



STATION

QUALITY ASSURANCE PROGRAM

1. GENERAL

1.1 Scope

1.1.1 This Station Quality Assurance Program is written to specifically describe the quality assurance program for control of work performed by personnel involving safety-related items and ASME Section III Division 1 work at the operating nuclear Stations hereinafter referred to as "the Station." This Station Quality Assurance Program and addenda thereto, as applicable, shall apply to operating stations and may be issued and then will be controlled under separate cover apart from the Corporate Quality Assurance Program Manual as deemed useful in performing the work to meet the requirements of the Quality Assurance Program. When a separate manual is issued, the Station Quality Assurance Manual will be identified to a specific operating station. The quality system outlined herein, to which Commonwealth Edison Company Management requires conformance, is in accordance with the requirements of the Commonwealth Edison Company Quality Assurance Program Manual for Nuclear Generating Stations which includes the requirements of ASME Section III, Division 1 (Code), NRC 10CFR50, Appendix B and ANSI N45.2 and ANSI N18.7. When Contractors are engaged to perform such work under the direction of the Station Construction Department, the system of control is as described in Commonwealth Edison Company Quality Assurance Program Manual for Nuclear Generating Stations. Contractors engaged to perform such work under the supervisory responsibility of the Station Maintenance Engineer shall be controlled as provided by this Manual.

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1.2 Responsibilities and Duties

1.2.1 General

The Station Superintendent has the responsibility that the requirements of this Program are carried out at the Station. The Manager of Quality Assurance has the responsibility to assure that all requirements of this Program are carried out.

- a. Management assessment of this Station Quality Assurance Program shall be included as part of the CECo Management assessment required in Quality Requirement 2.0 in the CECo Quality Assurance

November 1, 1979
(Revision 11)



Program Manual for Nuclear Generating Stations. Such annual assessment is preplanned and documented. Identified corrective action is identified and tracked.

- b. It shall be the responsibility of each Station department head to assure that each individual in his department is thoroughly familiar with the responsibilities of the department in which he is employed.
- c. It shall be the responsibility of the Technical Staff Supervisor to assure this Manual is reviewed at least every six months in concert with issuance of new addenda and all sections are kept up-to-date and implemented in accordance with the latest revisions and addenda of the Code and Federal Regulations. | 8
- d. Revisions to this Manual and the Quality Assurance Program Manual require the approval of the Manager of Quality Assurance and acceptance by the Authorized Inspection Agency Inspection Specialist (AIA) prior to issuance. Submittals to the AIA shall be by letter, in duplicate, by the Manager of Quality Assurance requesting AIA review and acceptance and return of the carbon copy of the letter with such acceptance indicated to the Manager of Quality Assurance, who, in turn, transmits a copy of such acceptance to the Station Superintendent. Upon acceptance by the AIA, a copy of the Agency acceptance letter shall be submitted to the Authorized Inspector by the Technical Staff Supervisor. | 8



1. A "Controlled Copy" is a uniquely identified copy of the Quality Assurance Manual which is kept current and specifically assigned to an individual. A Controlled Copy of the manual shall be provided at the Station by the Technical Staff Supervisor for use and reference by the Authorized Nuclear Inspector (ANI) and a Controlled Copy shall be assigned to the AIA by the Manager of Quality Assurance.

2. To maintain control of all copies, each copy of the Quality Assurance Manual issued shall be designated as "Controlled" or "Uncontrolled" on the distribution list maintained by the Director of Quality Assurance (Engineering and Construction).

A record of revisions to this Manual shall be kept on file in the Manager of Quality Assurance's Office.

Uncontrolled copies of Manual will not be issued to personnel assigned to the Station. Uncontrolled manuals are issued for reference and for information upon request by outside companies and people not involved with Station activities.

e. Revisions to the Station Quality Assurance Manual, shall be accompanied by the Commonwealth Edison Company Quality Assurance Manual Transmittal, Figure 1, which lists the revisions by page and revision number. Also, current revisions are identified on the respective pages by vertical lines with an accompanying revision number at the right-hand side adjacent to the revision. It shall be the responsibility of holders of Controlled Copies of issued Quality Assurance Manuals to

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incorporate the revisions, sign the transmittal and return it and the superseded Manual pages to the Director of Quality Assurance (Engineering and Construction) who will verify that the proper pages were returned. Also, it shall be the responsibility of the holder to maintain this document up-to-date as listed herein in the Index which shows the latest revisions by date and page numbers. Further, audits of the controlled copies will be conducted annually by the Station Quality Assurance Engineer or Inspector for Maintenance using the latest issued Index to this Manual as the controlling document.

1.2.2 Manager of Quality Assurance

The Manager of Quality Assurance directs the quality assurance activities for the design, procurement, construction, operations and maintenance of the Company's nuclear power facilities and interface activities covering Quality Assurance with the Nuclear Regulatory Commission, Directorate of Regulatory Operations, Region III and the Authorized Inspection Agency. He or his designated alternate has the responsibility and authority to stop unsatisfactory work or stop further processing of unsatisfactory material during design, engineering and construction of the plant and during plant modification, maintenance, in-service inspection and operations.

1.2.3 Quality Assurance Engineer or Inspector (Maintenance)

A Station Quality Assurance Engineer or Inspector for maintenance, functioning independent of the Production Department, reviews, monitors and audits maintenance, repairs, modifications, in-service inspections and Stores activities to assure



all requirements are fulfilled. He, through the Manager of Quality Assurance has stop-work authority for Code and safety related work. He is located at the Station and is responsible for the above quality assurance activities. He reports directly to the **Quality Assurance Supervisor (Maintenance)** who, in turn, is responsible to the Manager of Quality Assurance who reports to the President.

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1.2.4 Station Superintendent

The Station Superintendent is responsible for direct management of the Station including industrial relations, planning, coordination, direction of the operation, maintenance, refueling and technical activities. The Station Superintendent is responsible for compliance with the Station's NRC Operating License, government regulations, ASME Code requirements and the Quality Assurance Program. He also authorizes the use of approved procedures at the Station, and is responsible for final approval and distribution of station reports. The Station Superintendent authorizes all approved modifications to the Station after the issuance of an Operating License and completion of preoperational testing. He forwards requests for modifications to the Station Nuclear Engineering Department.

He provides direction for the Station's on-site review function as provided in the Administrative Section 6.0 of the Technical Specifications.

During periods when the Station Superintendent is unavailable, he shall designate this responsibility to an established alternate who satisfies the ANSI N18.1 experience requirements for plant manager.



1.2.5 Operating Assistant Superintendent

Responsibility for the day-to-day operating and refueling activities for the Station is delegated to the Operating Assistant Superintendent. Reporting to him are the Station Operating Engineers.

1.2.6 Administrative and Support Services Assistant Superintendent

The Administrative and Support Services Assistant Superintendent reports to the Superintendent and performs various administrative duties and support services as assigned. Reporting to him are: (1) Technical Staff Supervisor, (2) Office Supervisor, (3) Station Security Administrator, and (4) Quality Control Supervisor.

1.2.7 Technical Staff Supervisor

The Technical Staff Supervisor provides technical support for plant operations, refueling, maintenance, modifications and in-service inspection and evaluates process data and equipment performance and adequacy of station procedures. He makes recommendations and advises the Administrative and Support Services Assistant Superintendent with respect to quality assurance. He has the responsibilities and authority as described in Section 6.0 of the Technical Specifications for implementation of the on-site review function. He is also responsible for the following:

- a. Witnessing of assigned testing for verifying completion of modifications and equipment maintenance.
- b. Verification of incorporation of approved engineering changes into station maintenance and operating procedures.
- c. Verification of completion of reported corrective action.
- d. Quality Requirements for maintenance and Stores receipt inspection.



1.2.8 Master Instrument Mechanic

The Master Instrument Mechanic is responsible for calibrating, maintaining and repairing instrumentation at the Station. His responsibility includes planning work, providing on-the-job training of instrument personnel, setting up instruments for tests, maintaining listings of calibrated instruments, arranging for the instrument maintenance work and its inspection to be performed and initiating requisitions for the procurement of instruments and parts from vendors and services from contractors. The Master Instrument Mechanic reports to the Maintenance Assistant Superintendent.

1.2.9 Quality Control Supervisor

The Station Quality Control Supervisor reports to the Administrative and Support Services Assistant Superintendent. He is responsible for coordinating the activities of the Quality Control Group. The Quality Control Group reviews all Work Requests for appropriate requirements, reviews all requests for purchases, performs receipt inspections during safety-related and ASME maintenance work. They also advise station personnel as to equipment classification upon request. The group reviews all work being carried out according to this Manual.

Additionally, the Quality Control Supervisor maintains control of any ASME "N" Stamps authorized. Upon concurrence by the Authorized Inspector, the Quality Control Engineer will apply these stamps to ASME Section III, Division 1 work.

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1.2.10 Maintenance Assistant Superintendent

The Maintenance Assistant Superintendent is responsible for directing the maintenance, including repair, of all mechanical and electrical equipment including instrumentation. His responsibility includes planning work, providing on-the-job training of maintenance personnel, maintaining calibration listings for maintenance, arranging for the maintenance work and its inspection to be performed and initiating requisitions for the procurement of tools, materials, equipment and parts from vendors and services from contractors.

1.2.11 Operating Engineers

The Operating Engineers are responsible for the operation of the mechanical and electrical equipment and certain common plant systems, such as fuel handling and radioactive waste processing, assigned to them by the Operating Assistant Superintendent. They are responsible for recommending maintenance for such equipment and for authorizing functional acceptance tests to be conducted by Operating and Technical Staff personnel.

1.2.12 Shift Engineer

The Shift Engineer on duty is responsible for operating the plant in compliance with the station Operating License and the station operating procedures. During his shift, the Shift Engineer is in charge of the entire plant operation and is responsible for the plant being operated in a safe and reliable condition. He receives direction from the Operating Assistant Superintendent.



1.2.13 Office Supervisor

The Office Supervisor is responsible for directing the activities of the Station's clerical staff, for controlling and maintaining file and distribution of quality assurance documents.

1.2.14 Maintenance Manager Nuclear Stations

The Maintenance Manager Nuclear Stations has the following responsibilities:

- a. Functional direction of electrical and mechanical maintenance activities at generating station.
- b. Liaison with Commonwealth stations and departments, manufacturers and other utilities on maintenance matters.
- c. Advising the scheduling of maintenance outages of nuclear generating stations.

1.2.15 Quality Assurance Engineer or Inspector (Operations)

The Quality Assurance Engineer or Inspector for operations assigned to the station reports to the Director of Quality Assurance (Operations), who, in turn, reports to the Manager of Quality Assurance. He has authority and responsibility for the surveillance, review and audit of operations quality assurance activities.

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1.2.16 Station Stores Supervisor

The Station Stores Supervisor reports to the Maintenance Assistant Superintendent. The Station Stores Supervisor receives functional direction from the Superintendent, Stores and Material Control under the Manager of Purchasing for station storekeeping activities. He is responsible for the administration of the station storeroom including receiving inspection, storing and issuing spare parts, materials and equipment. His responsibility includes verifying the receipt of quality assurance documents specified in the procurement documents for spare parts, welding material, material and equipment directed to him, maintaining inventory records of spare parts, welding material, materials and equipment and complying with special handling and storing instructions.

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1.2.17 Training Supervisor

The Maintenance Training Foreman (or Coordinator) is responsible for training in maintenance work skills and procedures for Station maintenance personnel. The Training Supervisor is responsible for training and retraining of Station personnel. Their responsibilities include planning, scheduling, preparing, presenting and arranging training courses and documenting completion of training.

Training involving the Quality Assurance Program shall be arranged by the Training Supervisor and the general program covering such training shall be approved by the Manager of Quality Assurance. Further details on station training are in the Company Quality Procedure 2-52 and Quality Requirement 2.0.

1.2.18 Personnel Administrator

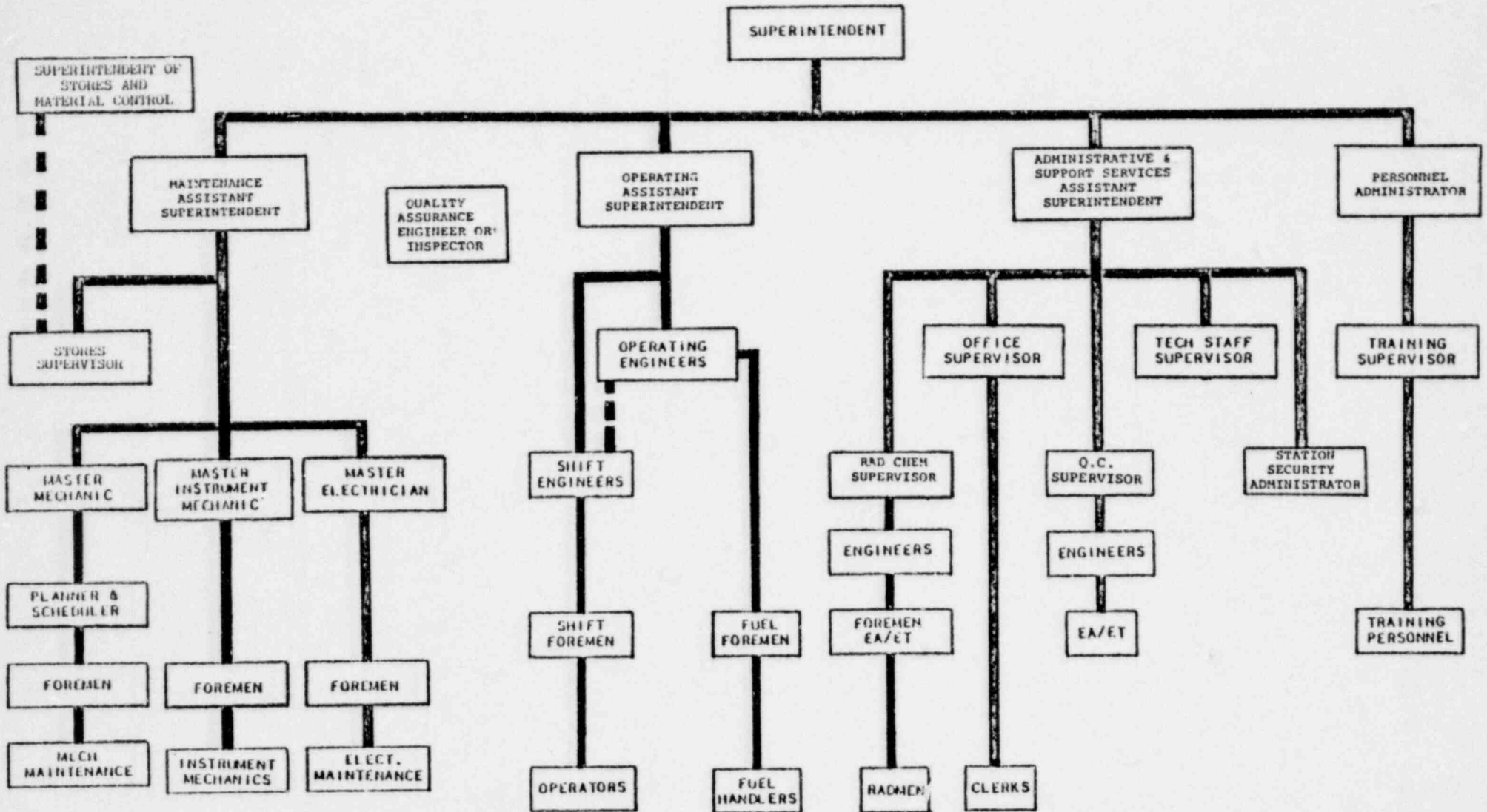
The Personnel Administrator reports to the Superintendent and performs various personnel activities as assigned. Reporting to him is the Training Supervisor.

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1.3 Organization Charts

1.3.1 Organization charts, Figures A and 1-6, show the structure of the Station and Production Department organizations and Figure 1-1 shows the structure of the Quality Assurance Department which is independent of all other departments. Also, Figures B and C provide the functional responsibilities for Quality Control and for Quality Assurance at the Station. Figure 1-0 provides the Company Organization Chart related to Quality Assurance.

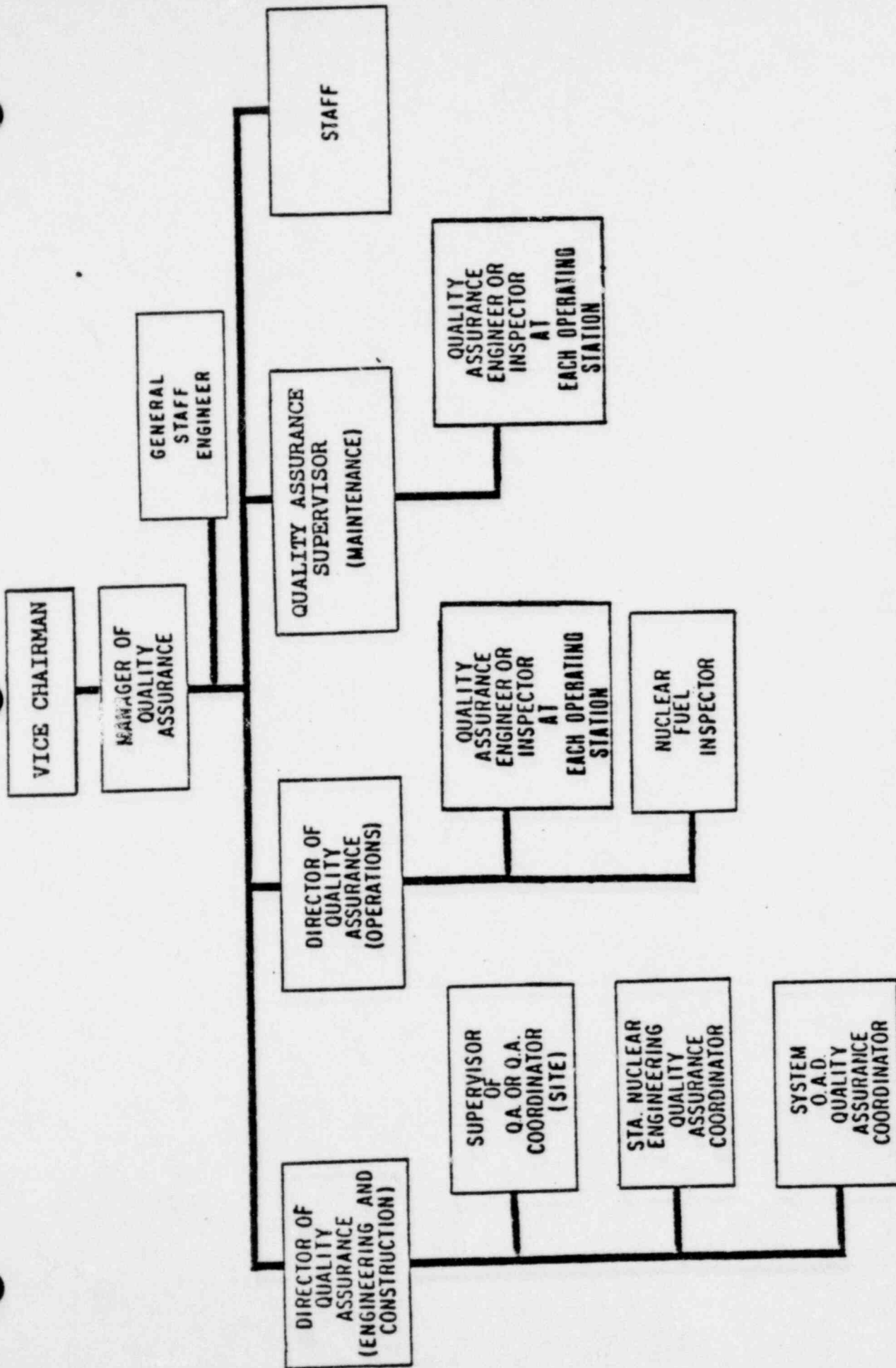
STATION PRODUCTION DEPARTMENT
ORGANIZATION



