEL OF STORAGE

REPORT PLANNED BY

TITLE

DATE _____

REPORTED BY

TITLE

DATE _____

EVALUATED BY _____

TITLE

DATE _____

ITEM NO	INSPECTION ITEM	SAT.	UNSAT.	REMARKS/FINDINGS	DATE	INSP. BY
	<u>ACCESS TO STORAGE AREAS</u>					
1.	Access to storage areas controlled and limited to those on list of authorized personnel established by UE&C RCM and the FSQA (see Para. IICl-QCP-13).					
	<u>CLEANLINESS & HOUSEKEEPING PRACTICES</u>					
	Housekeeping practices maintained in accordance with the requirements of ANSI N45.2.3, in particular:					
2.	Storage areas cleaned as required to avoid the accumulation of trash, discarded packing material and other detrimental soil.					
3.	Storage areas adequately lighted, ventilated, protected and accessible					
	<u>FIRE PROTECTION</u>					
4.	Procedures and instructions for fire protection established per 6.2.3-ANSI N45.2.2 & 3.2.3-ANSI 45.2.3 and being implemented.					
	<u>STORAGE OF FOOD & ASSOCIATED ITEMS</u>					
5.	Food, drinks and salt tablet dispensers not used or stored in any storage area. (Does not apply to enclosed offices located in storage areas.)					
	<u>ANIMAL ENTRANCE PREVENTION</u>					
6.	Measures taken to prevent the entrance of rodents and other animals into indoor storage areas or equipment to minimize possible contamination and mechanical damage to stored items.					

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FIGURE 5

FORM 4513 - 9763
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PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

 SUBJECT Storage Methods

STORAGE/HANDLING LOCATION _____

REPORT PLANNED BY _____

REPORTED BY _____

EVALUATED BY _____

TITLE _____

TITLE _____

TITLE _____

DATE _____

DATE _____

DATE _____

REPORT NO. _____

LEVEL OF STORAGE _____

ITEM NO	INSPECTION ITEM	SAT.	UNSAT.	REMARKS/FINDINGS	DATE	INSP. BY
	<u>ACCESS & ARRANGEMENT OF STORED ITEMS</u>					
1.	All items stored in a manner to permit ready access for inspection or maintenance without excessive handling to minimize risk of damage.					
2.	Items stacked for storage are arranged so that racks, cribbing or crates are bearing full weight without distortion of item.					
	<u>STORAGE OF HAZARDOUS MATERIAL</u>					
3.	Hazardous chemicals, paints, solvents and other materials of like nature stored in well ventilated areas not in close proximity to important nuclear plant items.					
	<u>IDENTIFICATION</u>					
4.	All items and their containers plainly marked so they are easily identified without excessive handling or unnecessary opening of crates or boxes.					
	<u>COVERINGS & POSITIONING</u>					
5.	Weatherproof covering, when used for outdoor storage, is flame resistant type of sheeting or tarpaulins.					
6.	Coverings placed to provide drainage and to insure air circulation & thus minimize condensation.					
7.	Covering tied down to prevent moisture from entering laps and to protect the covering from wind damage.					
8.	Items stored outdoors are positioned to avoid trapping moisture in pockets or internally.					

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FIGURE 6

INSPECTION REPORT

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PG. 1 OF 3

SUBJECT Control of Items in Storage

STORAGE/HANDLING LOCATION _____

REPORT PLANNED BY _____

REPORTED BY _____

EVALUATED BY _____

TITLE _____

TITLE _____

TITLE _____

DATE _____

DATE _____

DATE _____

REPORT NO. _____

LEVEL OF STORAGE _____

ITEM NO.	INSPECTION ITEM	SAT.	UNSAT	REMARKS/FINDINGS	DATE	INSP. BY
	<u>LEVEL OF STORAGE</u>					
1.	Accepted items stored in areas meeting storage level specified in Appendix A for UE&C items and Reference Document No. 1 for Westinghouse NSSS items.					
	<u>MAINTENANCE IN STORAGE</u>					
2.	Requirements for proper maintenance during storage are documented and implemented.					
3.	Inventory records available for information to all UE&C area coordinators, Field QA personnel and the authorized inspector.					
	<u>IDENTIFICATION & MARKING</u>					
4.	Proper item identification & markings maintained in storage per 3.9 & A3.9 - ANSI N45.2.2.					
5.	Item tagging applied at receiving maintained.					
	<u>PROTECTIVE COVERS & SEALS</u>					
6.	Stored items have all covers, caps, plugs or closures intact.					
7.	Methods used to seal openings are in accordance with 3.5, A3.5.1 & A3.5.2 - ANSI N45.2.2.					
8.	Covers removed for internal access at any time for any reason are immediately replaced and resealed after completion of activity for which removed.					
	<u>COATINGS & PRESERVATIVES</u>					
9.	Temporary preservatives intact and offer the necessary protection.					

FIGURE 7

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INSPECTION REPORT

PG. 2 3

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Control of Items in Storage

STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY

TITLE

TITLE

TITLE

DATE

DATE

DATE

REPORT NO.

LEVEL OF STORAGE

ITEM NO.	INSPECTION ITEM	SAT.	UNSAT.	REMARKS/FINDINGS	DATE	INSP. BY
10.	Should reapplication of preservatives be required while items are in storage, only those previously approved & in accordance with 3.4.1 & A.3.4.1 - ANSI N45.2.2 are used.					
	INERT GAS BLANKETS					
11.	Items pressuring with inert gas checked at a frequency to assure that the gas pressure is maintained within specified limits marked on item or its container.					
12.	Should repressurization of inert gas be required while item is stored, recharging is done with same type gas previously used per 3.4.2 & A.3.4.2 - ANSI N45.2.2.					
	DESICCANTS					
13.	Desiccant humidity indicators are checked and desiccants are changed or reprocessed when specified per 3.6.3 & A 3.6.3 - ANSI N45.2.2.					
	PHYSICAL DAMAGE OR DETERIORATION					
14.	Items in storage have not suffered any visible damage or deterioration from improper handling, improper storage, ageing or harmful environment.					
	CLEANNESS					
15.	Items in storage maintained in a clean condition commensurate with the type of storage area and the items involved.					
	MAINTENANCE IN STORAGE					
16.	Instrumentation racks energized as specified by manufacturer.					

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FIGURE 7

FORM 4513 - 9783

REV. ORIG. 6/78

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Control of Items in Storage

STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY _____

T I T L E

TITLE

TITLE

DATE _____

DATE _____

DATE _____

REPORT NO.

LEVEL OF STORAGE

[illegible]



REV 0404 6 76

PUBLIC SERVICE CO. OF NEW HAMPSHIRE — SEABROOK STATION

PG 1

2

REPORT NO.

LEVEL OF STORAGE In Place

TITLE

DATE _____

TITLE

DATE _____

TITLE

DATE _____

[illegible]

EVALUATED BY	TITLE	DATE
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Figure 7A

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Issue of Items from Storage

REPORT NO.

STORAGE/HANDLING LOCATION

LEVEL OF STORAGE

REPORT PLANNED BY

TITLE

DATE _____

REPORTED BY

TITLE

DATE _____

EVALUATED BY

TITLE

DATE _____

[illegible]

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2/21/80

FIGURE 8



PG.

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Handling Methods and Procedures

REPORT NO.

STORAGE/HANDLING LOCATION

LEVEL OF STORAGE

REPORT PLANNED BY

TITLE

DATE _____

REPORTED BY

TITLE

DATE _____

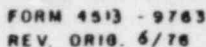
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DATE _____

SEA BROOM
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5/6/77

FIGURE 9



PG. 1 of 2

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Hoisting Equipment

STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY

T I T L E

DATE _____

TITLE

DATE _____

TITLE

DATE _____

REPORT NO.

LEVEL OF STORAGE

FIGURE 10

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Hoisting Equipment

STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY _____

T I T L E _____

DATE _____

TITLE

DATE _____

TITLE

DATE _____

REPORT NO.

LEVEL OF STORAGE

[illegible]



PG. 10 JF

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Inspection of Equipment and Rigging

STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY _____

TITLE

DATE _____

TITLE

DATE _____

TITLE

DATE _____

REPORT NO.

LEVEL OF STORAGE

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FIGURE 11



FORM 4513 - 9763

REV. ORIG. 6/76

INSPECTION REPORT

PG. 1 OF 2

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

SUBJECT Personnel, Records and Miscellaneous

REPORT NO. _____

STORAGE/HANDLING LOCATION _____

LEVEL OF STORAGE _____

REPORT PLANNED BY _____

TITLE _____

DATE _____

REPORTED BY _____

TITLE _____

DATE _____

EVALUATED BY _____

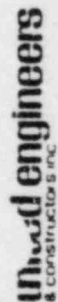
TITLE _____

DATE _____

ITEM NO.	INSPECTION ITEM	SAT.	UNSAT.	REMARKS/FINDINGS	DATE	INSP. BY
	<u>PERSONNEL</u>					
1.	Personnel engaged in operating material handling equipment are competent and have demonstrated satisfactory ability in operating similar lift equipment.					
	<u>RECORDS</u>					
2.	Record copies of completed procedures, reports, personnel qual. records, test equip., calibration records, test deviation or exception records and inspection or examination records are prepared and filed as required.					
	<u>MISCELLANEOUS</u>					
3.	All stainless steel materials are handled in such a manner that they are not in contact with lead, zinc, copper and other nonferrous, low melting elements and alloys to prevent surface contamination of the steel.					
4.	When carbon steel chains, slings or wire ropes are used for handling, they are not in direct contact with stainless steel.					
5.	Care is taken to avoid damage, entrapment of debris, or loss of identification markings during handling.					
6.	Temporary attachments are not welded to code items without permission of FS-QA and concurrence of Authorized Inspector.					
7.	The movement of items is planned to minimize the					

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FIGURE 12



FORM 4513 - 978
REV. ORIO. 6/78

SUBJECT

SUBJECT Personnel, Records and Miscellaneous
STORAGE/HANDLING LOCATION

REPORT PLANNED BY

REPORTED BY

EVALUATED BY

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

REPORT NO. LEVEL OF STORAGE

TITLE	DATE
-------	------

TITLE _____ DATE _____

TITLE _____ DATE _____

INSPECTION REPORT

PG. 2 of 2

[illegible]

FIGURE 12

APPENDIX A

STORAGE LEVEL ASSIGNMENTS OF SAFETY-RELATED EQUIPMENT

The following equipment is identified by Specification and Discipline Codes:

I&C	-	Instrumentation & Control
E	-	Electrical
M	-	Mechanical
MS	-	Mechanical Services
N	-	Nuclear
P	-	Piping
S	-	Structural

LEVEL A**

(Indoor, Temperature & Humidity Controlled)

<u>Spec. No.</u>	<u>Component</u>	<u>Discipline</u>
119-3	Standby Power Sequencing System	E
170-1	Main Control Board	I&C
170-6	Misc. I&C Panels (MM-CP-23 only)	I&C
172-1	Radiation Data Monitoring Systems (RM-CP-296)	I&C

LEVEL B

(Indoor, Heated)

41-4	Protection Coating Systems (Paint)*	S
118-1	Penetrations	E
119-5	DC Switchboards	E
120-1	Power Distribution Panels	E
128-1	Induction Motors	
129-1	Control Panels	E
137-1	Storage Batteries	E
137-2	Battery Chargers	E
143-1	460V Motor Control Centers	E
144-1	5 KV Non-Segregated Bus	E
145-2	5 KV Switchgear	E
145-3	480 V Unit Substations	E

*Level B storage shall be required during the 24 hour period prior to application unless the manufacturer specifies a more restrictive time and temperature range.

**To meet the requirements of ANSI N45.2.2 the filters shall provide 75% dust arrestance efficiency when tested in accordance with ASHRAE Std 52-68.

APPENDIX A

LEVEL B cont'd

<u>Spec. No.</u>	<u>Component</u>	<u>Discipline</u>
170-3	Multipoint Recorders	I&C
170-4	Small Case Recorders	I&C
170-5	Indicators - Panel Mounted	I&C
170-6	Misc. Panels (all panels except MM-CP-23)	I&C
171-1	Instrument Racks - BOP & Rx Aux. Sys.	I&C
172-1	Radiation Data Management System (except RM-CP-296)	I&C
173-4	Solenoid Valves	I&C
174-1	Electronic Transmitters	I&C
174-2	Electronic Controllers & Accessories	I&C
174-5	RTD/TC Conversion Units	I&C
174-8	MSIV Logic Cabinet	I&C
201-1	Emerg. D-G Sets (Control Panels)	M
236-11	Air Handling Filters	MS
252-3	Flow Nozzles and Tubes	I&C
252-8	Thermal Elements and Wells	I&C
252-10	Level Switches	I&C
252-16	Differential Pressure Switches	I&C
252-19	Seismic Monitoring	I&C
252-30	Loose Parts Monitoring	I&C
253-1	Pneumatic Instruments	I&C
501-1	Hydrogen Analyzer	I&C
501-2	Chemical Analyzer	I&C

LEVEL C

(Indoor, Unheated)

45-1	Centrifugal Fans	MS
45-2	Vane Axial Fans	MS
45-5	Control Building AC Equipment	MS
69-4	Cement	S
69-5	Cement	S
69-9	Cement	S
113-6	Instrumentation Cable	E
173-1	Control Valves - Nuclear 1 (in-line)	I&C
173-5	Control Valves - Nuclear 2 (in-line)	I&C
201-1*	Emergency Diesel Generator & Accessories (Partial)	M
209-1*	Cooling Tower Equipment (Motors, Fans, Gear Reducers, Driveshaft, Piping, Nozzles, Eliminator)	N

*Item contains both Level C and D.

APPENDIX A
LEVEL C cont'd

<u>Spec. No.</u>	<u>Component</u>	<u>Discipline</u>
225-3	Dampers	MS
236-8	S. C. 3 Filters	N
236-10	S. C. 2 Filters	N
236-11	Air Cleaning Units	MS
236-14	Iodine Guard Beds/Filters	N
238-2	Service Water Pumps	N
238-3	Containment Spray Pumps	N
238-5	Component Cooling Water Pumps	N
238-10	Emergency Feed Pumps	M
238-15	Spent Fuel Pool Pumps	N
238-19	Diesel Fuel Oil Transfer Pumps	M
238-20	Cooling Tower Pump	N
246-8	Vessels-Carbon Delay Beds	N
248-5	Butterfly Valves	P
248-6	Air & Vacuum Release Valves	P
248-7	Safety and Relief Valves	P
248-8*	Pipe Supports	P
248-9	Containment Spray Nozzles	N
248-11	Piping Expansion Joints	P
248-29	Plug and Ball Valves	P
248-30	Valves - Waste Disposal	P
248-31	Main Steam Safety Valves	M
248-34	Containment Penetrations	P
248-36	Feedwater Isolation Valves	M
248-37	Gate, Globe and Check Valves	P
248-38	Globe Valves	P
248-39	Gate, Globe & Check Valves	P
248-40	Gate, Globe & Check Valves	P
248-41	Gate and Check Valves	P
248-45	Butterfly Valves	P
248-46	Metal Diaphragm Globe Valve	P
248-47	Isolation Sump	N
248-48	6", 8" & 24" Water Check Valves	P
248-54	Piping and Fittings - 2" & Smaller	P
248-65	Main Steam Isolation Valves	M
252-4	Orifice Plates	I&C
252-22	Neutron Detector Positioning Equipment	N
257-4*	Spent Fuel Pool Bridge	N
275-2	Molecular Sieve Dryer	N

*Item contains both Level C and D. To be stored at higher level if not separated.

APPENDIX A

LEVEL D

<u>Spec. No.</u>	<u>Component</u>	<u>Discipline</u>
12-5	Structural Steel (Safety Related)	S
12-6	Structural Steel (Non-Safety Related)	S
14-1	Reinforcing Bars	S
14-5	Nickel Coated Reinforcing Bars	S
15-1	Containment Building Steel Liner	S
15-2	Equipment Hatch and Personnel Lock	S
18-1	Embedded Steel and Weldments	S
18-3	Miscellaneous Steel	S
18-14	Anchor Plates and Embedded Plates for Containment Structure	S
48-5	Duct Banks and Conduit	E
113-1	5 KV Cable	E
113-3	600 V Power Cable	E
113-4	600 V Control Cable	E
113-8	Heating Cable	E
201-1*	Emergency Diesel Generator Accessories (Partial)	M
209-1*	Lintels and Tile	N
225-1	Heavy Gage Ductwork	MS
225-4	Sump Liners	S
226-1	Sheet Metal Ductwork Accessories	MS
236-18	Service Water Strainers	N
246-1	Refueling Water Tank	N
246-2	S. C. 3 Shop Fabricated Tanks	N
246-6	S. C. 3 Field Erected Tanks	N
246-13	Fuel Oil Storage Tanks	M
248-1	Shop Fabricated Piping	P
248-2	Service Water Piping	P
248-3	Field Erected Piping	P
248-8*	**Pipe Supports	P
248-56	Carbon Steel Pipe	S
248-62	Pipe Supports	P
249-4	RPV Insulation	P
257-4*	Spent Fuel Pool Bridge Hoist	N
258-1	Primary Component Cooling Heat Exchanger	N
258-3	Spent Fuel/Containment Spray Heat Exchangers	N
522-1	Cooling Units	MS

*Item contains both Level C and D. To be stored at higher level if not separated.

**Limited to non-engineered support hardware which contains no threaded or machined surfaces.

APPENDIX B

CONDITIONS DURING INSTALLATION & PRIOR TO SERVICE

Spec. Number	<div>Original Storage</div> <div>LEVEL - A</div> <div>Component</div>	Discipline	Area, Temp. & Hum. Controlled (Temporary or Perm.)	Local, Temp. & Hum. Controlled (Temporary)	Area, Heated Only (Temporary or Perm.)	Local, Heated Only (Temporary)	Area, Unheated	Local, Temporary Heat (Including Strip Heaters)	Temporary Heat on Selected Basis
119-3	Standby Power Sequencing System	E	X						
170-1	Main Control Board	I&C	X					*	
170-6	Miscellaneous Panels (MM-C.P.-23) (only)	I&C	X					*	
172-1	Radiation Date Monitoring Systems (RM-C.P.-296 only)	I&C	X						

*energize strip heaters

APPENDIX B

CONDITIONS DURING INSTALLATION & PRIOR TO SERVICE

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Spec. Number	Component	Discipline	Original Storage LEVEL - B						Local, Temporary Heat (Including Strip Heaters)	Temporary Heat on Selected Basis
			Area, Temp. & Hum. Controlled (Temporary or Perm.)	Local, Temp. & Hum. Controlled (Temporary)	Area, Heated Only (Temporary or Perm.)	Local, Heated Only (Temporary)	Area, Unheated			
41-4	Protection Coating Systems (Paint)	S			X *					
118-1	Penetrations	E				X				
119-5	D.C. Switchboards	E			X					
120-1	Power Distribution Panels	E			X					
128-1	Induction Motors	E&M	a - If strip heaters are furnished they should be connected. b - Local heat may be required on selected equipment (or as indicated by periodic megger readings).							
129-1	Control Panels	E			X					
137-1	Storage Batteries	E			X		* Level "B" storage shall be required during the 24 hr. period prior to application unless Mfr. specifies more restrictive time and temperature range.			
137-2	Battery Chargers	E			X					
143-1	460 Volt Motor Control Centers	E			X					
144-1	5 KV Non Segregated Bus	E			X					
145-2	5 KV Switchgear	E			X					
145-3	480 V Unit Substations	E			X					

* Level "B" storage shall be required during the 24 hr. period prior to application unless Mfr. specifies more restrictive time and temperature range.

APPENDIX B

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3/9/81

CONDITIONS DURING INSTALLATION & PRIOR TO SERVICE

Page 3 of 4

Spec. Number	Original Storage LEVEL - B Component	Discipline	Area, Temp. & Hum. Controlled (Temporary or Perm.)	Local, Temp. & Hum. Controlled (Temporary)	Area, Heated Only (Temporary or Perm.)	Local, Heated Only (Temporary)	Area, Unheated	Local, Temporary Heat (Including Strip Heaters)	Temporary Heat on Selected Basis
170-3	Multipoint Records	I&C	X						
170-4	Panel Mounted Small Case Records	I&C	X						
170-5	Indicators - Panel Mounted	I&C	X						
170-6	Miscellaneous Panels (Except MM-C.P.-23)	I&C	X					*	
171-1	Instrument Racks	I&C	X						
172-1	Rad. Data Management System (Except RM-C.P.-296)	I&C	X						
173-4	Solenoid Valves	I&C			X				
174-1	Electron Transmitters	I&C			X				
174-2	Electronic Controllers and Accessories	I&C	X						
174-5	RTD/TC Conversion Units	I&C	X						
174-8	MSIV Logic Cabinet	I&C	X						
201-1	Emergency D-G Sets (Control Panels)	M	X		X			*	
236-11	Air Handling Filters	MS			X				
252-3	Flow Nozzles and Tubes	I&C					X		

*energize strip heaters

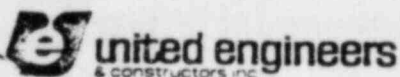
APPENDIX B

CONDITIONS DURING INSTALLATION & PRIOR TO SERVICE

Seabrook
QCP-13
Rev. 11
3/9/81
Page 4 of 4

Spec. Number	<div>Original Storage</div> <div>LEVEL - B</div> <div>Component</div>	Discipline	Area, Temp. & Hum. Controlled (Temporary or Perm.)	Local, Temp. & Hum. Controlled (Temporary)	Area, Heated Only (Temporary or Perm.)	Local, Heated Only (Temporary)	Area, Unheated	Local, Temporary Heat (Including Strip Heaters)	Temporary Heat on Selected Basis
252-8	Thermal Elements and Wells	I&C					X		
252-10	Level Switches	I&C			X				
252-16	Differential Pressure Switches	I&C	X						
252-19	Seismic Monitoring	I&C	X					*	
252-30	Loose Parts Monitoring	I&C	X						
253-1	Pneumatic Instrumentation	I&C	X						
501-1	Hydrogen Analyzer	I&C	X						
501-2	Chemical Analyzer System	I&C	X			X		*	

*energize strip heaters



ORM 4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE Records ReviewPREPARED BY B. E. O'ConnorDATE 6/8/81

CHANGE

I - Scope - Add new sentence to expand the scope as follows:

This procedure also includes a review of the records for the non-safety
Purchase Orders as listed in QA 7-2, Appendix B.

Page 2, IV.A.1 - Revise as follows:

1. Material will be inspected when received in accordance with QCP 7-1, QCP 7-2
and QCP 7-3.

Page 1 - B - Reference Documents - Add

QCP 7-3 - Receiving Inspection of UE&C Purchased Non-Safety Items

INFORMATION ONLYRECEIVED
U E & C INC.

JUL 23 1981

SEABROOK
STATION

REASON FOR CHANGE Expand the scope of QCP 17-1 to include records review for Non-
Safety Purchase Orders as listed in QA 7-2, Appendix B and QCP 7-3.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>W. Lambert</i>	<i>6/16/81</i>	<i>GC Humphrey</i>	<i>7/14/81</i>	<i>D.T.L.</i>	<i>6/21/81</i>	<i>J.B. Schramm</i>	<i>7/24/81</i>	<i>82 Dmy Tangle</i>	<i>7/17/81</i>

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-17-1
RECORDS REVIEW

FOR

SEABROOK STATION

February 14, 1975

Prepared by: M. Stevens / REM
M. Stevens
Quality Assurance Engineer

Approved by: J. R. Dmytryk
J. R. Dmytryk
Construction Manager

Approved by: G. F. Cole
G. F. Cole
Project Manager

Approved by: J. B. Silverwood
J. B. Silverwood, Manager
Reliability & Quality Assurance

INFORMATION ONLY

REVISION				APPROVAL		
No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr.	Mgr. R&QA	Project Con. Mgr.
1	6/26/75	1,2,3,4,5,6	<u>W. Howard</u>	<u>G. F. Cole</u>	<u>J. B. Silverwood</u>	<u>J. R. Dmytryk</u>
2	1/23/78	i, ii, 1,2,3,4	<u>REM</u>	<u>G. F. Cole</u>	<u>J. B. Silverwood</u>	<u>J. R. Dmytryk</u>
3	10/20/80	Figures 1 & 2	<u>A. L. White</u>	<u>G. F. Cole</u>	<u>J. B. Silverwood</u>	<u>J. R. Dmytryk</u>

QCP-17-1 Current Page Listing:

<u>Page</u>	<u>Date</u>
Cover Sheet	10/20/80
1	10/20/80
11	10/20/80
1	1/23/78
2	1/23/78
3	1/23/78
Figure 1	10/20/80
Figure 2	10/20/80

RECORDS REVIEW
PROCEDURE QCP-17-1

Identification of Changes:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
Figure 1		Revised per ACN #24 (3/14/80)
Figure 2		Added per ACN #24 (3/14/80)



QUALITY CONTROL PROCEDURE

QCP - 17-1

PUBLIC SERVICE CO. OF NEW HAMPSHIRE
SEABROOK STATION

SUBJECT:

RECORDS REVIEW

REV: 3

DATE: 1/23/78

PAGE 1 of 3

I. SCOPE

This procedure describes the activities associated with the site records review of documents for items and services purchased by UE&C and NSS Equipment provided by Westinghouse. This includes items identified as Safety Class 1, 2, 3, Class 1E and Seismic Category I in Tables 3.2-1 and 3.2-2 of the Seabrook Station PSAR.

II. GENERALA. Purpose

1. The purpose of this procedure is to establish a method for the review of documentation to assure that the records are complete and correct prior to releasing the items for installation.
2. To impose the applicable portions of UE&C Corporate Standard XVII to this project.

B. Reference Documents

1. QCP-7-1 - Receiving Inspection
2. QCP-7-2 - Receiving Inspection of Westinghouse NSS Items.
3. QCP-13-1 - Storage Control
4. QCP-17-2 - Quality Assurance Records
5. QA-7-2 - Control of Purchased Material - Vendor Surveillance
6. QA-8 - Identification and Control of Materials, Parts and Components
7. QA-10 - Inspection
8. QA-15 - Nonconforming Materials, Parts or Components
9. QA-17 - Quality Assurance Records
10. Westinghouse Power Systems Division Product Assurance Manual
11. REQUEST User Manual - UE&C Data Base System for Information and Records Management.

III. RESPONSIBILITIES

- A. The UE&C Field Quality Assurance Group is responsible for the surveillance of "Record Review" effort by Contractor Quality Control Groups, in order to assure their implementation of their procedures. They are also responsible for providing the documentation requirements for QA implementation of records review and acceptance.