————— ADMINISTRATIVE
- - - - - FUNCTIONAL

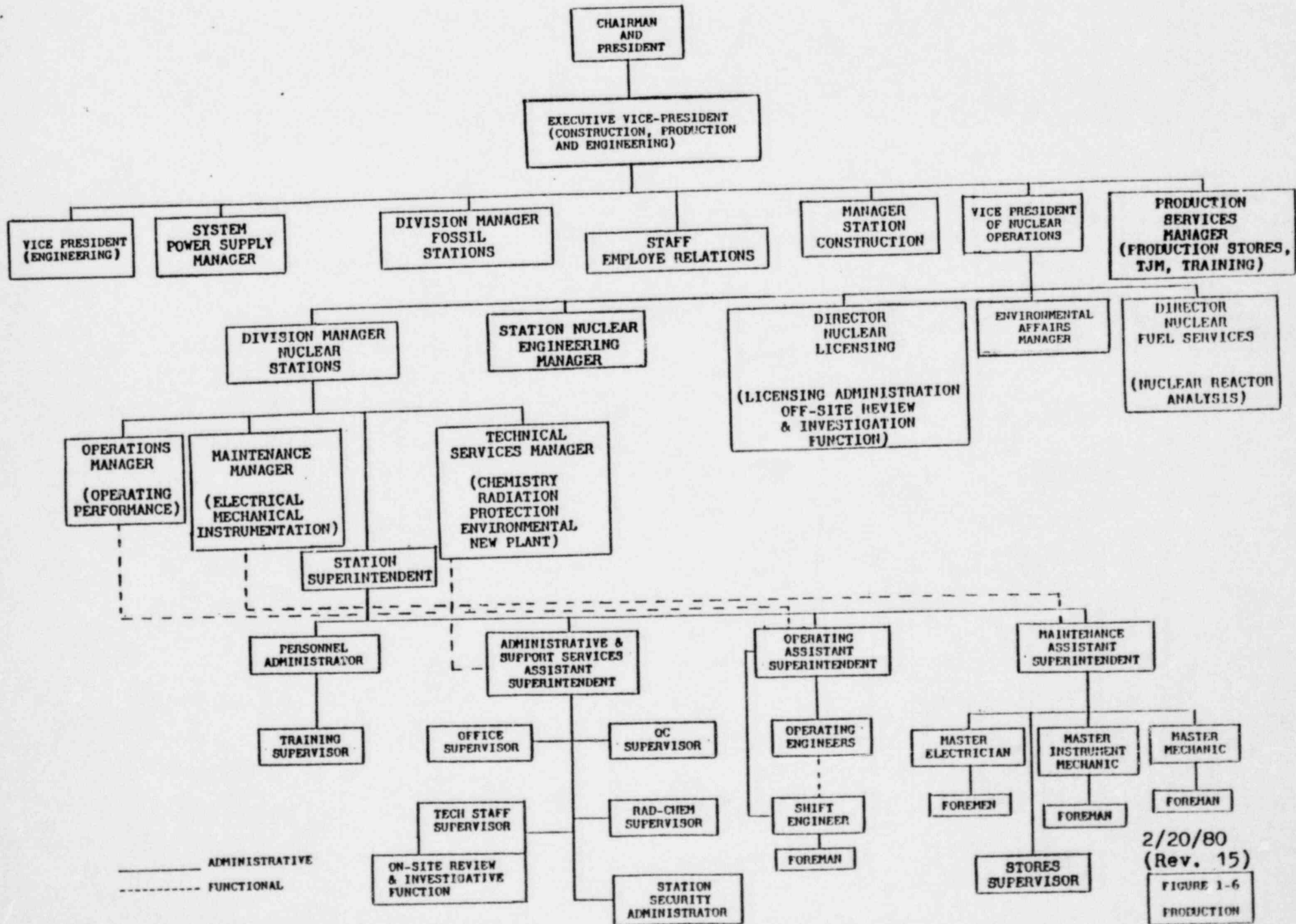
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FIGURE A
REVISION 16



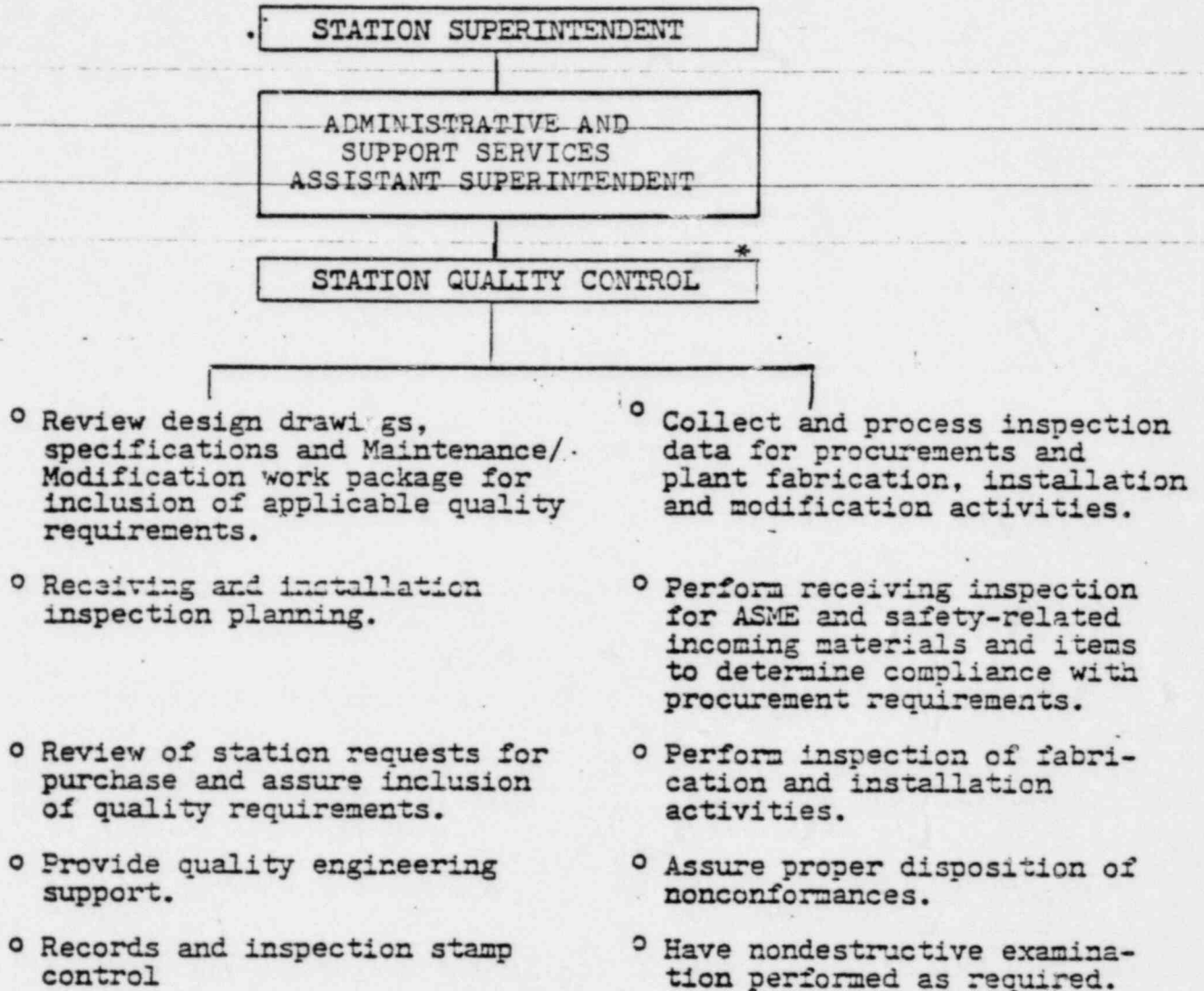
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(Revision 10)

FIGURE I-1
ORGANIZATION CHART
QUALITY ASSURANCE



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(Rev. 15)
FIGURE 1-6
PRODUCTION


QUALITY CONTROL
FUNCTIONAL RESPONSIBILITIES CHART



*General statements of Station Quality Control Engineer's responsibilities.

Figure B

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QUALITY ASSURANCE
FUNCTIONAL RESPONSIBILITIES CHART

MANAGER OF QUALITY ASSURANCE

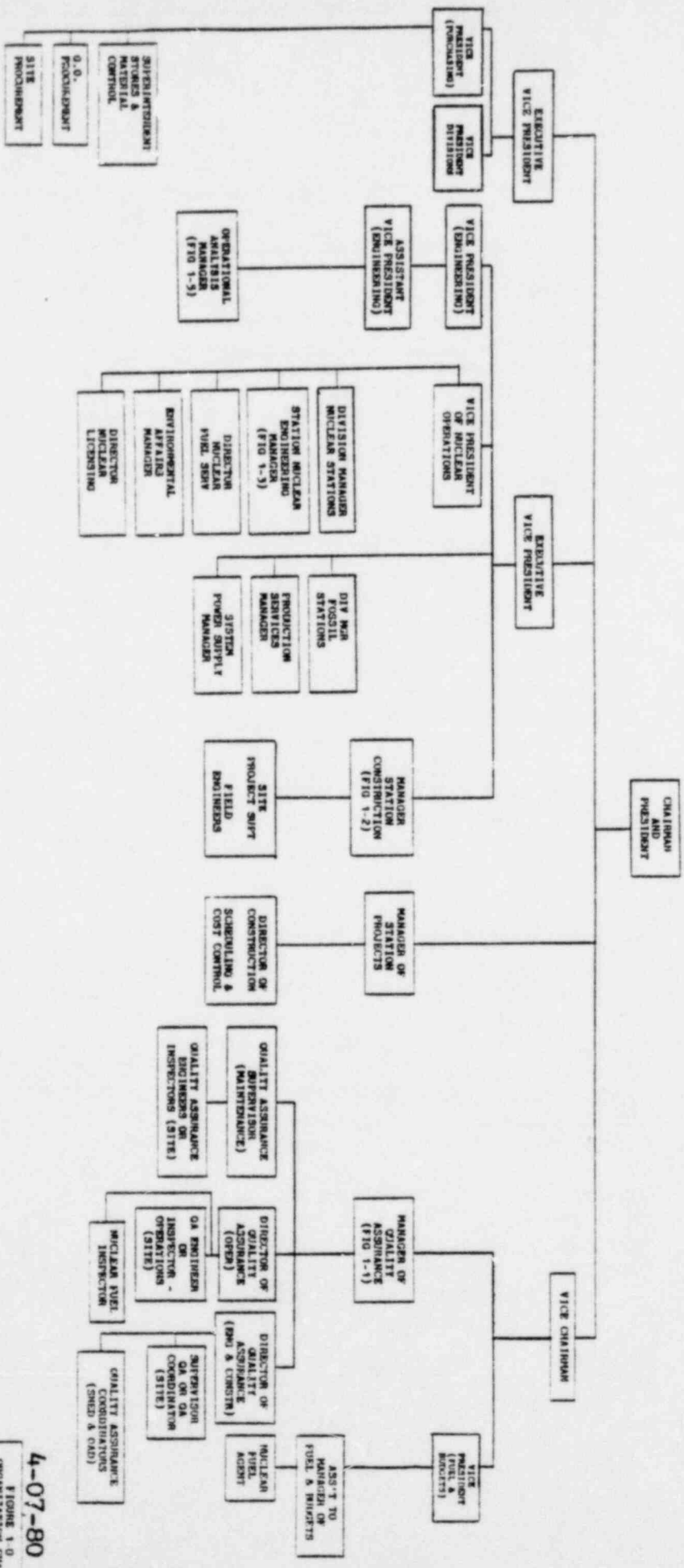
STAFF ASSISTANT

QUALITY ASSURANCE
ENGINEER OR INSPECTOR
(MAINTENANCE) *

- Planning, scheduling performance and coordination of audits.
- Review and approve all ASME Code and safety-related Modifications as complete and satisfactory.
- Annually audit all controlled copies of this Manual assigned to the Station.
- Verify and approve receiving inspection of ASME and safety-related materials to assure compliance with procurement requirements.
- Review, insert hold points and approve all ASME Code and safety-related Maintenance/Modification work packages.
- Approve all Discrepancy Report dispositions for Code and safety-related work.
- Verify and approve completion of all requirements of the work package and associated documentation.

*General statements of Quality Assurance Engineer or Inspector responsibilities.

Figure C



4-07-80
 FIGURE 1-0
 ORGANIZATION CHART
 RELATED TO
 QUALITY ASSURANCE
 Rev. 17



2. DRAWINGS AND SPECIFICATION CONTROL

2.1 Production, Maintenance and Distribution

2.1.1 Drawings and specifications are produced by Architect Engineer (AE), Nuclear Steam Supply System (NSSS) Supplier and Commonwealth Edison Company Station Nuclear Engineering Department. Control at the Station starts with receipt of signed, approved and released drawings or other documents, such as design specifications, purchase specifications, procedures or special instructions from the Station Nuclear Engineering Department or the Architect Engineer. The Station Superintendent designates distribution of these by the Office Supervisor who does so in accordance with Station Document Control Procedures of the Station Procedures Manual. NSSS drawings are approved by the Station Nuclear Engineering Department or its Architect Engineer prior to use at the Station. The Office Supervisor is responsible for controlling such distribution and maintaining the central official station files for all final and latest drawings and other documentation in accordance with Station Document Control Procedures and QP 6-52. Replacement for a drawing lost or destroyed shall be requested by the supervisor responsible for that drawing. Drawings and specifications used for Code work shall be issued from Central File and specifically identified to a work package.

2.1.2 ASME Section III Code is utilized by the Station to govern the work affecting ASME Section III items. Applicable ASME Code, and national and industry standards are utilized by the Station to govern the work affecting safety and code related systems/components. Application of these codes and standards is as stipulated in the Maintenance/Modification work package.

2.1.3 Design Specifications and Design Reports for the installed Code and safety-related equipment are maintained as part of the permanent records for the life of the plant. The design specifications are used as base

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line requirements by Station Maintenance, Technical Staff, Quality Control and Quality Assurance and authorities having legal jurisdiction at the Station plus for spare parts acquisition unless otherwise stipulated in the engineering requirements of the Maintenance/Modification work package.

2.2 Revisions, Control of

2.2.1 Control of revised drawings and specifications at the station begins with receipt of Station Nuclear Engineering or Architect Engineer approved and released documents. Revisions are handled in the same manner as initial documents. Distribution to and within the Station is in accordance with distribution lists established by Station Nuclear Engineering Department and the Station Superintendent. The Office Supervisor, who is responsible for the central official station files, is responsible for removal of obsolete documents from these central files, insertion of the latest revisions and marking the obsolete documents as superseded or void. Current lists of released documents, provided by Station Nuclear Engineering and Architect Engineer are used by the Office Supervisor to verify on a continuing basis that the latest revisions are in such files and in use at the Station.

Maintenance/Modification work packages shall be updated by the supervisor in charge of the work, inserting the revised prints and removing and destroying superseded prints.

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2.2.2 A Modification Approval Sheet, Figure 24, is required for modifications to the Station as described in the FSAR including



safety-related and ASME Section III systems or parts. To process the Modification Approval Sheet, a request for modification must come to the Technical Staff Supervisor. The Technical Staff Supervisor will review the request to determine whether the modification involves ASME Code or safety-related or whether non-Code or nonsafety-related equipment is involved, and complete Part 1 and Part 2 of the Modification Approval Sheet. Concurrence with proposed ASME Code and safety-related modifications will be made by the Technical Staff Supervisor, Operating Assistant Superintendent and Station Superintendent in Part 3 of the form. Also, (a) review by On-Site Review; (b) authorization by the Station Superintendent to proceed with the installations; (c) signification by the Maintenance Assistant Superintendent, Master Instrument Mechanic or Construction Engineer that installation and construction testing are complete; (d) review and approval by the Quality Control Supervisor that the work, inspections, quality control requirements, documentation, and any other requirements are completed satisfactorily; (e) signification by the Operating Engineer or Shift Engineer that operating testing has been completed and operation is authorized; and (f) approval by the Quality Assurance Engineer or Inspector that all installation, testing, inspection and documentation requirements have been satisfactorily completed will be indicated in Part 3 of the Modification Approval Sheet.

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After completion of the modification, verification of completion of all documentation and other requirements will be indicated by signatures of the Technical Staff Supervisor, Quality Control Supervisor and Quality Assurance Engineer or Inspector in Part 5 of the form. Details for processing of the Modification Approval Form are in Commonwealth Edison Company Quality Procedure 3-51.

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3. PROCUREMENT CONTROL

3.1 Purchasing

3.1.1 Purchasing responsibility is centralized within Commonwealth Edison Company. All Code and safety-related procurement is performed by the Purchasing Department in accordance with the Purchasing Department's Procurement Policies and Procedures Manual. Vendors and Suppliers of safety- and Code-related systems/components are evaluated and, upon satisfactory evaluation and approval by the Station Nuclear Engineering Manager and the Manager of Quality Assurance, are included in the Approved Bidders List maintained by the Purchasing Department. Agenda and checklists used in evaluation of vendors and suppliers as to having and implementing an acceptable documented quality assurance program are approved prior to use by the Director of Quality Assurance (Engineering-Construction). Also, original vendors and suppliers of safety-related systems/components (non-Code) are approved bidders. Like-for-like replacement of safety-related (non-Code) items are purchased from such original equipment manufacturers and suppliers. Procurement control is further described by Commonwealth Edison Quality Procedures 4-51 and 7-51.

3.2 Source of Purchase Requisitions

3.2.1 Request for purchases involving services, materials, welding materials, spare parts and replacement equipment are initiated at the Station by the cognizant Department and approved by the Department Head. The Technical Staff Supervisor is responsible for providing the technical requirements for procurements. A Request for Purchase, Figure 3a, is completed by the originator, who designates the required item(s), design specifications, whether ASME Code or safety-related, applicable codes and standards and any special requirements. The Station Quality Control Supervisor and Quality Assurance Engineer or Inspector.