B. Contractor Quality Control Groups are responsible for:

1. Implementing the requirements of this procedure within the scope of their responsibility.
2. Coordinating their activities related to documentation and related deficiency reports with:
 - a. UE&C Construction Management personnel (site)
 - b. YAEC Field Quality Assurance (FQA)
 - c. UE&C Field Quality Assurance (FQA)
 - d. Contractor Superintendents

IV. REQUIREMENTS

A. Receiving and Storage Inspection

1. Material will be inspected when received in accordance with QCP-7-1 and QCP-7-2.
2. Material will be inspected when stored in accordance with QCP-13-1.
3. A copy of the Receiving Inspection and Storage Inspection Reports will be forwarded to the QA Engineer - Records and filed in accordance with QCP-17-2.

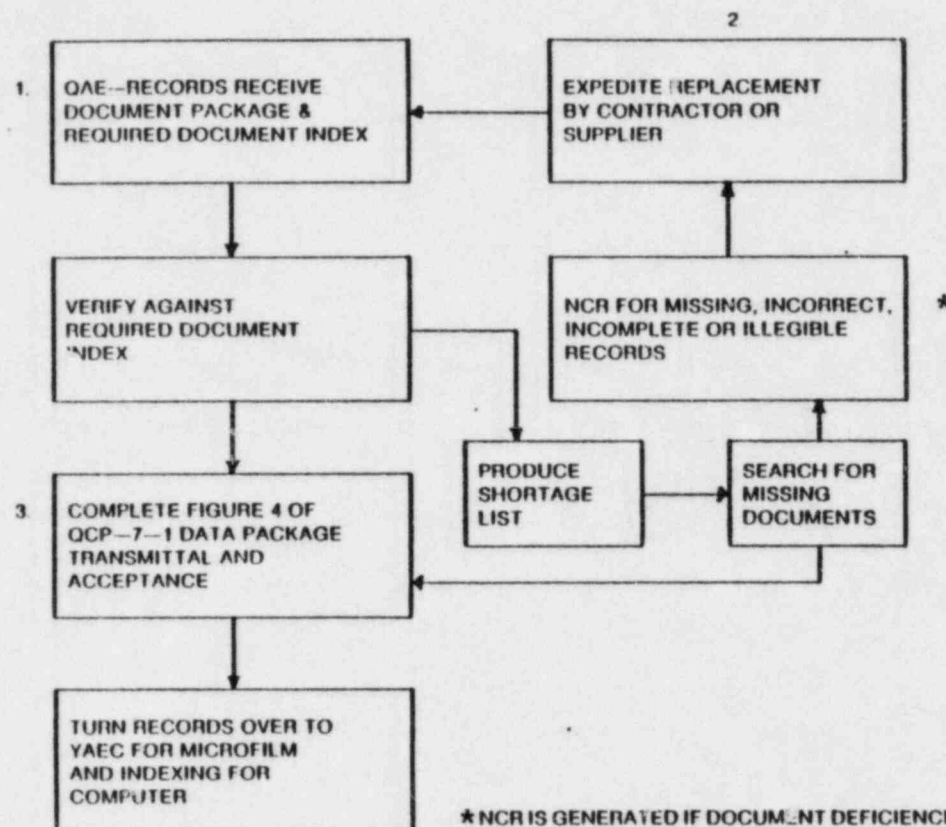
B. Records Review

1. For components purchased by UE&C, review of records will take place primarily at the facility of the supplier prior to shipment in accordance with QA-7-2.
2. Westinghouse will provide a Quality Release for each of the NSSS components. These documents will satisfy UE&C Records requirements until Westinghouse PWR-SD transfers microfiche NSSS Supplier Data Packages directly to YAEC.
3. Site contractor records for civil/structural work will be accumulated according to UE&C approved contractor procedures and turned over by the contractor to YAEC, or at prescribed intervals to be developed by the YAEC.
 - a. The applicable Site Contractor's quality control group will perform a document review upon receipt of their purchased items on site. This will be accomplished in accordance with their applicable UE&C approved procedures.

- b. The purpose of his data review is to check the documentation received for availability and against required documentation as defined in the Contractor procurement documents.
 - c. When required documentation is missing or does not meet Contractor specified requirements, the Contractor QA personnel shall issue a nonconformance report in accordance with their UE&C approved nonconformance control procedures.
- 4. UE&C records review will be accomplished in accordance with the flow diagram shown in Figure 1.
 - 5. Records accepted by UE&C will be filed in accordance with QA-17-2 prior to turnover to YAEC.
- C. Records Disposition

Disposition of records accumulated by UE&C & Site Contractors will be in accordance with QCP-17-2.

**FIGURE 1
QA RECORD FLOW**



1. RECORDS RECEIPT

- a. RECEIVE DOCUMENT PACKAGE FROM QAE--RECEIVING PER QCP-7-1 & 2.
- b. CHECK FOR LOSS OR DAMAGE AGAINST TRANSMITTAL OR SHIPPING DOCUMENT AND COMPLETED DOCUMENT PACKAGE INDEX OR ITEMIZED LIST.
- c. CHECK EACH DOCUMENT RECEIVED AGAINST VENDOR'S DOCUMENT INDEX USING EITHER A MANUAL OR AN AUTOMATED SYSTEM. (THE MANUAL SYSTEM REQUIRES CHECKING THE V.S. CHECK PLAN LIST PART "A" AND THE VENDOR'S DOCUMENT INDEX. THE AUTOMATED SYSTEM USES THE DOCUMENT AUDIT OPTION OF REQUEST.)

2. RECONCILE WITH REQUIREMENTS

- a. PRODUCE SHORTAGE LIST AND SEARCH CORRESPONDENCE, HOME OFFICE, EXPEDITING, ETC. FOR MISSING DOCUMENTS.
- * b. ISSUE NCR FOR VENDOR FOLLOWUP ON ITEMS CONFIRMED AS MISSING IN ACCORDANCE WITH QA-15.
- c. EXPEDITE SUBMITTAL OF PROPER DOCUMENTS.

3. ACCEPT RECORDS

- a. COMPLETE FINAL ACCEPTANCE AND DISTRIBUTE IN ACCORDANCE WITH QCP-17-2.
- b. TURN RECORD OVER TO YAEC IN ACCORDANCE WITH YAEC'S PROCEDURES.

* NCR IS GENERATED IF DOCUMENT DEFICIENCIES ARE NOT RESOLVED WITHIN 15 WORKING DAYS. IN THE INTERIM THE MATERIAL WILL BE PLACED ON "HOLD" BY QAE RECEIVING. TRACKING OF DOCUMENT DEFICIENCIES WILL BE BY USING THE DOCUMENT DEFICIENCY LOG IN THIS PROCEDURE (FIGURE 2).

SEABROOK
QCP-17-1
REVISION 3
10/20/80

FIGURE - 2

SEABROOK
QCP-17-1
REVISION 3
10/20/80



RM 4543 - 9763

QA/QC PROCEDURE ADVANCE CHANGE NOTICE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE - SEABROOK STATION

PROCEDURE TITLE QC Procedure for Quality Assurance RecordsPREPARED BY B. E. O'ConnorDATE 6/1/81CHANGEChange Figure No. 1, 3rd column Site Contractor File to read:As Required (File in Numerical Sequence).CHG. NO. 40
EFFECTIVE DATE 7/9/81QA N/AQCP 17-2REV. 4DATE 10/20/80RECEIVED
U.E. & C. INC.

JUL 23 1981

SEABROOK
STATIONREASON FOR CHANGE To conform to current site practice and to avoid duplicate files.

REVIEWED BY FSQA	DATE	REVIEWED BY PROJECT QAE	DATE	APPROVED PM	DATE	APPROVED MGR. R & QA	DATE	APPROVED	DATE
<i>W. Lambert</i>	<i>6/1/81</i>	<i>BC Lempky</i>	<i>6/1/81</i>	<i>ST Col-</i>	<i>6/21/81</i>	<i>BB Shannon</i>	<i>6/21/81</i>	<i>BR Emery</i>	<i>7/7/81</i>

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-17-2
QUALITY ASSURANCE RECORDS

FOR

SEABROOK STATION

INFORMATION ONLY

Prepared by:

Martin Stevens
M. Stevens
Quality Assurance Engineer

Approved by:

J. R. Dmytryk
J. R. Dmytryk
Construction Manager

Approved by:

G. F. Cole
G. F. Cole
Project Manager

Approved by:

J. B. Silverwood
J. B. Silverwood, Manager
Reliability & Quality Assurance

REVISION

APPROVAL

No.	Date	Page Nos. Revised	Prep. By	Proj. Mgr.	Mgr. R&QA	Project Con. Mgr.
1	6/26/75	1 thru 11	<i>R. H. Howard</i>	<i>BTC</i>	<i>JBS</i>	<i>JRC</i>
2	2/17/78	Cover Sheet, 1 thru 7	<i>J. R. Dmytryk</i>	<i>BTC</i>	<i>JBS</i>	<i>JRC</i>
3	3/1/79	Figure 2 (Page 6)	<i>J. R. Dmytryk</i>	<i>BTC</i>	<i>JBS</i>	<i>JRC</i>
4	10/20/80	3	<i>J. R. Dmytryk</i>	<i>BTC</i>	<i>R. H. Howard for JBS</i>	<i>JRC</i>

QCP-17-2 Current Page Listing:

<u>Page</u>	<u>Date</u>
Cover Page	10/20/80
i	10/20/80
ii	10/20/80
1	2/17/78
2	2/17/78
3	10/20/80
4	2/17/78
Figure 1	2/17/78
Figure 2	3/1/79
Attach. 1 Page 1 of 4	2/17/78
Attach. 1 Page 2 of 4	6/26/75
Attach. 1 Page 3 of 4	6/26/75
Attach. 1 Page 4 of 4	6/26/75

Project Quality Control
Procedure QCP-17-2

Identification of Changes:

<u>Section</u>	<u>Page</u>	<u>Reason</u>
IV.B.1.b	3	Revised per ACN #26 (3/17/80)
Attach. 1	1-4	Eliminated reference to Figure 3



& constructors inc

QUALITY CONTROL PROCEDURE

PUBLIC SERVICE CO. OF NEW HAMPSHIRE-SEABROOK STATION
NEW ENGLAND POWER COMPANY - NEP 1 & NEP 2
CENTRAL MAINE POWER COMPANY - MNPS

SUBJECT:

QUALITY ASSURANCE RECORDS

QCP - 17-2

REV: 2

DATE: 2/17/78

PAGE 1 of 4

UNITED ENGINEERS & CONSTRUCTORS INC.

QUALITY CONTROL PROCEDURE QCP-17-2
FOR
QUALITY ASSURANCE RECORDS

I. SCOPE

This procedure pertains to the records of structures, systems and components identified as safety Class 1, 2, 3, Class IE and Seismic Category I in Tables 3.2-1 and 3.2-2 of the Seabrook Station PSAR. This procedure also provides for a review for completeness of documents required by the non-safety related purchase orders in QA-7-2 Appendix B.

II. GENERALA. Purpose

1. This procedure establishes a system for the maintenance of records sufficient and necessary to provide objective evidence of satisfactory performance of activities affecting quality.
2. This procedure describes the method for the accumulation, organization, custody and retention of quality assurance and quality control records for materials and equipment, including those activities at the construction site. Records will be collected at the site to form a permanent file of documentation furnished to PSNH/YAEC, by the NSS Supplier, UE&C Construction Management and Quality Assurance, Site Contractors and Off-Site Vendors.
3. To impose the applicable portions of UE&C Corporate Standard XVII to this project.

B. Referenced Documents

1. ANSI N45.2.9 - Requirements for Collection, Storage and Maintenance of QA Records
2. QA-15 - Control of Nonconforming Conditions
3. QCP-17-1 - Records Review
4. QA-17 - Quality Assurance Records
5. REQUEST User Manual - UE&C Data Base System for Records Management and Material Control
6. YAEC Document Control Center Manual and Procedure
7. RM-1 - Seabrook Site Record Management System

C. Document Storage Requirements (Protective Measures)

1. Storage facility for all documents shall be in accordance with Section IV.E.2 of QA-17.

2. File cabinets used to store records, documents and microfilm shall be of metal construction stored in the vault to safeguard against loss, damage and unauthorized entry.
3. Vaults used to store radiograph film shall be of fireproof construction and meet local and standard fire underwriter codes.
4. Individual documents and radiographs shall be handled in such a manner as to protect their integrity.
5. Access to the storage facility shall be restricted to designated individuals within the Quality organization responsible for safekeeping of the documents.

III. RESPONSIBILITIES

- A. The YAEC Quality Assurance group has been assigned the responsibility for overall maintenance and control of the Site Record Center. The Site Record Center will provide the final storage and maintenance of QA Records for the Seabrook Station.
- B. The UE&C Field Superintendent-Quality Assurance is responsible for:
 1. Maintaining the master files for UE&C-Purchased equipment Documents, the NSSS Quality Release Documents and UE&C Site Generated Civil/Structural Documents until they are turned over to YAEC.
 2. Identifying and informing the Construction Superintendent, Purchasing Department and QAE of deficiencies in the records and filing system.
 3. Surveillance of Records Review in accordance with Procedure QCP-17-1.
- C. Site Contractors for Civil/Structural work are responsible for maintaining and/or furnishing all documentation and records within the scope of their activity as required contractually, in the purchase order and applicable specifications. UE&C QA surveillance of these records shall be in accordance with QCP-10-1, and QCP-10-2.

IV. PROCEDURE

A. Master QA File Location

1. Records pertinent to UE&C Quality control/quality assurance activities will be kept in master files located within the designated records storage area of the construction office building.

2. Access to these master files shall be controlled by UE&C Field Superintendent - Quality Assurance.
3. Authorized representatives of the Client, inspection agencies and audit personnel will be permitted access to the master files under the direct supervision of UE&C FS-QA.

B. Filing System

1. The make-up of UE&C's Master QA file is illustrated in Figure 1 and consists of:
 - a. Vendor Purchase Order (PO) File contains the data packages received with the items and associated documentation. A further division within each Purchase Order File shall be by the most appropriate method i.e. Receiving Report Number, system, spool number or tag number.
 - b. General Documents are UE&C generated documents such as surveillance reports, inspection reports, NCR's, etc., and will be filed in numerical sequence.
 - c. Site Civil/Structural Contractor Files shall be filed separately. They shall be maintained by the Contractor until they are turned over at specified intervals or at the completion of subcontractor's work. The documents required by contract shall be filed as part of the Master Quality Assurance File. Documents which make up the final documents package are distributed as shown in Figure 2 and are in separate locations until finally turned over to YAEC.
2. A typical Document Package for each item may contain, but not necessarily be limited to the applicable information listed in Figure 3. Each document package could consist of three (3) data packages if documents in each phase are applicable.
3. A file index will be maintained by the FS-QA in which the location and contents of files described in IV.B.1 are listed. Site Contractor file index will be turned over with the files.

C. Duplicate Files

1. Documents generated during the design, procurement and construction phase are generated and distributed as shown in Figure 2. The duplication shown satisfies the requirement for protection against loss or destruction.
2. Documents described in para IV.B.1 shall be indexed and micro-filmed by YAEC in accordance with YAEC Seabrook Station Record Center Manual and Procedure. Copies of each reel of microfilm along with computer input tape shall be sent to the Project Document Control Center.

D. Retrieval

In order to facilitate retrievability of records UE&C's Computerized Records Management System has been developed (Request). The REQUEST User Manual describes in detail the retrieval steps.

E. Turnover of Records

YAEC and UE&C Records responsibilities will determine the timing and method for turn over of records to YAEC/PSNH. Turnover of records is covered in RM-1, and YAEC's DCC-2, transfer of Quality Assurance Records to DCC.

F. Security

Under no circumstances will original copies of documents be allowed to leave the site without first being copied and filed temporarily in the site record center.

G. Surveillance and Audit

1. The FS-QA shall provide surveillance over UE&C and Civil/Structural records administration.
2. The Manager-Audits shall periodically audit records administration in accordance with QA-18.

MASTER QUALITY ASSURANCE FILE

PURCHASE ORDER FILE (PO FILE)	GENERAL DOCUMENTS	SITE CONTRACTOR FILE
UE&C PO UE&C SPECIFICATION V.S. CHECK PLAN V.S. INSPECTION REPORT RECORD ACCEPTANCE FORMS RIR# PKG (FILE IN NUMERICAL SEQUENCE)	NCR CAR LWA (FILE IN NUMERICAL SEQUENCE UNDER APPROPRIATE HEADINGS)	AS REQUIRED. (FILE IN ALPHABETIC SEQUENCE)

FIGURE 1

DOCUMENT FLOW & DISPOSITION

ACTIVITY	UE&C		WESTINGHOUSE NSSS	YANKEE (SITE RECORD CENTER)	SUBCONTRACTORS
	ENGINEERING	CONSTRUCTION MANAGER			
UE&C ENG. & DESIGN DOCUMENTS	ORIGINAL DOCUMENTS	HARD COPIES & MICROFILM (CON — STRUCTION FILE)	-----	HARD COPIES & MICROFILM (NORMAL PROJECT DIST.)	HARD COPIES NEEDED TO DO JOB
SITE DATA PACKAGE RECEIVED FOR EQUIPMENT	COPY FOR INFO	HARD COPIES FOR REVIEW & TURNOVER (MASTER QA FILE)	-----	HARD COPIES TURNED OVER BY C.M.	-----
WESTINGHOUSE QUALITY RELEASE FOR NSSS EQUIP.	-----	HARD COPY FOR REVIEW & TURNOVER (MASTER QA FILE)	ORIGINAL COPY	HARD COPY TURNED OVER BY C.M.	-----
WESTINGHOUSE DOCUMENT PACKAGE FOR NSSS EQUIP.	-----	-----	ORIGINAL COPY	HARD COPIES & MICROFILM TURNED OVER BY NSSS	-----
SUBCONTRACTOR SITE CONSTRUCTION RECORDS-CIVIL/ STRUCTURAL	SUBMITTALS REQUIRED BY SPECIFICATIONS	HARD COPIES FOR REVIEW AS REQUIRED FOR CONSTRUCTION REPORT	-----	HARD COPIES TURNED OVER BY SUBCONTRACTORS	ORIGINALS
SUBCONTRACTOR SITE CONSTRUCTION RECORD - ALL OTHER	SUBMITTALS REQUIRED BY SPECIFICATIONS	SUBMITTALS REQUIRED BY SPECIFICATION	-----	HARD COPY TURNED OVER BY SUBCONTRACTORS	ORIGINALS

FIGURE 2

ATTACHMENT-1

TYPICAL DOCUMENT PACKAGE LISTINGS
(See note - Page 4)

DATA PACKAGE	TYPICAL DOCUMENTS	SAFETY RELATED (QAS-1, QAS-3)
1) Procurement Phase	Certified Drawings and Specs	x
	Equipment Specification	x
	Quality Assurance Manual (Evaluation)	x
	Vendor Purchase Order (unpriced) including Amendments	x
2) Manufacturing and Fabrication Phase	Balancing Data (Dynamic & Static)	x
	Cement Sample Reports	x
	Certificate of Authoriztion	x
	Cleaning Procedures	x
	Detailed Inspection Plan	x
	Eddy-Current Test Procedures	x
	Ferrite Test Procedures & Results	x
	Final Insp. Reports & Releases	x
	Heat Treatment Records and Procedures	x
	Inspection & Test Instrumentation Calibration Procedures & Records	x
	Major Defect Repair Records	x
	Manufacturers Certificate of Compliance	x
	Manufacturers Data Reports (Code)	x
	Material Properties Records	x

ATTACHMENT-1

TYPICAL DOCUMENT PACKAGE LISTINGS
(See note - Page 4)

<u>DATA PACKAGE</u>	<u>TYPICAL DOCUMENTS</u>	<u>SAFETY RELATED (QAS-1, QAS-3)</u>
	Material Test Reports and/or Certifications	x
	Nonconformance Reports	x
	NDE Personnel Qualification Procedure	x
	NDE Procedures (Liquid Penetrant, Magnetic Particle & Ultrasonic Test and Results)	x
	Packaging & Storage Procedures	x
	Performance Test Procedures & Records	x
	Pipe & Fitting Location Reports	x
	Pressure Test Procedure & Results	x
	QA Manuals, Procedures & Instructions	x
	QA System Audit Reports	x
	Radiographs, Review Forms	x
	Spool Piece Sketches	x
	Vendor Surveillance Releases	x
	Weld Material Control Procedures and Reports	x
	Welding Personnel Qualifications	x
	Welding Procedures	x
	Welding Procedure Qualifications	x

ATTACHMENT-1

TYPICAL DOCUMENT PACKAGE LISTINGS

(See note - Page 4)

DATA PACKAGE	TYPICAL DOCUMENTS	SAFETY-RELATED (QAS-1, QAS-3)
3) Installation and Construction Phase	Field Surveillance & Corrective Action Reports	x
	Nonconformance Reports	x
	Receiving Inspection Procedures and Reports	x
	Source Inspection Data	x
	Storage Inspection Procedures and Reports	x
<u>CIVIL</u>		
	Batch Plant Operation Reports	x
	Concrete Cylinder Test Reports & Charts	x
	Concrete Design Mix Reports	x
	Concrete Placement & Curing Records	x
	Concrete Test Reports (slump, air content, temp. unit weight)	x
	Containment Vessel Pressure Proof Test & Leak Rate Tests & Results	x
	Material Property Reports & Certification & Mill Test Reports for -	x
	Structural steel & bolting	x
	(Re-Bar) reinforcing steel	x
	Reinforcing steel splice sleeve material	x
	Metal containment shell & accessories	x
	Containment Liner & accessories	x

ATTACHMENT-1

TYPICAL DOCUMENT PACKAGE LISTINGS
(See note - Page 4)

<u>DATA PACKAGE</u>	<u>TYPICAL DOCUMENTS</u>	<u>SAFETY-RELATED (QAS-1, QAS-3)</u>
	Mix Water Chemical Analysis	x
	Physical Property Reports - Cement & Aggregates	x
	Reinforcing Steel Mechanical Splice Records	x
	Soil Compaction Test Reports & Sieve Analysis	x
	Users Tensile Test Reports for Cadmold splices & reinforcing steel	x

NOTE: The typical Document Package Listings as defined on pages 6 thru 9 are not intended as a list of Data Requirements for Seabrook Station. Data Requirements are specified in the applicable contract specification and various Quality Assurance documents. These lists are intended only to direct where similar type documents for various pieces of equipment should be filed for traceability and retrievability. This list will be revised as other typical documents are generated.

3

To:

JOHN CARR, CHIEF
FREEDOM OF INFORMATION AND
PRIVACY ACT BRANCH

FOIA 524

Release
Seaborn Procedure

3

Revision 5 Date 3/31/78
Page 1 of 2

PREFACE

Public Service Company of New Hampshire (PSNH) as lead applicant for regulatory licenses is responsible for quality assurance on the Seabrook Project. The Chief Executive Officer of PSNH has delegated to Yankee Atomic Electric Company (YAEC) the responsibility for establishment and implementation of the Quality Assurance Program. He is maintained cognizant of the Program activities and provided quarterly reports prepared by YAEC management. He is represented in management audits of the QAD and at selected audits of contractors, vendors, and YAEC departments.

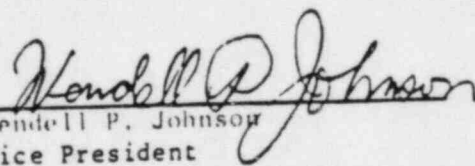
Within YAEC, the Vice President is responsible for coordination of the Program activities and for the overall effectiveness of the Seabrook Station Quality Assurance Program. The responsibility for completeness of Program requirements, maintenance and issuance of this Manual, and compliance with Program requirements has been delegated to the YAEC Quality Assurance Manager. The Managers of the Seabrook Project Office and the YAEC Engineering, Construction, Operations and Quality Assurance Departments are responsible for performance of quality assurance activities within their scope.

This Manual contains the PSNH/YAEC Quality Assurance Program and Procedures applicable to the design, procurement and construction phases. The Program complies with the requirements of the American Society of Mechanical Engineers, Boiler & Pressure Vessel Code, Section III, Appendix B, 10 CFR 50; "Quality Assurance Criteria for Nuclear Power Plants", and "Guidance on

Power Plants" dated June 7, 1973 (commonly called the Grey Book) with exceptions as noted in the contents of the Program.

YAEC has delegated to the contractors (Westinghouse, the Nuclear Steam System Supplier and United Engineers & Constructors, Inc., the Engineer-Constructor) quality control and quality assurance responsibilities associated with the design, procurement and installation of safety related equipment as defined in this Manual. The contractors are responsible for imposing applicable quality requirements on their vendors and for ensuring that implementation of the requirements are performed by their vendors. YAEC ensures implementation of the contractor and vendor portion of the program through reviews of contractors' design documents, quality programs and procedures and a comprehensive audit program.

The YAEC Quality Assurance organization shall operate in strict accordance with this Manual and all personnel shall give full support to the quality system set forth herein.


Wendell P. Johnson
Vice President

SEABROOK STATION
QUALITY ASSURANCE MANUAL
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		No.	Date	No.	Date
5.1	CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES	5	03/31/78	1	08/21/81
5.1	CONTROL OF YAEC/PSNH PROCUREMENT Appendix A	3	03/30/79	1	08/21/81
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8.1	CORRECTIVE ACTION	7	12/05/79	1	08/21/81
9.1	GENERAL AUDIT PROCEDURE	8	02/08/80	1	08/21/81
9.2	INTERNAL AUDITS	5	03/31/78	1	08/21/81
10.0	RECORDS	5	03/31/78	1	08/21/81

SEABROOK PROJECT
QUALITY ASSURANCE MANUAL

LIST OF CHANGES

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
3/25/76	1.2	2.3	Construction Manager responsible for Level 2 on containment structure.
		6.2.2	Changed "Construction Superintendent" to "Resident Construction Manager."
		7.2	Changed "Construction Superintendent" to "Resident Construction Manager".
		18.4	Distribution of site audit reports per Procedure 9.1.
		18.6.1	Changed "Construction Superintendent" to "Resident Construction Manager"
	3.2	3.1.7	Changed "to identify" to "for indicating".
		3.1.7.4	New paragraph requires review of previous ERR comments.
	5.1	2.4	Deleted reference to Procedure 9.2.
		3.7	Deleted redundant paragraph. Same data contained in paragraph 3.2 and 3.3.
		3.7	3.8 renumbered as 3.7.
		3.7.1	3.8.1 renumbered as 3.7.1 and Reference 2.4 changed to 2.3.
	8.1	3.3.1	New paragraph requiring documentation of corrective action.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
5/25/76		3.4	Changed "Construction Superintendent" to "Resident Construction Manager"
		Form 8.1-A	Computer format shown.
	9.1	3.1.6.4	Changed "Project Superintendent" to "Resident Construction" Manager.
		3.1.8.5	Added "Field QCAD Manager"
		3.1.8.7.1	Added "and subcontractors."
	9.2	3.2.1	Added "in accordance with."
		3.3.1	Deleted reference to Procedure 5.1, 8.1, and 9.1. Added reference to Procedure 10.0.
	9.4	3.1.1	Added "and contractors."
		3.1.2	Added "and contractors."
		3.1.4.4	Changed "Project Superintendent" to "Resident Construction Manager."
		3.1.5.4	Deleted "and attributes."
		3.1.6.1	Changed "UE&C Project Superintendent" to "Resident Construction Manager"
		3.1.6.4	Added "Project Manager."
		3.1.6.5	Added "Supervisor"
		3.1.6.7	New paragraph.
		3.2.3	Changed from three to five working days.
		3.3.1	Changed "is" to "will be".
	10.0	3.1.1	Added reference to N45.2.9.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
3/25/76		3.4	Records, as a minimum, will be those required by Appendix A, N45.2.9.
		3.5	Added "Field."
		3.6.1	Added "and non-permanent".
		3.6.2	Clarified storage requirements during identification, microfilming, etc.
		3.7	Added "received, recorded, inspected" and "Field".
		3.8	Added "Field" and "and Non-permanent"
		3.10	Changed "and prevent deterioration" to "and preservation".
8/20/76	2.0	Fig. 2.0-1	Revised to show division of Electrical Group and Instrumentation and Control Group.
		Fig. 2.0-1(A)	Revised.
	3.2	3.2	Safety-Related calculations discussed.
		3.3	Renumbered.
		3.3.1	Renumbered.
12/1/76	2.0	2.1	Deleted reference to Table 2.0-1.
		3.3.1	Revision to reflect new reporting line.
		3.4	New paragraph. Responsibilities of former Director of Engineering included here.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
12/1/76		3.7	Former 3.7 now included in 3.4.3.
		3.7.1	Renumbered. Reporting line changed. Paragraphs renumbered.
		3.8.1	Reporting line changed. Paragraphs renumbered.
		3.11.1	Reporting line changed.
		Fig. 2.0-1	Updated chart.
		Table 2.0-1	Deleted.
	3.3	3.3	Review instructions clarified.
3/15/77	Definitions	--	Added definition for "Audit," "Survey," "Surveillance."
	1.1	2.1	Clarification of QA independence. Updated training categories.
		17.2	Defined audit area.
	1.2	1.2.6	Added "Surveillance."
		6.2.1	Deleted "quarterly." Changed QCAD to QA.
		11.2.3	Clarification of test results review responsibility.
		12.3	Changed "survey" to "surveillance."
		16.2.3	Defined audit area.
	2.0	3.4.1	Clarification of Responsibilities.
		3.4.3	Clarification of Responsibilities.
		3.7.1	Department lines clarified.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
3/15/77	3.2	3.1.9	Documentation requirements explained.
	3.3	3.5	Documentation requirements explained.
	4.1	--	Deleted "documents," added "specifications."
	4.2	2.2.1	Clarified V.P. responsibilities.
	5.1	--	General revision.
	5.2	--	Procedure deleted. Contents now incorporated in Procedure 5.1.
	9.1	3.2.2	Deleted "audits," added "surveillance"
		3.2.3	Clarified QA Manager's responsibilities.
	9.2	3.3.1	Deleted requirement to audit Procedure 9.4.
	9.3	--	Deleted obsolete code references.
8/31/77	Definitions	--	Added definition for "Project Construction Manager" and "Resident Construction Manager."
	1.1	3.0	Reference to Table 1.1-2 added.
		Table 1.1-2	New table added to Manual.
	1.2	3.2.1	Title changed.
		4.2	Title changed.
		10.2.3	Title changed.
		18.7	Title changed.
	2.0	3.10	Title changed.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
8/31/77		3.10.1	Title changed.
		3.10.2	Title changed.
	5.1	Appendix A	Details controls for YAEC procurement.
	9.4	3.1.2	Deleted "and/or audits."
		3.1.3.1	Deleted "all."
		3.1.4.4	Referenced Form 9.4-D.
		3.1.5	Referenced Form 9.4-C.
		3.2.1	Instructions expanded.
		3.2.1.1	Instructions expanded.
		3.3.1	Alternative form allowed.
3/31/78	1.2	2.2.1.2	Changed "audit" to "survey."
		4.2	Included provisions for site purchases.
		4.2.1	Included provisions for subcontractor review.
		11.2.3	Deleted minimum requirements.
	2.0	3.8.1	Group titles corrected.
	3.1	3.4.1	Clarified audit requirements.
	3.2	3.1.10	Clarified document routing.
	3.3	3.2	Editorial clarification.
		3.5	Details for controlling conflicts with design bases documents.
		Appendix A	Numerous editorial changes to clarify reviewer responsibilities.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
3/31/78		Appendix C	Limits scope to Contractor documents.
		Appendix D	Deleted reference to Procedure 9.3, Appendix A.
	4.1	3.5.1	Deleted "all".
	9.1	2.0	Deleted reference to Procedure 9.3, Appendix A.
		3.1.5.4	Permitted use of a procedure or check list during audits.
		3.1.8.4	Corrected reference.
	9.2	3.1.1	Clarified audit requirements.
	9.3	—	Deleted procedure and appendix.
	9.4	3.1.4.4	Added to distribution list.
		3.1.6.7	Added to distribution list.
		3.2.3	Expanded instructions.
	10.0	—	Corrected organizational titles.
7/10/78	5.1	1.0	Revised to include applicability for PSNH procurement.
	Appendix A	3.1.1.1	
9/15/78	3.3	2.0	Deleted requirement for check lists.
	Appendix D		
3/30/79	1.1	1.0	Included reference to applicable standards.
		Table 1.1-2	List updated.
		Table 1.1-3	List of applicable Regulatory Guides and ANSI Standards included.
	1.2	2.2.1.2	Changed "audits" to "surveys."

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
3/30/79	2.0	3.8.1	Revised areas of responsibility.
		3.11.1	Revised reporting lines.
		Fig. 2.0-1	Updated chart.
	3.2	3.1.3	Clarified documentation requirements.
		3.1.12	Added documentation requirements.
	3.3	3.3	Clarified responsibilities.
	5.1 Appendix A	3.1.1.3	Clarified review requirements.
		3.1.4	Clarified audit scope.
		8.1	Added code for trend analysis.
		Form 8.1-A	Updated form.
11/21/79	9.1	3.1.7.6	Corrected reference.
	9.4	All	Deleted from QA Manual.
	8.1	As marked	Revised to facilitate prompt corrective action.
12/5/79	9.1	As marked	Revised to facilitate prompt corrective action.
	8.1	3.3.2	Acceptable methods of followup listed.
	9.1	3.1.6.5.4	Retention requirements for Form 9.1-1 clarified. Form 9.1-1 revised.
2/8/80	9.1	3.1.6.5.4	Retention requirements for Form 9.1-1 clarified. Form 9.1-1 revised.
9/30/80	1.2	11.0	Included Startup Test Group requirements.

<u>Date</u>	<u>Procedure</u>	<u>Paragraph</u>	<u>Change</u>
9/30/80	2.0	3.12	Added Startup Test Group Manager.
		Fig. 2.0-1	Added Startup Test Group Manager.
11/21/80	1.3		Original issue.
	2.0	3.3.1	Revised reporting structure.
		3.4	Title changed.
		3.4.1	Title changed.
		3.7.1	Title changed.
		Fig. 2.0-1	Revised to reflect organizational changes.
08/21/81	2.0	As Marked	To reflect recent reorganization of QA Department.
02/05/82	4.2	Int. Chg. #1	Deleted.
		2.2.1	Changed "Vice President" to "Director of Quality Assurance".
		2.4.4	Changed "released" to "issued".
		2.5	Responsibility for manual distribution changed.
		Form 4.2.A	Deleted.
		Form 4.2.B	Deleted.
	5.1	App. B	New appendix added to Procedure.

DEFINITIONS

PSNH

- Public Service Company of New Hampshire, the lead applicant for the regulatory license.

YAEC

- Yankee Atomic Electric Company.

Contractor

- United Engineers & Constructors, Inc. or Westinghouse.

Construction Manager

- United Engineers & Constructors, Inc. who, by contract, is responsible for the management of all construction at the site.

Project Construction Manager

- A representative of UE&C at the home office who is responsible for construction activities at the home office and the site.

Resident Construction Manager

- A representative of UE&C at the site who is responsible for coordination, constructor work forces, and UE&C construction effort on the site.

YAEC Site Manager

- A representative of the Yankee Atomic Electric Company who is responsible for overseeing the performance of the Construction Manager at the site.

QAD

- The Quality Assurance Department of the Yankee Atomic Electric Company.

Audit

- An activity to determine through investigation, the adequacy of, and adherence to, established procedures, instructions, specifications, codes, and standards or other applicable contractual and licensing requirements, and the effectiveness of implementation.

Survey

- An appraisal or evaluation of a prospective supplier's ability to meet or continue to meet specified requirements in the areas of engineering, quality assurance, manufacturing, procurement, and contractual administration, as applicable.

Surveillance

- A review, observation, or inspection for the purpose of verifying that an action is accomplished in accordance with applicable drawings, specifications, and contractual requirements.

Document Control Center

- An area at the construction site, under the jurisdiction of the Yankee Atomic Electric Company which, during the construction phase, is a repository for documentation required to verify conformance to required standards and regulations and contracts.

Subcontractor

- Any organization performing design or site construction work. Normally the scope of work for these organizations will include the quality control level 1.

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL <small>YANKEE ATOMIC ELECTRIC COMPANY</small></p> <p>DESCRIPTION PROGRAM - DESIGN AND PROCUREMENT</p> <p>Interim Change Number <u>1</u> to</p> <p>Procedure <u>1.1</u> , Rev. <u>8</u></p>	<p>Effectivity Date <u>08/21/81</u></p> <p>Page <u>1</u> of <u>1</u></p> <p>Appr. <i>[Signature]</i> Quality Assurance Manager</p>
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Section 16.1, page 17

Written reports will be submitted to the Director of Regulatory Operations by the Project Manager within 30 days of knowledge of a significant deficiency.

Table 1.1-2

Add to list of "Supplemental Procedures":

Deficiency Coding System

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL <small>YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</small></p> <p>DESCRIPTION</p> <p style="text-align: center;">PROGRAM - DESIGN AND PROCUREMENT</p>	<p>Section Procedure 1.1</p> <p>Revision <u>8</u> Date <u>3/30/79</u></p> <p>Page <u>1</u> of <u>36</u></p> <p>Appr. <i>W. Johnson</i> YAEC Vice President</p>
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1.0 GENERAL

This procedure contains a description of the program utilized by YAEC for design and procurement. It contains the YAEC responsibilities, the contractor responsibilities and the program requirements imposed on the vendor.

Except as specifically denoted in the PSAR and its Amendments, the PSNH/YAEC Quality Assurance Program will be in accordance with the following codes, regulations and standards:

- a) ASME Boiler and Pressure Vessel Code, Section III
- b) 10 CFR 50, Appendix B
- c) NRC Regulatory Guides*
- d) ANSI Standards*

*(Refer to Table 1.1-3 for applicable revisions)

2.0 ORGANIZATION

2.1 YAEC and its contractors' quality assurance organizations are required to be structured such that they have the required authority and organizational freedom to identify quality problems; initiate, recommend or provide solutions; and to verify implementations of solutions. The personnel performing quality assurance functions for activities performed by others will be independent of the individual or group responsible for performing the activity. These personnel will receive suitable indoctrination and/or training to assure that proficiency is achieved and maintained. The following categories of training will be maintained, as applicable:

- a) Department/group/section meetings,
- b) Attendance at special courses and/or classes at institutions of higher learning or conducted by QAD personnel,
- c) Conducting audits under supervision,
- d) Conducting reviews under supervision,
- e) Participation in technical society activities.

2.2 The YAEC organization is defined in Section 2.0 of this Manual.

3.0 QUALITY ASSURANCE PROGRAM

3.1 Consistent with its objective of assuring the highest practical degree of integrity for safety related equipment, PSNH/YAEC includes in this program those planned and systematic actions necessary to provide adequate confidence that structures, systems or components will perform satisfactorily in service.

This portion of the program covers quality assurance measures taken by PSNH/YAEC, as well as by the contractors, the Nuclear Steam Supplier (Westinghouse Electric Company), Engineer - Constructor (United Engineers and Constructors, Inc.), and the requirements imposed on subcontractors and vendors throughout design, procurement and fabrication. It includes provisions for control during each of these phases by means of reviews, inspections, tests and audits and by documentation of activities affecting quality. All activities affecting quality shall be accomplished under suitably controlled conditions.

The PSNH/YAEC Quality Assurance Program will be applied to those structures, systems and components listed in Tables 1.1-1A, 1.1-1B and 1.1-1C. The contractor's responsibilities for design and procurement are denoted in the tables.

The PSNH/YAEC policy for quality assurance will normally involve three control levels:

Level 1 - Vendor responsibilities - provide quality assurance program as defined in the procurement documents.

Level 2 - Contractor responsibilities - provide a quality assurance program to the requirements of this plan consisting of design and procurement controls through the use of source evaluation and inspections, design and procurement reviews and vendor and internal audits.

Level 3 - YAEC responsibilities - perform reviews and audits as defined in this program to assure contractor compliance to the program requirements.

At each level, the individual or group responsible for reviewing, inspecting, auditing or otherwise verifying that an activity has been correctly performed will be independent of the individual or group responsible for performing the specific activity. The degree of control at each level will reflect the importance of the activity to plant safety.

YAEC activities covered by this program, as well as the activities of its contractors and vendors, will be performed in accordance with written procedures or manuals. These control procedures will incorporate the criteria described in this program. YAEC internal procedures used to supplement this Manual, are listed in Table 1.1-2. YAEC will review and approve the Westinghouse

Product Assurance Manual and UE&C QA procedures and referenced documents (Section 3.0 of this Manual). YAEC will review contractors' detailed departmental control procedures on an audit basis for adequacy of control and will audit as required contractors, subcontractor and vendor performance to provide assurance of contractor compliance with approved QA procedures and to assure effectiveness of the QA Program (Section 5.0 and 9.0 of this Manual).

Seabrook Project Policies, prepared by the Project Office, detail what documents require review, reviewing departments, and methods of document control.

YAEC management will review the status of the Quality Assurance Program on a continuing basis to ensure continued program effectiveness (Section 9.0 of this Manual). The contractors' managements are required to make similar reviews regularly within their area of responsibility.

A quarterly report shall be made to PSNH management assessing the effectiveness of the program and identifying problems in the program's execution or with equipment or construction quality activities.

4.0 DESIGN CONTROL

4.1 Each contractor shall maintain design control measures as required by ANSI 45.2.11. The measures shall consist of procedures defining: preparation and review requirements to assure that applicable regulatory and design basis requirements as defined in the applicable sections of the PSAR* are incorporated in the specification, drawings, procedures and instruction; preparation and review requirements to assure that appropriate quality standards are specified in design documents; methods for control of deviations from above requirements; requirements for selection and review of materials for suitability of application; inter-organization review, approval, release, distribution and revision of design documents involving design interfaces; checks of calculations; requirements for qualification testing programs when testing is used to verify design. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking process, it shall include suitable qualification testing of a prototype unit under the most adverse design condition. These design measures shall be applied to areas such as the following: reactor physics, stress analysis, thermodynamic, hydraulic and accident analysis, compatibility

*PSAR - Preliminary Safety Analysis Report -license document in which YAEK has defined classification requirements.

of materials; accessibility for in-service inspection, maintenance and repair, delineation of acceptance criteria for inspections and tests. Controls for changes, including field changes, shall be commensurate with the controls applied to the original document.

Changes will be reflected in "as-built" drawings and specifications. The contractors are responsible as agents of YAEK to perform design reviews (i.e. stress reports, over-pressure reports, specification coordination) as defined in ASME, Boiler & Pressure Vessel Code, Section III, within their respective areas of responsibility. In addition, each contractor shall maintain an internal audit level to assure its compliance with the above.

- 4.2 YAEK reviews contractors' design criteria documents as defined in Section 3.0 of this Manual. Within YAEK, the Project Manager coordinates the design control measures in accordance with procedures which define internal and inter-organizational review and approval cycles. The Project Manager distributes the design documents to the appropriate Engineering Department Manager and the Quality Assurance Department Manager (if applicable) for performance of applicable reviews. The review procedures define the review requirements per the above criteria of Section 4.1.

YAEK comments require resolution with all affected organizations (Section 3.0 of this Manual). YAEK also provides an audit level to assure compliance of all organizations to the criteria of 4.1

(Section 9.0 of this Manual).

5.0 PROCUREMENT DOCUMENT CONTROL

5.1 Each contractor is required to provide measures for procurement document control. These measures shall include written procedures to define the preparation, review and approval of procurement documents to provide assurance that applicable regulatory requirements, design bases and other requirements such as quality assurance programs necessary to assure adequate quality are included. In addition, each contractor shall provide an audit level to assure compliance with the above. Quality assurance measures to assure that all necessary requirements are included or referenced in the procurement document should be carried out throughout all activities which affect the technical and quality requirements of the procurement document as required by ANSI 45.2.13.

5.2 YAEC reviews contractors' procurement documents for compatibility with the design criteria. These reviews are performed on an audit basis at the contractors' facility in accordance with the instructions contained in Section 9.0 of this Manual. Bid evaluations will be performed in accordance with the requirements of Section 3.3 of this Manual.

6.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

6.1 Each contractor is required to perform his respective quality related activities covered by this program in accordance with documented instructions, procedures or drawings. The instructions, procedures or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

6.2 This Manual contains YAEC instructions and procedures covering its controls for coordination, reviews and audits as indicated in other sections of this program. Departments within YAEC may utilize supplementing departmental procedures for the handling of project activities provided they are approved by the Manager of the department and are consistent with the requirements of this Manual. YAEC reviews its contractors procedures for compliance with this program and performs audits per Sections 3.0 and 9.0 of this Manual.

7.0 DOCUMENT CONTROL

7.1 Each contractor is required to have a document control system. The system shall be defined in written procedures. It shall provide assurance that procedures, drawings and instructions including changes which prescribe activities affecting quality are reviewed for adequacy and approved for release by authorized

personnel and distributed to the locations where quality related activities are performed. In addition, audits are required to provide assurance that the required documents are in use at the location where the prescribed activity is performed.

- 7.2 Within the YAEC corporate office, the control of documents is the responsibility of the Project Manager. Procedures define the review cycle required for documents. The documents are reviewed by the QA and/or Engineering Departments per procedures, and are released for use only by the authority of the Project Manager after completion of the Yankee review. Distribution requirements for documents are defined by category (Section 4.0 of this Manual).

8.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

- 8.1 Each contractor purchasing material, equipment or services covered by this program is required to establish a procurement program in accordance with the requirements of ANSI 45.2.13.

These measures shall include, as appropriate: procedures defining procurement document requirements; provisions for source evaluation; provisions for contractor inspections at sources; objective evidence of conformance with procurement documents; and examination of products upon delivery. Installation or use of material or equipment is not permitted until documentary

evidence of conformance to procurement documents is at the construction site. The purchasing organization shall maintain an audit level to assure compliance to the above.

8.2 YAEC ensures conformance to the above criteria through reviews (Section 3.0 of this Manual) and/or audits (Sections 5.0 and 9.0 of this Manual).

9.0 IDENTIFICATION AND CONTROL OF MATERIAL, PARTS AND COMPONENTS

9.1 Each contractor purchasing material, parts and components is required to provide an identification and control system through appropriate procurement document requirements. The system shall provide identification of material, parts or components through identification affixed to the item or on records traceable to the items throughout fabrication, installation and use. These measures shall be designed to prevent the use of incorrect or defective material, parts or components. It shall also provide means of records traceability. In addition, contractors are required to perform vendor audits to assure identification and control of material requirements are met.

9.2 YAEC ensures compliance with these criteria through reviews and/or audits (Sections 3.0, 5.0 and 9.0 of this Manual).

10.0 CONTROL OF SPECIAL PROCESSES

10.1 Each contractor procuring materials and fabricated items covered by its program shall require in the procurement document that special processes required during manufacture be controlled. These controls shall include the requirements for personnel and procedure qualifications to the applicable codes, standards or specification criteria, and the review and approval of the special process procedure by the procuring organization. In addition, the contractor shall provide an audit level to ensure vendor compliance with these requirements. Examples of special processes covered by these requirements are: welding, nondestructive testing, heat treatment and performance testing.

10.2 Yankee ensures conformance to the above criteria through reviews and/or audits (Sections 3.0, 5.0, and 9.0 of this Manual).

11.0 INSPECTIONS

11.1 Each contractor procuring items covered by the program shall require in the procurement documents that a plan of inspection of activities affecting quality be provided by vendors. The design documents shall define the examinations, measurements or tests required to verify conformance. The plan shall identify the process steps and inspections or tests to be performed by the vendor. The inspections shall be performed by individuals

independent of the individual or group performing the activity being inspected. The plan shall be approved by the procuring organization and hold points and audit points identified for source inspections and audits.

11.2 If inspection of processed material or products is impractical, indirect control by monitoring processing methods, equipment, and personnel shall be provided.

11.3 YAEC ensures conformance to this criteria through reviews and/or audits (Sections 3.0, 5.0 and 9.0 of this Manual). The inspection plans are utilized by YAEC to identify witness points for audits.

12.0 TEST CONTROL

12.1 Each contractor shall specify testing requirements and acceptance limits in the design or procurement documents. When tests are to be performed by vendors, the procurement documents shall require vendors to maintain a test program. The procurement contractor shall approve vendor programs. The program shall consist of procedures which incorporate the test requirements, specify prerequisites, define instrumentation and environmental conditions. When a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualification testing of a prototype unit under the most adverse design conditions. Test results shall

be documented and evaluated by the appropriate organizations as defined in the procurement document to ensure test requirements are satisfied. The procuring contractor shall provide an audit level to assure the above requirements are met.

12.2 YAEC ensures compliance with the above through reviews and audits (Sections 3.0, 5.0 and 9.0 of this Manual).

13.0 CONTROL OF MEASURING AND TEST EQUIPMENT

13.1 Each contractor procuring items covered by this program shall require in the purchasing documents that a calibration system be maintained for measuring and testing equipment used in activities affecting quality. The system shall include written procedures defining the tools, gages, instruments and other testing and measuring devices requiring calibration, the methods to be used for calibration, the calibration frequency and the accuracy limits of the calibration. All calibration must be traceable to national standards. In addition, the procuring contractor shall provide an audit level to ensure vendor compliance to these requirements.

13.2 YAEC ensures compliance with this criteria through reviews and/or audits (Sections 3.0, 5.0 and 9.0 of this Manual).

14.0 HANDLING, STORAGE AND SHIPPING

14.1 Each contractor procuring material and equipment covered by this program shall define in the procurement documents appropriate handling, storage and shipping instructions. These instructions shall include, where applicable, requirements for storage, shipping, cleaning, preservation and protective environment to prevent damage or deterioration of the material or equipment. When definition of the above requirements are inappropriate in procurement documents, the procurement document may require the vendor to define the requirements for approval of the procuring contractor. The procuring contractor will be required to maintain an audit level to ensure vendor compliance with these requirements.

14.2 YAEK ensures compliance with the above criteria through reviews and/or audits (Sections 3.0, 5.0 and 9.0 of this Manual).

15.0 INSPECTION, TEST AND OPERATING STATUS

15.1 Each contractor performing quality related activities covered by this program shall provide measures that indicate the status of inspections and tests performed. Procedures shall define the method for identification of satisfactorily passed inspections and tests to prevent inadvertent bypassing of such inspections and tests. These requirements shall be imposed on vendors by suitable procurement document requirements. An audit level shall

be maintained to ensure compliance with the above criteria.

15.2 YAEC ensures compliance with the above criteria through reviews and audits (Sections 3.0, 5.0 and 9.0 of this Manual).

16.0 NONCONFORMING MATERIAL, PARTS OR COMPONENTS

16.1 Each contractor performing quality related activities covered by this program shall provide measures to prevent inadvertent use or installation of material, parts or components which do not conform to the applicable requirements. The measures shall include procedures defining requirements for identification, documentation, segregation and disposition. Repair or rework of nonconforming items shall be performed per documented procedures. This criteria shall be imposed on vendors through appropriate purchasing document requirements. An audit level is required to ensure conformance to the above criteria.

Significant deficiencies, as defined in 10CFR50.55(e), occurring during design and procurement shall be reported by NSSS supplier, Architect-Engineer or cognizant YAEC personnel as applicable, to the YAEC Project Office. Deficiencies to be reported to Regulatory Operations shall be of a significant nature. In order to apply consistent interpretation to 10CFR50.55(e), deficiencies considered for reporting should be brought to the attention of a Vice President of YAEC by the Project Office as soon as possible.

It is required that deviations be reported to Regulatory Operations only if they present problems requiring extensive evaluations, redesign or repairs or if they represent a significant breakdown of any portion of the Quality Assurance Program. Deficiencies need not be reported if they are of the type or frequency that is reasonably anticipated during design, fabrication, construction or testing.

The requirement of 10CFR50.55(e) for prompt reporting is interpreted to require oral notification to the regional office of Regulatory Operations within twenty-four hours of the knowledge of a significant deficiency. The oral reports will be made by the Project manager on all matters concerning design, construction and quality assurance. Additionally, the Project Manager is responsible for coordinating and preparing the written report as required by 10CFR50.55(e). Written reports will be submitted to the Director of Regulatory Operations by a Vice President of YAEC within 30 days of knowledge of a significant deficiency. An interim report is acceptable if it is not possible to prepare a definitive report within 30 days. The interim report should give a time estimate for submittal of a final report.

16.2 YAEC ensures compliance with the above through reviews and/or audits (Sections 3.0, 5.0, 8.0 and 9.0 of this Manual).

17.0 CORRECTIVE ACTION

17.1 Each contractor performing quality related activities covered shall provide measures to control conditions adverse to quality. The measures shall include procedures defining methods for prompt identification, correction, determining cause and prevention of repetition of conditions adverse to quality such as failure, malfunctions, deficiencies, deviations, defective material and nonconformances. The procedures for corrective action shall require appropriate documentation and the reporting of the condition to management.

17.2 Conditions adverse to quality found during YAEC audits (Section 9.0 of this Manual) are documented in the audit report with any recommended corrective action. The reports are distributed to the appropriate organization for implementation of corrective action and to the Vice President of YAEC and PSNH management. Record of corrective action is maintained per Section 8.0 of this Manual. YAEC provides an audit level at Contractors and selected suppliers to ensure compliance with these criteria by these organizations.