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review and approve Requests for Purchase to assure that quality assurance specifications, ASME Code and other applicable codes and standards and special requirements are included. The Station Stores Supervisor reviews and signs-off on the request after review for completeness and appropriate sign-offs. In instances where the items to be purchased are for Spare Parts Inventory replacement, the Station Stores Supervisor initiates a Request for Purchase or a Stores Department Requisition Card, Figure 3f, which contains a description of the specific item and the technical and quality assurance requirements and obtains a similar review and approval from the Quality Control Supervisor, the Maintenance Assistant Superintendent or Master Instrument Mechanic and the Quality Assurance Engineer or Inspector. The Office Supervisor has a Purchase Requisition, Figure 3b, or a Shipment Release, Figure 3g, prepared upon receipt of the approved Request for Purchase or Stores Department Requisition Card from the Stores Supervisor. Following signed approval by the Station Superintendent, the Purchase Requisition, which reflects all requirements of the Request for Purchase or Stores Department Requisition Card, is then forwarded to the General Supervisor Production Stores (Production Services) for review and action. This General Supervisor verifies that the required technical and quality assurance requirements which are determined from original plant equipment procurement documents or from requirements provided by the Station Nuclear Engineering Department are included on the requisition. Any change to such requisitions or releases shall be done upon documented concurrence of the originator, the Quality Control Supervisor and the Quality Assurance Engineer or Inspector. The requisition is then approved by the Production Services Manager or his designee. All such requisitions or releases for ASME and safety-related procurements are forwarded to the Manager of

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Quality Assurance for review and approval as to providing quality requirements. Requisitions shall then be sent to the Vice President (Purchasing) where the Purchase Order, Figure 3c, is placed with an approved supplier. If purchase is authorized by release, the vendor's copy shall be mailed to the vendor, and the #1 copy sent to the Purchasing Department. For modifications involving safety-related and ASME Section III systems, the design and specification of procurement requirements is the responsibility of the Station Nuclear Engineering Department, and quality requirements are approved by the Quality Assurance Coordinator for Engineering. All subsequent changes to Purchase Orders, Releases, or Change Orders are controlled by Change Order Requisitions, Figure 3d, and subsequently by Change Order, Figure 3e, or by a revised Release, and are approved in the same manner as the original requisition. Changes to procurement documents undergo the same review and approval requirements as the original documents. Also, any changes evolving from procurement activities which involve technical or quality assurance matters, either for the original purchase or subsequent change orders, shall be approved by the originator of the Purchase or Change Order Requisition and by Quality Assurance where the changes affect quality requirements. Further details for processing of purchasing documents is identified in Quality Procedure 4-51.

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3.3 Source Inspection

3.3.1 Source inspections may be made of contractors and vendors producing and supplying ASME Code or safety-related equipment and materials. When these inspections are to be performed, they are identified by hold or witness points established by Station Nuclear Engineering Department as part of the procurement activity. The Manager of Station Construction is responsible for performing such inspections using qualified personnel acceptable to Quality Assurance.



The Director of Quality Assurance (Engineering-Construction) is responsible for assuring that witnessing of hold or witness points is performed at the supplier's facility where source inspection is required and for final approval of witness inspection reports. Further details on how source inspection activities are accomplished are covered in Quality Procedures 7-2 and 7-52.

3.4 Receiving Inspection

3.4.1 ASME Code and safety-related material, parts and components shall be inspected and accepted through receipt inspection action by the Quality Control Supervisor and Quality Assurance Engineer or Inspector whether it has been provided directly from a vendor or transferred to the Station from another Edison site or storage location. ASME Code material transferred from Stores or another CECo Station shall meet the requirements specified for the designated installation. Receipt inspection of safety-related and ASME Section III material, parts and components are accomplished in accordance with Commonwealth Edison Company Quality Procedure 7-1 or 10-54. Upon receipt of a Receiving Inspection Notice (RIN), Figure 5, from the Stores Supervisor Quality Receipt Inspection Reports, Figure 4, are prepared by Station Quality Control and approved by the Quality Assurance Engineer or Inspector, to delineate the documentation and physical characteristics to be verified during receiving inspection. The inspection is verified and recorded on the form and accepted by the Station Quality Control Supervisor and the Quality Assurance Engineer or Inspector to assure the item and the documentation meets the requirements of the Request for Purchase and the Purchase Order. The Quality Receipt Inspection Report is made part of the

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Purchase Order Package. Also, Part 2 of the RIN is completed by the Quality Control Supervisor and the Quality Assurance Engineer or Inspector and returned with the Purchase Order to the Stores Supervisor.

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3.4.2 Inspected material is handled in the following manner:

- a. Upon receipt of the completed and approved RIN, acceptable material is identified with inspection status by the Stores Supervisor and processed to Stores. A two-part stock identification tag, Figure 25, is placed on ASME Code and safety-related items by the Stores Supervisor to indicate acceptability and provide traceability.
- b. Nonconforming material is identified, segregated and disposed of according to Section 11 of this Manual.

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The Station Quality Control Supervisor coordinates with the Stores Supervisor regarding return of nonconforming material to a supplier for rework or replacement.

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3.4.3 Copies of Quality Receipt Inspection Reports shall be maintained for the Station Quality Control Supervisor and the Quality Assurance Engineer or Inspector's analysis and joint reporting annually to the Station Superintendent and the Manager of Quality Assurance of adverse findings on incoming material processed.

3.4.4 The Stores Supervisor controls ASME and safety-related items upon acceptance and during storage prior to issuance to the Station. Such control is achieved by utilizing the two-part tag which is attached to each

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item or lot to indicate acceptability and by placing such items in segregated storage locations. The description, lot, heat, date and Purchase Order numbers and other identification numbers are indicated on this tag to maintain traceability to the certification data. Like items or materials that cannot be uniquely identified by the manufacturer's heat number or serial number or because of some distinct difference from the others in the group shall also be serialized and recorded on the Quality Receipt Inspection Report and two-part tag for each such different item or material.

3.5 Deficient or Nonconforming Material

3.5.1 When deficient or nonconforming material or equipment is discovered during receiving inspection, the Quality Control Supervisor and/or Quality Assurance Engineer or Inspector shall direct the Stores Supervisor to attach a Quality Assurance "Hold" tag to the item and initiate a Discrepancy Record, Figure 18. The Maintenance Assistant Superintendent or Master Instrument Mechanic and Technical Staff Supervisor shall evaluate the cause of the nonconformance, and describe the action required to dispose of the nonconformance and the corrective action to prevent recurrence. The Quality Assurance Engineer or Inspector approves disposition of such deficient or nonconforming items, in accordance with Section 11.

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3.6 Material Storage and Handling

3.6.1 ASME Section III and safety-related material, parts and components are identified, tagged (See 3.4.2a), and stored separately from other Station material. Segregated storage is maintained except when the size of the item precludes placement in the segregated



Stores area. When size precludes placement in segregated area, the item is uniquely identified and segregated by special enclosure, barriers or container. The Station Stores Supervisor is responsible for operation of segregated storage.

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- 3.6.2 Special handling or storage requirements are normally stipulated by the component/material supplier. When such information is not provided by the supplier, the department head approving the Request for Purchase shall designate the need for any special handling and storage on the request and shall develop the procedures for special handling and storage of equipment and materials for use at time of receipt and until the item is placed in service. Also, any special tools required for safe and correct handling are identified. The Quality Control Supervisor and Quality Assurance Engineer or Inspector shall verify adherence to such requirements and procedures by inspection, surveillance and audit.

The Station Stores Supervisor is responsible for handling and storage of equipment and materials while under his control. After issuance by the Stores Supervisor, the Maintenance Assistant Superintendent or Master Instrument Mechanic are responsible for meeting handling and storage requirements. Instructions and responsibilities for control of handling, storage and shipping activities are further described in Commonwealth Edison Company Quality Procedure 13-51. Quality Assurance Engineer or Inspector maintains surveillance of Station Stores and the Station for adherence to Code requirements during the storage and installation period to prevent damage, deterioration or loss.

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4. PROCESS CONTROL

4.1 Production Order System

- 4.1.1 Work at the Station involving ASME Code and safety-related items is initiated upon approval of a Work Request, Figure 7. The flowchart for processing Work Requests is shown in Figure 8. The Operating Assistant Superintendent reviews and authorizes each Work Request and indicates on it if ASME Code or safety-related, whether a modification, outage requirements and inspections and operating tests to be performed and assigns the work to the Maintenance Assistant Superintendent. He or the Master Instrument Mechanic, as applicable, in turn review their Work Request and direct their staff to prepare a Maintenance/Modification Procedure, Figure 9, as applicable, which together with the Work Request and all other documentation connected with the job constitute the Maintenance/Modification work package. A copy of all Work Requests will be provided to the Quality Control Supervisor to verify that ASME Code and safety-related work is accordingly designated. | 12
- 4.1.2 Maintenance/Modification Procedures are used to detail the individual steps required to accomplish maintenance, repair and modification work on safety-related items and components. The Maintenance Assistant Superintendent is responsible for the preparation of such Procedures. A Station Traveler, Figure 6, is applied as a companion document; its preparation is the responsibility of the Maintenance Assistant Superintendent. The Station Traveler is used as part of the work package as detailed in Commonwealth Edison Company Quality | 12



Procedures 3-51 and 3-52 to outline the key work steps and to designate both Station Quality Control and Quality Assurance hold points and those of the Authorized Inspector prior to start of the job. Additionally, it serves as a Checklist and provides for indication and sign-off of completion of steps, inspections and witnessing requirements. In preparing the Maintenance/Modification work package, the Maintenance Assistant Superintendent or Master Instrument Mechanic utilizes inputs such as: specifications and drawings covering the work from Engineering; welding and NDE procedures contained in the Special Process Procedures Manual or such approved procedures provided specifically for a job by Engineering or the Level III Examiner; technical input by the Station Technical Staff; inspections and witness and hold points from the Quality Control Supervisor and the Quality Assurance Engineer or Inspector; and hold points from the Authorized Inspector.

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Qualified and approved special process procedures (e.g., welding, nondestructive examinations, etc.) and manufacturer manuals and instructions are incorporated by reference in the Maintenance/Modification Procedure. The welding procedure and supplements shall be approved by the Station Nuclear Engineering Manager, Maintenance Manager - Nuclear Stations and the Manager of Quality Assurance; the nondestructive examination procedures shall be approved by the Commonwealth Edison Company Level III Examiner and reviewed by the Manager of Quality Assurance. Written Maintenance/Modification Procedures are required for modifications, maintenance and repair work involving safety-related items and for fabrication and installation work to be accomplished in accordance with ASME Section III Code requirements.

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For safety-related items and ASME Section III, Division 1 systems and components, the Maintenance Assistant Superintendent will request the Technical Staff Supervisor to obtain witness and hold points of the Quality Control Supervisor and Quality Assurance Engineer or Inspector and from the Authorized Inspector (See Section 10.3). After the Maintenance/Modification work package consisting of the approved Work Request, Station Traveler, Maintenance/Modification Procedure, Final Documentation Checklist and other supporting documents has been processed in accordance with Quality Assurance Procedures 3-51 and 3-52, the Maintenance Assistant Superintendent or Master Instrument Mechanic sends the work package to the Station Quality Control Supervisor for review and approval. The Quality Control Supervisor will review quality control requirements, witness points and hold points as to adequacy and that the materials and equipment to be used and installed has been inspected and accepted by Station Quality Control and Quality Assurance. If acceptable, he will review and approve the Maintenance/Modification Procedure and sign the Work Request and Station Traveler. He will then forward the work package to the Technical Staff Supervisor for review and approval of the Maintenance/Modification Procedure. He then shall forward the work package to the Quality Assurance Engineer or Inspector for verification and approval of the Maintenance/Modification Procedure and sign-off of the Work Request and Station Traveler that necessary quality hold points and other requirements are provided for in the Work Package. Then, after authorization of the Maintenance/Modification Procedure and the Modification Approval Sheet by the Station Superintendent, the Master Mechanic, Master Instrument Mechanic or Master Electrician will then assign the work.

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Work shall not proceed beyond a designated hold point until witnessed, signed-off or formally waived by the individual who established the hold points. Further, hold tags may be used for in-process status control purposes. In this use a Discrepancy Record is not required.



After completion of the work, the Maintenance Assistant Superintendent or his designee shall have the Quality Control Supervisor and, if applicable, the Authorized Inspector review the documentation and completed work to verify satisfactory completion of the work, inspections, quality control requirements and sign-off the Final Documentation Checklist, Figure 23, plus obtain Quality Control Supervisor approval of Part 3 of the Modification Approval Sheet and the Work Request. After satisfactory completion of operational testing and authorization of operation by the Operating Assistant Superintendent, the Quality Assurance Engineer or Inspector shall verify the requirements of the work package have been satisfactorily completed and shall approve Part 3 of the Modification Approval Sheet and the Work Request.

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For routine type maintenance involving safety-related and plant reliability related items where Quality Control and Assurance personnel are not on-site and work must be done immediately and maintenance methods and procedures have been established and proven through use and previously been reviewed and accepted, the Work Request and applicable documentation may be approved and work assigned upon approval of the Maintenance Assistant Superintendent, Master Instrument Mechanic or their designee. Under such maintenance approach, each Work Request and associated documentation shall be reviewed promptly after completion of the work by the Quality Control Supervisor and verified by the Quality Assurance Engineer or Inspector and their approvals shall be indicated on the completed Work Request Form.

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Routine type maintenance methods would not normally require use of the Station Traveler or Final Documentation Checklist Forms plus the Maintenance/Modification Procedure Form where the equivalent requirements for safety related work can be provided on the Work Request. Work not having detailed procedures approved as provided in 6.2.A of the Technical Specifications which would physically alter the characteristic of an item such as welding and machining, replacements other than like-for-like, complex disassemblies and re-assemblies, such as control rod drives and other safety-related items which would have serious consequences from faulty workmanship or incomplete testing and inspection plus all ASME Code related items shall be processed in accordance with this procedure. If maintenance is not safety-, plant reliability- or Code-related, proceed with work in accordance with station practices.



4.2 Material Issuance

4.2.1 Material, parts and components identified in the Maintenance/Modification work package are issued for safety-related or ASME Section III work only upon receipt by Stores of Material Request, Figure 10, approved by an authorized supervisor and identified to an approved Work Request. Only material which has been inspected and accepted by the Station Quality Control Supervisor and Quality Assurance Engineer or Inspector shall be issued by the Stores Supervisor for such work.

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After being accepted, the material, parts and components are tagged with a two-part tag which is attached to the item or lot while in Stores and after issuance until installed. Identification shall be applied to all pieces when material is divided.

When complete, the two-part tag is removed and made a part of the final documentation. Verification that proper materials, parts and components are available shall be determined during the formulation stage of the Maintenance/Modification Procedure by the Maintenance Assistant Superintendent or Master Instrument Mechanic. The Quality Control Supervisor and the Quality Assurance Engineer or Inspector shall verify that proper material, parts and equipment being used on each safety-related or ASME Section III job are correct and identified prior to final approval as to completeness.

4.2.2 If the material which has been issued in accordance with 4.2.1 above, is not used, it may be returned to Stores and accepted and tagged by the Stores Supervisor using the same control as utilized originally in connection with items from off-site provided that:

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- a. Identification to the Purchase Order and Certified Material Test Reports has been maintained.



- b. It is accompanied by a completed Material Credit Form, Figure 11.

NOTE: Control and issuance of welding materials is further covered in Section 5.

5. WELDING QUALITY ASSURANCE

5.1 Welding Material Control

5.1.1 Welding material purchased for use on Code and safety-related systems at the Station complies with ASME Section III requirements and is controlled throughout its use at the Station. The weld filler material to be used on a job is specified in the Welding Procedure. Upon acceptance of welding electrodes or rod by the Station Stores Supervisor; Station Quality Control and the Quality Assurance Engineer or Inspector, certification data is placed with the Purchase Order and is forwarded to the Office Supervisor. Any lot of weld rod whose complete identification is lost or destroyed before being issued, is immediately assigned to Maintenance for control and use in training or application where ASME and AWS Codes are not applicable; ovens are identified and maintained by the Maintenance Department to be used only for these electrodes. The ovens are locked and under control of the Master Mechanic, who reports to the Maintenance Assistant Superintendent. Welding rods in the shop, whose identity is lost will also be segregated and controlled by the Master Mechanic to prevent use in ASME Code or safety-related work.

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5.1.2 Each full container of electrodes and bare wire is stored in the main storeroom. Only



identifiable, traceable material is issued for safety-related and ASME Code work. Electrode stabilizing ovens are maintained in the Station storeroom by the Stores Supervisor. The ovens are held at the temperature recommended by the manufacturer and have an instruction sheet attached indicating the required temperature setting and other special requirements. A log sheet is provided for daily recording of time and date and the temperature of the ovens. Separate ovens in the storeroom are designated for carbon steel electrodes and for stainless electrodes. The Station Quality Control Inspector and the Quality Assurance Engineer or Inspector verify by on-the-job checking and review of the documentation that only electrodes with proper certification are used on safety-related or ASME Code work.

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5.1.3 Welding electrodes and other filler material used in welding processes are issued to Maintenance personnel upon receipt by the Stores Supervisor of a completed Material Request Form. Completed Material Request Forms will be approved by Maintenance supervision.

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5.2 Qualification of Weld Procedures and Welders

5.2.1 Welding Procedure Specifications such as the examples in Figures 12a and 12b are prepared by the Nuclear Station Maintenance Department personnel and are reviewed and approved by the Manager of Quality Assurance and the Station Nuclear Engineering Manager and approved prior to issuance by the Maintenance Manager Nuclear Stations. Procedure Qualification Testing in accordance with ASME Section III and IX is performed by the Operational Analysis Department (OAD) of Commonwealth Edison Company or a qualified independent testing agency.



The actual Welding Procedure Specification qualification is performed at the Commonwealth Edison Company Station, or at the weld training center for a Station, first requiring the new procedure. Upon acceptance of test results, the Operational Analysis Department formally transmits the results to the Staff Engineer-Mechanical Maintenance (Production Department) who approves and issues ASME Form QW-483, Figures 12e and 12f, to document a qualified and proven procedure. Subsequently, the Commonwealth Edison Company Nuclear Stations Maintenance Department issues the new Welding Procedure Specification for incorporation into the Special Process Procedures Manual after approval by the Station Nuclear Engineering Manager, Maintenance Manager, Nuclear Stations and the Manager of Quality Assurance. The Welding Procedure Specification and qualification of the procedures shall be submitted to the Authorized Inspector for review.

5.2.2 Personnel qualification is accomplished in accordance with ASME Section III and witnessed by the Station Quality Control Supervisor or designee. Required destructive and nondestructive examinations are accomplished by the Operational Analysis Department or an approved Independent Testing Agency. Upon satisfactory completion of test results and the review and approval by the Nuclear Stations Maintenance Department ASME Form QW-484, Figure 13, is completed by the Staff Engineer Mechanical Maintenance (Production Department) to document qualification of the individual. The Maintenance Assistant Superintendent is responsible for keeping a log of records covering qualification for each welder to the requirements of Section III. The foreman for the job is responsible for checking this log prior to performing Code work to determine that the individual (welder) is qualified. These qualification documents are submitted to the Authorized Inspector for review.

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5.3 Weld Inspection

- 5.3.1 Inspection points during welding are included in the Maintenance/Modification work package for individual jobs. Upon completion of the portion of the weld performed by the welder, the welder shall lightly stamp his identification adjacent to all permanent welded joints made by him, at three foot intervals or less. The identification stamp shall be a low stress stamp.

As an alternative, a record shall be kept of permanent welded joints of a component and of the welders used in making each of the joints. The method of providing such traceability shall be indicated on the Traveler.

The results of inspection are recorded on the Weld Inspection Record, Figure 14, for each joint by the Station Quality Control Supervisor.

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- 5.3.2 The Station Quality Control Supervisor will maintain surveillance of welding operations for compliance with the essential and nonessential variables stated in the applicable welding procedure. Also, the Quality Assurance Engineer or Inspector reviews, monitors and audits welding operations, as well as, all other job activities.

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6. NONDESTRUCTIVE EXAMINATION

6.1 Qualification and Testing of Personnel and Procedures

- 6.1.1 Procedures for nondestructive examinations performed by Commonwealth Edison Company are prepared in writing and approved and qualified



by a Level III Examiner in the Operational Analysis Department (OAD). Also, the Manager of Quality Assurance reviews these procedures. Details of procedure qualification shall be described and will be proven by actual demonstration to the satisfaction of the Authorized Inspector. The comprehensive NDE procedures for ordinary use are contained in the Commonwealth Edison Company Special Process Procedures Manual. The special use NDE procedures are retained at their respective Generating Station.

- 6.1.2 Commonwealth Edison Company personnel evaluating nondestructive examination results are qualified and certified as Level II or III in accordance with SNT-TC-1A and the Code. Personnel are selected from the Operational Analysis Department and other departments such as Quality Assurance, Station Construction, Production or Engineering, dependent upon the test being evaluated and individual qualifications. A qualified Level III Examiner in the Operational Analysis Department is responsible for examining and qualifying Commonwealth Edison Company personnel performing nondestructive examinations. The Operational Analysis Manager of the Operational Analysis Department is responsible for training and the qualification of the Level III Examiner. Training of personnel is according to a planned, written program for NDE under the surveillance and direction of the Commonwealth Edison Company Level III Examiner. Records of qualification are maintained in the Operational Analysis Department under the direction of Level III Examiner.

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6.2 Status of Nondestructive Examination

- 6.2.1 The status of the inspection as to acceptability of the required nondestructive testing is recorded on the applicable form. (See Figures 14, 15, 16, 16a and 17.) Additionally, the inspection status is recorded on the Weld Inspection Record.



6.2.2 When an outside contractor is utilized for nondestructive examination, Commonwealth Edison Company audits its performance in accordance with Quality Procedures 9-1, 18-1 or 18-51. For all Code work, the contractor is required to conform with the requirements of ASME Section III and SNT-TC-1A as stated in the procurement documents. Written procedures by contractors shall be approved by a Level III Examiner employed by Commonwealth Edison Company and shall be retained in the Station permanent central files. NDE inspection reports and personnel records shall be reviewed and accepted by the Quality Control Supervisor and the Quality Assurance Engineer or Inspector and be maintained in Commonwealth Edison Company files.

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6.3 Qualification of Equipment

6.3.1 The Operational Analysis Department Level III Examiner is responsible for the selection and testing of NDE equipment. Equipment qualification requirements are contained in the Commonwealth Edison Company Special Process Procedures Manual.

7. QUALIFICATIONS OF GAUGES AND MEASURING EQUIPMENT

7.1 Means of Recording and Testing

7.1.1 The Maintenance Assistant Superintendent and the Master Instrument Mechanic maintain a master list of measurement and test equipment and instruments that require calibration with standards traceable to National Standards or other recognized standards when National Standards do not exist. The Operational Analysis Department is responsible for maintenance of calibration records. Also for the inspection and testing equipment which are calibrated at the station, calibration records shall be maintained by the department performing the calibration. These records are available for the Authorized Inspector's review. Inspection and testing equipment utilized for acceptance measurements shall be identified by serial number in the work package. Calibration and

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control of measurement, test equipment and instruments are conducted in accordance with Commonwealth Edison Company Quality Procedures 12-1, 12-2, 12-51 and 12-52. For each piece of equipment, the date of last calibration and the due date of next calibration shall accompany the piece of equipment at the time of calibration and shall remain with the equipment until the next calibration. These items shall be identifiable by use of tags or stickers.

7.1.2 All pressure gauges used in ASME pressure testing shall be calibrated against a standard dead-weight tester or a calibrated master gauge prior to each test or series of tests. A series of tests is that group of tests, using the same pressure test gauge or gauges, which is conducted within a period not exceeding two weeks.

7.1.3 When discrepancies in inspection or testing equipment are found during calibration, the Maintenance Assistant Superintendent or Master Instrument Mechanic shall determine what corrective action is required and the Quality Control Supervisor shall review and approve the corrective action. Materials, fabricated items and components previously checked (since the previous valid calibration) with equipment which is out of calibration shall be considered unacceptable and be treated as a nonconformance per Section 11. The Quality Assurance Engineer or Inspector shall review and approve corrective action.

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8. HEAT TREATING

8.1 Description of System

8.1.1 Post-weld heat treating is normally performed by qualified outside contractors. Contractor performance is audited by



Commonwealth Edison Company in accordance with Quality Assurance Procedures 9-1 and 18-1. The Station Quality Control Supervisor and the Quality Assurance Engineer or Inspector review and approve records associated with the heat treating operation prior to acceptance. In those cases where Commonwealth Edison Company performs heat treating on ASME or safety-related material, it shall be performed in accordance with written procedures approved by the Station Nuclear Engineering Manager, approved by the Manager of Quality Assurance and approved and issued by the Nuclear Stations Maintenance Department as part of the Special Process Procedures Manual. These procedures shall include the method of calibration of heat treating equipment, and the records required for the heat treating process. For ASME Code work, the time and temperature records shall be submitted to the Authorized Nuclear Inspector for review. For material requiring impact tests, the Maintenance Assistant Superintendent shall be responsible for determining the accumulative heat treat time and documenting same.

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9. DOCUMENTATION

9.1 System for Acquiring Final Documentation

9.1.1 Station Quality Control and Quality Assurance personnel verify on the Final Documentation Checklist that the complete set of all the completed procedures, certification data, NDE results, etc., that were required to repair, fabricate and install the items specified in the Maintenance/Modification work package are in the package and in accordance with the ASME Boiler and Pressure Vessel Code. All forms used shall indicate the appropriate ASME Section III Class. After review by the Authorized Nuclear Inspector, the document package is transmitted to the Station Office Supervisor for filing and retention in the Station

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records for the life-of-the-plant. Where Commonwealth Edison Company has contracted for the fabrication or repair, the qualified contractor is responsible for the final documentation package. However, upon the completion of the required testing, the complete documentation package is submitted to the Station for review and acceptance. Upon completion of the review and acceptance by Quality Control and Quality Assurance personnel, the documentation package is forwarded to the Station Office Supervisor for filing and retention for the life of the plant.

9.2 Checklist of Final Documents

- 9.2.1 For each contract involving ASME Section III and safety-related items, a checklist of final documents required is prepared by the contractor or Commonwealth Edison Company, or its Architect Engineer, as applicable, and shall include, such as, ASME Section III Data Reports, specifications, drawings, production travelers, maintenance procedures. The checklist includes spaces to indicate the Authorized Nuclear Inspector review. For modification work performed by the Station, a completed and a blank checklist form are shown in Figures 23 or 23-1.

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9.3 Submittal of Data Reports

- 9.3.1 Upon completion of each ASME Section III work project, ASME Data Reports shall be properly filled-out and signed by the Maintenance Assistant Superintendent or his alternate and then submitted to the Authorized Nuclear Inspector for review and signature. (See Par. 10.5.1)

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A copy of the design specification shall be made available at the manufacturing site before fabrication begins. In addition, the Design Report and certification indicating that the Design Report has been reviewed by the Owner and that it does satisfy the requirements of the

design specification shall be made available to the Authorized Nuclear Inspector at the manufacturing site and a copy, plus the certified Design specification and Data Reports, shall be filed at the station and made available to the Authorized Nuclear Inspector and the enforcement authorities (Superintendent of Boiler & Pressure Vessel Safety Office of the State Fire Marshall, State of Illinois) having jurisdictional authority over the station installation before the components or appurtenances are placed in service. The ASME Data Reports will indicate those cases where modifications have been performed to an existing system or component versus a completely new installation. Upon review, acceptance and signature of the ASME Data Reports by the Authorized Nuclear Inspector, the Authorized Nuclear Inspector authorizes the application of the appropriate stamp to the completed component part or appurtenance.

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10. AUTHORIZED NUCLEAR INSPECTOR

10.1 Relationship In-Plant

10.1.1 The Authorized Nuclear Inspector's primary contact is with the Station Superintendent and/or the Technical Staff Supervisor, with access to the Quality Assurance Engineer or Inspector. The Authorized Nuclear Inspector shall have free access to Commonwealth Edison Company facilities at any time while work on the item is being performed during the period of assembly and testing within the limitations of station safety, health and security regulations. He shall be provided ample time to insert his hold points, prior to start of work, in the Maintenance/Modification work package relating to Section III Code work. The Authorized Nuclear Inspector will notify the Station Superintendent or Technical Staff Supervisor of any problem and concur in the resolution of the problem.

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10.2 Documents Available to the Authorized Nuclear Inspector

10.2.1 The Authorized Nuclear Inspector shall be afforded full access to any procedures, specifications, drawings and design specifications and other documents and requirements involved in ASME Section II work. Also a copy of the Corporate Quality Assurance Manual shall be made available to the Authorized Nuclear Inspector.

10.3 Choosing of Hold Points

10.3.1 The Authorized Nuclear Inspector shall be kept currently informed on relevant aspects of the Maintenance/Modification work package covering work involving ASME Code. He shall be supplied a review copy by the Technical Staff Supervisor who shall review the work with him when in the rough draft and planning stage. The Authorized Nuclear Inspector is then afforded the opportunity to enter his hold points. During the preparation of the final issue of the work package, the Station Quality Control Supervisor assures that the Authorized Nuclear Inspector's hold points are included.

10.4 Special Processes and the Authorized Nuclear Inspector

10.4.1 All detailed procedures including procedure qualifications are available for review by the Authorized Nuclear Inspector prior to their use in ASME Section III work. Personnel files are open to the Authorized Nuclear Inspector. He may require requalification of either procedure or personnel if specific reason exists to doubt the validity of test results.

10.5 Checklist of Final Documents and Data Reports

10.5.1 When all of the documents identified on the Final Documentation Checklist have been prepared as required by Section 9 of this Manual, the entire package shall be made



available to the Authorized Nuclear Inspector. When the Authorized Nuclear Inspector is satisfied, |12 he shall certify the Data Reports by signature and authorize the application of the appropriate nuclear stamp by the Quality Control Supervisor.

10.6 Facilities

10.6.1 The Station Superintendent shall provide adequate facilities including a drawer of a file cabinet and a desk for the Authorized Nuclear Inspector's use. |12

11. NONCONFORMITIES AND CORRECTIVE ACTION

11.1 Nonconformances

11.1.1 Examples of nonconformance include: nonconformance to ASME Code, physical defects, test failures, out-of-calibration, inadequate documentation or deviations from specifications, drawings and procurement requirements or from prescribed processing and inspection or test procedures.

11.2 Inspection Hold System

11.2.1 Nonconformances found during receipt inspection are documented by Quality Control personnel on a Discrepancy Record, Figure 18. The nonconforming part(s) is tagged with a Quality Assurance "Hold" tag, Figure 19, by or at the direction of Quality Control personnel for the Quality Assurance Engineer or Inspector, and moved by Storeroom personnel to a segregated area (size permitting) pending disposition.



11.2.2 Nonconformances found during fabrication or installation work are documented and resolved in one of two ways:

- a. If an approved repair procedure exists (e.g., welding) that nonconformance is documented on the Weld Inspection Record, Figure 14. Authorized Nuclear Inspector review is required prior to starting the weld repair. The repair is performed and subsequent reinspection and acceptance of the repair by the Quality Control Supervisor and Quality Assurance Engineer or Inspector is documented on the original Weld Inspection Record. (See Par. 11.4.1 for Authorized Nuclear Inspector Acceptance) |14
- b. When a nonconformance cannot be reworked to achieve conformance, a Discrepancy Record (DR) is initiated by the involved supervisory person. The nonconforming part is tagged by the DR originator with a Quality Assurance "Hold" tag, at the direction of Quality Control and Quality Assurance personnel for the Quality Assurance Engineer or Inspector, removed from the work area (if practical) and held until disposition is received and approved by the Station Quality Control Supervisor and Quality Assurance Engineer or Inspector. |14

11.3 Resolution

- 11.3.1 Discrepancy records are reviewed and dispositioned at the Station by the Technical Staff Supervisor, Station Quality Control Supervisor, and the Maintenance Assistant Superintendent or Master Instrument Mechanic. |14

If unanimous agreement cannot be reached between these Parties, the matter shall be referred to the Station Superintendent for resolution. The Station Superintendent will resolve the discrepancy by utilizing station



personnel. If additional expertise is needed, off-site personnel such as the Authorized Inspection Agency, Station Nuclear Engineering Department, Production Department, Operational Analysis Department or Quality Assurance Department will be solicited for assistance with technical and quality items.

The agreed upon disposition and suggested corrective action shall be submitted by the Maintenance Assistant Superintendent or Master Instrument Mechanic to the Quality Control Supervisor for review sign-off, to the Technical Staff Supervisor and the Quality Assurance Engineer or Inspector for approval and, where the ASME Code is involved, to the Authorized Nuclear Inspector for review. 13

Copies of the Discrepancy Records pertaining to ASME Section III and safety-related items will be sent to the Station Nuclear Engineering Department for review and acceptance of the disposition. The Authorized Nuclear Inspector shall be notified prior to work being performed, concerning discrepancy records that pertain to fabrication or installation work to ASME Section III requirements and a copy of these records shall be available to him at the Station, and documented in the Station Traveler. 13

11.4 Return to Production

11.4.1 When the discrepancy is satisfactorily resolved, an amendment is attached to the Station Traveler by the Maintenance or Master Instrument Mechanic per Section 4 of this document. In those cases that the disposition is "scrap," the Quality Control Supervisor and the Quality Assurance Engineer or Inspector has the Quality Assurance "Hold" tag replaced with a Quality Assurance "Reject" tag, Figure 20, for the Quality Assurance Engineer or Inspector who verifies disposition compliance. Upon satisfactory 13



solution of corrective action, Maintenance Supervision shall sign Part 3 of the DR, and obtain sign-off review by the Quality Control Supervisor and, if applicable, obtain Authorized Nuclear Inspector release followed by review and approval by the Technical Staff Supervisor, the Station Superintendent and the Quality Assurance Engineer or Inspector. Upon acceptance of such action, the Station Quality Control Supervisor and the Quality Assurance Engineer or Inspector sign-off the applicable step of the revised Station Traveler. After sign-off, the Quality Assurance "Hold" tag is removed and work again progresses in accordance with the next step in the original Station Traveler.

12. AUDIT

12.1 Audit System

- 12.1.1 The adequacy and implementation of the Station Quality Assurance Program for maintenance, repairs, modifications, in-service inspections and Stores activities are verified by periodic, pre-planned audits including Management Assessments as described in Section 1.2.1a of this Manual. The station Quality Assurance Engineer or Inspector, assigned from the Manager of Quality Assurance's Office, is responsible for conducting continuous surveillance of ASME Code and safety-related material, parts and components and for conductance of audits and reporting of results to responsible management including the Station Superintendent, Manager of Quality Assurance, Division Manager-Nuclear Stations, Quality Assurance Supervisor and the Vice President of Nuclear Operations.

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The following types of audit are performed:

- a. System Audits - audits of quality systems including: methods, procedures, instructions, tests, examinations, records, documentations and practices established to control and verify activities that affect quality.
- b. Product Audits - audits the effectiveness of inspections and tests that are specific to the receipt, fabrication, installation, construction, testing and operation of an item.

A schedule of audits to be conducted at the Station is prepared and maintained by the Station Quality Assurance Engineer or Inspector.

Follow-up audits are scheduled and conducted to assure that deficiencies or adverse conditions previously identified are corrected. Copies of these scheduled audits shall be transmitted to the Station Superintendent and the Manager of Quality Assurance. The Quality Assurance Supervisor (Maintenance) will refer the items found uncorrected at a follow-up audit or survey to the Station Superintendent and the Manager of Quality Assurance for resolution. The audit schedule is reviewed and approved semi-annually by the Quality Assurance Supervisor (Maintenance). An Audit Log, Figure 21, indicating assigned number, title, initiation date, re-audit and follow-up completion is maintained by the Quality Assurance Engineer or Inspector.

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The format of the audit checklist is shown in Figure 22. The requirements of audits and independent outside reviews and operational audits are described in Commonwealth Edison Company Quality Procedures 18-51 and 18-52.



The audit reports are filed at the Site
and made available for review by the
Authorized Nuclear Inspector

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(End)

COMMONWEALTH EDISON COMPANY QUALITY ASSURANCE MANUAL TRANSMITTAL

To all CECo Quality Assurance Manual Holders:

Effective Date

REMOVE the following pages from your controlled copy of the CECo Quality Assurance Manual. **INSERT** the new pages as indicated. **SIGN** this transmittal form in the space provided for Manual holder below. **RETURN** this signed sheet along with the superseded pages before _____ to:

Mr. G. F. Marcus
Director of Quality Assurance
(Engineering/Construction)
Quality Assurance Department
Room 922 Edison Building

If you have any questions or comments, please list them in the space provided below.

W. J. Shewski
Manager of Quality Assurance

<u>MANUAL NO.</u>	<u>MANUAL HOLDER-SIGNATURE</u> (If new holder, please advise Q.A.)	<u>DATE</u>
-------------------	---	-------------

<u>DOCUMENT</u>	<u>REMOVE/REV. DATE</u>	<u>INSERT/REV. DATE</u>
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- NOTE: 1. Acceptance shall be obtained from the Authorized Inspection Agency Inspection Specialist* for revisions to the Station Quality Assurance Manual prior to issuance.
2. Revisions requiring training are indicated above by *.