18.0 QUALITY ASSURANCE RECORDS

18.1 Each contractor is responsible for defining records generation and retention requirements, to provide evidence of compliance with this program, in the appropriate specification, procurement document or quality assurance procedures. Quality records requirements shall be in accordance with ANSI 45.2.9 and, when applicable, Section III, ASME Boiler & Pressure Vessel Code. For record requirements covered by the Code, the requirements of the Code should apply in addition to the requirements of N45.2.9. In cases where conflict may exist, the requirements of the Code (for Code-related activities) should be controlling. The records shall include the results of reviews, inspections, test and audits; results of material analyses; and personnel, procedure and equipment qualifications as required. The records shall be identifiable and retrievable. They shall identify the inspector or data recorded and type of observation and shall present the results as well as the acceptance of the observation or the action taken in connection with any deficiencies noticed. Contractors are required to provide an audit level to ensure compliance with the above for records within their area of responsibility. The contractor shall provide means to transmit to the Seabrook site appropriate records to demonstrate compliance of purchased material to the purchase documents.

18.2 YAEC reviews contractors' specifications, bid evaluations and quality assurance procedures for adequacy of provisions covering records to be generated by contractor, subcontractors and vendors and provisions for audits by contractors and by YAEC (Sections 3.0 and 9.0 of this Manual). Audits of purchase orders are performed to ensure inclusion of record requirements.

YAEC audits quality assurance records generated by contractors, subcontractors and vendors to provide assurance of compliance with applicable specifications, procedures and quality assurance programs (Section 10.0 of this Manual).

YAEC will develop a records retention program defining records to be retained, the location, and duration of the retention in compliance with the applicable ASME codes and ANSI Standard 45.2.9 (Section 10.0 of this Manual).

19.0 AUDITS

19.1 Each Contractor is required to provide audit systems in accordance with the requirements of ANSI 45.2.12 to verify compliance with all aspects of their quality assurance programs and to evaluate the effectiveness of their programs. The system shall include planned and periodic audits performed by appropriately trained personnel not directly responsible for the area being audited. Written audit procedures or check lists shall be complied with.

Audits shall be documented and the management of the area audited shall review the results. Re-audits shall be made to ensure corrective action is taken for items found deficient. Copies of UE&C audits shall be forwarded to the YAEC Project manager.

19.2 YAEC provides a system of audits to verify contractors' and YAEC compliance with the quality assurance program and to evaluate the effectiveness of the overall program. The YAEC system provides a schedule of audits identifying hold or witness points and/or areas to be audited. The audits are performed per written procedures or check lists by the QA personnel or other Yankee departments personnel. The audit procedure requires that a written report be prepared denoting the areas covered by the audit, the results of the audit and any area requiring corrective action and re-audit to ensure deficient items found are corrected. The auditor may order at the audit site that work be stopped if, in his opinion, conditions exist that are adverse to production of proper quality product. The audit report will be transmitted to appropriate YAEC management and the management of the contractor responsible for areas audited. (Sections 5.0 and 9.0 of this Manual provide details of the audit program.)

TABLE 1.1-1A
SAFETY RELATED STRUCTURES

<u>Description</u>	<u>Contractor</u>
Containment Structure	UE&C
Containment Enclosure	UE&C
Primary Auxiliary Building	UE&C
Fuel Storage Building	UE&C
Waste Processing Building	UE&C
Control and Diesel Generator Building	UE&C
Electrical Cable Tunnels and Penetration Areas (Control Building to Containment)	UE&C
Service Water Pump House	UE&C
Auxiliary Boiler Feed Pump Enclosure	UE&C
Foundations and Supports for Category I Components	UE&C
Spent Fuel Pool	UE&C

TABLE 1.1-1B
(Sheet 1 of 3)

SAFETY RELATED ELECTRICAL AND INSTRUMENTATION

<u>Description</u>	<u>Contractor</u>
4160 Volt Switchgear (Engineered Safety Features (Buses)	UE&C
4160 - 480 Volt Transformer (Associated with Engineered Safety Features)	UE&C
4000 and 460 Volt Motors (Associated with Engineered Safety Features)	UE&C/W
13.8kV and 4160 Volt Non-Segregated Group Phase Buses (Associated with Engineering Safety Features)	UE&C
480 Volt Load Centers (Associated with Engineered Safety Features)	UE&C
125 Volt DC Batteries (Asso- ciated with Engineered Safety Features)	UE&C
Battery Chargers (Associated with Engineered Safety Features)	UE&C
Inverters, 125 Volt DC to 120 Volt AC (Vital Instrument Buses)	UE&C
Vital Instrument Bus Panels	UE&C
Regulated Instrument Bus Panels (240/120 Volts AC Single Phase)	

TABLE 1.1-1B
(Sheet 2 of 3)

<u>Description</u>	<u>Contractor</u>
125 Volt DC Power Panels (Associated with Engineered Safety Features)	UE&C
Transformers, dry type, 480- 120/240 Volt (Associated with Regulated Instrument Buses)	UE&C
Conduit and Trays (Associated with Engineered Safety Features)	UE&C
Electrical Supports, Fittings and Accessories (Associated with Engineered Safety Features)	UE&C
Containment Penetration Assemblies	UE&C
Power Cables (Associated with Engineered Safety Features System)	UE&C
Instrumentation and Control Cables (Associated with Engineered Safety Feature System)	UE&C
DC Emergency Lighting (Category I Buildings)	UE&C
AC Emergency Lighting (Control Room)	UE&C
Diesel Generators	UE&C
Diesel Generator Control Panels	UE&C
Heat Tracing for Boric Acid Injection	UE&C

TABLE 1.1-1B
(Sheet 3 of 3)

<u>Description</u>	<u>Contractor</u>
Reactor Trip System	W
Engineered Safety Features Actuation System	W

TABLE 1.1-1C
(Sheet 1 of 7)

SAFETY RELATED MECHANICAL

<u>Description</u>	<u>Contractor</u>
<u>Reactor Coolant System</u>	
Reactor	W
Full Length Control Rod Drive Mechanism Housing	W
Part Length Control Rod Drive Mechanism Housing	W
Steam Generator	W
Pressurizer	W
Reactor Coolant Piping, Fittings, and Fabrication	W
Surge Pipe, Fittings and Fabrication	W
Bypass Manifold	W
Reactor Coolant Thermowells	W
Safety Valves	W
Relief Valves	W
Valves to Reactor Coolant System Boundary	W
Control Rod Drive Mechanism Head Adapter Plugs	W
Reactor Coolant Pump	W
Internals	W
Fuel	W

TABLE 1.1-1C
(Sheet 2 of 7)

<u>Description</u>	<u>Contractor</u>
<u>Handling Equipment for Fuel and Reactor Vessel Internals</u>	
Fuel Transfer Tube Outer Sleeve	UE&C
Expansion Joints	UE&C
Reactor Vessel Head Lifting Device	W
Fuel Transfer System	
Fuel Transfer Tube and Flange	W
Conveyor System and Controls	W
Spent Fuel Racks	UE&C
<u>Feedwater System</u>	
Auxiliary Feedwater Pumps	UE&C
Condensate Storage Tank	UE&C
Feedwater Piping (up to and including containment isolation valve)	UE&C
<u>Service Water System</u>	
Service Water Pumps	UE&C
Valves and Piping up to and including the isolation valves at the Cooling Water Tunnel	UE&C
<u>Containment Spray System</u>	
Spray Additive Tank	UE&C
Containment Spray Pumps	UE&C

TABLE 1.1-1C
(Sheet 3 of 7)

<u>Description</u>	<u>Contractor</u>
Containment Spray Heat Exchangers	UE&C
<u>Post Accident Containment Combustible Gas Control System</u>	
Hydrogen Recombiner	UE&C
Piping and Valves	UE&C
Charcoal Filter	UE&C
<u>Chemical and Volume Control System</u>	
Regenerative Heat Exchanger	W
Letdown Heat Exchanger	W
Mixed Bed Demineralizer	UE&C
Cation Bed Demineralizer	UE&C
Reactor Coolant Filter	UE&C
Charging Pumps Centrifugal	W
Positive Displacement Charging Pump	W
Seal Water Injection Filter	UE&C
Excess Letdown Heat Exchanger	W
Seal Water Return Filter	UE&C
Seal Water Heat Exchanger	W

TABLE 1.1-1C
(Sheet 4 of 7)

<u>Description</u>	<u>Contractor</u>
Boric Acid Tanks	UE&C
Boric Acid Transfer Pumps	W
Boric Acid Blender	UE&C
Boric Acid Filter	UE&C
Volume Control Tank	W
Bypass Orifice	W
Letdown Flow Control Valves	W
Boric Acid Transfer Pump Bypass Orifice	UE&C
Demineralizer Prefilter	UE&C
Letdown Strainers	UE&C
 <u>Boron Thermal Regeneration</u> <u>Sub System</u>	
Moderating Heat Exchanger	W
Letdown Chiller Heat Exchanger	W
Letdown Reheat Heat Exchanger	W
Thermal Regeneration Demineralizer	W
 <u>Boron Recovery System</u>	 UE&C

TABLE 1.1-1C
(Sheet 5 of 7)

<u>Description</u>	<u>Contractor</u>
<u>Safety Injection System</u>	
Refueling Water Storage Tank	UE&C
Accumulators	W
Boron Injection Tank (discharge)	W
Boron Injection Tank Recirculation Pump	W
Boron Injection Surge Tank	W
Safety Injection Pump	W
<u>Residual Heat Removal System</u>	
Residual Heat Removal Pump	W
Residual Heat Exchanger	W
<u>Waste Processing System</u> <u>(Gas Subsystem)</u>	
	UE&C
<u>Primary Component Cooling</u> <u>Water System</u>	
Component Cooling Water Pumps	UE&C
Component Cooling Water Surge Tank	UE&C
Component Cooling Water Heat Exchangers	UE&C

TABLE 1.1-1C
(Sheet 6 of 7)

<u>Description</u>	<u>Contractor</u>
<u>Main Steam System</u>	
Main Steam Piping (from Steam Generator up to and including Containment Isolation Valve)	UE&C
Safety Valves	UE&C
Atmospheric Dump Valve	UE&C
<u>Steam Generator Blowdown System</u>	
Piping (up to and including isolation valve)	UE&C
<u>Sample System</u>	
Isolation Valves	UE&C
<u>Ventilation Cleanup and Air Conditioning Systems</u>	
Containment Enclosure Exhaust	UE&C
Diesel Generator Building Ventilation	UE&C
Battery Room Ventilation	UE&C
Control Room Air Conditioning	UE&C

TABLE 1.1-1C
(Sheet 7 of 7)

<u>Description</u>	<u>Contractor</u>
Control Room Emergency Filters	UE&C
Fuel Storage Building Emergency Purge System	UE&C
Safeguard Pump Rooms Cooling	UE&C
Control Room Complex Makeup Air System	UE&C
<u>Emergency Diesel Generator System</u>	
Diesel Fuel Storage Tank	UE&C
Diesel Fuel Day Tank	UE&C
Diesel Generator Air Tank	UE&C
Diesel Fuel Transfer Pump	UE&C
Diesel Fuel Filter	UE&C
Diesel Engines	UE&C
<u>Spent Fuel Pool Cooling and Cleanup System</u>	
Spent Fuel Pool Pump	UE&C
Spent Fuel Pool Heat Exchanger	UE&C

Table 1.1-2
(Sheet 1 of 2)
Supplemental Procedures

<u>Procedure</u>	<u>Proc. No.</u>
Administration of QA Program	WE-001
Indoctrination of Personnel	WE-003
Training	WE-004
Calculations and Analysis	WE-103
Quality Assurance Training	Q-101
QA Training Program	Q-102
Asst Primer	Q-103
Qualification and Certification of Inspection and Testing Personnel to ANSI N45.2.6	Q-106
Document Control Center Interface	Q-107
Storage and Maintenance Inspections of NSSS Items (Reactor Vessel, Vessel Head, and Metal "O" Rings, etc.)	Q-108
Receiving Inspection Procedure for Westinghouse NSSS Components	Q-109
Quality Assurance for Fire Protection	Q-110
Project Policy Manual (Seabrook)	
Document Control Center Manual	
Seabrook Station Field Quality Assurance Manual and Procedure	
Procedure for Blast Monitoring	PSY Proc. 1
Procedure for Monthly Maintenance Program - Blast Monitoring Equipment	

Table 1.1-2
(Sheet 2 of 2)
Supplemental Procedures

<u>Procedure</u>	<u>Proc. No.</u>
Procedure for Operator Training Program (Blast Monitoring)	PSY Proc. 3
Procedure for Control of YAEC Generated Procedures (Site Related)	PSY Proc. 4
Procedure for Geological Mapping Program	PSY Proc. 5
Procedure for Procurement Control	PSY Proc. 6
Review Procedure for Field General Construction Procedures	HOC-1

Table 1.1-3

Applicable NRC Regulatory Guides
and
ANSI Standards for Seabrook Station

<u>Title</u>	<u>Reg Guide/Date</u>	<u>ANSI Std/Date</u>
Mechanical Splices in Reinforcing Bars	1.10 Rev. 1 1/2/73	
Testing of Reinforcing Bars for Category I Concrete Structures	1.15 Rev. 1 12/28/72	
Nondestructive Examination of Primary Containment Liner Welds	1.19 Rev. 1 8/11/72	
Quality Group Classifications	1.26 Rev. 1 9/74	
Quality Assurance Program	1.28 June 7, 1972	N45.2-1971
QA Requirements for Instruments and Electrical Equipment	1.30 Aug. 11, 1972	N45.2.4-1972
Control of Stainless Steel Welding	1.31 Rev. 1 1973*	
Criteria for Class IE Electric Systems	1.32 Rev. 1 3/76*	
Non-Metallic Thermal Insulation for Austenitic Stainless Steel	1.36 2/23/73	
QA Requirements for Cleaning of Fluid Systems	1.37 3/16/73	N45.2.1-1973
QA Requirements for Packaging, Shipping, Receiving and Storage	1.38 1.38	N45.2.2-1972
QA Requirements for Housekeeping	1.39 3/16/73	N45.2.3-1973
Control of the Use of Sensitized Stainless Steel	1.44 May 1973*	
Control of Preheat Temperature for Welding Low-Alloy Steel	1.50 May 1973*	
QA Requirements for Protective Coatings	1.54 June 1973	N101.4-1972

Concrete Placements in Category I Structures	1.55 June 1973	
Qualification of Inspection Personnel	1.58 August 1973	N45.2.6-1973
QA Requirements for Design	1.64 October 1973	Draft 3, Rev. 1 N45.2.11-July 1973
NDE of Tubular Products	1.66 October 1973	
Concrete Radiation Shields for Nuclear Power Plants	1.69 December 1973	N101.6-1972
Welder Qualification for Areas of Limited Accessibility	1.71 December 1973*	
QA Terms and Definitions	1.74 February 1974	N45.2.10-1973
Physical Independence of Electrical Systems	1.75 February 1974	
QA Requirements for Records	1.88 August 1974	N45.2.9-1974
QA Requirements for Structural Concrete and Steel	1.94 April 1975	N45.2.5-1974
Requirements for Auditing QA Programs		Draft 3, Rev. 4 N45.2.12-2/22/74
Fire Protection Guidelines	1.120 June 1976	
QA Requirements for Control of Procurement	1.123 October 1976	N45.2.13-1976

Note: It is anticipated that changes will be made in future issues of the above Regulatory Guides and ANSI Standards. YAEK will incorporate, as practicable, the provisions of later issues on a case-by-case basis.

*See Seabrook PSAR for additional guidance

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION PROGRAM - CONSTRUCTION

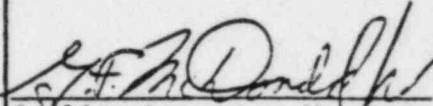
Interim Change Number 1 to

Procedure 1.2, Rev. 7

Effectivity Date 08/21/81

Page 1 of 1

Appr.


Quality Assurance Manager

Section 1.2.1, page 2

Delete "Westboro."

Change "Site" to "Field."

Section 2.3, page 5

Delete "Westboro."

Section 2.5, page 6

Delete "in Westboro."

Change "Vice President" to "Director of Quality Assurance."

Section 15.3, page 21

Delete "Westboro."

Section 17.2.6, page 24

Delete "Quality Control."

Section 18.5, page 25

Delete "from Westboro."

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">PROGRAM - CONSTRUCTION</p>	<p>Section <u>Procedure 1.2</u></p> <p>Revision <u>7</u> Date <u>9/30/80</u></p> <p>Page <u>1</u> of <u>26</u></p> <p>Appr.</p> <p style="text-align: center;"><i>W. S. Johnson</i> YAEC Vice President</p>
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1.0 ORGANIZATION

- 1.1 The quality assurance organizations at the construction site shall be structured such that they have sufficient authority and organizational freedom to identify quality problems; initiate, recommend, or provide solutions through designated channels; verify implementation of solutions; and control further processing, use, or installation of a nonconforming item, or unsatisfactory condition until proper dispositioning has occurred.
- 1.2 The organizational structure and areas of responsibility for YAEC personnel is detailed in Section 2.0 of this Manual. Responsibility for completeness of Program requirements, maintenance and issuance of this Manual, and compliance with Program requirements has been delegated to the YAEC Quality Assurance Manager.
 - 1.2.1 The YAEC Field QA Group, under the direction of the YAEC Field QA Manager, who reports to the YAEC Quality Assurance Manager, will perform surveillance of safety-related

activities at the site. YAEC QAD-Westboro personnel will audit the Construction Manager's site staff, subcontractors and the YAEC Site QA Group to assure compliance with quality assurance programs established by the YAEC QAD Manager.

- 1.2.2 Subcontractors at the site shall have a quality assurance organization complying with the requirements of their contract. All quality assurance personnel shall receive suitable training to assure that proficiency in their activities is achieved and maintained. The Construction Manager shall review and approve the subcontractor's training program. The YAEC QAD training program is outlined in 1.1 of this Manual.
- 1.2.3 Discussions relating to site activities will be conducted on a day-to-day basis directly between each quality assurance group at the site. The YAEC Project Manager and YAEC Site Manager shall be informed by the YAEC Field QA Manager of all matters of quality assurance policy. These shall be formalized in writing by the YAEC Field QA Manager.
- 1.2.4 Each quality assurance organization at the site shall possess sufficient organizational freedom and authority to stop work where necessary or appropriate to assure quality. It is a requirement that each subcontractor

stop work when ordered by the Construction Manager. The Construction Manager will have procedures for ordering work stoppage and work resumption. The Construction Manager shall review and approve the subcontractor procedure for stop work. YAEC shall review and approve the Construction Manager's procedure.

1.2.5 YAEC personnel duties and responsibilities are outlined in Procedure 2.0 of this Manual.

1.2.6 YAEC QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

2.0 QUALITY ASSURANCE PROGRAM

2.1 To assure the highest degree of integrity for safety-related equipment, PSNH/YAEC includes in this program those planned and systematic actions necessary to provide adequate confidence that structures, systems or components will perform satisfactorily in service. The program complies with the requirements as listed in Section 1.0 of Procedure 1.1 of this Manual. It covers quality assurance measures taken by YAEC, the Construction Manager, and the requirements imposed on subcontractors during construction activities at the site. It includes provisions for control during the construction phase by means of review, inspections, audits, surveillance, tests, and by documentation of activities affecting quality. Provisions are included to assure that all activities

affecting quality are accomplished under suitably controlled conditions.

2.2 PSNH, with overall responsibility for quality assurance at the site, has delegated the establishment and implementation of the program to YAEC. YAEC assumes, by delegation, total responsibility for the quality activities affecting safety-related items which are listed in Tables 1.1-1A, 1.1-1B and 1.1-1C of Procedure 1.1 of this Manual.

2.2.1 The Construction Manager shall submit his quality assurance manual and implementation procedures to YAEC for review and approval. YAEC will monitor the activities of the Construction Manager to assure compliance with specified requirements.

2.2.1.1 The Construction Manager shall prepare bid packages for all safety-related activities at the site. The bid package shall be subject to review and approval by the Engineering and Quality Assurance Groups of the Construction Manager and YAEC. The bid packages shall contain all of the quality requirements for which the subcontractor will be responsible.

2.2.1.2 The bidder shall submit his quality assurance manual to the Construction Manager for review and approval. Prior to issuing a purchase order

the Construction Manager shall survey bidders to assure that they comply with the requirements of 10 CFR 50 Appendix B, and this Program. YAEK will participate in selected surveys and shall monitor the implementation of the bidders program at the site.

2.3 There will be three quality assurance levels at the site:

Level 1 - Quality control by subcontractors on the activities they perform and by the Construction Manager on receiving, inspection and storage.

Level 2 - Surveillance by the YAEK Field QA Group on all activities performed by Level 1 organizations and by the Construction Manager on safety-related structural and civil activities. Surveillance of containment erection is included within the scope of the Construction Manager.

Level 3 - Audit by YAEK QAD Westboro on activities performed by Level 1 and 2 organizations.

2.4 YAEK activities covered by this program, as well as those performed by the Construction Manager and subcontractors, will be performed in accordance with written procedures or instructions. These procedures will comply with the criteria included in this program.

2.5 A summary report of Quality Assurance Program activities will be prepared monthly by the YAEC Field QA Manager and forwarded to the YAEC QAD Manager in Westboro with copies to the PSNH Project Manager, YAEC Vice President, YAEC Seabrook Project Manager and YAEC Construction Manager.

2.6 Management of the Construction Manager organization and subcontractors shall regularly review the status and adequacy of their portion of the program. The YAEC QA Manager, who is responsible for program implementation, shall remain cognizant of the status and effectiveness of the program.

3.0 DESIGN CONTROL

3.1 Measures are established and documented to assure that changes or deviations from specified design requirements or quality standards shall be identified, documented, and controlled in accordance with the requirements of ANSI 45.2.11.

3.2 The Construction Manager shall assure that the impact of changes are considered, required actions documented, and information concerning the change is transmitted to all affected organizations.

3.2.1 Site generated changes to drawings and specifications for safety-related items shall be subject to review by YAEC and the Construction Manager or Westinghouse, as applicable. Proposed changes shall be directed by the subcontractor to the Resident Construction Manager who

shall forward them to his Project Office for review and approval. Procedure 3.0 of this Manual describes the YAEC involvement in these reviews. Westinghouse changes shall be forwarded to the applicable Westinghouse Project Engineer.

- 3.2.2 The Construction Manager shall review and approve each sub-contractor's procedure for the handling of design changes.
- 3.2.3 Design changes are subject to the same control measures as were applied to the original design. Changes must be reviewed and approved by the organization responsible for the original design. Calculations supporting the original design must be correlated with all changes and nonconformances.
- 3.2.4 YAEC QAD personnel shall perform audits, as detailed in Section 9.0 of this Manual, to assure the effectiveness and compliance with these requirements.

4.0 PROCUREMENT DOCUMENT CONTROL

- 4.1 Measures are established and documented by contractors to assure that applicable regulatory requirements, design bases, and other requirements are included or referenced in the documents for procurement of items and services.

4.2 Contractor and subcontractor generated procurement documents, originating at the site shall be directed to the Resident Construction Manager for processing. The Construction Manager's program provides consistent evaluations, approvals and audits for all purchases. The Construction Manager's home office shall prepare the procurement document. Procurements which represent additional material/services previously ordered (from the same vendor) are not subject to YAEC approval. Procurements which represent new items, new vendors, or changes in specification shall be forwarded to YAEC for review and approval as required by Sections 3.0 and 5.0 of this Manual. Bid packages shall be prepared and reviewed as required by Section 2.0 of this Procedure.

4.2.1 All procurement documents for safety-related items shall be reviewed by the subcontractor or Construction Manager in accordance with written procedures which have been reviewed and approved by YAEC.

4.2.2 YAEC QAD personnel shall conduct audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 Measures are established to assure that all activities affecting quality are performed by documented instructions, procedures and drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures

or drawings.

5.2 All safety related work shall be performed in accordance with written instructions, procedures and drawings. It shall be the responsibility of each subcontractor to furnish written instructions to personnel performing the work. It shall be the responsibility of the Construction Manager to assure the adequacy of these instructions, procedures and drawings with related construction activities and the compliance with applicable codes and standards. The Construction Manager's procedures are subject to YAEC review and approval.

5.2.1 All quality related work instructions, procedures and drawings shall, as applicable, include acceptance criteria for determining that the function has been satisfactorily accomplished.

5.2.2 The Construction Manager shall prepare or approve inspection procedures to be used on safety-related items.

5.2.3 Changes to instructions, procedures, and drawings shall be handled in accordance with 6.2.2 of this Procedure. Revised procedures which are subject to YAEC review shall be handled in accordance with Section 3.0 of this Manual.

5.2.4 YAEC QAD personnel shall perform audits to assure compliance and effectiveness of these requirements as detailed in Section 9.0 of this Manual.

6.0 DOCUMENT CONTROL

6.1 Measures are established and documented to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe activities affecting quality. These measures assure the documents including changes, are reviewed for adequacy and approval for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed.

6.2 The Construction Manager shall have a procedure for the control of drawings and procedures which shall be subject to review and approval by YAEC as detailed in 3.0 of this Manual. Each subcontractor shall have a written procedure, approved by the Construction Manager, for the control of drawings and procedures he uses at the site.

6.2.1 The Construction Manager shall forward indices of instructions, procedures and drawings prepared by the Construction Manager to applicable subcontractors.

Subcontractors will prepare indices for their instructions, procedures and drawings and submit them to the Construction Manager. All indices will also be sent to the YAEC Field QA Group. The Construction Manager and subcontractors and YAEC will be responsible for keeping their instructions, procedures and drawings up to date.

6.2.2 Changes to drawings or procedures may be requested by subcontractor, YAEC or the Resident Construction Manager. Changes are documented by issuing a revised drawing or procedure subject to approval by the Construction Manager. Such changes shall be approved by the original approval organizations.

6.2.3 YAEC QAD personnel shall perform audits, as detailed in 9.0 of this Manual, to verify the adequacy of the document control system at the construction site.

7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

7.1 Measures are established and documented to assure that purchased items and services, requested by the site, conform to the requirements of ANSI 45.2.13. These measures include provisions, as appropriate, for evaluation and selection, objective evidence of quality furnished by the contractor, inspection and audit at the source, and examination of the items upon delivery.

7.2 Site generated requests for the purchase of safety-related items or services shall be routed to the Construction Superintendent. The Resident Construction Manager shall forward these requests to the Construction Manager for the review cycle, as may be required, and initiation of the procurement document as detailed in Section 4.0 of this Procedure. The Construction Manager performs vendor evaluation and surveillance consistent with that provided other purchases of safety-related items.

7.2.1 Site receiving inspection shall be conducted by the Construction Manager in accordance with written procedures. These procedures, approved by YAEC QAD shall make provisions for inspection for shipping damage, preservation, identification, and quality records. Following acceptance, quality documentation (Reference Section 17 of this Procedure) shall be forwarded to the YAEC Records Center for filing.

7.2.2 The YAEC QAD shall perform audits, per Section 9.0 of this Manual to assure compliance with these requirements and the adequacy of control measures.