REQUEST FOR PURCHASE -
 NUCLEAR GENERATING STATIONS
 C.E. CO. 86-5024(S) 2/80

SAMPLE

ITEM CL.	VENDOR NUMBER	C.C.
786	70420	9

ORDER	<input checked="" type="checkbox"/>	REQUISITION NO.	2057
VIA.	<input type="checkbox"/>	P.O. and REL. NO.	N/A
	<input type="checkbox"/>	SMALL P.O.	N/A

DATE 7-30-74

VENDOR Pavlik Company
554 Green Bay Road Kenilworth, Illinois 60043

REQUESTED BY R. Spear
 EST. COST \$504.00
 CHARGE TO: 004
34637-2
 DATE REQUIRED 11-30-74

TO BE USED FOR: Establish 1 year supply bonded stock welding rod
for Units 1 & 2 Quad Cities

February 20, 1980
 (Revision 8)

ITEM NO.	QUANTITY REQUIRED	DESCRIPTION	ASME RELATED	SAFETY RELATED	STORES ITEM NO.	SCHED. REPAIRS	NEW ITEMS									
							FOR STOCK - TO BE CODED									
							SPARE PARTS	MATL	SUPP.	MIN. QUAN.	MAX. QUAN.					
1	800	1 lbs. Welding Electrodes, coated, type MIL-7018, E7018, size 3/32x12 in long, 8 lb. moisture cans, McKay No. 7018 QUALITY ASSURANCE REQUIRED: ASME Spec. SFA 5.1, 5.4, 5.5 or 5.9, Bonded Stock, double tagged, identified by Heat No. and Lot No., Certify conformance to spec. & grade actual chemical analysis, tensile and impact properties as deposited.		YES	N/A	N/A	N/A	N/A	N/A	N/A						
APPROVED BY <i>K. L. Grassman</i>		DEPT. HEAD B.W.		APPROVED BY <i>F. Huger</i>		DEPT. HEAD B.W.		APPROVED BY <i>D. F. Thayer</i>		DEPT. HEAD B.W.		APPROVED BY <i>R. A. Lampert</i>		DEPT. HEAD B.W.		DATE 7-30-74
DATE RECEIVED			PURCHASE ORDER NO.			STOCKMAN			DATE							

FIGURE 3a

SAMPLE

Commonwealth Edison Company



PURCHASE REQUISITION
ORIGINATING DEPT. COPY
86-5321 (9)2/75

ITEM CLASS 786	VENDOR NO. 70420	C.C. 9	ITEM 1	FUNCT. OR ORDER 004	SUB.
REQUISITION QC 2057	REQUESTED BY R. Spear	I. A. P			
TO BE USED FOR Establish 1 year supply bonded stock welding rod for Quad Cities					

SHIP TO
COMMONWEALTH EDISON CO.
Quad Cities Nuclear Power Station
3 Miles north of Cordova off Rt. 84
Cordova, Ill. 61242

P. O. LINE ITEM	QUANTITY	DESCRIPTION	C. E. ITEM NO.
	800	Lbs. Welding Electrodes, coated, type MIL 7018, E7018, size 3/32 x 12 in. long, 8 lb moisture tight cans, McKay No. 7018 QUALITY ASSURANCE REQUIRED: ASME Spec. SFA 5.1, 5.4, 5.5, or 5.9, Bonded Stock, double flag tagged, Identified by Heat No. and Lot No. Certify conformance to spec. & grade actual chemical analysis, tensile and impact properties as deposited.	

DEPARTMENT MEMO

ASME CLASS 1 SAFETY RELATED

MAIL INVOICE IN DUPLICATE TO:

Commonwealth Edison Company
POST OFFICE BOX 767 * CHICAGO, ILLINOIS 60690

Pavlik Company
554 Green Bay Road Kenilworth, Il. 60043

Q.A. Dept. *[Signature]*

DELIVERY REQUIRED 11-30-74	ORIGINATORS EST. COST \$ 504.00	ORIGINATORS AUTHORIZED APPROVAL <i>R. L. Kalivianakis</i>	PURCHASING DEPARTMENT APPROVAL
	REQUISITION DATE 6-30-74	AUTHORIZED APPROVAL - EXECUTIVE	PURCHASING EXECUTIVE APPROVAL

ITEM	DATE	P. O. NO.	VENDOR	REMARKS
N/A	N/A	N/A	N/A	N/A

RECEIVING DEPT. COPY		Commonwealth Edison Company		NUMBER SAMPLE	
ITEM NO.	VENDOR NO.	C.C.	QUANTITY	ESTIMATE COST	
786	ASA BELLEVUE	O	52123	94	
REQUISITION	RECEIVED BY				
QC 4748	Spear/cae	P			
TO BE USED FOR			TOTAL \$ 300 00		
replace stock					

725408
DATE
APR 05 1978

12-15-78
(Revision 3)

96205 SHIP TO
COMMONWEALTH EDISON CO.
Quad-Cities Nuclear Power Station
3 Miles North of Cordova Off Rt 84
Cordova, IL 61242

WELDSTAR CO
1750 MITCHELL RD.
AURORA, IL. 60504

SHIP VIA	DELIVERY REQUIRED	SHIPMENT PROMISED
	EARLIEST	
	NORMAL	
TERMS OF PAYMENT	YOUR QUOTATION	BUYER
PER INVOICE		J. J. BEVEN
		TEL. NO. (312) 294-3408

Q. LINE	QUANTITY	DESCRIPTION	C. E. ITEM No.
1.	400	Welding electrode, AWS E7018, ASME SFA-5.1, mild steel, size 3/32 in. dia. Tested-ASME Sec. III. Packaged in moisture tight cans. LB. Material: E7018 electrodes	611.A00 ✓
<p>Q.A. Documentation Required:</p> <p>E7018 electrodes shall conform to ASME Section II, Part C, Spec. SFA 5.1, 1977 Edition, Current Addenda. Certified Material Test Reports shall be furnished in accordance with the requirements of ASME Section III, NCA 3867 and NB-2400 1977 Edition, Current Addenda and shall include the following test results and information:</p> <p>(Cont'd. on page 2)</p>			

CARRIER	PRO. No.	ADD./CLAIM No.
QTY. REQD.	UNIT	
400	LB	4-11-78

ORDER COMPLETE

FIGURE 3c
Page 1 of 3

DEPARTMENT MEMO
Weldstar Co.
SAFETY RELATED (GJT, JRF) (QA REQ.)
ASME CLASS 1
QA as shown - yld yds

Commonwealth Edison Company
POST OFFICE BOX 767 CHICAGO, ILLINOIS 60690

Q.A. Dept. *[Signature]*

INVOICES TO BE MAILED TO ABOVE ADDRESS

RECEIVED AND CHECKED BY
[Signature]
APPROVED

QUANTITY	DESCRIPTION	C.C. ITEM NO.
	<p>A.) Chemical analysis of undiluted weld metal. (Deposit chemistry) (C, Cr, Mo, Ni, Mn, Si, P, S, V, Cu).</p> <p>B.) Radiographic Test.</p> <p>C.) Fillet Weld Test.</p> <p>D.) All-Weld-Metal Tension Test. Specimen to be tested as welded.</p> <p>E.) All-Weld-Metal Tension Test. Specimen to be tested after stress relieving at 1100°F - 1250°F for 8 hrs.</p> <p>F.) Charpy V-Notch Impact Test. All-Weld-Metal Specimens to be tested, as welded. Minimum V-Notch Impact requirement to be 20 ft-lb. at -20°F.</p> <p>G.) Charpy V-Notch Impact Test. All-Weld-Metal Specimens to be tested after stress relieving at 1100°F - 1250°F for 8 hrs. Minimum V-Notch Impact requirements to be 20 ft-lb. at -20°F.</p> <p>H.) Lot Number(s).</p> <p>I.) Documentation must reference purchase order number.</p> <p>Electrodes must be packaged in moisture tight containers.</p> <p>As required by the Nuclear Regulatory Commission, the Seller is hereby notified that the provisions of Nuclear Regulatory Commission Regulation 10 CFR Part 21 apply to this purchase order.</p>	

CONTINUED ON PAGE

312-15-78
(Revision 3)FIGURE 3c
Page 2 of 3

16/5

3
3

REQUISITION NO.
OC-4748

NUMBER

725415

QUANTITY	DESCRIPTION	C.E. ITEM NO.
	<p>Quality assurance documents, as specified herein are an integral part of this order. Two copies of specified documents, referencing the purchase order number, are required with the shipment of material. Invoice payments will be withheld until documentation is received.</p>	

12-15-78
(Revision 3)

FIGURE 3c
Page 3 of 3

ITEM CLASS	VENDOR NO.	C. C.	ITEM	FUNCT. OR ORDER	CODE	EST. AMT. CHANGE
786	70420	9	1	34637	2	\$
REQUISITION NO.	REQUESTED BY	I. A.				
QC 2057 A	R. Spear/Garperl	P				
REASON FOR CHANGE Matl. comes in 50 lb. cans, vendor overshipment, welding rod bonded stock supply for UI&2 QC						
(INDICATE ADD OR DEDUCT)						
TOTAL						\$

REFER TO OUR PURCHASE ORDER NUMBER

719547
DATED
6-30-74



DATE OF THIS CHANGE

Pavlik Co.
554 Green Bay Rd.
Kenilworth, Il. 60043

BUYER:

P.O. LINE ITEM	<p>Please make the following changes on our Purchase Order 719547 dated 6-30-74.</p> <p style="text-align: center;">CONFIRMATION</p> <p>Increase quantity of item 1 from 800 lbs to 900 lbs, overshipment, Station will retain for scheduled repairs.</p> <p>Change est. cost from \$504.00 to 567.00</p>	C. E. ITEM No.
-------------------	---	----------------

DEPARTMENT MEMO ASME CLASS 1 SAFETY RELATED

ORIGINAL DELIVERY LOCATION Quad-Cities Nuclear Power Station

PURCHASING DEPARTMENT

Q.A. Dept. *[Signature]*

CHANGE ORDER REQUISITION DATE 8-30-74	ORIGINATOR'S AUTHORIZED APPROVAL <i>R. A. Kalivas</i>
PREVIOUS EST. P.O. COST \$ 504.00	EST. AMT. THIS CHANGE \$ +63.00
AUTHORIZED APPROVAL-EXECUTIVE	

Commonwealth Edison Company

CHANGE ORDER REQUISITION

SAM

Commonwealth Edison Company

POST OFFICE BOX 767 * CHICAGO, ILLINOIS 60690

REFER TO OUR
PURCHASE ORDER NUMBER

719547

DATED

6-30-74

DATE OF THIS CHANGE

9-30-74

Pavlik Company
554 Green Bay Road
Kenilworth, IL
60043

CHANGE ORDER

BUYER

Please make the following changes on our Purchase Order 719547 Dated
6-30-74

C. E. ITEM NO.

CONFIRMATION

Increase quantity of Item #1 from 800lbs to 900 lbs.
Change Cost from \$504.00 to \$567.00

611 A00

Material already received, overshipment,
Station will retain for scheduled repairs

FIGURE 3e Revision 3
12-15-78

Q.A. Dept. *[Signature]*

PURCHASING DEPARTMENT

ALL OTHER TERMS AND CONDITIONS OF THE
ORDER ARE TO REMAIN UNCHANGED

SAMPLE

STORES DEPARTMENT
REQUISITION CARD

611A00 LBS. WELDING ELECTRODE, TYPE
MIL-7018, E7018, SIZE 3/32 X 12 IN. LG.
8 LB. MOISTURE TIGHT CANS, MCKAY NO.
7018

PURCHASE DESCRIPTION

ASME CLASS 1



Item Class 786
Vendor No. 70420
CC 9

SAFETY-RELATED

Pavlik Company
554 Green Bay Road
Kenilworth, Il. 60043

[Signature]
QUALITY ASSURANCE
ENGINEER OR INSPECTOR

CODE DESCRIPTION

EMERGENCY RESERVE	BUYER	Gleason	LOCATION	QA Weld Cage
MINIMUM REQUIREMENTS	BY	DATE	UNIT COST	.63 lbs.
7018	RS	11/74	NOTES:	ASME spec. SFA 5.1, 5.4, 5.5, or 5.9 Bonded Stock, double flag tagged.

NOTES: Continued QA Requirements identified by Heat No. and Lot No., certify conformance to Spec. & Grade, Actual Chem. Analysis, Tensile and Impact Properties as deposited.

DATE	QUANTITIES				DATE REQ'D	FUNCTION NUMBER	REQUESTED BY	APPROVED BY	TO BE USED FOR	REQUISITION NUMBER
	ON HAND	USE	ON ORDER	TO ORDER						
7/30/74	0	50	0	300#	11/74	34637-2	Gamperl	<i>NJK</i>	Establish Stock	QC 2057

REQUISITION CARD

C. E. CO. 88-5070(S) 11-72

FIGURE 3f

Revision 2 March 21, 1975

Commonwealth Edison Company

SHIPMENT RELEASE



ITEM CLASS 392	VENDOR NO. 23130	C.C. 9	ITEM	FUNCT. OR ORDER 34747	SUB 10	ESTIMATED COST \$ 81 60
REQUISITION NO.	REQUESTED BY J. McGeachy					
TO BE USED FOR Stock						
QA Required						

P.O. NO.
500553
 RELEASE
2-77
 DATE

SHIP TO

COMMONWEALTH EDISON CO.

Crane Packing Co.
 6400 Oakton Street
 Morton Grove, IL 60053

Zion Gen. Station c/o Storekeeper
 101 Shiloh Blvd.
 Zion, IL 60099

SHOW 1 LINE ITEM FROM CONTROLLING PURCHASE ORDER	F.O.B. Morton Grove, IL	SHIP VIA	DATE REQUIRED E.N.
---	----------------------------	----------	-----------------------

QUANTITY	DESCRIPTION	STORES ITEM
132	Ring, Grafoil Packing 2PC CTN Union Carbide, 1.020/1.010 OD x .623/.618 ID x 3/16 THK EA	604A89
	CERTIFIED FOR NUCLEAR SERVICE TO CONTAIN LESS THAN 200 PPM CHLORIDE	
	Figure 3-g	
	May 12, 1978 (Revision 1)	

SIGNED

J. Smith



QUALITY RECEIPT INSPECTION

Safety Related	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
ASME Class 1	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
ANSI	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Other	None	

ITEM/TITLE <u>E7018 3/32" Coated Weld Electrodes received for storeroom stock</u>	DWG. NO. <u>N/A</u>	REV. <u>N/A</u>
	ITEM DESC. <u>E7018 3/32" Coated Weld Electrode</u>	
	SUPPLIER <u>Pavlik</u>	INSP. NO. <u>1</u>
	P. O. <input checked="" type="checkbox"/> SUBCONTRACT <input type="checkbox"/> NO. <u>719547</u>	ITEM NO. <u>1</u>
PREPARED BY <u>Terry L. Shaw</u> DATE <u>8/30/74</u>	WORK ORDER NO. <u>N/A</u>	INSP. BY <u>K. Houseman</u> DATE <u>9-1-74</u>
APPROVED BY <u>Dale Thayer</u> DATE <u>8/31/74</u>	CECo <input checked="" type="checkbox"/> SUPPLIER <input type="checkbox"/> CUSTOMER <input type="checkbox"/>	QTY. <u>900 lbs</u>
	APPLICABLE SPEC. <u>SFA-5.1, 5.4, 5.5, 5.5.9</u> REF. NO.	

CHAR. NO.	Engineer or Inspector INSPECTION CHARACTERISTIC	INSPECTION STATUS	COMMENTS/ADDITIONAL INFO.
1.	Chemical Analysis	Sat.	No Comments
2.	All Weld-Metal Tension Test	Sat.	No Comments
3.	Impact Property (V-Notch Impact)	Sat.	No Comments
4.	Dimensional Requirements for Fillet Welds	Sat.	No Comments
5.	Radiograph	Sat.	No Comments
	No other requirements		

ACCEPTED Fred Geiger DATE 9/2/74 ACCEPTED Dale Thayer 9/3/74
QUALITY CONTROL SUPERVISOR QUALITY ASSURANCE ENGINEER OR INSPECTOR

July 1979
FIGURE 4 Revision 9



Commonwealth Edison

RECEIVING INSPECTION NOTICE

SAMPLE

P.O. NO. 759547

SHEET 1 OF 1

DATE August 30, 1974

SUPPLIER Pavlik Company
Kenilworth, Illinois

P.O. LINE ITEM AND QTY.	CECO STORE CODE ITEM NO.	HEAT LOT, SERIAL NO., DRAWING/PART ITEM NO.	NOMENCLATURE	CHECKLIST						COMMENTS BY STOREKEEPER (REFERENCE HOLD TAG/HTG NO., DR NO.)	STATUS AND SIGN (ACCEPT, DISCREPANCY, HOLD, REJECT, ETC.)	DATE
				ITEM		DOCUMENTS		TRACE ABILITY				
				IDENT	CNFRM TO P.O.	CNDTN & QTY	CMPLT TO P.O.		ITEM OK			
1 900lbs.	611A00	Lot #2434472 Heat # 402K2211	E7018 3/32" Coated Weld Electrode	X	X	X	X	X	X	Material Received 3/30/74. Two copies of material certification con- formance to Spec and grade, actual chem. analysis, test report received with material.	Accept F. Faley	8/31/74
FIGURE 5 Revision 4 February 20, 1980												
											Accept Date: F. Faley 8/31/75 Quality Assurance Engineer or Inspector	

RECEIVED, CHECKED BY Ray Dimmig STORES SUPERVISOR

ACKNOWLEDGE DOCUMENTATION FILED F. Faley OFFICE SUPERVISOR

DATE 9-1-74

RETURN TO STORES

SAMPLE



DATE REC'D: 12-1-74	STATION TRAVELER	SHEET <u>1</u> OF <u>2</u>
DATE DUE: 12-18-74		REVISION: 0

SYSTEM: Off-Gas WR NO.: 98-74	DESCRIPTION Replace: Line 10 602A-6"-0	ASME CLASS <u>2</u> SAFETY-RELATED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
----------------------------------	---	---

DWG. NO: MS-400 SPEC. NO: X-0031 P. O. NO: NA	PREPARED BY: <u>D. Spivey</u> Date <u>12-2-74</u> APPROVED BY: <u>K. Grady</u> Date <u>12-4-74</u>	SOURCE INSP. REQ'D YES: <u> </u> NO: <u>X</u>
---	---	---

DEPT	OPR. NO.	OPERATIONS	Hold Point	Operator/Date	QC/Date	QA/Date	ANI/Date
QC	1	QC verify traceability of job materials					
QC	2	Record pipe heat Numbers/P.O. Numbers					
QC	3	Record fitting Heat Numbers/P.O. Numbers					
QC	4	Record weld filler metal Heat & P.O. Numbers					
Maint	5	Prepare V bevel dimensions on Joints 3, 4, 5, 6, 7 & 8 per Drawing MS-400					
QC	5a	QC verify Operation No. 5					
Maint	6	Perform fit-up on Joints 4,5,6 & 7					
QC	6a	QC verify fit-up under Operation 6	X				
Maint	7	Perform root pass welding on Joints 4, 5, 6 & 7 per welding procedure GS-1B, rev. 0					
QC	8	Have PT examination performed on root pass of joints 4, 5, 6 & 7 Special Process Procedure NDE 2-1-0, rev. 1					
Maint	9	Complete welding on Joints 4,5, 6&7 per welding procedure GS-1B, rev. 0					
QC	10	Have PT examination on final pass of Joints 4,5,6,&7 per Special Process Procedure NDE 2-1, Rev. 1					
OAD	11	Have Joints 4,5,6 & 7 radiographed per Special Process Procedure NDE 2-4-0					

HOLD POINTS INCLUDED:		
Quality Control Supervisor:	<u>F. Heiger/KS</u>	Date <u>12/5/74</u>
QA Engineer or Inspector:	<u>D. Thayer/KS</u>	Date <u>12/5/74</u>
Authorized Nuclear Inspector:	<u>W. Caldwell/KS</u>	Date <u>12/6/74</u>

SAMPLE



STATION TRAVELER (Continued)

SYSTEM: Off-Gas		DESCRIPTION			SHEET <u>2</u> OF <u>2</u>		
WR NO: 98-74		Replace Line 10 602A-6"-0			Revision: 0		
DEPT	OPR. NO.	OPERATIONS	Hold Point	Operator/Date	QC/Date	QA/Date	ANI/Date
ANI	11a	ANI review radiographs for Joints 4, 5, 6 & 7 for acceptability	X				
QC	11b	QC Supervisor verify	X				
QA	11c	QA Engineer or Inspector verify	X				
Naint Inst. Maint	12	Hydro-test Spool piece per Maintenance/Modification Procedure					
ANI	12a	ANI witness hydro-test for acceptability	X				
QC	12b	QC Supervisor witness hydro-test for acceptability	X				
QA	12c	QA Engineer or Inspector witness hydro-test for acceptability	X				

QC APPROVAL/DATE

AUTHORIZED NUCLEAR INSPECTOR
COMPLETION REVIEW/DATE

QA ENGINEER OR INSPECTOR
APPROVAL/DATE

FIGURE 6
(Sheet 2 of 2)

(Revision 8)



NUCLEAR WORK REQUEST



No. **200993**

EQUIPMENT NAME 1B Diesel Generator		UNIT 1	LOCATION 59 2TB	EPN IDG002	SYSTEM
PROBLEM/WORK REQUESTED Jacket water leaking into crank case. suspect wrinkle belly or gaskets					
REQUESTED BY Krawzak	/DATE 7-02-79	TEST REQUIRED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		BY: OP <input checked="" type="checkbox"/> TS <input type="checkbox"/> MM <input type="checkbox"/> EM <input type="checkbox"/> IM <input type="checkbox"/>	
DEPT. ASSIGNED MM IM EM OTHER		PT-11			
SHIFT SUP. APPR. Pruett	/DATE 7/2/79	TECH. SPEC REQ: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		3.15.2.B	
PRIORITY B 1	LOAD REDUCTION YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	UNIT OUTAGE SHORT REFUEL <input type="checkbox"/> HOT COLD <input type="checkbox"/>		<input type="checkbox"/> SPECIAL	
SAFETY RELATED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	RELIABILITY RELATED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	MODIFICATION YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	CODE WORK YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		
IF ALL FOUR NO'S. ARE CHECKED APPROVALS ARE NOT REQ'D.					
OPER. ENGR. APPR. Fuerst	/DATE 7-02-79				
MAINT. DEPT. Rafter	/DATE 7-02-79				
WORK INSTRUCTIONS: ROUTINE MAINT. <input type="checkbox"/> CRAFT CAPABILITY <input checked="" type="checkbox"/>					
WORK ANALYST Loeber					
MAINT. APPR. Bellanger	/DATE 7-02-79	PARTS CHECKED AND FOUND AVAILABLE <input checked="" type="checkbox"/>	PARTS ASSEMBLED IN STOREROOM UNDER THIS W.R. NO. <input type="checkbox"/>	JOB CODE	W.O. OR FUNCTION NO. 53189-4
Q.C. REVIEW Laureys	/DATE 7-02-79	ATTACHED DOCUMENTATION REQUIREMENTS TRAVELER YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		WORK TO BE CONTRACTED PORTION <input type="checkbox"/> ALL <input type="checkbox"/> P.O. NO. _____	
Q.A. VERIFY Rostkowski	/DATE 7-02-79	PROCEDURE <input checked="" type="checkbox"/> OTHER DG 001/3-4		REASON FOR CONTRACTING LOWER COST <input type="checkbox"/> EXPOSURE LEVELING <input type="checkbox"/>	
WORK ASSIGNED TO: MAINT. FOREMAN - Winstead		RED TAGS <input type="checkbox"/> DOC. CHK. LIST <input type="checkbox"/>		EXPOSURE <input type="checkbox"/>	
SCHEDULED START DATE 7/3/79		SPECIAL PART NO'S AND TOOLS USED		EST. ACT. 4 4	
SHIFT AUTHORIZATION TO START WORK Flowers		WORK PERFORMED Removed cylinder head, replaced all "O" rings, reassembled torqued and hydro head		TOTAL MNHRS 160 150	
Q.C. RELEASE Laureys		MAINT. FOREMAN COMP. Winstead		TESTS COMP. Stetkar	
APPROVED COMPLETION Stetkar		WORKMAN Larsen		WORK REQUEST PACKAGE COMPLETE Q.C. ENGR. Allen /DATE 7-17-79 Q.A. ENGR. OR INSP. Kuhner /DATE 7-23-79	

C.E. CO. 86-2228 (S) 11-78

MASTER COPY

Figure 7

August 28, 1979
(Revision 9)

ATTACHMENT A

STATION WORK REQUEST FLOW CHART

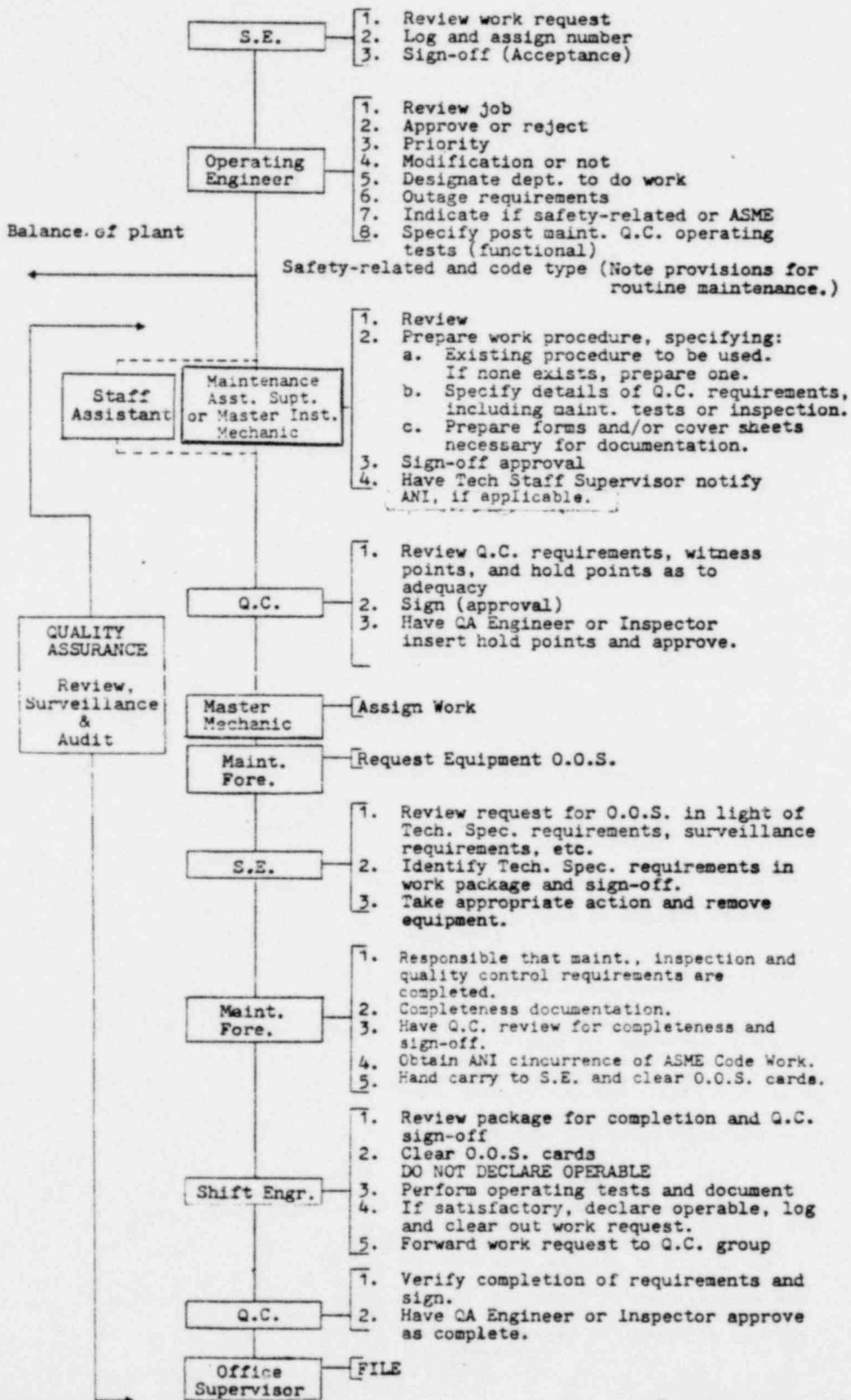


FIGURE 8

September 28, 1979
(Revision 10)

MAINTENANCE/MODIFICATION PROCEDURE

W.R.# _____

1. Special instructions or precautions: _____

2. **Describe work to be performed, and identify by revision and/or date, the applicable procedures/drawings/traveler/etc. to be used.

Prepared By: _____

Approved By: _____ Date: _____

Maint. Assist. Superintendent

Accepted By: _____ Date: _____

Quality Control Supervisor

Approved By: _____ Date: _____

Technical Staff Supervisor

Approved By: _____ Date: _____

Quality Assurance Engineer or Inspector

Authorized By: _____ Date: _____

Station Superintendent

**Attach additional pages as required

SAMPLE

STATION MATERIAL
REQUEST FORM

MATERIAL REQUEST STATION STOCK	PREPARED BY Kirkland	APPROVED BY Kirkland	WORK REQUEST NUMBER	CHARGE FUNCTION OR WORK ORDER NO. 54024	28812
	DATE 6/14/78	DATE 6/14/78			STOCK LOCATION
U. CO. 86-5089(S) 10-77					
QUANTITY ORDERED	DESCRIPTION	ITEM NUMBER	QUANTITY ISSUED	UNIT	
15	Welding Rod E70S2 3/32" Dia. to ASME Section III Class I	611A58	15	EA	
	Heat #065118 P.O. #212650				
ORDERED BY: Okraski		RECEIVED BY: Osmundson		ENTERED BY: Sdetz	
DATE 6/14/78		DATE 6/14/78		DATE 6/14/78	
					1 ACCOUNTING COPY

FIGURE 10

SAMPLE

MATERIAL CREDIT FORM
(Red on White)

MATERIAL CREDIT
STATION STOCK

PREPARED BY

APPROVED BY

CREDIT: WORK REQUEST NO.
FUNC/W.O. NO.

01594

DATE

DATE

34647-1D

STOCK LOCATION

C.E. CO. 86-5090(S) 7-78

QUANTITY RETURNED	DESCRIPTION	ITEM NUMBER	QUANTITY	UNIT
	Filler Ring, Part No. D 30686	123A00		
	Job No. 22690 Prod. Code 6690		1	each

FILLED BY:

J. Smith

DATE 12-20-74

RECEIVED BY:

R. Dimmig Stockman

DATE

APPROVED:

D. G. Clark / ELM
FOREMAN

DATE:

1 ACCOUNTING COPY

SAMPLE

COMMONWEALTH EDISON COMPANY

QW-482 WELDING PROCEDURE SPECIFICATION (WPS)

Page 1 of 4

Welding Procedure Specification No. ES-23 Date _____ Supporting PQR No. M 2463-74
 Revisions 2 12-6-76
3 7-21-77
 Welding Process(es) GTAW/ SMAW Type(s) MANUAL

<p>JOINTS (QW-402) Groove Design <u>SINGLE VEE OR SINGLE U</u> Backing: Yes <u> </u> No <u>X</u> Backing Material (Type) <u>N/A</u> Other _____</p>	<p>POSTWELD HEAT TREATMENT (QW-407) Temperature <u> </u> <u>N/A</u> Time Range <u> </u> <u>N/A</u> Other _____</p>
<p>BASE METALS (QW-403) P No. <u>1</u> to P No. <u>1</u> Thickness Range <u>1/16" TO .674"</u> Pipe Dia. Range <u>ALL DIAMETERS</u> Other <u>CAUTION: SEE NOTE 8</u></p>	<p>GAS (QW-408)* Shielding Gas(es) <u>ARGON</u> Percent Composition (mixture) <u>99% Pure</u> Flow Rate <u>15-20 CFH</u> Gas Backing <u>ARGON</u> Trailing Shielding Gas Composition _____ Other _____</p>
<p>FILLER METALS (QW-404) F No. <u>4 AND 6</u> Other _____ A No. _____ Other _____ Spec No. (SFA) <u>F4 (E1) - F6 (E18)</u> AWS No. (Class) <u>E1 (E-7018) - E6 (E-705-2)</u> Size of Electrode <u>3/32"</u> Size of Filler <u>1/16", 3/32" AND 1/8"</u> Electrode-Flux (Class) <u>N/A</u> Consumable Insert <u>SFA 5.18 PER FIG 3</u> Other <u>ELECTRODE (TUNGSTEN) 3/32", AWS A-5.12 CLASS ENTH-2.</u></p>	<p>ELECTRICAL CHARACTERISTICS (QW-409) Current AC or DC <u>DC</u> Polarity <u>STRAIGHT</u> Amps (Range) <u>70-150*</u> Volts (Range) <u>16-24*</u> Other <u>POLARITY: SMAW-REVERSE *SEE TABLE 1</u></p>
<p>POSITION (QW-405) Position of Groove <u>3</u> <u>ALL</u> Welding Progression <u>UPHILL</u> Other _____</p>	<p>TECHNIQUE (QW-410) String or Weave Bead <u>1st PASS - WEAVE</u> <u>BALANCE - STRINGER</u> Orifice or Gas Cup Size <u>3/8 I.D.</u> Initial & Interpass Cleaning (Brushing, Grinding, etc.) <u>AS-NECESSARY</u> <u>INITIAL: PER SPP 3-1-0, PARA 3.3.7.3</u> <u>INTERPASS: PER SPP 3-1-0, PARA 3.3.15.13</u> Method of Back Gouging <u> </u> <u>N/A</u> Oscillation <u> </u> <u>N/A</u> Contact Tube to Work Distance <u> </u> <u>N/A</u> Multiple or Single Pass (per side) <u>MULTIPLE</u></p>
<p>PREHEAT (QW-406) Preheat Temp. <u>60°F MIN.</u> Interpass Temp. <u>400°F MAX</u> Preheat Maintenance _____ Other _____</p>	<p>Multiple or Single Electrodes <u>SINGLE</u> Travel Speed (Range) _____ <u>N/A</u> Other _____</p>

OPERATIONAL DETAILS

- Edges of parts to be welded shall be prepared by machining or grinding per Figures 1 or 2.
- Before welding, the surface of the base metal within 2 inches of the edge preparation shall be smooth, clean and free of all foreign materials such as grease, oil, machine lubricants, marking crayon, dirt, chloride-bearing compounds, sulfur, lead, zinc and paint.
- Consumable insert shall be in accordance with Figure 3.

FIGURE 12a

May 12, 1978
 Revision 5

SAMPLE

COMMONWEALTH EDISON COMPANY

QW-482 WELDING PROCEDURE SPECIFICATION (WPS)

WPS No. ES-23
Rev. No. 3
Page 2 of 4

OPERATIONAL DETAILS (Con't)

4. Fit-up Consumable insert.
 - a. Tack weld insert to end of first pipe at approximately 2" intervals using very small tacks.
 - b. Tack welds joining the second pipe to insert should be in-between the first series of tacks joining the first pipe.
5. Weaving of passes shall be limited to 3 times welding rod size.
6. Finished weld should be approximately 1/16 inch above the surface of the adjacent base metal and shall be an even and smooth appearance.
7. Undercut at edge of weld shall be the minimum practical but in no case shall it exceed 1/32 inch and shall not encroach on the required section thickness.
8. Impact testing is required for ASME, Section III, Code related work on pipe or tube with nominal size 6 inch and larger *AND MATERIAL OVER 3/8" THICKNESS.*

TABLE 1, OPERATING PARAMETERS

<u>PASS</u>	<u>AMPS</u>	<u>VOLTS</u>	<u>WIRE SIZE</u>	<u>CUP</u>
ROOT	100-140	8-15	1/16"	3/8
ROOT	100-140	8-15	3/32"	3/8
ROOT	140-170	8-15	1/8"	3/8
2	70-120	18-22	3/32"	3/8
3 AND MORE	100-150	22-24	1/8"	

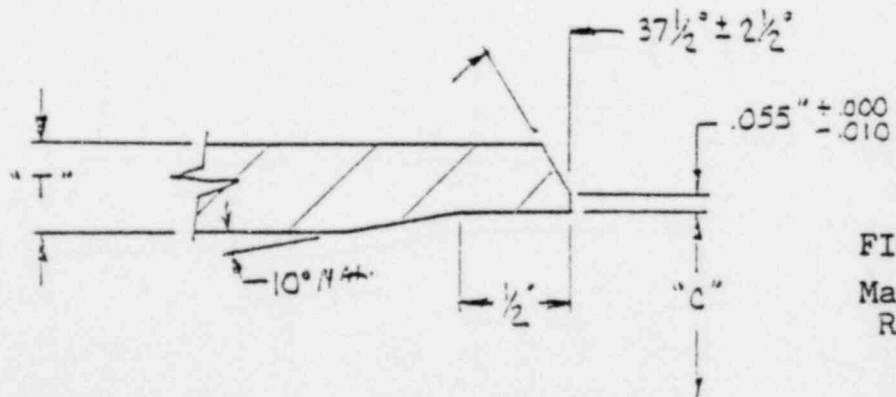


FIGURE 12b
May 12, 1978
Revision 7

Fig. 1 (SIZES WHERE "T" IS LESS THAN 1/4")

PREPARED BY: _____ DATE: _____
APPROVED BY: SWED: _____ DATE: _____
 SMD: _____ DATE: _____

SAMPLE

COMMONWEALTH EDISON COMPANY

QW-482 WELDING PROCEDURE SPECIFICATION (WPS)

WPS No. ES-23

Rev. No. 3

Page 3 of 4

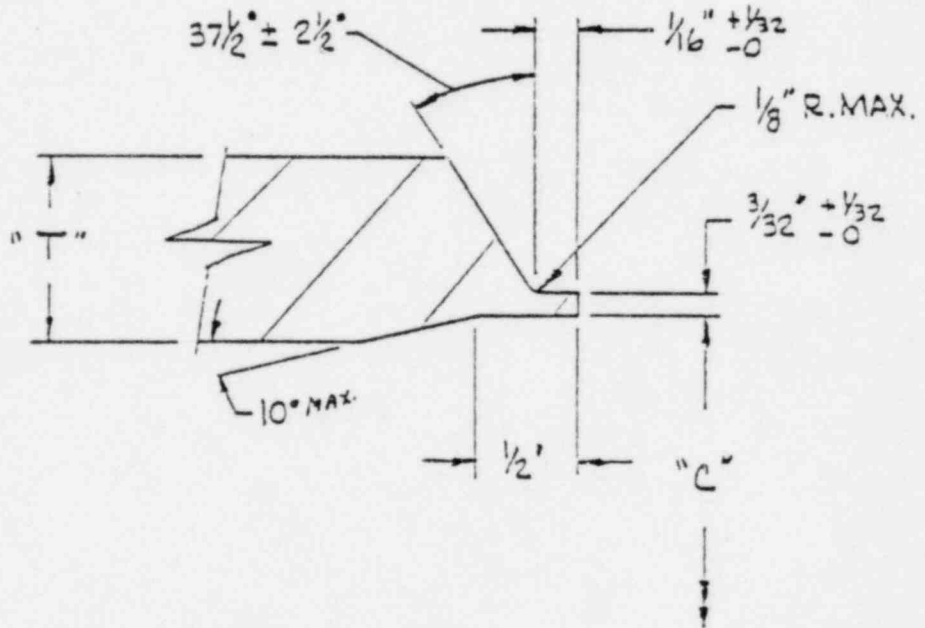


Fig. 2 (SIZES WHERE "T" IS $\frac{1}{4}$ " TO .674")

FIGURE 12c
May 12, 1978
Revision 6

PREPARED BY: _____ DATE: _____
APPROVED BY: SNED: _____ DATE: _____
RMD: _____ DATE: _____

SAMPLE

COMMONWEALTH EDISON COMPANY

QW-482 WELDING PROCEDURE SPECIFICATION (WPS)