8.0 IDENTIFICATION AND CONTROL OF MATERIAL, PARTS AND COMPONENTS

8.1 Measures are established and documented for the identification and control of material, parts and components. These measures provide for assuring that only correct and accepted items are used and installed.

8.2 The Construction Manager's procedure for maintaining control of material, parts or components shall be reviewed and approved by YAEC QAD.

The Construction Manager shall review and approve the subcontractor procedures.

- 8.2.1 All safety-related items and material shall be identified by heat number or other suitable symbol as required by the procurement document or applicable procedure.
- 8.2.2 Prior to releasing material, parts and components for installation or use, Receiving Inspection shall verify that each item, or group of items, is properly identified, as required by the procurement document, and that the identification is traceable to the supporting quality records.
- 8.2.2.1 The minimum requirements for installation of equipment will be a Certificate of Compliance (Reference Procedure 10.0 of this Manual) to be followed prior to fuel loading, by a data package.
- 8.2.3 YAEQ QAD shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

9.0 CONTROL OF SPECIAL PROCESSES

- 9.1 Measures are established and documented to assure that special processes, including welding, heat treating, cleaning and nondestructive examination are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria and other special requirements, using qualified personnel and procedures.

9.2 Each subcontractor who performs special processes shall assure that the operations are performed in accordance with written procedures which have been subjected to review and approval by the Construction Manager. These procedures shall be qualified, as required, prior to use and shall become a quality record for retention at the site Record Center as required by ANSI 45.2.9.

9.2.1 Subcontractor personnel performing special process shall be qualified per written procedures and the results of such tests shall be forwarded to the YAEC Records Center for filing. Records resulting from the qualification of processes shall also be forwarded to the YAEC Records Center for filing (Reference 17.0 of this Procedure).

9.2.2 Measuring and test devices and other equipment used in and during special processes shall be calibrated and controlled in accordance with the requirements of Section 12.0 of this Procedure.

9.2.3 YAEC QA Department personnel shall perform audits per Section 9.0 of this Manual to assure effectiveness and compliance with these requirements.

10.0 INSPECTION

10.1 A system is established for the inspection of activities affecting quality and executed by or for the organization performing the activity to verify conformance to the documented instructions,

procedures and drawings for accomplishing the activity. Inspection activities to verify the quality of work shall be performed by persons other than those who performed the activity being inspected. Such persons shall not report directly to the immediate supervisors who are responsible for the work being inspected.

10.2 Inspections shall be conducted in accordance with written procedures or programs which shall be prepared by the subcontractor's Quality Assurance organization. The planning sheets or forms used to document the inspection shall provide space for the inspector's signature/stamp.

10.2.1 Each subcontractor shall establish an inspection group which shall be independent of the group performing the work being inspected and shall report to an individual who shall have at least equal management status as those performing the work being inspected.

10.2.2 Work instructions for each activity shall be developed by each applicable subcontractor and the instructions shall include inspection points and reference the applicable inspection procedures. The instructions shall be submitted to the Construction Manager for review.

10.2.3 Reporting of nonconformances shall be in accordance with procedures approved by the Construction Manager. This will include routing copies to the Resident Construction Manager, YAEC Project Manager, YAEC Site Manager and YAEC

Field QA Manager. (Reference 15.0 of this Procedure.)

- 10.2.4 Measuring and test equipment used in conjunction with inspections shall be calibrated in accordance with Section 12 of this Procedure.
- 10.2.5 If inspection of processed items is impossible or impractical, indirect control by monitoring of processing methods, equipment and personnel shall be provided.
- 10.2.6 Non-destructive examination (NDE) personnel and processes shall be qualified in accordance with Section 9 of this Procedure.
- 10.2.7 Completed inspection records shall be forwarded to the YAEC Central Records area for review and filing (Reference Section 17 of this Procedure.)
- 10.2.8 YAEC QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

11.0 TEST CONTROL

- 11.1 This program requires that subcontractors and the Startup Test Group establish test programs to assure that all testing required to demonstrate that the items will perform satisfactorily in service is identified and documented and that the testing is performed in accordance with written test procedures which

incorporate or reference the requirements and acceptance limits contained in the applicable design documents.

11.2 Site tests conducted by subcontractors shall be identified and performed in accordance with written procedures which shall be reviewed and approved by the Construction Manager. The initial test program, which includes integrated systems preoperational tests and initial startup tests, will be performed in accordance with written procedures approved by the Joint Test Group. Testing of the project's material or equipment shall be as specified in the appropriate contract.

11.2.1 Repetitive testing, such as reinforcement and concrete proof tests at the site shall be done by the subcontractor in accordance with test plans which have been approved by the Construction Manager.

11.2.2 Deviations of test results beyond specified limits shall be treated as nonconformances.

11.2.3 Site test records are reviewed during surveillance activities by the YAEF Field QA Group. Test results shall be evaluated by the organization having design responsibility for the item being tested.

11.2.4 YAEF QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

- 12.1 Measures are established and documented to assure that tools, gages, instruments and other inspection, measuring and testing equipment and devices used in activities affecting quality are of the proper range, type, and accuracy to verify conformance to established requirements.
- 12.2 The subcontractors shall prepare written procedures for the calibration of measuring and test equipment. These procedures shall be reviewed and approved by the Construction Manager. All calibration must be traceable to national standards.
- 12.3 YAEC QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure the effectiveness and compliance to these requirements.

13.0 HANDLING, STORAGE AND SHIPPING

- 13.1 Measures are established and documented to control handling, storage, and shipping including cleaning, packaging and preservation of material and equipment in accordance with established instructions, procedures or drawings to prevent damage, deterioration and loss.
- 13.2 The Construction Manager shall provide or review and approve all subcontractor procedures for handling, storage and shipping required at the site. These include procedures for maintenance

during in-place storage.

13.2.1 The YAEF Field QAD Group will make periodic surveillance of safety-related items delivered to the site but not yet installed or consumed in the construction or installation process to verify the condition of their packaging and preservation. Discrepancies shall be reported as detailed in Section 8.0 of this Manual.

13.2.2 YAEF QAD personnel shall perform audits, per Section 9.0 of this Procedure, to assure the effectiveness and compliance to these requirements.

14.0 INSPECTION, TEST AND OPERATING STATUS

14.1 Measures are established and documented to identify inspection and test status. Such measures shall provide means for assuring that required inspections and tests are performed and that the acceptability of items with regard to inspections and tests performed is known throughout installation.

14.2 Each subcontractor shall have a system of inspection and test work instructions which are reviewed and approved by the Construction Manager.

14.2.1 Nonconforming items shall be clearly identified. Tags, labels or other items shall be used as a visual method to quickly determine the quality status of an item. In addition, written inspection records shall contain the

up-to-date inspection status and shall provide space for the constructors inspectors stamp/signature.

14.2.2 Site personnel shall be familiar in the use of the status indicating and nonconformance report system to assure the control of items, segregation of nonconformances, and the reporting of loss of, or unauthorized use of, inspection stamps. The integrity of the status indicating system shall be maintained and misuse shall be reported as a nonconformance.

14.2.3 YAEC QAD personnel shall perform audits, as detailed in Section 9.0 of this Manual, to assure the effectiveness and compliance with these requirements.

15.0 NONCONFORMING MATERIAL, PARTS OR COMPONENTS

15.1 Measures are established and documented to control items, services, or activities which do not conform to requirements in order to prevent their inadvertent use or installation. These measures include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to the affected organizations.

15.2 Each subcontractor is required to have a procedure for the control of nonconformances which has been reviewed and approved by the Construction Manager. YAEC shall review and approve the Construction Manager's procedure for the control of

nonconformances. These procedures shall provide measures to assure that nonconforming items are reviewed, accepted, rejected, repaired or reworked in accordance with written procedures.

15.2.1 YAEC identified nonconformances shall be handled in accordance with 9.0 of this Manual.

15.3 Significant deficiencies as defined by 10CFR50.55(e) shall be reported promptly by the YAEC Field QA Manager to the Project Manager in Westboro. Reports to the Director of Regulatory Operations will be handled as outlined in Procedure 1.1, paragraph 16.1.

15.3.1 It is required that deviations be reported only if they present problems requiring extensive evaluation, are not of a type or frequency that is reasonably anticipated involving design, fabrication, material, procedural or workmanship issues, or if they represent a significant breakdown of a portion of the quality assurance program.

15.4 YAEC QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

16.0 CORRECTIVE ACTION

16.1 Measures are established and documented to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances

are promptly identified and corrected as soon as practicable.

16.2 Each subcontractor shall have a procedure, reviewed and approved by the Construction Manager, which defines how he will handle corrective action, indicates forms, tags, stamps and other items to be used, and the distribution system.

16.2.1 Section 8.0 of this Manual details how YAEC will process corrective actions.

16.2.2 Corrective actions are initiated upon discovery of conditions adverse to quality by subcontractor, Construction Manager or YAEC personnel as a result of nonconformance reports or audit reports.

16.2.3 YAEC QAD personnel shall perform audits of contractors and selected suppliers as detailed in Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

17.0 QUALITY ASSURANCE RECORDS

17.1 Measures are established to assure that sufficient records shall be prepared as work is performed to furnish documentary evidence of the quality of items and of activities affecting quality. Records will be consistent with the requirements of Section III of the ASME B&PV Code and ANSI Standard 45.2.9. For record requirements covered by the ASME Boiler & Pressure Vessel Code, the requirements of the Code should apply in addition to the

requirements of N45.2.9. In cases where conflict may exist, the requirements of the Code (for Code-covered activities) should be controlling.

17.2 The records Center will be administered by the YAEC Field Quality Assurance Records Supervisor. The Records Center, at the site, will be located in a structure complying with the requirements of ANSI 45.2.9 with the exception that the building will not be tornado proof.

17.2.1 Design documents, including their interpretations, addenda and amendments shall be retained at the YAEC Westboro office or by the vendor as defined in the procurement document.

17.2.2 Quality records maintained at the site shall be classified as lifetime or non-permanent as required by ANSI 45.2.9.

17.2.2.1 Lifetime records will be protected from possible destruction by causes such as fire, flooding, insects, rodents and from possible deterioration by a combination of extreme variations in temperature and humidity conditions.

17.2.2.2 Non-permanent records will be stored in a common office environment.

- 17.2.3 Completed construction records shall be audited for compliance with written specifications, indexed and filed by the YAEC Field QA Group.
- 17.2.4 Those records which must be sent to the site shall be detailed in the applicable procurement document. All site generated records shall be retained at the site.
- 17.2.5 Record requirements are outlined in Section 10.0 of this Manual.
- 17.2.6 Access to quality records in the YAEC file shall be controlled by the Quality Control Records Supervisor. Access and retrieval of lifetime records shall be controlled in accordance with the requirements of a written procedure. Records shall be retained and stored in accordance with the requirements of ANSI 45.2.9.
- 17.2.7 YAEC QAD personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.

18.0 AUDITS

- 18.1 Measures are established to assure that a comprehensive system of planned and documented audits shall be carried out to verify compliance with all aspects of the quality assurance program as required by ANSI 45.2.12. Audits shall be performed in accordance with written procedures or checklists (Reference Section 9.0 of

this Manual) by appropriate trained personnel having no direct responsibilities in the areas being audited.

- 18.2 Subcontractors are required to have an audit procedure which has been reviewed and approved by the Construction Manager. The procedure shall include requirements for scheduled audits and the use of check lists.
- 18.3 Audits shall be performed on a planned and periodic basis by YAEC Field QA personnel as designated by the YAEC Field QA Manager.
- 18.4 The results of YAEC QAD site audits shall be documented in written reports which shall be distributed as detailed in Procedure 9.1.
- 18.5 YAEC QAD personnel from Westboro shall perform audits to assure that the YAEC Field QA Group is adequately fulfilling its assignment.
- 18.6 Supervision of the area being audited shall provide prompt corrective action (within the time frame detailed in the audit report) detailing the action proposed to prevent recurrence of the deficiency and the date of its implementation.
- 18.6.1 Should it become necessary for YAEC QAD personnel to order that a particular operation be stopped, the order shall be made by notifying the YAEC Site Manager who will inform the Resident Construction Manager of the rejection of the work and will order him to have the work discontinued. The individual stopping work may do so

by giving the order orally but will always document the stop work order by letter. Copies will be distributed to the YAEC Site Manager, YAEC Construction Manager, Resident Construction Manager, Construction Manager, YAEC Project Manager, YAEC QA Manager. Disputed matters will be promptly reported to the YAEC Project Manager, YAEC Construction Manager and YAEC QAD Manager in Westboro, for mutual resolution. Work will remain stopped until the dispute is resolved.

18.7 YAEC QAD personnel shall perform audits, as detailed in Section 9.0 of this Manual, to assure subcontractor and Field QA group's compliance with these requirements.

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">PROGRAM - PREOPERATIONAL TESTING</p>	<p>Section <u>Procedure 1.3</u> Revision <u>0</u> Date <u>11/21/80</u> Page <u>1</u> of <u>14</u> Appr. <i>J. B. Johnson</i> YAEC Vice President</p>
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1.0 ORGANIZATION

- 1.1 The Yankee Atomic Electric Company (YAEC) Startup Test Group (STG) will manage and provide overall direction for the Preoperational Test Program (PTP). The STG Manager reports to the YAEC Vice President responsible for the overall direction of the Seabrook Project.
- 1.2 Reporting to the STG Manager are personnel assigned to the site who have technical capabilities in areas such as primary systems, secondary systems, electrical systems, and plant operations.
- 1.3 STG personnel, qualified to the appropriate requirements of ANSI N45.2.6 (1978), will direct plant operations personnel during test activities and will be responsible for the acquisition, review, and evaluation of relevant data.
- 1.4 The Yankee Field Quality Assurance Manager, who reports to the Quality Assurance Manager provides surveillance during the PTP to assure that tests are performed in accordance with approved procedures by trained and qualified personnel, that test results

are documented and evaluated by qualified personnel, and that nonconformances are controlled.

- 1.5 The Yankee Quality Assurance Manager is responsible for the performance of audits of the activities occurring during the PTP.

Yankee QA personnel, both Field and Home Office, have sufficient organizational freedom and authority to stop work where necessary or appropriate to assure quality.

- 1.6 Figures 1.3-1 and 1.3-2 show the organizational structure for the PTP.

2.0 PROGRAM

- 2.1 Details of the PTP are contained in the Seabrook Station PTPD.

- 2.2 Appendix F of the Seabrook Station Preoperational Test Program Description (PTPD) indicate those tests which are performed on safety-related equipment, systems and structures during the PTP. Preoperational testing consists of individual system and integrated system tests performed prior to (and in some cases after) initial core loading on essentially completed systems and structures.

- 2.3 Figure 1.3-3 denotes those groups responsible, under the direction of the STG, for control of systems and performance of tests during the PTP. This Program applies to the STG and all organizations performing activities under the direction of the Joint Test Group.

2.4 There will be three quality assurance levels during the PTP:

Level 1 - STG personnel shall assure that tests are properly conducted as required by Section 10.2 of this procedure.

Level 2 - Surveillance by the YAEC Field QA Group on testing activities performed under the direction of the STG.

Level 3 - Audits by YAEC QA Westboro on activities performed under the direction of the STG and Field QA Group.

2.5 Activities performed under this Program, both by QA organizations and the STG will be performed in accordance with written procedures or instructions. STG Test Program Instructions (TPI's) shall be reviewed by QA to assure the inclusion of quality requirements.

2.6 The STG Manager shall periodically report the status of the testing program to the Vice President. The YAEC QA Manager shall remain cognizant of the status and effectiveness of the program.

3.0 DESIGN CONTROL

3.1 During the PTP the method used to control design changes will be dependent upon when modifications are requested in relationship to the applicable system final acceptance turnover.

3.2 Design changes prior to a system final acceptance will be controlled by the Seabrook Station Quality Assurance Program and Project Policies.

3.2.1 Changes within the NSSS scope of supply, prior to system final acceptance, will be reported to the W Site Group who will prepare a Field Deficiency Request (FDR) which will be processed using approved procedures to the appropriate Westinghouse engineering group. The approved FDR will be required prior to any changes being made at the site.

3.2.2 For design changes not within the NSSS scope of supply, requests (prior to system final acceptance) will be documented in a Field Change Request (FCR) and forwarded to UE&C for action. UE&C will process the FCR per approved procedures. Changes will be made based upon the UE&C approved FCR or other appropriate document.

3.3 Subsequent to a system final acceptance, design changes will be controlled by the operating plant programs.

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 Should the need arise for the STG to obtain materials, equipment or services, the STG will request that the appropriate contractor initiate the procurement cycle.

4.2 The preparation of procurement documents, including changes thereto, will be controlled by the program of the applicable procurement organization.

5.0 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

- 5.1 Activities performed during the PTP will be conducted using approved instructions, procedures, or drawings.
- 5.2 A Joint Test Group (JTG) consisting of representatives from the STG, Seabrook Station Staff and the UE&C Test Startup Engineering Department shall review and approve all procedures used to perform testing. The Station Operations Review Committee shall assume this function subsequent to initial fuel loading for each unit.
- 5.3 Yankee QA shall review STG administrative instructions to assure that proper quality requirements have been included.
- 5.4 Test procedures used during the PTP shall, as appropriate, contain quantitative or qualitative criteria for determining the acceptability of the tests.
- 5.5 Changes to procedures shall be approved by the organizations who approved the original document, as appropriate.

6.0 DOCUMENT CONTROL

- 6.1 Documents such as instructions, procedures, and drawings which have been prepared under the direction of the STG, including changes thereto, shall be controlled. Control measures shall assure that documents, including changes, are used at the location where the prescribed activity is performed.

7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

- 7.1 During the PTP, procurement may be initiated by the STG by requesting that the appropriate contractor initiate the procurement cycle. Requests will be forwarded to UE&C for procurement action. The procuring organization shall assure that procurement documents are prepared and reviewed following approved procedures, that approved suppliers are utilized and that completed items are subject to source inspection and receipt inspection as appropriate.
- 7.2 Where required by code or regulation, documentary evidence that items conform to procurement requirements shall be available at the site prior to installation or use of the item.

8.0 IDENTIFICATION AND CONTROL OF MATERIAL, PARTS AND COMPONENTS

- 8.1 The identity and status of equipment and systems shall be the responsibility of the installing contractor who shall assure that measures are taken to prevent the use of incorrect or defective material, parts and components.

9.0 CONTROL OF SPECIAL PROCESSES

- 9.1 Measures shall be established to assure that activities associated with the cleaning of fluid systems and associated components are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria and other special requirements, using qualified personnel and procedures.

- 9.2 Welding, heat treating, or nondestructive testing associated with the PTP shall be accomplished by the appropriate site contractor using approved, qualified procedures and qualified personnel.
- 9.3 Procedures shall be qualified, as required, prior to use and shall be forwarded to the Site Records Center for retention as required by ANSI N45.2.9.

10.0 INSPECTION

- 10.1 Measures shall be established for the inspection of items affecting preoperational test activities.
- 10.2 During the PTP, tests shall be conducted under the cognizance of a Test Director who shall be qualified to the applicable requirements of ANSI N45.2.6. The Test Director will coordinate the activities prior to, during, and after each test, insure that the test is properly conducted and that all relevant data is properly recorded.
- 10.3 Nonconformances noted during the PTP shall be handled as described in Section 15 of this procedure.

11.0 TEST CONTROL

- 11.1 A test program has been established to assure that all testing required to demonstrate that the station will perform satisfactorily in service has been identified and documented. All testing will be performed in accordance with written test

procedures which incorporate or reference appropriate requirements and acceptance limits.

11.2 Testing will be performed using appropriate and calibrated instruments, and trained personnel. Provisions will be made to assure the proper condition of test equipment and the system or item to be tested, suitable environmental conditions, and provisions for data collection.

11.3 Test results will be evaluated by knowledgeable personnel to assure that test criteria have been successfully satisfied.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 During the PTP, measures are established and documented to assure that gauges, instruments and other testing equipment are of the proper range, type and accuracy to establish conformance to established requirements.

12.2 Gauges, instruments and other testing equipment furnished by contractors will be controlled by the contractor procedure which has been approved by UE&C, and those supplied by the operating plant will be controlled by plant approved procedures. Gauges, instruments and other testing equipment furnished by the STG will be controlled by a procedure approved by the STG Manager.

12.3 Procedures controlling gauges, measuring and test equipment require that items be controlled, calibrated, adjusted, and maintained at prescribed intervals or prior to use against

certified equipment having known valid relationship to nationally recognized standards. If no national standard exists, the basis for calibration shall be documented.

12.4 Measuring and test equipment used during the conduct of special processes shall be calibrated and controlled.

12.5 Special calibration shall be performed when accuracy of the equipment is suspect.

12.6 Records of calibration shall be maintained and equipment suitably marked to indicate calibration status.

13.0 HANDLING, STORAGE AND SHIPPING

13.1 Handling and storage of equipment by UE&C will be controlled and performed by contractors following UE&C or station staff approved procedures to prevent damage, deterioration, or loss.

13.2 Requisitions for equipment originated as a result of the PTP will include appropriate instructions for handling, storage, and shipping, including cleaning, packaging, and preservation of materials and equipment in accordance with established instructions, procedures, or drawings to prevent damage, deterioration and loss.

14.0 INSPECTION, TEST AND OPERATING STATUS

14.1 During the PTP, the inspection, test and operating status of equipment and systems will be controlled by a STG administered tagging program. The systems employed indicate the service status of the item and jurisdictional responsibility.

14.2 Other vehicles such as status boards and marked-up Piping and Instrument Diagrams may be used to supplement the tagging system.

15.0 NONCONFORMING ITEMS

15.1 Nonconforming items noted during the PTP will be included in a "Summary of Test Exceptions" prepared by the Test Engineer.

15.2 Nonconformances which are determined to be the result of failure of the component to meet procurement requirements will be referred to the procuring contractor for corrective action.

15.3 Nonconformances which are of the type expected in an operating plant will be corrected using the Maintenance Request Program.

15.4 Nonconforming items will be clearly identified.

16.0 CORRECTIVE ACTION

16.1 Measures are established and documented to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected as soon as practicable.

16.2 The STG Manager shall, on a periodic basis, review the "Summary of Test Exceptions" to determine whether corrective action is necessary or appropriate in order to prevent recurring problems.

17.0 QUALITY ASSURANCE RECORDS

17.1 Test procedures identify the records to be prepared and completed to document test activities. Administrative procedures include provision for the retention of appropriate records relating to such items as personnel qualifications, procedures, and inspection and test records. Procedures shall also include measures to assure that completed records are forwarded to the Site Records Center.

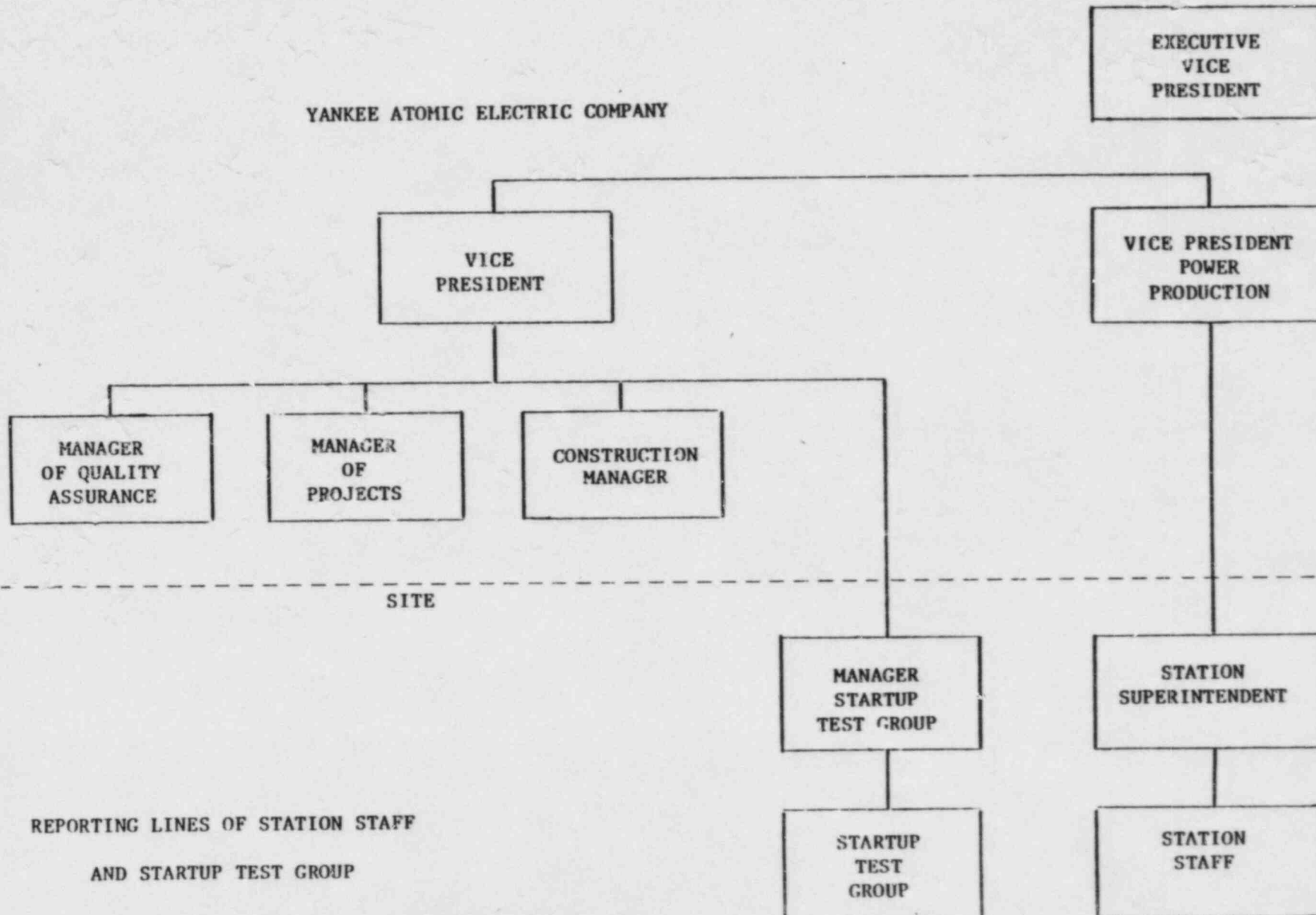
18.0 AUDITS

18.1 Audits of PTP activities shall be performed on a periodic basis by YAEC QA personnel as designated by the YAEC QA Manager to verify compliance with all aspects of the testing program as required by ANSI N45.2.12.

18.2 Audits shall be performed by qualified personnel using procedures or check lists and reported as required by Procedure 9.1 of this Manual.