WPS No. ES-23
Rev. No. 3
Page 4 of 4

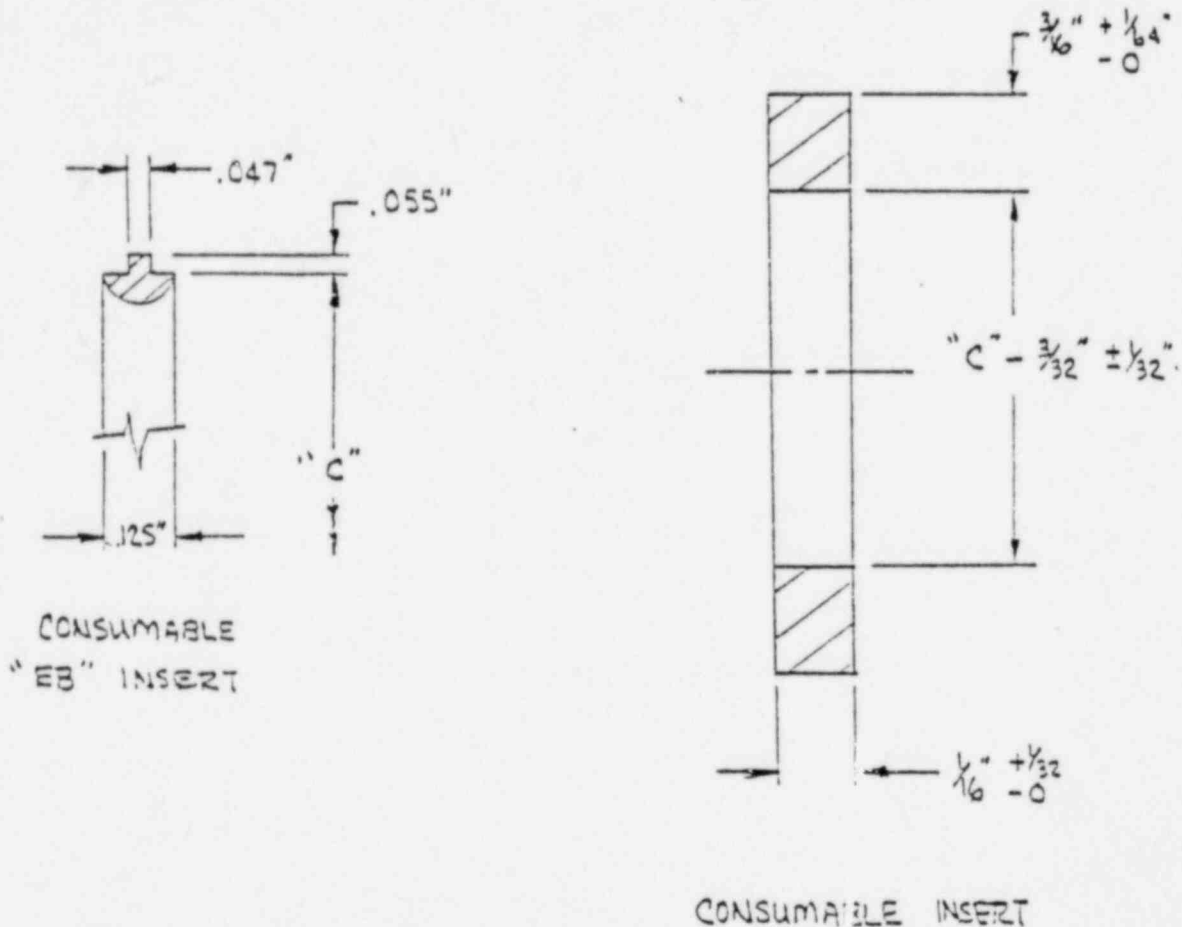


Fig. 3

FIGURE 12d
May 12, 1978
Revision 5

W. J. Shewski
DATE JAN 6 1977

PREPARED BY: Frank Chandel DATE: 12-6-76
APPROVED BY: W. J. Shewski DATE: 1/13/77

SAMPLE

NOTE: The information on this form has been transferred from a previously approved PQR and has been reviewed for correctness.

Approvals:

PMD: J.O. Letoury Date: 12-6-76

SNED: [Signature] Date: [Signature]

QA: [Signature] Date: 11-4-77

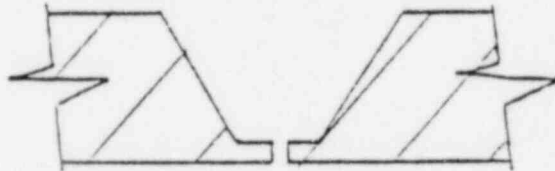
COMMONWEALTH EDISON COMPANY

QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

Page 1 of 2

Procedure Qualification Record No. M-2463-74 Date 10-18-74 WPS No. ES-23
Welding Process(es) GTAW/SMAW Types (Manual, Automatic, Semi-Auto) MANUAL

JOINTS (QW-402) SINGLE - U



Groove Design Used

BASE METALS (QW-403)
Material Spec. SA-333
Type or Grade GRADE G
P No. 1 to P. No. 1
Thickness .337"
Diameter 4.0" Nom DIA
Other _____

POSTWELD HEAT TREATMENT (QW-407)
Temperature _____ N/A
Time _____
Other _____

GAS (QW-408)
Type of Gas or Gases ARGON
Composition of Gas Mixture 99.99% PURE
Other _____

FILLER METALS (QW-404)
Weld Metal Analysis A No. 1
Size of Electrode 3/32"
Filler Metal F No. 4 and 6
SFA Specification 5.1 and 5.18
AWS Classification E70S-2 E-7018
Other CONSUMABLE INSERT USED (AG 3)

ELECTRICAL CHARACTERISTICS (QW-409)
Current DC
Polarity GTAW - STRAIGHT SMAW - REVERSE
Amps. GTAW-100 SMAW-110 Volts GTAW-20 SMAW-1
Other _____

POSITION (QW-405)
Position of Groove GG
Weld Progression (Uphill, Downhill) UPHILL
Other _____

TECHNIQUE (QW-410)
Travel Speed _____ N/A
Spring or Weave Bead 12 Pass - Weave 3rd Pass
Oscillation _____ N/A
Multipass or Single Pass (per side) MULTIPLE
Single or Multiple Electrodes SINGLE
Other _____

PREHEAT (QW-406)
Preheat Temp. 60°F
Interpass Temp. 60°F
Other _____

SAMPLE

PQR No. M-2463-74

WPS No. CS-23

Page 2 of 2

COMMONWEALTH EDISON COMPANY

QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

Tensile Test (QW-150)

Specimen No.	Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location
TOP	0.320	0.750	0.2400	18,290	76,210	DUCT - BASE METAL
BOTTOM	0.322	0.750	0.2415	18,230	75,490	DUCT - BASE METAL

Guided Bend Tests (QW-160)

Type and Figure No.	Result
QW 462.3 (2) FACE	PASSED
QW 462.3 (2) ROOT	PASSED
QW 462.3 (2) FACE	PASSED
QW 462.3 (2) ROOT	PASSED

Toughness Tests (QW-170)

Specimen No.	Notch Location	Notch Type	Test Temp.	Impact Values	Lateral Exp.		Drop Weight	
					% Shear	Mils	Break	No Br's
N/A								

Fillet Weld Test (QW-180)

Result - Satisfactory: Yes _____ No. _____ Penetration into Parent Metal: Yes _____ No _____
 Macro - Results _____

Other Tests

Welder's Name DANIEL BUCKLEY Station _____ Stamp No. 4

Tests conducted by: MARK LINDEN Laboratory Test No. _____

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Date 10-24-74 Manufacturer COMMONWEALTH EDISON COMPANY
 By J.D. LATHROP
Jim Lathrop

(SAMPLE)

COMMONWEALTH EDISON COMPANY

QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TESTS

Welder Name Dennis Hillison Station LaSalle Stamp No. 2
 Welding Process GTAW/GMAW Type Manual
 In accordance with Welding Procedure Specification (WPS) GS23 Rev. No. 3 Date 7/21/77
 Backing (QW-402) Argon Purge Plate or Pipe Pipe
 Material (QW-403) Spec. No. SA106GB to SA106GB of P No. 1 to P No. 1
 Thickness 1/16 to .674 Dia. 2 7/8 and over
 Filler Metal (QW-404) Spec. No. SFA 5.18 Class No. E70S2 F No. F6
 Other SFA 5.1 E7018 F4
 Position (QW-405) (1G, 4F, 6G, etc.) 6G
 Gas (QW-408) Type Argon % Composition 99
 Electrical Characteristics (QW-409) Current DC Polarity GTAW Straight
SMAW Reverse
 Weld Progression (QW-410) Uphill
 Other _____ Witnessed By Dan R. Beeler Date 4/17/78
 Quality Control

FOR INFORMATION ONLY

Filler Metal Diameter and Trade Name _____ GTAW Linde 65 3/32
 Submerged Arc Flux Trade Name _____ SMAW Lincoln Jet LH72 3/32
 Gas Metal Arc Welding Shield Gas Trade Name _____

Guided Bend Test Results QW-462.2(a), QW-462.3(a), QW-462.3(b)

Type and Fig. No.	Result
1 - QW 462.2(a)	passed
2 - QW 462.2(a)	passed
3 - QW 462.2(a)	passed
4 - QW 462.2(a)	passed

Radiographic Test Results (QW-304 & QW-305)

For alternative qualification of groove welds by radiography

Radiographic Results: N/A

Fillet Weld Test Results [See QW-462.4(a), QW-462.4(b)]

Fracture Test (Describe the location, nature and size of any crack or tearing of the specimen)
N/A

Length and Per Cent of Defects _____ inches _____

Macro Test - Fusion _____

Appearance - Fillet Size (leg) _____ in. x _____ in. Convexity _____ in. or Concavity _____ in.

S. J. Robb

Test Conducted by Neil J. Mares Laboratory - Test No. M-78-65

We certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Sections IX of the ASME Code.

Date April 17, 1978 Organization Commonwealth Edison Company
 By [Signature]

WELD INSPECTION RECORD

SYSTEM CDX LINE NUMBER ICDX002-4
 SPEC NUMBER DS-CDX-01-LS R2 DESIGN TABLE N/A
 CODE: ASME SECT. III CLASS 1 OTHER N/A
 BASE METAL - TYPE AND GRADE PIPE SA333GR6 FITTING SA 234 WPB
 BASE METAL - HEAT NUMBER PIPE L02628 FITTING CAK
 WORK REQUEST NUMBER 77-34 WELD NUMBER 4

DATE 6-8-78 REV 1
 WELDING PROCEDURE GS-23 REV 3
 PROCESS GTAW/SMAW
 PIPE DIAMETER 4 IN. NOMINAL WALL THICKNESS SCH 80 .337
 JOINT DESIGN 37 $\frac{1}{2}$ " "J" CONSUMABLE INSERT
 ORIGINAL X REPAIR NUMBER N/A

STATION LASALLE

DATA	HOLD POINT			SIGN-OFF/DATE				DATA	HOLD POINT			SIGN-OFF/DATE				
	QC	QA	AI	MAINT	QC	QA	AI		QC	QA	AI	MAINT	QC	QA	AI	
WELDERS I.D. L.C. #1				L.C				WELD ROOT CHECK AMPS & VOLTS *	PER WELD PROCEDURE	X		X	L.C	RCS		JD
CONSUMABLE INSERT OR BACKING RING (HT #) 4125603	X			L.C	RCS			VISUAL INSPECTION COMPLETED ROOT (ACCESSIBLE AREAS)	NDT-V1-R5 ATTACH 5	X	X	X	L.C	RCS	EJS	JD
FILLER MATERIAL HT NUMBER GTAW 065118	X		X	L.C	RCS		JD	FOR INFO ONLY NDE COMPLETED ROOT	RT-3-NP REV 0				EB	RCS		
SMAW 422B6311	X		X	L.C	RCS		JD	INTER PASS TEMPERATURE	400 ⁰ F MAX S/N 486				L.C			
CLEANLINESS INSPECTION	X			L.C	RCS			COMPLETE WELDING * CHECK AMPS & VOLTS	PER WELD PROCEDURE	X		X	L.C	RCS		JD
NDE WELD PREP FOR INFO ONLY PT-2-NP REV 0				EB				POST WELD HEAT TREAT	N/A							➔
FIT UP AND ALIGNMENT	X	X	X	L.C	RCS	EJS	JD	VISUAL INSPECTION COMPLETED WELD	NDT-V1 R5 ATTACH. 5	X	X	X	L.C	RCS	EJS	JD
TORCH GAS FLOW 15-20 CFH				L.C				YOKE PT/MT FINAL PASS	MT-2-NP REV 0	X	X	X	EB	RCS	EJS	JD
BACKING GAS (% O ₂) LESS THAN 1% S/N 1436	X		X	L.C	RCS		JD	RADIOGRAPHY	RT-3-NP REV	X	X	X	EB	RCS	EJS	JD
PRE HEAT 60 ⁰ F MIN S/N 486				L.C												

REMARKS OR REPAIR NOTES: _____

WELD ACCEPTED: Robert C. Stone 6-8-78
 QUALITY CONTROL DATE
 REVIEWED BY: Edwin J. Stevak 6-8-78
 QUALITY ASSURANCE DATE
John Doe 6-8-78
 AUTHORIZED INSPECTOR DATE

HOLD POINTS INCLUDED QC RCS 6-3-78 /QA EJS 6-3-78 /AI JD 6-3-78

*NOTE: Amps and Volts will be checked as required. However, Actual Values need not be recorded.



RADIOGRAPHIC EXAMINATION RECORD

WORK REQUEST NO. 106-74 DRAWING NUMBER 1-3202-1FW
 DATE RADIOGRAPHED 10/1/74 WELD JOINT IDENTIFICATION FW-1

MATERIAL SA106 Grade B SIZE/THICKNESS 4" O.D. Sch. 80, TYPE OF WELD BACKING RING INSERT OTHER
 LOCATION: SHOP FIELD Procedure No. NDT-A

SETUP "A" <input type="checkbox"/> STATION MARKER SOURCE PENETRATOR AND SHIM FILM TECHNIQUE NO. _____	SETUP "B" <input checked="" type="checkbox"/> OFFSET STATION MARKER SOURCE PENETRATOR AND SHIM FILM TECHNIQUE NO. <u>2</u>	SETUP "C" <input type="checkbox"/> STATION MARKER SOURCE PENETRATOR AND SHIM FILM QUALIFIED TECHNIQUE NO. _____	REMARKS (SKETCH SPECIAL TECHNIQUES)
--	--	--	-------------------------------------

X-RAY				ISOTOPE			
MACHINE <u>NA</u>	FOCAL SPOT <u>NA</u>	KVP <u>NA</u>	MILLIAMPERES MA <u>NA</u>	TYPE <u>IR-192</u>	INTENSITY (CURIES) <u>25 Curies</u>	SIZE <u>.10 x .10</u>	
SOURCE-FILM DIST. <u>6"</u>	TIME <u>70 sec</u>	FILM <u>ANSCO AA</u>	NUMBER EXPOSURES <u>3</u>	REQUIRED SENSITIVITY <u>2T</u>	RADIOGRAPHER <u>F. Smith</u>	DATE <u>10/1/74</u>	

FILM IDENTIFICATION	PENETRATOR SIZE AND HOLE	CRACKS	SLAG INCLUSION	POROSITY	INCOMPLETE JOINT PENETRATION	MELT-THROUGH	BURN-THROUGH	INCOMPLETE FUSION	CRATER PIT	OXIDATION	TUNGSTEN INCLUSION	ROOT EDGE FUSION	ROOT UNDERCUT	INCOMPLETE INSERT MELTING	ROOT SURFACE CONCAVITY	ROOT SURFACE CONVEXITY	ROOT SURFACE CENTERLINE CREASE	OTHER	LOCATION OF UNACCEPTABLE DEFECTS	REJECT	ACCEPT
FW-1	10-2T																				
a-b	↓		X																none		X
b-c				X															none		X
c-a	↓																		none		X

STD. OR SPEC. <u>ASME Sec. III Class 2</u>	DISPOSITION Reviewer Decision ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input type="checkbox"/> RETAKE <input type="checkbox"/>	REVIEWER <u>H. Kich...</u> INSPECTOR <u>F. De...</u> Authorized Inspector	DATE <u>10/1/74</u> DATE <u>10/1/74</u>
--	--	---	--

REMARKS: Slag inclusion and porosity noted are within acceptable limitation

COMMONWEALTH EDISON COMPANY



(A) No.
 (B) Date 12-20-74
 Page of

ULTRASONIC EXAMINATION
TECHNIQUE RECORD & REPORT

(C) Attachment

Station	Unit	Work Request No.	Governing Specification		CECo. SPP
1 Quad Cities	-	3 4836-75	4 ASME Sec. III 1974 Summer		5 NDT-C
Part Description		Drawing No.	Item No.	Rev. No.	Stage of Manufacture
6 Spool Pine for piece		7 1-3203-1 FW	FW1	0	8 Prior to Welding
Test Instrument	Model	Serial No.	Defect Alarm and/or Recording Equipment		
9 Magnaflux	PS 702		10 None		
Feeding Mechanism		Special Search Units		Serial No.	
11 None		12 Longitudinal		3806	
Test Surface		Couplant		Surface Finish (RMS)	
13 <input type="checkbox"/> ID <input checked="" type="checkbox"/> OD <input type="checkbox"/> TOP <input type="checkbox"/> BOTT <input type="checkbox"/> SIDE		14 Glycerine		15 As Found	
Method 16		Technique 17		Scanning	
<input checked="" type="checkbox"/> Contact <input type="checkbox"/> Immersion		<input checked="" type="checkbox"/> Pulse Echo <input type="checkbox"/> Thru Trans. <input type="checkbox"/> Reson.		18 100%	
Mode of Transmission 19		Transducer		Serial No.	Test Frequency
<input checked="" type="checkbox"/> Shear Wave <input checked="" type="checkbox"/> Longitudinal <input type="checkbox"/> Surface		20 45° Shear		4701	2.25 MHg
Weld Joint Ident.	Thickness	Material	Specification	Type or Grade	Weld Procedure
NA	22 .337	23 Carbon Steel	SA 333	Grade 6	24 NA
Description of Calibration Method					
25 Calibrate to ASME Section III, Summer 1974 Edition paragraph NB-2552, CECo will furnish reference specimen. At 1/2 node position, set I.D. notch at 75% screen height, lock controls then move to full node O.D., 1 1/2 Node I.D. and 2 Node positions, obtaining the data points for DAC. Confirm in both directions. Calibrate "L" wave by setting first back reflection at 40% of CRT width and 100% of CRT height.					
Details of Examination Technique					
26 Scan pipe circumferentially, in both directions, with shear wave transducer directed circumferentially using a 10% overlap; then repeat with transducer directed axially, making one scan directed toward one end, then repeating with transducer directed at other end. Make one 100% scan of the pipe using straight beam, using 10% overlap. Indications equal to or exceeding DAC shall be cause for rejection, while any less indications must be fully evaluated and reported.					
Edward E. Potter Designation Level III Examiner					
NDE Tester	Level	Date	DR. No.	Reviewed by	
27	<input checked="" type="checkbox"/> II <input type="checkbox"/> III	28	29	30 Authorized Inspector	

Distribution:

- Requester
 Inspection Pkg./Job File
 OAD Technique File

FIGURE 16

August 7, 1975
(Revision 7)



Document No. Technique C-1 of SPP-NDT-C

Revision Dated Original - 12-18-74

Application: ASME Section III, Class I
Tubular Product Acceptance Test

PROCEDURE CERTIFICATION

Procedure Title: C.E.Co - 5169A (9-73) Ultrasonic Examination

Procedure NDT-C Technique C-1

This is to certify the above titled procedure is in compliance with the requirements of the ASME Boiler and Pressure Vessel Code Section III 1974 Edition Appendix NA Paragraph NB-2552.