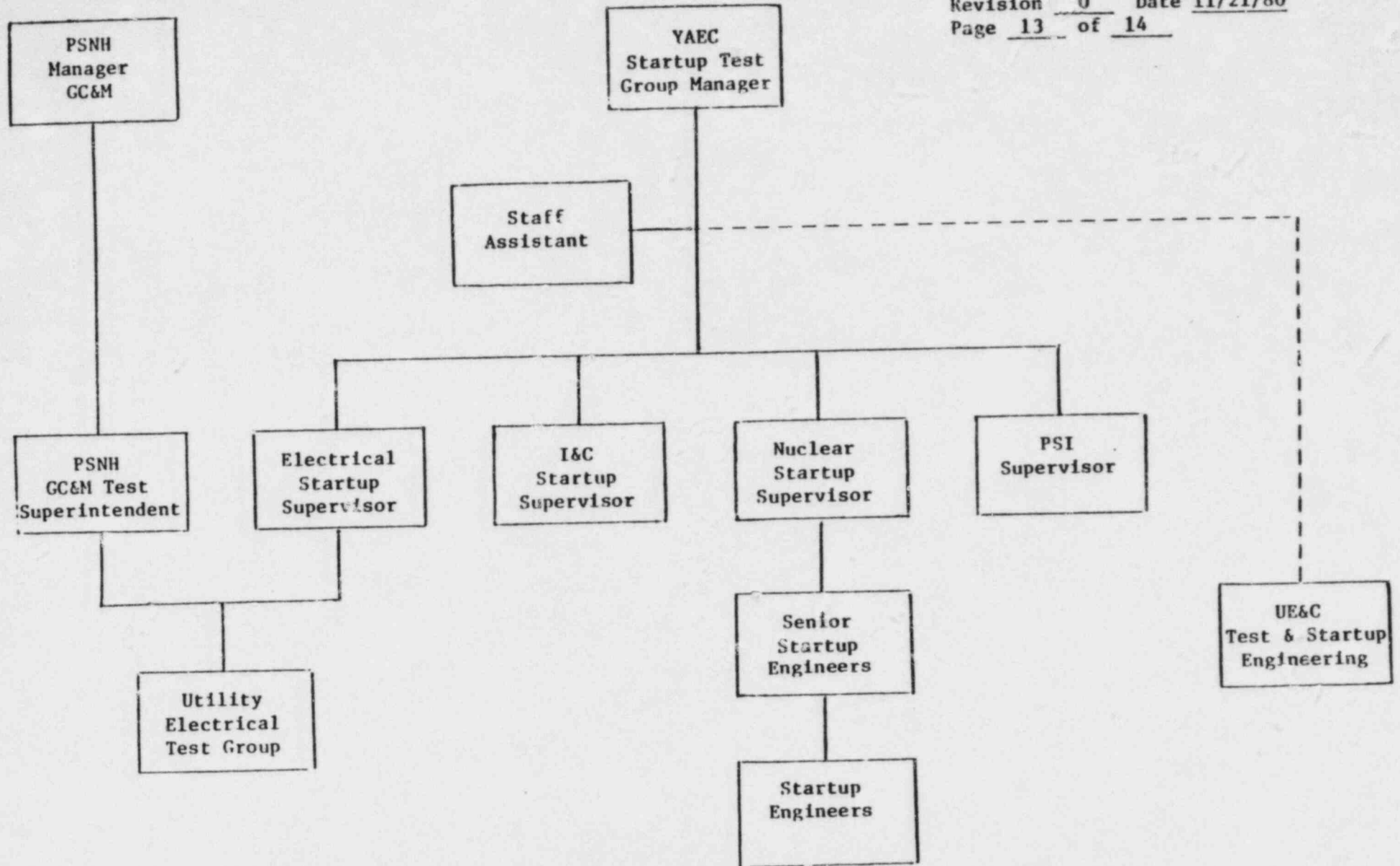
PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY



REPORTING LINES OF STATION STAFF
AND STARTUP TEST GROUP

FIGURE 1.3-1



YAEC STARTUP TEST GROUP - ORGANIZATION CHART
FIGURE 1.3-2

FIGURE 1.3-3

PREOPERATIONAL TEST PROGRAM RESPONSIBILITY/AUTHORITY MATRIX

Activity	Construction Verification Tests	Individual System Tests	Integrated Systems Tests
Management	STG	STG	STG
Test Procedure Preparation	STG, AE, UETG	STG or AE	STG
Test Procedure Approval	AE, STG, SS	AE, STG, SS	AE, STG, SS
Test Coordination and Direction	AE, UETG, STG	STG	STG
Systems and Equipment Operations	AE, UETG, SS	SS	SS
Systems and Equipment Maintenance	AE or UETG	AE or SS	SS
Test Completion Approval	AE, STG, SS	AE, STG, SS	AE, STG, SS
Technical Support	NSD, NSS, AE, TG	NSD, NSS, AE, TG	NSD, NSS, AE, TG

STG - Startup Test Group - Yankee Atomic Electric Company
AE - Architect Engineer and Construction Manager - United Engineers and Constructors
SS - Station Staff - Public Service Company of New Hampshire
NSD - Nuclear Services Division - Yankee Atomic Electric Company
NSS - Nuclear Steam Supply Vendor - Westinghouse Electric Corporation
TG - Turbine Generator Vendor - General Electric Company
UETG - Utility Electrical Test Group - Yankee Atomic Electric Company and Public Service
Company of New Hampshire

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL <small>YANKEE ATOMIC ELECTRIC COMPANY</small></p> <p>DESCRIPTION</p> <p style="text-align: center;">ORGANIZATION</p>	<p>Section <u>Procedure 2.0</u> Revision <u>9</u> Date <u>08/21/81</u> Page <u>1</u> of <u>11</u> Appr. <i>Arthur M. Shepard</i></p>
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1.0 PURPOSE AND SCOPE

This Section describes the YAEC organizational structure and the duties and responsibilities of organizations and individuals performing quality assurance functions.

2.0 GENERAL

2.1 The organizational structure of the YAEC Quality Assurance Organization is shown in Figure 2.0-1. The duties and responsibilities of individuals and departments performing quality assurance activities are described in 3.0 below.

2.2 The YAEC quality assurance organization establishes program requirements and defines or approves quality systems to be used by YAEC and by contractors to reach program objectives. It reviews, audits or otherwise verifies that the Seabrook Project Quality Assurance Program, as described in Section 1.0 of this Manual, is correctly implemented. It provides control levels over contractor (Westinghouse and UE&C) activities and over

subcontractor and vendor activities.

- 2.3 The individuals and departments within YAEC to whom responsibilities have been delegated are independent of the individual or group responsible for performing the specific activity and have the organizational freedom to identify quality problems; to initiate, recommend or provide solutions; to verify implementation of solutions; and control processing, delivery or installation of safety related equipment.
- 2.4 YAEC personnel are assigned quality assurance duties for which they are judged by their superiors to be qualified. In preparation for the initial assignments to review or audit without direct supervision, personnel are instructed in the governing procedures and they perform reviews or audits under qualified supervision. Personnel are given in-house training and attend courses as necessary to qualify them for assignments of quality assurance activities or to upgrade their qualifications in such areas as design control measures, nondestructive testing, welding, code requirements and audit procedures. The qualifications and performance of personnel are evaluated annually by the appropriate department heads.
- 2.5 Consultants retained by YAEC as necessary to supplement the work of the YAEC quality assurance organization are required to comply with this Manual. Their work will be reviewed on a continuing

basis by the YAEC individual responsible for their scope of work.

3.0 DUTIES AND RESPONSIBILITIES

3.1 Vice President

3.1.1 Reports to the President.

3.1.2 Establishes the qualification requirements for the principal Quality Assurance management positions to assure competence commensurate with responsibility.

3.1.3 Reviews or provides company policy relative to practices conducted in conjunction with the construction of the Seabrook plant.

3.1.4 Authorizes personnel performing Quality Assurance functions to have direct access to management levels which will assure accomplishment of quality-affecting activities.

3.2 Director of Quality Assurance

3.2.1 The Director of Quality Assurance who reports directly to a Vice President is responsible for the overall Seabrook Project Quality Assurance Program. The Director of Quality Assurance establishes Program policies under which YAEC personnel work. He provides direction and management for implementation of the Program in quality assurance matters.

3.2.2 He provides reports to PSNH Management to keep them advised of the Program's status.

3.2.3 He is responsible for approval of this Manual.

3.2.4 He delegates responsibility for portions of the Program to individuals and departments within the YAEC organization and provides general direction for the Program.

3.2.5 He maintains a continuous surveillance over quality assurance activities to assure Program effectiveness.

3.3 Quality Assurance Manager

3.3.1 The Quality Assurance Manager (QAM), who reports directly to the Director of Quality Assurance, is responsible for the direction and supervision of work performed by the Quality Assurance Department staff, both at the corporate office and at the plant site and by consultants hired to supplement this staff. He has delegated to the Field QA Manager the responsibility for maintaining surveillance of construction activities for safety related structures and systems.

3.3.2 He is responsible for the preparation, maintenance and distribution of this Manual.

- 3.3.3 He is responsible for verifying completeness and adequacy of YAEC Quality Assurance Program documents used to define Program scope or methods. He is also responsible for review of contractor specifications, procurement documents, Quality Assurance Programs and Quality Assurance Manuals and Procedures for compliance with quality assurance requirements of the Quality Assurance Program.
- 3.3.4 The QAM is responsible for developing, directing and implementing YAEC surveillance and audit systems to assure implementation of the Quality Assurance Program by YAEC and its contractors and subcontractors, including subcontractors performing construction activities.
- 3.3.5 He is responsible for insuring that program activities and documentation are completed prior to plant operation.
- 3.3.6 He is responsible for timely and appropriate communications regarding conditions requiring corrective action, including those at the construction site or in vendor shops, and communication regarding information required mutually by the QAD and other groups for the performance of their respective functions.

3.4 Construction Manager

3.4.1 The Construction Manager, who reports directly to the Vice President, is responsible for the direction and supervision of work performed by the Construction Department staff, both in the corporate office and at the plant site. The YAEC Site Manager reports directly to the Construction Manager.

3.4.2 The Construction Manager and his delegated representative, the YAEC Site Manager, have the authority to stop work at the construction site.

3.5 Vice President - Operations

3.5.1 The Vice President - Operations, who reports directly to the President, is responsible for the direction and supervision of work performed by the YAEC Engineering and Operations staffs.

3.5.2 He is responsible for reviews of selected plant system specifications and drawings for plant operability and maintainability.

3.5.3 He is responsible for maintaining an awareness of technical and regulatory developments and for YAEC compliance with applicable requirements. He is also responsible for

assuring that quality assurance programs and procedures are implemented within the engineering departments.

3.6 Project Manager

- 3.6.1 The Project Manager, who reports directly to a Vice President, is responsible for the coordination of interfaces between YAEC, Westinghouse and UE&C concerning contractual, engineering and quality assurance matters and for communications with other YAEC departments on these matters.
- 3.6.2 Although technical details are discussed on a day-to-day basis by YAEC design, construction and quality assurance engineers with their counterparts in Westinghouse and UE&C, the Project Manager is responsible for the documentation of significant questions, answers, positions, conclusions and agreements.
- 3.6.3 He is responsible for maintaining project logs, drawings, specifications and ERR files.
- 3.6.4 He has the authority to order that engineering and procurement activities be stopped at the principle contractors.

3.7 Plant Engineering Manager

3.7.1 The Plant Engineering Manager, who reports directly to the Vice President - Operations, is responsible for the direction and supervision of the Systems Engineering, Mechanical Engineering, Electrical Engineering, and Instrumentation and Control Engineering Groups.

3.7.2 He is responsible for the review of design criteria to be applied to all systems and components other than reactor core components.

3.7.3 He is responsible for a level of engineering review of contractor design documents, including changes, and for the review of bid evaluations to assure the incorporation of design criteria for systems and components other than reactor core components.

3.8 Fuel Cycle Manager

3.8.1 The Fuel Cycle Manager, who reports to the Vice President, is responsible for the direction and supervision of the Core Components and Nuclear Materials Groups.

3.8.2 He is responsible for the review of design criteria to be applied to reactor components.

3.8.3 He is responsible for a level of engineering review of contractor design and procurement documents, including changes, to assure the incorporation of design criteria for reactor core components.

3.9 Field Quality Assurance Manager

3.9.1 The Field Quality Assurance Manager, who reports to the Quality Assurance Manager, is responsible for the direction and supervision of the YAEC Quality Assurance staff at the site.

3.9.2 He shall be responsible for quality surveillance at the site and shall provide a second level of assurance over the quality control level provided at the site by subcontractors and the Construction Manager. Personnel working under his direct supervision will be qualified to perform duties assigned.

3.10 YAEC Site Manager

3.10.1 The YAEC Site Manager, who reports to the YAEC Construction Manager, is responsible for the coordination of all site activities and shall direct the activities of the site construction staff.

3.10.2 He works closely with the Resident Construction Manager in discharging his responsibilities and is familiar with site construction policies, planning, schedules and procedures.

3.10.3 He holds the authority to reject or discontinue any activity.

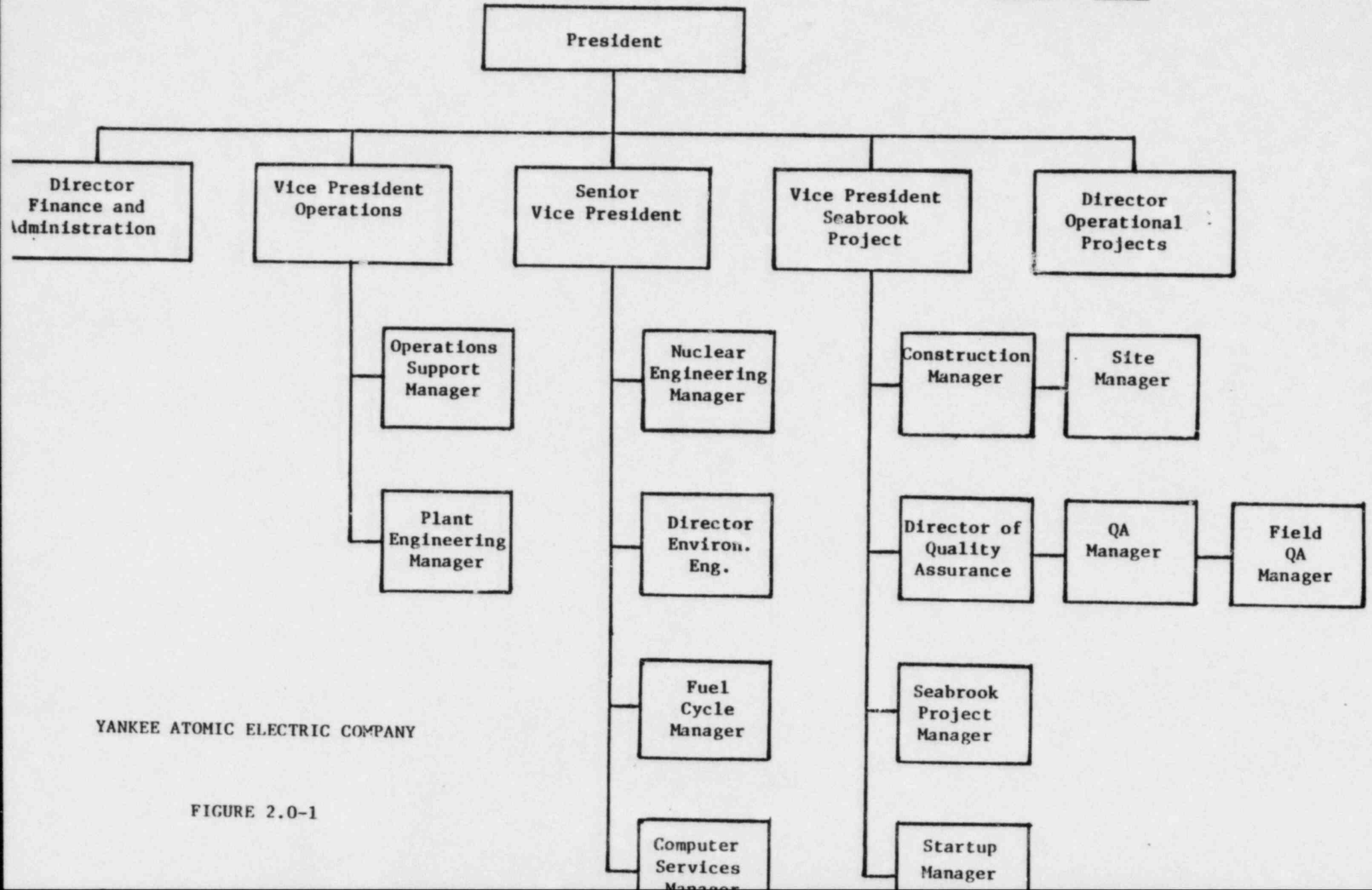
3.11 Environmental Engineering Manager

3.11.1 The Environmental Engineering Manager, who reports to the Vice President, is responsible for direction and supervision of Environmental Engineering, Radiological Engineering and Radiation Protection.

3.11.2 He is responsible for the review of design criteria to be applied to environmental protection programs, systems and components.

3.12 Startup Test Group Manager

3.12.1 The Startup Test Group Manager, who reports to the Vice President, is responsible for managing and providing overall direction for the initial test program which includes integrated systems preoperational tests and initial startup tests. He shall insure that applicable portions of the Seabrook Station Quality Assurance Program are applied in activities related to the initial test program.



YANKEE ATOMIC ELECTRIC COMPANY

FIGURE 2.0-1

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">EXTERNAL INTERFACE CONTROLS</p>	<p>Section Procedure 3.1</p> <p>Revision <u>6</u> Date <u>3/31/78</u></p> <p>Page <u>1</u> of <u>7</u></p> <p>Appr.</p> <p style="text-align: center;"><i>W. S. Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure defines the methods utilized by the project office to control external interfaces.

1.1.1 Methods for definition of documents requiring YAEC review.

1.1.2 Methods for resolution of YAEC review comments.

1.1.3 Methods for control of interface between contractors.

2.0 REFERENCES

2.1 Review Control	Procedure 3.2
2.2 Review Procedure	Procedure 3.3
2.3 General Audit Procedure	Procedure 9.1
2.4 Internal Audits	Procedure 9.2

3.0 PROCEDURE

3.1 Identification of documents requiring YAEC review:

3.1.1 Tables 1.1-1A, B and C define the safety related systems and components covered by this Manual and identify the responsible contractor.

3.1.2 Table 3.1-1 identifies the categories of documents reviewed by YAEC.

3.2 Resolution of review comments:

3.2.1 Comments generated by the YAEC review are resolved as noted below.

3.2.1.1 The Project Manager is responsible to accumulate and document YAEC review comments. Conflicting comments by YAEC reviewers are brought to the attention of the reviewers involved for resolution as defined in Reference 2.1. The resultant YAEC comments are transmitted to the Project Office of the document originator.

3.2.1.2 The Project Manager is responsible for maintaining a project letter log, Form 3.1-A, for YAEC letters and similar forms for letters generated by Westinghouse and UE&C.

- 3.2.1.3 The replies and/or proposed solutions to YAEC comments are received by the Project Office.
- 3.2.1.4 The replies and/or proposed solutions are forwarded by the Project Manager to the originator of the comments.
- 3.2.1.5 The comment originator is responsible to either accept the replies and/or proposed solutions or provide further comments to the Project Manager.
- 3.2.1.6 If the initial replies and/or proposed solutions are not accepted, the Project Manager repeats steps 3.2.1.1 through 3.2.1.5 until satisfactory resolution.
- 3.2.1.7 Minutes of meetings or telecon memoranda maintained by the Projects Office may be used to denote resolutions for YAEC comments. Comments resolved in this manner will be processed per 3.2.1.5 and 3.2.1.6 if resolved by the Project Office, or by filing the memoranda if resolved by the comment originator.

3.2.1.8 YAEC acceptance of items proposed by others shall be in writing. Where action is in accordance with YAEC comments, approvals are not required.

3.2.1.9 Any organization within YAEC desirous of revising a previously approved contractor specification or procedure shall prepare a memo to the YAEC Project Manager outlining the proposed changes. The Project Manager shall review the request and forward the proposed change to the contractor.

3.3 Interface between contractors:

3.3.1 The interface between contractors is controlled by YAEC through:

3.3.1.1 Review of contractors QA/QC procedures, Reference 2.2, Appendix D.

3.3.1.2 Contractor program audits, Reference 2.3.

3.3.2 A system of controls for letters originated by the principle contractors (UE&C and Westinghouse) and YAEC has been established which identifies individual letters with a letter number. All letters originated by the contractors are transmitted to the YAEC and PSNH Project Office. The PSNH Project Office also receives a copy

of all letters originated by YAEC. YAEC has assigned the responsibility to UE&C and Westinghouse to assure that they have the engineering information they require to design their portions of the plant. If there are disputes over interfacing, they will be brought to the attention of the YAEC Project Manager for resolution.

3.4 Management Control

- 3.4.1 YAEC QA audits engineering groups and the Project Office to assure implementation of this procedure.

TABLE 3.1-1

CATEGORIES OF MATERIAL REQUIRING DOCUMENTED REVIEW

1. NSS Supplier Quality Assurance Program.
2. Engineering-Contractor Quality Assurance Program.
3. NSSS Supplier Quality Assurance Procedures. (Product Assurance Manual)
4. Engineering-Contractor Quality Assurance Procedures. (QA Procedures Manual)
5. Selected NSSS Supplier Specifications on safety related components.
6. Selected Engineering-Contractor Specifications on safety related components and materials.
7. Bid recommendations of selected safety related components.
8. Safety related system flow diagrams.
9. Safety related electrical one-line diagrams.
10. Arrangements of safety related buildings.
11. Other drawings as may be designated.

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(1) CONTROL COLUMN		(2) 6-W 8-PSNH 7-UEHC 9-OTHER		(3) 1-YES 2-NO		(4) 1-YES 2-NO		SEABROOK LETTER LOG			
		SENT TO		PARTY AFFAIRS		REPLY REQUESTED					
(1) SB NUMBER		TITLE		TO		DATE SENT		REPLY LETTER NUMBER		TECH FILE NUMBER OR COMMENTS	
962332		STATUS OF OUTSTANDING QCAD ITEMS		W		04017521		NAH-301		(12.4.3)	

FORM 3.1-A

<p align="center">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p align="center">REVIEW CONTROLS</p>	<p>Section <u>Procedure 3.2</u> Revision <u>5</u> Date <u>3/30/79</u> Page <u>1</u> of <u>8</u> Appr. <i>W.B. Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure defines the methods utilized by YAEC to control document review.

2.0 REFERENCES

- | | |
|--------------------------------|---------------|
| 2.1 External Interface Control | Procedure 3.1 |
| 2.2 Review Procedures | Procedure 3.3 |
| 2.3 Internal Audits | Procedure 9.2 |

3.0 PROCEDURE

3.1 Review Controls:

- 3.1.1 The Project Manager is responsible for receipt and control of documents throughout the YAEC review cycle.
- 3.1.2 All transmittals of documents identified by Reference 2.1 and changes thereto, and letters concerning possible changes, are logged (Reference Form 3.1-A) upon receipt

by the Project Office.

3.1.3 An Engineering Review (ERR) Form, Form 3.2-A, is generated for each document requiring review as indicated in the Project Policies. The documents, for which an ERR have been assigned, are the only ones which require documented evidence of review.

3.1.4 The Project Manager is responsible for routing of the ERR.

3.1.4.1 Form 3.2-B is prepared by the Project Manager to denote distribution and review responsibilities for each document.

3.1.4.2 The completed Forms 3.2-B are distributed through the YAEC organization for concurrence with the assigned review responsibilities.

3.1.4.3 Additional routing may be added by the reviewers as deemed necessary.

3.1.5 The Project Manager is responsible for maintaining an ERR log, Form 3.2-C.

3.1.6 The documents identified for ERR coverage (Form 3.2-B) are reviewed by the responsible persons per the applicable appendix of Reference 2.2.

The reviewer is responsible for indicating on the ERR
the following information:

3.1.7.1 Review procedure.

3.1.7.2 Review comments.

3.1.7.3 Signature and date.

3.1.7.4 Review of previous ERR comments.

Upon completion of the review, the ERR is returned to

☐ Project Manager.

The Project Manager will refer conflicting YAEC reviewer
comments to the responsible department heads for
resolution. If department heads are unable to affect
resolution, the matter shall be resolved by the next higher
level of management. His decision shall be documented
by memo which shall be referenced on the ERR form. Copies
will be given to the Project Manager and the department
heads involved.

10 The response to the document, including Engineering and
QAD comments, is prepared by the Project Office and
forwarded to the originating activity. A copy of the
☐ transmittal letter is forwarded to each group that signed

correspondence to assure
where practicable,
acceptability of comments
of the letter. If
or an addendum to
out as soon as

signed by the Project

ing letters

nts to the Project
is not assigned,
a system to assure

the personnel shall
with the requirements
the calculations
be forwarded to

the Project Manager for retention as required by ANSI N45.2.9.

3.3 Management Control:

- 3.3.1 The effectiveness and degree of implementation of this procedure is audited as defined in Reference 2.3.

(SAMPLE)

ERR No. SB-41A ENGINEERING REVIEW REPORT

ROUTING

Letter No. YANKEE ATOMIC ELECTRIC COMPANY

Eng'g TDK

JWS

Completed copies to:

Projects (2)

QC&A (1)

Engineering (2)

QC&A WJM
Project HEW

Document (Revision)

Section No.

Specification - Refueling Water Tank

Tech File No.

Date Rec'd 1/15/75

(Completed by Project Office)

Review

Complete X

Revision

COMMENTS:

Engineering Department

Review Procedure 3.3

Should reference Section III

Comment on Previous ERR Reviewed

Reviewer TDK Date 1/20/75

QC&A Department

Review Procedure 3.3

Include requirements that vendor submit QA Program for review

Comment on Previous ERR Reviewed

Reviewer GFM Date 1/22/75

Resolution

Project Manager JDH

SB-480

Date 1/23/75

UE+C SPECIFICATION REVIEW
02/18/75

SPEC NUMBER	U/L	TYPE REVISION	ERR NO.	TITLE	TECH FILE NUMBER	SNH NO.	PRIME REVIEW	SECONDARY REVIEWERS
128-01	EL	S	107A	INDUCTION MOTORS	00.04.00		DAM	NJM
129-01	EL	S	108A	CONTROL PANELS	00.12.02	108	DAM	NJM
124-02	EL	S	108B	CONTROL PANELS	00.12.02	109	DAM	NJM
129-03	EL	S		MISC STARTERS + PUSHBUTTONS	00.01.00	170	DAM	
133-03	EL	N/2		PUBLIC ADDRESS SYSTEM	00.14.00	171	DAM	
135-04	EL	N/2		TELEPHONE SYSTEM	00.14.00	172	DAM	
137-01	EL	S	109A	CONTROL BATTERIES (B)	00.07.01	173	DAM	NJM
137-02	EL	S	109B	BATTERY CHARGERS (10)	00.07.01	174	DAM	NJM
138-01	EL	N/2		CONTROL ROOM LIGHTING	00.11.00	174	DAM	
138-02	EL	N/3		HIGHWAY LIGHTING FIXTURES	00.11.00	180	DAM	
138-03	EL	N/3		LC-BAY LIGHTING FIXTURES	00.11.00	181	DAM	
138-04	EL	N/3		OFFICE + SERVICE BLDG LIGHTING FIXTURES	00.11.00	182	DAM	
138-05	EL	N/3		PLANT AREA + SECURITY LIGHTING FIXTURES	00.11.00	183	DAM	
141-01	EL			CURRENT TRANSFORMERS AND MUTUAL SUBSTATIONS		304		
143-01	EL	S	110A	MOTOR CONTROL CENTERS - AC	00.05.03	175	DAM	NJM
144-01	EL	S	111A	5-15 KV NON-SEG PHASE BUS	00.06.02	073	DAM	NJM
144-03	EL	N/2		25KV ISOLATED PHASE BUS	00.06.02	176	DAM	NJM
145-01	EL	N/		15 KV SWITCHGEAR	00.05.01	075	DAM	NJM
145-02	EL	S	112A	5 KV SWITCHGEAR	00.05.01	076	DAM	NJM
145-03	EL	S	112B	480V UNIT SUBSTATION	00.05.02	177	DAM	NJM
145-04	EL	N/		GENERATION BREAKERS	00.02.01	075	DAM	NJM

ERR NUMBER SB-2AFROM: W TITLE: REACTOR VESSEL

Specification)

~~Procedure~~) Number 676413 Tech File Number _____~~Drawing~~) S.O. 105Prime Reviewer TDK Secondary Reviewers _____QA Review WJM

1	Date Out <u>9/4/72</u> Transmittal Letter _____ Revision Number <u>4</u> Bid Comparison _____ Bid Recommendation _____ Date In <u>10/2/72</u> Comments: Yes <input checked="" type="checkbox"/> No _____ Resolution: <u>SB-70</u>	5	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	9	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____
2	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	6	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	10	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____
3	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	7	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	11	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____
4	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	8	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____	12	Date Out ____/____/____ Transmittal Letter _____ Revision Number _____ Bid Comparison _____ Bid Recommendation _____ Date In ____/____/____ Comments: Yes _____ No _____ Resolution: _____

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION REVIEW PROCEDURE

Interim Change Number 1 to

Procedure 3.3 , Rev. 8

Effectivity Date 08/21/81

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Appr.


Quality Assurance Manager

Section 3.2, page 2

Revise second sentence to read:

"Upon receipt of changes to or subsequent issues. . . "

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">REVIEW PROCEDURE</p>	<p>Section <u>Procedure 3.3</u></p> <p>Revision <u>8</u> Date <u>3/30/79</u></p> <p>Page <u>1</u> of <u>3</u></p> <p>Appr. <i>JB Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure provides guideline for the review of specific categories of documents. Appendices are provided for each category:

Appendix A - Engineering Specifications

Appendix B - Engineering Drawings

Appendix C - Purchase Documents

Appendix D - QC/QA Program/Manual/Procedures

2.0 REFERENCES

2.1 Review Control Procedure 3.2

3.0 PROCEDURE

3.1 Reference 2.1 identifies each document requiring ERR review.

- 3.2 The reviewer is responsible to conduct a review of the document(s) per the applicable appendix. Upon receipt of subsequent issues of the document the reviewer is responsible for conducting a review of the portions of the document affected by the change.
- 3.3 The appendices provide guidelines to be considered by the reviewer. Each guideline will be considered for its applicability or mandatory inclusion in the document. Those guidelines which are applicable will be utilized in the review of the document. The reviewer is also responsible to inform the Project Office of deviations from the requirements indicated in the applicable sections of the PSAR or other design bases documents.
- 3.4 Upon completion of the review, the review is documented as defined in Reference 2.1.
- 3.5 Conflicting comments made by YAEK reviewers are referred to the reviewers for resolution. If a mutually satisfactory decision cannot be reached, the matter shall be resolved by the next higher level of YAEK management. The final resolution shall be documented on the ERR form or by a memo which shall be referenced on the ERR form.

If a discrepancy is discovered between the design basis for a document under review (specification, drawing or procedure) and the design basis given in the PSAR or other design documents (such

as system description, or drawings), the discrepancy must be noted on the ERR form for those items covered with an ERR.

A discrepancy between design bases is defined as:

- a. a change in safety class
- b. a change in seismic category
- c. a change in intent or scope of the safety function of equipment, systems or structures
- d. any other changes deemed significant by the reviewer.

Discrepancies are allowed between documents under review and the PSAR. The discrepancies will be documented in the FSAR for NRC review. However, technical justification for the discrepancy should be provided by the originator or reviewer.

<p align="center">Seabrook Station</p> <p align="center">QUALITY ASSURANCE MANUAL</p> <p align="center">YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p align="center">ENGINEERING SPECIFICATION</p>	<p>Procedure 3.3 Section <u>Appendix A</u></p> <p>Revision <u>3</u> Date <u>3/31/78</u></p> <p>Page <u>1</u> of <u>5</u></p> <p>Appr.</p> <p align="center"><i>W. S. Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE

1.1 To provide instruction and guidance in the preparation or review of specifications such that all applicable requirements (codes, design, materials, quality assurance, etc.) are satisfied for the procurement of components or services.

2.0 GUIDELINES

When reviewing a specification, note that some of the following review items may not be contained in the specification, per se, but may be incorporated into the specification by reference to documents containing specialized requirements (QA, seismic, equipment qualification, welding, etc.) or may be forwarded to the vendor along with the specification as part of the letter of inquiry (commercial or purchasing conditions).

In the preparation and/or review of an engineering specification, the following points shall be addressed; if applicable:

2.1 General

- 2.1.1 The scope of specification in terms of purpose, functions and components to be provided.
- 2.1.2 The relative location of the components in the system of which it is a part.
- 2.1.3 The equipment and services to be furnished by the vendor.
- 2.1.4 The equipment and services to be furnished by the purchaser with units and tolerances where applicable.
- 2.1.5 Requirements for design related documents (drawings, calculations, reports, etc.) or samples, to be included in the bid package.
- 2.1.6 The governing NRC requirements, codes and their effective dates (as per the PSAR when applicable). Where the applicable codes are dependent upon safety classifications, the effort shall assure the application of the appropriate safety class designations to the various components.
- 2.1.7 Requirements that all specifications have at least two signatures, one indicating preparation and the other indicating review and approval. In addition, the final issue of all safety class component specifications shall be signed and stamped by a registered professional engineer

with a statement indicating that the document complies with paragraph NA-3250 of Section III of ASME B & PV Code, when the component is in fact subject to such requirements.

- 2.1.8 Instructions for the resolution of exceptions to the specification, and any conflicts with referenced documents.

2.2 Design

- 2.2.1 The design basis normal, accident, and post accident conditions in establishing the environmental and functional requirements for a component. Requirements for all conditions shall be stipulated in the specification unless normal conditions are the same as or more severe than accident or post accident conditions.
- 2.2.2 Acceptable tolerances for performance parameters.
- 2.2.3 Special design considerations to allow in-service inspection where required in Section XI ASME B&PV Code.
- 2.2.4 Requirements in regard to services, supports, installation, etc., that are required for interfacing components, systems or structures by others.
- 2.2.5 Requirements for installation, operating and maintenance instructions to be provided by the vendor.

2.2.6 Requirements for the vendor to recommend a qualified spare part inventory.

2.2.7 Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualification testing to demonstrate adequacy of performance under the most adverse design conditions.

2.3 Materials

2.3.1 Environmental service conditions which might affect the components, i.e., radiation, corrosion, impurities, erosion, mechanical abrasion, temperature, pressure, etc.

2.3.2 Special material considerations, such as impact requirements, prohibited materials and the deleterious effects of environmental conditions.

2.3.3 Additional requirements, e.g., fabrication, material preference, component preference, etc.

2.4 Quality Assurance

2.4.1 Testing requirements in excess of those in any referenced documents to ensure that the component or service provided meets the quality standards consistent with its intended use and the necessary documentation of such.

- 2.4.2 Critical inspection points and applicable requirements, including purchaser access to the vendor's facilities and fabrication records.
- 2.4.3 Quality assurance programs and documentation for the design, fabrication and testing of components as required by the applicable codes, standards and regulatory documents.
- 2.4.4 Quality assurance program and documentation for the design, fabrication and testing of components in excess of that required by the applicable codes, standards and regulatory documents.
- 2.4.5 Requirements for the vendor to submit for review and approval all applicable construction and quality assurance procedures to the purchasers.

2.5 Cleaning, Marking and Shipping

- 2.5.1 Instructions and precautions for cleaning, painting, marking, packing, shipping, etc., in the specification or reference other documents that have these instructions which will be available to the vendor.

<p align="center">Seabrook Station</p> <p align="center">QUALITY ASSURANCE MANUAL</p> <p align="center">YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p align="center">ENGINEERING DRAWING</p>	<p>Procedure 3.3 Section Appendix B</p> <p>Revision <u>3</u> Date <u>3/31/78</u></p> <p>Page <u>1</u> of <u>3</u></p> <p>Appr.</p> <p align="center"><i>AS Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE

1.1 To provide assurance that all engineering drawings are adequately prepared and reviewed.

2.0 GUIDELINES

2.1 In the preparation and for review of an engineering drawing, the following items shall be addressed:

2.1.1 The drawing is clearly and properly titled.

2.1.2 Drawing references are accurate and adequately identified.

2.1.3 Information contained in the drawing is appropriate, accurate and legible.

2.1.4 The ability of the system, structure or component, as can be properly defined by the subject drawing, to perform its intended function shall be evaluated.

- 2.1.5 When materials of construction appear on the subject drawing, they shall be verified for consistency with applicable specifications as applicable.
- 2.1.6 The accessibility of the system, structure or component (described in subject drawing) for testing, in-service inspection, maintenance and repair, as applicable, shall be examined.
- 2.1.7 The consistency of dimensions shall be verified.
- 2.1.8 Safety related systems, structure or components (described in subject drawing) and their boundaries, as applicable (Safety Class 1, 2 or 3; Train A or B, etc.) are properly defined.
- 2.1.9 Requirements that all drawings have at least two signatures, one indicating preparation and the other indicating review and approval. In addition, the final issue of all safety class component drawings shall be signed and stamped by a registered professional engineer with a statement indicating that the document complies with paragraph NA-3250 of Section III of ASME B & PV Code, when the component is in fact subject to such requirements.

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2.1.10 Conformance with applicable codes, standards and regulatory
design criteria.

<p align="center">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p align="center">PURCHASE DOCUMENTS</p>	<p align="right">Procedure 3.3 Section <u>Appendix C</u></p> <p>Revision <u>2</u> Date <u>3/31/78</u></p> <p>Page <u>1</u> of <u>2</u></p> <p>Appr.</p> <p align="right"><i>W. Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE

- 1.1 To provide guidelines for review of Contractor purchase documents to assure that the quality control requirement of specifications are imposed on vendors.

2.0 INSTRUCTIONS

2.1 Bid Packages

- 2.1.1 The following items shall be examined for technical adequacy and compliance with the purchaser's requirements:

2.1.1.1 Services to be supplied by the vendor (technical support, installation, maintenance and repair) shall be those specified.

2.1.1.2 Consideration shall be given to the suitability of materials specified by the vendor.

2.1.1.3 Drawings shall be reviewed to verify that the proposed design is adequate from the standpoint of ability to perform its intended function, and accessibility for inservice inspection and testing shall be provided as required.

2.1.1.4 Compliance with the purchaser's testing requirements shall be verified.

2.1.1.5 Provisions of technical documents by the vendor shall be examined.

2.1.1.6 Vendors' exceptions with the purchaser's requirements shall be considered.

2.2 Purchase Orders

2.2.1 A Quality Assurance audit of purchase orders and purchase order supplements is required to assure the specification requirements, (including exceptions taken) which have been approved by engineering review, are properly imposed on the vendor. The audit will be performed at the contractors' facility.

Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass. 01581 DESCRIPTION QA/QC PROGRAM/MANUAL/PROCEDURE	Procedure 3.3 Section Appendix D Revision <u>2</u> Date <u>9/15/78</u> Page <u>1</u> of <u>1</u> Appr. <i>W. S. Johnson</i> YAEC Vice President
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1.0 PURPOSE AND SCOPE

1.1 This Appendix provides guidelines for review of QA/QC programs, manuals or procedures.

2.0 REVIEW GUIDELINES

2.1 The review shall be performed to assure that the program/manual/procedure includes requirements from appropriate sections of the PSAR and applicable codes, standards and regulatory guides.

2.2 Comments are to be noted on an ERR or memo as appropriate.

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">DOCUMENT CONTROL</p>	<p>Section <u>Procedure 4.1</u></p> <p>Revision <u>5</u> Date <u>3/31/78</u></p> <p>Page <u>1</u> of <u>3</u></p> <p>Appr.</p> <p style="text-align: center;"><i>W. Johnson</i> YAEC Vice President</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure defines the methods utilized by YAEC to assure that project documents are distributed, updated and maintained for use.

2.0 REFERENCES

2.1 Review Controls Procedure 3.2

2.2 Internal Audit Procedure 9.2

3.0 PROCEDURE

3.1 The project office receives all documents from contractors.

3.2 Documents including changes and related letters are distributed for review to the YAEC organization as defined in Reference 2.1.

3.3 The official document files are maintained by the Project Manager until plant completion. The documents are filed per the project master file index, except Westinghouse specifications and purchase

orders which are filed by Shop Order Number.

3.4 The files are updated as follows:

3.4.1 Each contractor is required to provide the Project Office with indices for specifications, drawings and purchase orders on a quarterly basis.

3.4.2 The Project Manager is responsible to review his files vs. the contractors' indices. Superseded specifications shall be stamped "OBSOLETE".

3.4.3 The Project Manager is responsible for interfacing and establishing details concerning master lists.

3.5 Site Controls:

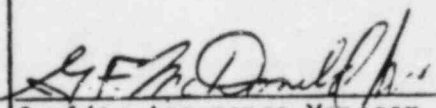
3.5.1 The Project Office shall assure copies of selected Master Lists, received from the NSSS Supplier and the A/E, are forwarded to the Field Quality Assurance Manager.

3.5.2 The Field QA Manager shall verify that his files are current based on the latest Master Lists received.

3.5.2.1 Any discrepancies shall be brought to the attention of the Project Office by the Field QA Manager which shall obtain the items requested.

3.6 Management Controls:

3.6.1 The effectiveness and degree of implementation of this procedure is audited as defined in Reference 2.2.

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Section 2.2.1, page 1

Change "Vice President" to "Director of Quality Assurance."

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass. 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">MANUAL CONTROL</p>	<p>Section <u>Procedure 4.2</u></p> <p>Revision <u>5</u> Date <u>2/5/82</u></p> <p>Page <u>1</u> of <u>4</u></p> <p>Appr.</p> <p style="text-align: center;"><i>A. M. Shepard</i> Director of Quality Assurance</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure defines requirements for control of this QA manual.

2.0 PROCEDURE

2.1 Format

2.1.1 Figure 4.2-1 provides an outline for procedure format. Items not utilized in preparation of the procedure are deleted.

2.2 Approval

2.2.1 Each procedure and change will be reviewed and concurred with by the YAEC Director of Quality Assurance.

2.2.2 Figure 4.2-1, procedure cover sheets, will provide documentation of review and concurrence/approval by signature and date.

2.3 Revision

2.3.1 When a revision to a procedure is prepared, the originator shall:

2.3.1.1 Prepare the changes to the text of the procedure.

2.3.1.2 Prepare a new index listing the applicable revision of all pages in the Manual.

2.3.1.3 Prepare procedure pages denoting the revision number and date.

2.3.1.4 Obtain approval per 2.2 above.

2.4 Interim Changes

2.4.1 Interim changes may be made at the direction of the QA Manager for minor changes and to document clarification to program requirements. No more than three interim changes to a procedure will be allowed before scheduling a procedure revision.

2.4.2 Interim changes shall be approved by the QA Manager, printed on colored paper, and placed in the manual at the beginning of the affected procedure.

2.4.3 Interim changes are effective on the date so noted on the document.

2.4.4 The index shall be updated when interim procedure changes are issued.

2.5 Distribution

2.5.1 The Document Control Center (DCC) will maintain a list of manual holders and will control distribution following approved DCC procedures.

2.5.2 Changes will be distributed to each manual holder by the DCC who will require acknowledgement of receipt.

(SAMPLE)

<p>Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass. 01581</p> <p>DESCRIPTION</p> <p>(TITLE)</p>	<p>Section or Procedure Number</p> <p>Revision <u>#</u> Date <u>4/16/74</u></p> <p>Page <u> </u> of <u> </u></p> <p>Appr. _____</p> <p>(Approval signatures)</p>
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1.0 PURPOSE AND SCOPE

2.0 REFERENCES

3.0 PROCEDURE

(Sections may be added or deleted as required by the specific procedure.)

Attachment and Appendix Numbering

1. Tables - Procedure or Section number and number -
Example: Table 3.1-1.
2. Figures - Procedure or Section number and number -
Example: Figure 4.2-1.
3. Forms - Procedure or Section number and letter -
Example: Form 5.2-A.
4. Appendices - Procedure or Section number and letter -
Example: Appendix 7.1-A.

FIGURE 4.2-1

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION CONTROL OF PURCHASED MATERIAL,
EQUIPMENT AND SERVICES

Interim Change Number 1 to

Procedure 5.1 , Rev. 5

Effectivity Date 08/21/81

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Appr.


Quality Assurance Manager

Section 3.6.3.1(a), page 6

Change "Vice President" to "Director of Quality Assurance."

Seabrook Station
QUALITY ASSURANCE MANUAL

YANKEE ATOMIC ELECTRIC COMPANY
Westboro, Mass 01581

DESCRIPTION

CONTROL OF PURCHASED MATERIAL,
EQUIPMENT AND SERVICES

Section Procedure 5.1
Revision 5 Date 3/31/78
Page 1 of 8
Appr.

W. F. Johnson
YAEC Vice President

1.0 PURPOSE AND SCOPE

1.1 This procedure defines the YAEC program for the control of purchased material, equipment, and services.

1.1.1 Identify interface with contractors.

1.1.2 Scheduling of contractor and vendor audits, surveys, and surveillance.

1.1.3 Audit, survey, and surveillance requirements.

1.1.4 Documentation requirements.

2.0 REFERENCES

2.1 Procedure 3.1 - External Interface

2.2 Procedure 3.2 - Review Controls

2.3 Procedure 9.1 - General Audit Procedure

3.0 PROCEDURE

3.1 YAEC provides for the control of purchased material, equipment, and services by:

- a) Review and audit of the contractor's procurement program to assure that it is in accordance with the requirements of ANSI N45.2.13 and this Program.
- b) Surveys of selected prospective suppliers.
- c) Surveillance of selected procured equipment manufacturing/contracted services.
- d) Participation in selected contractor's audits and surveys.

3.1.1 The YAEC Project Manager is responsible for transmittal of YAEC audit/survey/surveillance plans to the contractor.

3.2 Contractors' procurement programs are reviewed by YAEC as part of the review performed on their QA Program. Details for program review are contained in Procedure 3.1.

3.3 To assure Contractor compliance with Program requirements, YAEC QAD schedules and performs audits of the Contractors in accordance with Procedure 9.1.

3.4 YAEC surveys are performed at supplier facilities prior to the procurement of selected safety-related items to determine the supplier's ability to comply with regulatory, Code, and other applicable requirements. The survey is a documented appraisal or evaluation of the prospective supplier's ability to meet Contractor requirements in the areas of engineering, quality assurance, manufacturing, procurement, construction, and contract administration, as applicable.

3.4.1 Surveys performed solely by YAEC personnel will be conducted and documented as required by Procedure 9.1.

3.4.2 When surveys are performed by Contractor survey team with YAEC represented, they will be conducted and documented as required by section 3.6 of this procedure.

3.5 Surveillance on selected safety-related items/services/material/documentation is performed to assure that processes/inspections/ tests are accomplished as specified.

3.5.1 Planning for vendor surveillance will be based on the following:

3.5.1.1 Vendor inspection/manufacturing plans or suggested inspection points.

3.5.1.2 Contractor inspection/audit reports.

3.5.1.3 Knowledge of the Vendor and Contractor
past/current performance.

3.5.2 Surveillance conducted by YAEC will be documented as
required by Procedure 9.1.

3.5.3 When surveillance is performed by the Contractor with
YAEC in attendance, the activity shall be documented as
required by section 3.6 of this procedure.

3.6 In addition to the activities listed above, YAEC also participates
as a member of the contractor team in the auditing and surveillance
of selected suppliers. This is done to confirm the adequacy of
suppliers controls and to evaluate the adequacy of the contractor's
audit and surveillance program and auditor performance. The YAEC
participant shall verify that the following criteria, as
applicable, are followed during the audit, survey, or surveillance.

- a) Check lists or procedures are utilized.
- b) Audit/surveillance is conducted in accordance with a written
procedure(s) by qualified personnel.
- c) Material or area selected for audit is commensurate with
the status of the activity being audited.

- d) Audit/survey/surveillance areas are well defined.
- e) Audit/survey/surveillance is conducted in a thorough, organized, and business-like fashion.
- f) Follow-up is conducted on open items from previous audits.
- g) Summary of findings is presented in an accurate and organized manner to cognizant supplier personnel at the audit/survey/surveillance site during the exit interview.
- h) A due date is established or scheduled for supplier reply to the audit/survey/surveillance findings.

3.6.1 During the audit/survey/surveillance, the YAEC participant shall consult with the Contractor audit team leader concerning any audit deficiencies to assure the adequacy of the audit.

3.6.2 Subsequent to the audit/survey/surveillance, unresolved deficiencies in the performance of the activity will be discussed with appropriate Contractor management. The resolution will be documented by the YAEC participant in a memo, as indicated in 3.6.3, to the YAEC QA Manager.

3.6.3 A Trip Report shall be prepared by the YAEC participant to document the activity. The report shall contain the following information:

- a) Place, date, project file number
- b) Subject of audit/surveillance/survey
- c) Those in attendance
- d) Summary including the degree of YAEC involvement in the audit/survey/surveillance.
- e) Discussion
 - 1. Indicate judgement of auditor's effectiveness, as applicable.
 - 2. Summarize the YAEC actions during and after the audit and the extent of the auditor's concurrence with the YAEC participant's recommendations to remedy deficiencies.

3.6.3.1 Copies of the Trip Report shall be forwarded to the following:

- a) YAEC Vice-President
- b) PSNH management
- c) Applicable contractor project manager
- d) YAEC Seabrook Project Office
- e) YAEC QA Manager

3.7 The suppliers selected for YAEC survey/audit/surveillance coverage and the frequency involved will be based on the following:

- a) Safety class
- b) Code class
- c) Complexity
- d) YAEC experience with the supplier
- e) Knowledge of Contractor team leader's ability and his familiarity with supplier's program.

3.8 YAEC audit/survey/surveillance activities may be waived provided the Contractor performs the activity or YAEC is able to audit the documentation at a later date.

3.9 Equipment Release

3.9.1 Equipment release shall be made by Contractor Quality Assurance personnel. The contractor's shipping release, properly completed, shall accompany the shipment.

3.10 Receiving Inspection

3.10.1 Receiving inspection, at the site, shall be conducted by UE&C, the Construction Manager, in accordance with the requirements of written procedures. The procedure is subject to YAEC approval as defined in Procedure 3.2.

3.10.2 During receiving inspection, provisions are made for the item received; inspection for shipping damage, preservation, identification and quality records. Records shall be traceable to the items received.

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DESCRIPTION CONTROL OF YAEC/PSNH PROCUREMENT

Interim Change Number 1 to
Procedure 5.1, App. A , Rev. 3

Effectivity Date 08/21/81

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Appr.


Quality Assurance Manager

Section 2.3, page 1

Change reference to Procedure 9.2.

Section 3.1.4, page 7

Change reference to Procedure 9.2.

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1.0 PURPOSE AND SCOPE

This procedure defines the methods utilized by YAEC/PSNH to develop and/or review YAEC/PSNH procurement documents and changes thereto, to assure that quality requirements are imposed on suppliers, Contractors, and subcontractors.

2.0 REFERENCES

- 2.1 Procedure 5.1 - Control of Purchased Material, Equipment, and Services.
- 2.2 Procedure 3.3 - Review Procedure.
- 2.3 Procedure 7.2 - Internal Audits.

3.0 INSTRUCTIONS

- 3.1 Yankee Purchase Documents

3.1.1 Purchase Orders

3.1.1.1 Some purchase orders will be initiated by
YAEC/PSNH for safety-related
equipment/services/construction necessary for
the Project and for which the originator has
responsibility. (This does not include areas
delegated to W and UE&C as listed in Tables 1.1-
1A, B, and C of Procedure 1.1).

3.1.1.2 The procurement documents shall contain or
reference the following items, as appropriate:

- a. Scope of Work - A statement of scope of work
to be performed by the supplier.
- b. Technical Requirements - Technical requirements
shall be specified in the procurement documents
or in references to specific specifications,
codes, regulations, procedures, instructions,
or drawings including revisions thereto.
Technical requirement documents shall have
been prepared as required by Procedure 3.3.
- c. Quality Assurance Program Requirements -
Procurement documents shall require that the
supplier have an adequately documented quality

assurance program that implements the applicable portions of Appendix B to 10CFR50 and/or applicable quality assurance requirements of nationally recognized codes and standards. In addition, the procurement document shall require the supplier to incorporate appropriate quality assurance requirements in lower tier procurement documents. Program approval by YAEC prior to the start of work shall be required.

- d. Nonconformances - Procurement documents shall include the requirement for reporting and providing disposition of nonconformances to YAEC.
- e. Right of Access - At each tier of procurement, the procurement document shall provide, as appropriate, for access to the supplier's facilities and records for inspection or audit by YAEC or its designee. The procurement document shall also provide for the later identification of YAEC hold or witness points and establish the notification requirements.
- f. Documentation Requirements - The procurement

documents, at all tiers, shall identify the documentation to be submitted, including quality assurance records, for information, review, or approval by YAEC. The time of submittal shall also be established. The retention and disposition of quality assurance records of compliance not to be delivered to YAEC shall be prescribed and acceptable to YAEC. The requirements of N45.2.9 shall be met.

- g. Significant Deficiencies - Significant deficiencies, as defined in 10CFR50.55(e) shall be reported to YAEC. The YAEC Project Office will be responsible for reporting such items to the NRC as outlined in Section 16.0 of Procedure 1.1 of this Manual.

3.1.1.3 The QAD shall review the completed purchase order prior to release, or the requisition and final copy of the purchase order after release to assure that the documents are complete and contain the applicable requirements specified in 3.1.1.2 of this procedure.

3.1.2 Procurement Document Changes

3.1.2.1 Changes made in the procurement documents as a result of the bid evaluations or precontract negotiations shall require a review of such changes and their effects, prior to contract awards. This review shall include the following considerations:

- a. Appropriate requirements specified in 3.1.1.2 of this procedure.
- b. Determination of any additional or modified design criteria imposed after preparation of the procurement documents.
- c. Analysis of exceptions or changes requested or specified and determination of the effects such changes may have on materials or services procured and the quality of the item or service to be furnished.

The reviews required by this section shall be performed by Engineering and Quality Assurance personnel who have access to pertinent information and who have an adequate understanding of the requirements and intent of the procurement

documents. The reviews shall be documented on an ERR form or in a memo.

3.1.2.2 Changes to procurement documents shall be subject to the same review as that required for the original document.

3.1.2.3 Copies of purchase orders and changes thereto may be retained by the originating group and Quality Assurance with the official copy retained in the Document Control Center.

3.1.3 Supplier Selection

It shall be the responsibility of the QA Department to assure that purchase orders are placed with qualified suppliers. Documented methods to be used in evaluation of suppliers shall include at least one of the following:

a. Evaluating the Supplier's history of providing a quality product which performs satisfactorily in actual use.

Information which should be evaluated should include:

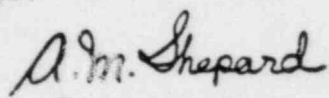
1. Experience of users of identical or similar products of the prospective supplier.
2. YAEK records that have been accumulated in connection with previous procurement actions and product operating experience.

Historical data used should be representative of the supplier's current capability. If there has been no recent experience with the supplier, or if he is a new supplier, the prospective supplier shall be requested to submit information on a similar item or service (such as applicable drawings or data) as evidence of his capabilities.

- b. The supplier's current quality records supported by documented qualitative and quantitative information which can be objectively evaluated. This would include review and evaluation of the Supplier's Quality Assurance Program, Manual, and Procedures as appropriate.
- c. The Supplier's technical, production and quality capability as determined by a source evaluation.

3.1.4 Audits

Internal audits shall be performed by the QA Department per Procedure 7.2 to verify compliance with the sections of this procedure not performed by QA.

<p align="center">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass. 01581</p> <p>DESCRIPTION</p> <p align="center">YAEC APPROVED VENDOR LIST (CONSTRUCTION)</p>	<p>Section <u>Proc. 5.1, App. B</u> Revision <u>0</u> Date <u>2/5/82</u> Page <u>1</u> of <u>3</u> Appr.  Director of Quality Assurance</p>
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1.0 SCOPE

- 1.1 This procedure defines the interfaces involved in the maintenance of the Approved Vendor List (AVL) for Public Service Company of New Hampshire (PSNH) during construction testing.

2.0 PURPOSE

- 2.1 Procurement of safety-related items/services during the construction phase is the responsibility of UE&C and Westinghouse. However, to support preoperational testing, PSNH is responsible for procurement of test equipment and spare parts for station equipment.

3.0 REFERENCES

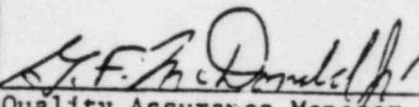
- 3.1 PSNH Procedure AQ 7.004 - Approved Vendor List
- 3.2 Yankee Atomic Electric Company Approved Vendors List for Operating Plants
- 3.3 Procedure 9.1 - General Audit Procedure

4.0 PROCEDURE

- 4.1 Purchases for safety-related items/services, classified as Procurement Level 1 or 3 by PSNH, must be made from suppliers who are included in the YAEC AVL (Reference 3.2).
- 4.2 If PSNH wishes to use a supplier who does not appear on the AVL, the following actions will be performed:
- 4.2.1 If the supplier appears on the UE&C AVL, YAEC will obtain a copy of UE&C's last audit and evaluation report for review. The results of the review will be documented in a memo and the package forwarded to YAEC OQAG for their files and to PSNH for their information. Upon completion of the review, if the supplier's program is acceptable, PSNH may use the supplier who will be added to the YAEC AVL during its next scheduled revision.
- 4.2.2 If the supplier is on the W AVL, YAEC will review the latest W audit and evaluation report. The results of the review will be documented and, if appropriate, the vendor added to the list as explained above.
- 4.2.2.1 If YAEC determines that a review of W records is not appropriate, a survey of the vendor's facility and program will be performed following the guidelines established by Procedure 9.1. If the survey results are satisfactory, the vendor will be added to the AVL.
- 4.3 Suppliers of items for which acceptance is not determined by receiving inspection or test shall be audited on a triennial basis or at least once during the life of the contract. A documented evaluation shall be performed annually by YAEC.

4.4 Removal of Suppliers

Upon written request from either YAEC QA or PSNH, YAEC OQAG will delete a supplier from the AVL for PSNH. This will be limited to those suppliers whose inclusion in the AVL was initiated by PSNH. Suppliers who are not active for a period of three years will be deleted from the AVL.

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL VANEESE ATOMIC ELECTRIC COMPANY</p> <p>DESCRIPTION CORRECTIVE ACTION</p> <p>Interim Change Number <u>1</u> to</p> <p>Procedure <u>8.1</u> , Rev. <u>7</u></p>	<p>Effectivity Date <u>08/21/81</u></p> <p>Page <u>1</u> of <u>1</u></p> <p>Appr.</p> <p> Quality Assurance Manager</p>
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Section 3.6, page 4

Change "Vice President" to "Director of Quality Assurance."

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p style="text-align: center;">CORRECTIVE ACTION</p>	<p>Section <u>Procedure 8.1</u> Revision <u>7</u> Date <u>12/5/79</u> Page <u>1</u> of <u>5</u> Appr. <i>[Signature]</i></p>
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1.0 PURPOSE

1.1 This procedure defines the methods utilized by YAEC to identify and to provide follow-up on items found deficient.

2.0 REFERENCES

2.1 General Audit Procedure	Procedure 9.1
2.2 Internal Audits	Procedure 9.2

3.0 PROCEDURE

3.1 Each audit performed by YAEC is conducted per the requirements of Reference 2.1.

3.2 Each audit report containing items requiring corrective action shall list these items under the paragraph heading "Outstanding Items Summary".

3.3 Each QAD-Westboro audit report shall be forwarded to the responsible individual as identified below. A cover letter, or memorandum when appropriate, shall accompany each audit report. The QA Manager and the Project Manager shall sign external audit cover letters. Cover memoranda for internal audits shall be signed by the QAD Manager. The cover letter and/or memoranda shall indicate the suggested schedule for resolution. They shall be addressed to:

- a. Contractor Project Office for contractor audits.
- b. Procuring contractor Project Office for vendor audits.
- c. As determined by the YAEC QA Manager a copy of the transmittal letter and audit report may be forwarded to the management of the area audited.
- d. Manager of YAEC section audited for internal audits.

3.3.1 The audited organization shall document the corrective action taken and forward such documentation to the auditor.

3.3.2 YAEC QAD is responsible for conducting the follow-up actions, as necessary, to confirm that corrective action is accomplished as scheduled. Follow-up action may be accomplished through written communication, re-audit, or other appropriate means.

3.4 Field QA Group surveillance and audit reports containing items requiring corrective action shall be forwarded to the Resident Construction Manager with a cover letter signed by the Field QA Manager.

3.5 Form 8.1-A, "Summary & Status of Corrective Action", shall be maintained by the QAD Manager.

3.5.1 Form 8.1-A shall be completed as follows:

- a. ITEM NO. - In numerical order.
- b. DATE OF REPORT - Report date.
- c. REPORT WRITTEN BY - Initials of auditor(s). Lead auditor is listed first.
- d. DEFICIENCY CODE - Code for trend analysis.
- e. ITEM AND SUBJECT REQUIRING CORRECTIVE ACTION - Item No. from Audit Report and brief description of deficient item.
- f. TO WHOM FOR ACTION - Company responsible for corrective action and letter number transmitting report.
- g. ITEM CORRECTED - Yes or No.
- h. REMARKS - Communications, references, current status,

schedule for resolutions and basis for acceptance of corrective action.

- 3.6 The auditor will bring repetitive deficiencies to the attention of the YAEC department or contractor Project Office responsible in the transmittal of the audit report, and changes required to eliminate the cause may be suggested or requested. Repetitive deficiencies will be listed, reviewed, and reported periodically to the YAEC Vice President.
- 3.7 Corrective action will be expedited by oral communication, as required, to assure timely resolution. Deficiencies not rectified within a reasonable period will be brought to the attention of the Contractor Project Office responsible. The YAEC Project Office and YAEC management will be informed in writing by QAD of these items, actions taken by YAEC and contractors, and the status of the items.
- 3.8 The Summary & Status of Corrective Action shall be distributed monthly to YAEC and PSNH management and to the appropriate contractor management. They will serve to indicate the status of deficiencies and to provide information for management review necessary to evaluate effectiveness of the program and to provide direction.

Section Procedure 8.1
Revision 7 Date 12/5/79
Page 5 of 5

SUMMARY AND STATUS OF CORRECTIVE ACTION FOR SEABROOK - WESTINGHOUSE

<u>ITEM NO.</u>	<u>DATE C" REPORT</u>	<u>REPORT WRITTEN BY</u>	<u>DEFICIENCY CODE</u>	<u>ITEM OR SUBJECT REQUIRING CORRECTIVE ACTION</u>	<u>SENT TO LETTER</u>	<u>ITEM CORR.</u>	<u>STATUS</u>
0114	10/4/77	DEG/WKP	07-208-2	Item II.A.5 Manufacturing releases not issued as required by E-Spec.	<u>W</u> SB-5399	Yes	Req. date 12/5/77 C/O per SB-5577 Ref. <u>W</u> response NAH-1014

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION GENERAL AUDIT PROCEDURE

Interim Change Number 1 to

Procedure 9.1, Rev. 8

Effectivity Date 08/21/81

Page 1 of 1

Appr.


Quality Assurance Manager

Section 3.1.8.1, page 10

Change "Vice President" to "Director of Quality Assurance."

Section 3.2.3, page 12

Delete "in Westboro."

<p align="center">Seabrook Station QUALITY ASSURANCE MANUAL</p>	<p>Section <u>Procedure 9.1</u></p>
<p align="center">YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p>	<p>Revision <u>8</u> Date <u>2/8/80</u></p>
<p>DESCRIPTION</p>	<p>Page <u>1</u> of <u>13</u></p>
<p align="center">GENERAL AUDIT PROCEDURE</p>	<p>Appr. <i>[Signature]</i></p>

1.0 PURPOSE AND SCOPE

1.1 This procedure provides a system for the conducting and reporting of audits.

1.2 Schedule of contractor and internal system audits.

2.0 REFERENCES

2.1 Corrective Action

Procedure 8.1

3.0 PROCEDURE

3.1 Audit Requirements

3.1.1 Audits of vendors and contractors and YAEC internal audits are performed by members of the QA Department supplemented by other members of the YAEC organization who are independent of the organization or function being audited or outside consultants as deemed necessary by the QAD Manager. Audits shall be conducted in accordance with written procedures and in conformance to ANSI 45.2.12.

3.1.2 Audits are performed covering specific areas or systems. This procedure presents general guidelines. The specific details of the audit are the responsibility of the auditor.

3.1.3 Personnel assigned responsibility for the performance of audits shall have had previous audit experience and shall have a working knowledge of the area being audited. Audit experience may be obtained by the planning, conducting, and reporting of two audits as well as follow-up of deficiencies noted. The performance shall be evaluated by a qualified auditor, assigned by the QAM. The QAD Manager shall make the determination as to the qualification of YAEC auditors. In order to maintain their proficiency, auditors shall maintain regular, active participation in the audit process.

3.1.4 Except in extraordinary circumstances, audits will be scheduled. Unannounced audits may be made. Regularly scheduled audits shall be supplemented by audits conducted for one or more of the following conditions:

- a) When it is necessary to determine the capability of a contractor's quality assurance program prior to awarding of a contract or purchase order.
- b) When, after award of a contract, sufficient time has

elapsed for implementing the quality assurance program and it is appropriate to determine that the organization is adequately performing the functions as defined in the quality assurance program description, codes, standards, and other contract documents.

- c) When significant changes are made in functional areas of the quality assurance program such as significant reorganization or procedure revisions.
- d) When it is suspected that the quality of an item is in jeopardy due to nonconformances in the quality assurance program.
- e) When a systematic, independent assessment of program effectiveness is considered necessary.
- f) When it is necessary to verify implementation of required corrective actions.

3.1.5 The following shall be followed by the auditor prior to performing the audit:

3.1.5.1 Review applicable documents (i.e. specifications, purchase orders, drawings, QA plans, procedures, referenced codes and standards, etc.) to become cognizant of the specific requirements that are

imposed.

3.1.5.2 Review past audits, inspection reports and Summary
& Status of Corrective Action prepared by YAEC
and/or its Contractor.

3.1.5.3 Define the areas to be audited.

3.1.5.4 A check list or procedure shall be selected prior
to the audit based on the attributes of the area
being audited.

3.1.6 The audit shall be conducted as follows:

3.1.6.1 Conduct a brief pre-audit conference with the
management of the area being audited to confirm
audit scope, present the audit plan, discuss the
audit sequence, and establish channels of
communication.

3.1.6.2 Conduct audit to the pre-planned attributes.
A representative sample (three minimum whenever
practicable) randomly selected shall be audited
for each attribute. Sample size shall reflect
the importance or complexity of the attribute.

3.1.6.3 Attempt to resolve deficient items noted during the audit. Depending upon the seriousness of the situation the auditor must consider the need for immediate oral communication with his superior and with the person(s) responsible for:

- a) controlling (locally) the situation needing attention (correction),
- b) supervision of the situation,
- c) corrective action.

3.1.6.4 Auditors are delegated responsibility and authority to stop unsatisfactory work. In vendor shops, they exercise this authority by notifying the appropriate management of the rejection of the work and requesting that work be discontinued until the matters are satisfactorily resolved. A request is directed to the contractor representative assigned to assist in the audit, whether it is being performed at a contractor facility or at his subcontractor's facility. In the absence of an assigned representative, the request is directed to the Project Office of the contractor responsible. Disputed matters

are resolved between YAEC and contractor Project Managers.

Should it become necessary for YAEC QAD personnel to order that a particular operation be stopped at the site, the order shall be made by notifying the YAEC Site Manager who will inform the Resident Construction Manager of the rejection of the work and will order him to have the work discontinued. Stop work orders may be given orally, but will always be documented by the individual stopping the work and copies will be distributed to the YAEC Site Manager, Project Superintendent, Construction Manager, YAEC Project Manager and YAEC QA Manager. Disputed matters will be promptly reported to the YAEC Project Manager, YAEC Construction Manager and YAEC QAD Manager in Westboro for mutual resolution. Work will remain stopped until the dispute is resolved.

3.1.6.5 Conduct an exit interview with a cognizant person at the audit site.

3.1.6.5.1 Discuss audit results.

3.1.6.5.2 Identify deficient items.

- a) Deficiencies are conditions which are adverse to quality or which can result in conditions rendering the quality of an item either unacceptable or indeterminate. Deficiencies may relate to the definition in the quality program, i.e., program manuals, policies, procedures, and/or to the compliance with requirements, including those addressed within the program, contract, specifications, and procedures.

When the deficiency category is not obvious, the auditor reporting it should assign a category, i.e., deficiency of; procedural noncompliance, procedure definitions, hardware or document noncompliance, etc.

- b) Observations are conditions to be investigated or considered although it is not apparent that

they are violations of contract requirements. They may involve a possible improvement to quality system methods or product or may help preclude deficiencies. A reasonable doubt that there is inadequate preparation for a safety related activity may also be classed as an observation.

When a condition is reported as an observation the auditor will make known whether he expects a response for the observation.

Further action or recording will not be required.

3.1.6.5.3 Make an effort to reach agreement concerning the methods to resolve identified problems, the schedule for resolution and the interim action to be taken.

3.1.6.5.4 Deficiencies shall be documented on Form 9.1-1 which shall be distributed at the exit interview. Form 9.1-1

shall be retained by the auditor until
he is satisfied that the condition
which caused the deficiency is being
resolved by the audited organization.

3.1.7 An audit report shall be prepared within thirty (30)
days of the conclusion of each audit. The report shall
include:

3.1.7.1 Date and place of the audit.

3.1.7.2 Scope of the audit.

3.1.7.3 Individuals contacted.

3.1.7.4 Results of the audit including position audited
organization takes concerning deficiencies and
action to be taken to resolve deficiencies
including the completion date.

3.1.7.5 Request for resolution of the identified
deficiencies within a period to be specified,
not to exceed thirty (30) days of receipt of audit
report.

3.1.7.6 Resolution of items found deficient during
previous audits.

3.1.8 Audit reports are distributed by QAD to the following individuals, as applicable:

3.1.8.1 YAEC Vice President.

3.1.8.2 PSNH Project Manager.

3.1.8.3 Construction Manager.

3.1.8.4 YAEC Site Manager.

3.1.8.5 YAEC QAD Manager and Field QAD Manager.

3.1.8.6 YAEC Project Manager.

3.1.8.7 Management of area audited.

3.1.8.7.1 Vendor and subcontractor audits are transmitted by the YAEC Project Office to the procuring contractor Project Office for appropriate action.

3.1.8.7.2 Contractor audits are transmitted by the YAEC Project Office to the contractor Project Office for appropriate action.

3.1.8.8 Reports requiring corrective action shall be followed up as detailed in Reference 2.1. The transmittal letter/memo shall indicate the suggested schedule for resolution. As determined by the YAEC QA Manager, a copy of the transmittal letter and audit report may be forwarded to the management of the area audited. If response is desired to observations made during the audit, it shall be requested in the transmittal letter.

3.1.9 Records shall be retained by auditing organization. These records shall be collected, stored and maintained in accordance with the requirements of ANSI 45.2.9. Records shall also be maintained of all personnel actively performing audits and those who have previously performed audits for this project. Records shall include the qualifications and training of auditors and shall be retained for the same period of time as required for the audit report with which the auditors are associated.

3.1.10 Monthly, the open items from YAEC internal audits and audits of the NSSS Supplier and the Architect-Constructor are tabulated and included in the Summary and Status of Corrective Action report which is forwarded to YAEC management and PSNH for review.

3.2 Audit Schedules

- 3.2.1 The schedules for auditing contractors are developed by the cognizant QA engineers and approved by the QAD Manager.
- 3.2.2 The YAEC Field QA Manager is responsible for the scheduling of surveillance of site activities performed by the Construction Manager and subcontractors, as applicable.
- 3.2.3 The YAEC QA Manager in Westboro is responsible for scheduling the following.
- a) internal audits at Westboro,
 - b) YAEC audits of activities performed by the YAEC Field QA Group,
 - c) audits performed on activities performed by Contractors and their vendors.
- 3.2.4 The frequency of audits and audit scope may change dependent upon contractor performance and area of work during audit period.

YANKEE ATOMIC ELECTRIC COMPANY
AUDIT REPORT

Section Procedure 9.1
Revision 8 Date 2/8/80
Page 13 of 13

AUDITED ORGANIZATION:	LOCATION:	PROJECT:	
REPORTED BY:	TITLE:	AUDIT DATE:	ITEM NO.

REQUIREMENT:

DEFICIENCY:

RECOMMENDATION:

(Indicate interim action if necessary.)

ACKNOWLEDGED BY: _____ TITLE: _____ DATE: _____

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION INTERNAL AUDITS

Interim Change Number 1 to

Procedure 9.2, Rev. 5

Effectivity Date 08/21/81

Page 1 of 1

Appr.

E.F. McDonald
Quality Assurance Manager

Section 3.2.3, page 2

Change "Vice President" to "Director of Quality Assurance."

Section 3.3.1, page 2

In first sentence delete "Westboro" and insert "the YAEC home office."

INTERNAL AUDITS

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1.0 PURPOSE AND SCOPE

1.1 This procedure identifies auditors and defines the frequency of the YAEC internal audit system. The utilized to identify the Quality Assurance Program and degree of compliance of the YAEC organization to requirements of this Manual.

2.0 REFERENCES

2.1 General Audit Procedure

2.2 Corrective Action

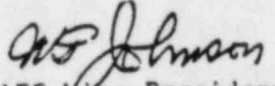
3.0 PROCEDURE

3.1 Auditors

Procedure 9.1

Procedure 8.1

3.1.1 Quality Assurance Department personnel will perform audits of program activities performed by YAEC Engineering, Projects and the Field QA group.

<p style="text-align: center;">Seabrook Station QUALITY ASSURANCE MANUAL YANKEE ATOMIC ELECTRIC COMPANY Westboro, Mass 01581</p> <p>DESCRIPTION</p> <p>INTERNAL AUDITS</p>	<p>Section <u>Procedure 9.2</u> Revision <u>5</u> Date <u>3/31/78</u> Page <u>1</u> of <u>3</u> Appr.  YAEC Vice President</p>
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1.0 PURPOSE AND SCOPE

1.1 This procedure identifies auditors and defines the scope and frequency of the YAEC internal audit system. The audits are utilized to identify the Quality Assurance Program effectiveness and degree of compliance of the YAEC organization to the requirements of this Manual.

2.0 REFERENCES

- | | |
|-----------------------------|---------------|
| 2.1 General Audit Procedure | Procedure 9.1 |
| 2.2 Corrective Action | Procedure 8.1 |

3.0 PROCEDURE

3.1 Auditors

3.1.1 Quality Assurance Department personnel will perform audits of program activities performed by YAEC Engineering, Projects and the Field QA group.

3.1.2 Personnel from other YAEC departments may be assigned auditing duties. Individuals performing audits shall not be directly responsible for the area being audited.

3.2 Auditing

3.2.1 The auditor shall perform the audit in accordance with the requirements of Reference 2.1.

3.2.2 The auditor shall use the requirements of procedures of this Manual as attributes. The auditor shall identify compliance or noncompliance to item(s) identified in the procedures or to items of his checklist.

3.2.3 The results of the audit shall be reported to YAEC Vice President and Management of PSNH.

3.2.4 Corrective action shall be per the requirements of Reference 2.2.

3.3 Scheduling

3.3.1 Each procedure listed below shall be audited periodically at Westboro and at the site, as applicable, on a minimum of a yearly basis. This requirement applies only to procedures in use during the year. Initial audits shall be made during early stages of work in each area audited.

Procedure 3.1 External Interface Control

Procedure 3.2 Review Control

Procedure 4.1 Project Document Control

Procedure 4.2 Manual Control

Procedure 10.0 Records

3.3.2 Other areas, as may be directed by the QAD Manager, shall
be subjected to internal audits.

Seabrook Station
QUALITY ASSURANCE MANUAL
YANKEE ATOMIC ELECTRIC COMPANY

DESCRIPTION RECORDS

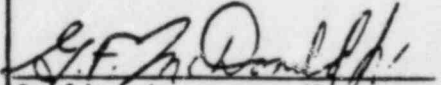
Interim Change Number 1 to

Procedure 10.0, Rev. 5

Effectivity Date 08/21/81

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Appr.


Quality Assurance Manager

Section 3.3, page 2

Delete "Westboro."

TANNEE ATOMIC ELECTRIC COMPANY
Westboro, Mass 01581

RECORDS

Appr.

W. S. Johnson
YAEC Vice President

3.1 The requirements for records are defined in the design and procurement documents.

- 3.1.1 YAEC reviews contractors' documents as defined in Reference 2.1 to assure record requirements are adequate and conform to the applicable requirements of ANSI N45.2.9.
- 3.2 The verification of completeness of records generated by vendors is the responsibility of the purchasing contractor.
 - 3.2.1 YAEC reviews contractors programs and manuals (Reference 2.1) to assure adequate controls are provided to verify records.
 - 3.2.2 YAEC audits the implementation of contractors' programs and manuals as defined in References 2.2 and 2.3.
- 3.3 YAEC review documents shall be retained at the YAEC Westboro office. Design calculations not forwarded to YAEC will be retained by the originator.
- 3.4 All QA records as defined in design and procurement documents will be available at the construction site prior to fuel loading. The records shall include as a minimum the types of records with the recommended minimum retention periods indicated in Appendix A of ANSI N45.2.9.
 - 3.4.1 The minimum requirements for installation of equipment will be a certificate of compliance to be followed, prior to fuel loading, by a data package.

3.4.2 The certificate of compliance shall:

- 3.4.2.1 Identify the item and include the purchase order number.
- 3.4.2.2 Identify the specification and revision to which the product was manufactured.
- 3.4.2.3 Identify approved deviations to the specification.
- 3.4.2.4 State conformance to the specification by the manufacturer and the purchaser.
- 3.4.2.5 Be attested to by a person who is responsible for the QA function and whose function and position are described in the supplier's QA program.

3.4.3 The validity of the certificates of conformance is audited by YAEC as noted in 3.2.2 above.

3.5 All site generated records shall be retained at the site. Records completed by subcontractors will be transferred to the custody of the YAEC Field Quality Assurance Document Control Center Supervisor who will administer the YAEC Document Control Center at the site.

3.5.1 For record requirements covered by the ASME B&PV Code, the requirements of the Code should apply in addition to the requirements of N45.2.9. In cases where conflict may exist, the requirements of the Code (for Code covered activities) should be controlling.

3.6 Quality records maintained at the site shall be classified as lifetime or non-permanent as required by ANSI 45.2.9.

3.6.1 Lifetime and non-permanent records will be protected from possible destruction by causes such as fire, flooding, insects, rodents and from possible deterioration by a combination of extreme variations in temperature and humidity conditions. The Document Control Center will be located in a structure complying with the requirements of ANSI 45.2.9, with the exception that the building will not be constructed to resist tornadoes.

3.6.2 Records will be stored in a common office environment during Document Control Center microfilming, identification, and other necessary preparation prior to placement in the storage facility.

3.7 Completed construction records shall be received, recorded, inspected, indexed, and filed by the YAEF Field Quality Assurance Document Control Center Supervisor.

- 3.8 Access to quality records in the Document Control Center shall be controlled by the Field Quality Assurance Document Control Center Supervisor. Access and retrieval of lifetime and non-permanent records shall be controlled in accordance with the requirements of a written procedure. Records shall be retained and stored in accordance with the requirements of ANSI 45.2.9.
- 3.9 YAEC QA personnel shall perform audits, per Section 9.0 of this Manual, to assure effectiveness and compliance with these requirements.
- 3.10 Final records will be stored at the plant site or vendor facility as defined in the procurement documents. They will be transferred to the plant staff for storage at completion of construction activities. The ASME Code, ANSI Standard 45.2.9, regulatory and YAEC requirements in effect at that time will be utilized to assure safe storage and preservation.

4

To:

JOHN CARR, CHIEF
FREEDOM OF INFORMATION AND
PRIVACY ACT BRANCH

FOIA 524