Edward E Potter
Signature of SNT-TC-1A Level III

12/18/74
Date

Reviewed by: W. J. Thewski
Manager of Quality Assurance

12/20/74
Date

I, the undersigned, holding a valid certificate issued by the National Board of Boiler & Pressure Vessel Inspectors and/or the State or Province of _____ and employed by _____ of _____

_____ have reviewed, _____ waived review of the above titled procedure.

Date _____

Inspector's Signature

Commissions _____
National Board, State, Province and No.

S.I. - Slag Inclusion
P. - Porosity

SAMPLE



RADIOGRAPHIC REVIEW REPORT											PAGE <u>1</u> OF <u>1</u>					
STATION/SUPPLIER											SUBCONTRACT / PO NO.		WORK REQUEST		Procedure No.	
Quad Cities Station/Magnaflux Co.											500321		106-74		NDT-A	
COMPONENT & SERIAL NO.				PATTERN NO. & SERIAL NO.				HEAT NO:								
1-3201-7				NA				Pipe J-1074								
ACCEPTANCE STANDARD		CLASS	GOVERNING SPECIFICATION			MATERIAL SPEC.		MATERIAL		MATERIAL DIAMETER						
ASME SEC. III		2	S&L T-3187			SA106 Grade B		Carbon Steel		4" O.D.						
MATERIAL THICK.		ISOTOPE		DIA. X LENGTH		CURIES	DISTANCE	TIME	FILM TYPE	FILM SIZE	FILM TECHNIQUE					
SCH 80		IR 192		.10 x .10		25	6 1/2"	18 sec.	Arsco AA	4" x 8"	<input type="checkbox"/> SINGLE <input checked="" type="checkbox"/> DOUBLE					
X RAY	KV	MA		DISTANCE	TIME	FOCAL SPOT SIZE		FILM PROCESSING		RADIOGRAPHER						
NA	NA	NA		NA	NA	NA		CE-1A		Level <i>J. Cooper Level II</i>						
FITTING, SEAM OR JOINT NUMBER	FILM INTERVAL NUMBER	PENE-TRAMETER SIZE AND CONDITION	JOINT TYPE OR CASTING	ACCEPT.	REJECT	DEFECT TYPE: FOR LEGEND SEE REVERSE SIDE			FILM INTER-PRATATION BY (INITIALS) CECO AIA	REMARKS IF NO DEFECTS INDICATED, STATE "NO APPARENT DEFECTS"						
FW-1		10-2T	J-Bevel													
FW-1	a-b	10-2T	J-Bevel	X		S.I.				"No Apparent Defects"						
FW-1	b-c	10-2T	J-Bevel	X		P.				Slag inclusion and porosity noted are within acceptable limitations						
FW-1	c-a	10-2T	J-Bevel	X		-										



Commonwealth Edison

DISCREPANCY RECORD

EXAMPLE

DR NO. 4	STA No. 0001
TIME OF OCCURRENCE	
DATE 4/24/78	HR. 0930

IDENTIFICATION & DESCRIPTION PART 1

DESCRIPTION OF ITEM (EQUIPMENT, MATERIAL, COMPONENT, PART): **Pipe Flanges** ITEM NO. (PART NO., SERIAL NO., EQUIPMENT NO.)

SYSTEM AND UNIT: **Pressure Retainment Cap for Torus Containment** MANUFACTURER/SUPPLIER: **MIDCO Pipe & Tube Inc.**

CATEGORY	<input type="checkbox"/> DAMAGE	<input type="checkbox"/> UNSAT CONDTN	OBSERVED DURING	<input type="checkbox"/> OPERATION	<input type="checkbox"/> START-UP
<input type="checkbox"/> DEFECT	<input type="checkbox"/> DWG NONCPLNC	<input checked="" type="checkbox"/> DOCUMENTATION	<input checked="" type="checkbox"/> RCYNG INSP	<input type="checkbox"/> MAINTENANCE	<input type="checkbox"/> CALIBRATION
<input type="checkbox"/> FAILURE	<input type="checkbox"/> SPEC NONCPLNC	<input type="checkbox"/>	<input type="checkbox"/> PLANT INSP	<input type="checkbox"/> TEST	<input type="checkbox"/>

DESCRIPTION OF DISCREPANCY

2 ea. 3" 150 lb. RG Slip on Flange SA 181

2 ea. 3" 150 lb. RG Blind Flange SA 181

Received with no documentation and taken out by Maintenance Foreman

P.O. NO. & P.O. ITEM NO.	QA HOLD TAG NO.	WORK REQUEST NO.	PREPARED BY:
P.O. 719101			R. J. Gamperl Stores 4/24/78

EVALUATION & DISPOSITION PART 2

CAUSE OF DISCREPANCY AND EFFECT ON THE SYSTEM: **No Documentation**

10CFR21 Notification
Yes No

Name _____ Date _____ Time _____

NRC _____

ACTION REQUIRED TO CORRECT THE DISCREPANCY

(Receipt of Docs) OAD to perform chemical analysis of items to verify SA 181G1 material. SNED approved the use of the item based on OAD recommendation.

Designated CECO Office: _____

CORRECTIVE ACTION REQUIRED TO PREVENT RECURRENCE OF DISCREPANCY (WRITE N/A IF NOT KNOWN):

PREPARED BY:	REVIEWED BY:	APPROVED BY:	REVIEWED BY:	APPROVED BY:
R. Spear 4-24-78	W. Burkamper 4-24-78	L. Gerner 4-24-78	W. Caldwell 4-24-78	D. Thayer 4-24-78
MAINT ASSIST SUPER/ DATE	QC SUPERVISOR DATE	TECH STAFF SUPV. DATE	AUTHORIZED NUCLEAR INSPECTOR DATE	QA ENGINEER DATE

DISPOSITION COMPLETION PART 3

DESCRIPTION OF ACTION TAKEN TO CORRECT THE DISCREPANCY

OAD tested specimens from each flange and verified that they do conform to ASME SA181. Copy of chemical analysis is attached.

TIME RETURNED TO SERVICE: DATE _____ HR. _____

DESCRIPTION OF CORRECTIVE ACTION INITIATED TO PREVENT RECURRENCE

None required.

COMPLETED BY:	REVIEWED BY:	APPROVED BY:	APPROVED BY:	APPROVED BY:
T. Shaw 5-1-78	W. Burkamper 5-2-78	L. Gerner 5-2-78	N. Kalivianakis 5-2-78	D. Thayer 5-2-78
DATE	X SUPERVISOR DATE	TECH STAFF SUPV. DATE	STATION SUPERINTENDENT DATE	QA ENGINEER DATE

CORRECTIVE ACTION PART 4 FAILURE REPORTING PART 5

CORRECTIVE ACTION (C/A) REVIEW	FAILURE REVIEW	FAILURE REPORT
<input type="checkbox"/> C/A NOT REQUIRED	<input checked="" type="checkbox"/> ADEQUATE	<input type="checkbox"/> REQUIRED
<input type="checkbox"/> ADDITIONAL C/A REQUIRED	REVIEWED BY: L. Gerner 5-5-78	<input type="checkbox"/> PREPARED
ACTION ITEM NO. N/A	DATE 5-7-78	YES <input type="checkbox"/> NO <input type="checkbox"/>
APPROVED BY: D. Thayer 5-5-78	APPROVED BY: N. Kalivianakis 5-7-78	REVIEWED BY: NA
QA ENGINEER DATE	STATION SUPERINTENDENT DATE	DATE

SAMPLE



COMMONWEALTH EDISON COMPANY
 QUALITY ASSURANCE

HOLD

DATE _____ BY _____

Quality Assurance
 Engineer or Inspector

COLOR

BACKGROUND - YELLOW
 LETTERS - BLACK

86-2555(B) 7-75

QUALITY ASSURANCE

HOLD

OUTAGED DOCUMENT DEFICIENCY
 ENGINEERING NON-CONFORMANCE
 DESIGN CH/ JOE OTHER

ITEM _____

Plant No. _____ Plant, On Site No. _____

R.L.R. No. _____ N.C.R. No. / O.A. No. _____

RELEASE FOR USE

DATE: _____ BY: _____

HOLD RESOLUTION DATE: _____

HOLD RELEASE DATE: _____

AUTHORIZED BY _____
 Quality Assurance
 Engineer or Inspector

THIS TAG TO REMAIN ATTACHED UNTIL
 REMOVED BY AUTHORIZED PERSONNEL

TAG NO. _____

FIGURE 19

August 7, 1975
 (Revision 5)

86-2556(s) 7-75



QUALITY ASSURANCE

REJECT

DO NOT USE THIS ITEM
TAG NO. _____

ITEM: _____

ISSUING NO. _____

IDENT. OR SER. NO. _____

REASON:

- RETURN TO VENDOR
- DESTROY
- OTHER

REJECT ACTION COMPLETE

DATE: _____

AUTHORIZED BY: _____

Quality Assurance
Engineer or Inspector

NCR/DR NO. _____

THIS TAG TO REMAIN ATTACHED UNTIL
REMOVED BY AUTHORIZED PERSONNEL

BACKGROUND - RED
LETTERS - BLACK

COLOR

COMMONWEALTH EDISON COMPANY

QUALITY ASSURANCE

REJECT



DATE _____

BY _____

Quality Assurance
Engineer or Inspector



FIGURE 20

August 7, 1975
(Revision 5)

AUDIT LOG

AUDIT RECORD NO.	AUDIT TITLE	CAR NO.	AUDITOR	START DATE	TYPE AUDIT PROCEDURE SECTION NO.		FOLLOW UP DATE	CLOSE OUT DATE
1	Work Request Packages		Stone	2-18	Q.P. 3-52		2-20	2-20
2	Document Control		Stone	3-10	Q.P. 4-51		3-15	3-18
3	Instrument Calibration		Stone	3-28	Q.P. 12-51 Q.P. 12-52		4-1	4-1
4	In-Service Inspection		Stone	5-20	ASME Sect. XI		5-25	5-27
5	Maintenance Procedure		Stone	6-4	Q.P. 3-52		6-4	6-10

FIGURE 21

January 6, 1975
(Revision 4)





AUDIT CHECKLIST AND RECORD SHEET

Date: 11-1-74

Char. No.	Organization Audited: Maintenance Department Location: Quad Cities	Checklist ¹ Prepared by: D. Thayer Auditor: D. Thayer	Approved By: Staff Assistant Quality Assurance Date: 10/15/74						
			Reference Document	COMPLIANCE				Other*	Commitment Date
				Procedure		Activity			
A) Audit Item B) Findings (or Observation) C) Comment (or recommendations)			ACC.	DEF.	ACC.	DEF.			
1.	Implementation of welding procedures No's 5 and 6 for fabrication of field weld #1 has been found acceptable based on review of applicable documentation. No corrective action required.	Special Process Procedures Manual	X					NA	
		FIGURE 22			August 7, 1975 (Revision 5)				

Activity is effective but documented procedures are not available.

WORK REQUEST NO. 0019-78 DATE: 5-18-78

SYSTEM: UNIT 1 HPCI

JOB DESCRIPTION: MODIFICATION (M-4-1-78-1)

DOCUMENTATION	REQUIRED	REVIEWED BY Q.C.	DOCUMENT NOMENCLATURE	REVIEWED BY AI	COMMENT
1. CERT. MAT'L TEST REPORTS	X	X		X	W/ PURCH ORDERS
(a) MAT'L PURCH ORDERS	X	X	PO Numbers on Reverse SIDE.	X	FILE W/OFFICE SUPER.
(b) QUAL RECP. INSPS.	X	X		X	W/ PURCH ORDERS
(c) MAT'L RED TAGS.	X	X		X	
2. WORK REQUEST	X	X	0019-78		
3. MAINT./MOD. PROCEDURE	X	X	Rev. 0 & Amend. "A"	X	
4. STATION TRAVELER	X	X		X	
5. FABRICATION PROCEDURES	X	X			
(a) BOLT TIGHTENING	X	X	"FLANGE BOLT TIGHTENING FOR 10 IN. HPCI FLANGES."	X	DATED MAY 8, 1978
(b) HYDRO TESTING	X	X	"HYDROSTATIC TEST FOR HPCI SPOOL PIECE FABRICATION"	X	DATED MAY 6, 1978
(1) PRE-TEST GAUGE CAL	X	X		X	
(2) POST-TEST GAUGE CAL	X	X		X	
6. WELDING					
(a) WELD PROCEDURES & PQR'S	X	X		X	Per SPPM.
(b) WELDER QUALS	X	X		X	Per MAINT. RECORDS
(c) WELD ROD Red TAGS	X	X		X	
(d) WELD INSP. RECORDS	X	X		X	
(e) CONSUMABLE INSERT Red TAGS	X	X		X	

ORIGINATED BY: [Signature] DATE 5-18-78

APPROVED BY: [Signature] FOR QUALITY CONTROL SUPERVISOR DATE 6-9-78

REVIEWED BY: [Signature] DATE 6-9-78
 AUTHORIZED NUCLEAR INSPECTOR

APPROVED BY: [Signature] DATE 6/12/78
 QUALITY ASSURANCE ENGINEER OR INSPECTOR

PO Numbers

- 219846 - 10" Sch 80 90° ELBOWS
- 222824 - 1/2" x 8" x 8" SA36 PLATE
- 219846 - 6" Sch 40 PIPE
- 219847 - 10" Sch 80 WELD NECK FLANGES.
- 725498 - 10" Sch 80 CONSUMABLE INSERTS.
- 219922 - 3/32" BARE WIRE WELD ROD.
- 184352 - 1/8" BARE WIRE WELD ROD.
- 725465 - 3/32" E7018 COVERED ELECTRODE.

WORK REQUEST NO. 0019-78 DATE: 5-18-78

SYSTEM: UNIT 1 HPCI

JOB DESCRIPTION: MODIFICATION (M-4-1-78-1)

Fabrication of Spool Piece.

DOCUMENTATION	REQUIRED	REVIEWED BY Q.C.	DOCUMENT NOMENCLATURE	REVIEWED BY AI	COMMENT
7. DRAWINGS (FAB-SPOOL)	X	X		X	
(2) M-733 Rev. A.	X	X		X	
(b) M-734 Rev. B.	X	X	REV. C (RELEASED 5-26-78) <i>Q.C.</i>	X	REV B Removed from Package.
(c) M-735 Rev. C.	X	X	REV. B Released for Const. 6-9-78	X	Rev D is clarification only no effect on work
(d) FIGURE #1 Rev. 0	X	X		X	
(e) FIGURE #2 Rev. 0	X	X		X	
(f) FIGURE #3 Rev. 0	X	X		X	
8. NDE	X	X		X	
(a) NDE PROCEDURES	X	X		X	PER SPPM PONDAM
(b) NDE OPERATOR QUALS.	X	X		X	
(c) VISUAL REPORTS	X	X		X	
(d) M. T. REPORTS	X	X		X	
(e) U. T. REPORTS	X	NOT REQ'D..			IF REQ'D.
(f) R. T. REPORTS	X	X		X	W/RADIOGRAPHS
(g) NDE MAT'S Red TAGS	X	NOT REQ'D-			IF REQ'D.

NOTE: RADIOGRAPHS TO be FILED WITH Quality Control until total package is transferred to Central File.

ORIGINATED BY: [Signature] DATE 5-18-78

APPROVED BY: [Signature] For DATE 6-9-78
QUALITY CONTROL SUPERVISOR

REVIEWED BY: [Signature] DATE 6-9-78
AUTHORIZED NUCLEAR INSPECTOR

APPROVED BY: [Signature] DATE 6/12/78
QUALITY ASSURANCE ENGINEER
OR INSPECTOR

WORK REQUEST NO. 0019-78 DATE: 5-18-78

SYSTEM: UNIT 1 - H.P.C.I.

JOB DESCRIPTION: MODIFICATION (M-4-1-78-1)

FABRICATION OF SPOOL PIECE	REQUIRED	REVIEWED BY Q.C.	DOCUMENT NOMENCLATURE	REVIEWED BY AI	COMMENT
9. AS BUILT DRAWING	X	Not Req'd.			IT READ.
10. MODIFICATION PACKAGE	X	X		X	IN MOD FILE
(a) DESIGN SPEC.	X	X	R-3279-REV 2 (X)	X	"
(b) DESIGN REPORT WITH LOAD CAPACITY DATA	X	X		X	" (WITH CEO APPROVAL)
(c) OVERPRESSURE PROTECT- ION REPORT	X	X		X	"
11. COMPLETED DISCREPANCY REPORTS	X	X	DR # 1084 DR # 1079	X	See P.O. 219846 for file See P.O. 219847 for file
12. Radiographic Exam Procedure	X	X	QUAD-A R.V.O.	X	ADDED TO LIST - WITH Fab. Procedures. elliptical
13. DATA REPORT	X	X		X	
⊗ Design Spec (Revised)	X	X	R3279-Rev 3 (5-17-78) <small>Revised</small>	X	FILED W/ MOD PKG.

ORIGINATED BY: [Signature] DATE 5-18-78

APPROVED BY: [Signature] FOR DATE 6-9-78
QUALITY CONTROL SUPERVISOR

REVIEWED BY: [Signature] DATE 6-9-78
AUTHORIZED NUCLEAR INSPECTOR

APPROVED BY: [Signature] DATE 6/12/78
QUALITY ASSURANCE ENGINEER
OR INSPECTOR



WORK REQUEST NO. _____ DATE: _____

SYSTEM: _____

JOB DESCRIPTION: _____

DOCUMENTATION	REQUIRED	REVIEWED BY Q.C.	DOCUMENT NOMENCLATURE	REVIEWED BY ANI	COMMENT

ORIGINATED BY: _____ DATE _____

APPROVED BY: _____ DATE _____
 QUALITY CONTROL SUPERVISOR

REVIEWED BY: _____ DATE _____
 AUTHORIZED NUCLEAR INSPECTOR

APPROVED BY: _____ DATE _____
 QUALITY ASSURANCE ENGINEER
 OR INSPECTOR

MODIFICATION APPROVAL SHEET

PART 1

STATION _____ UNIT _____ MODIFICATION NO. _____ WORK REQUEST NO. _____
 SYSTEM _____ ORIGINATED BY: _____
 EQUIPMENT NAME _____ NAME _____ DATE _____
 EQUIPMENT NUMBER _____ DEPARTMENT _____

DESCRIPTION OF PROPOSED MODIFICATION: (Use attachment if necessary and include appropriate references) PART 2

WORK ASSIGNMENT: _____
 REASON FOR MODIFICATION: (Use attachment if necessary and include appropriate references)
 Type of Modification: Safety-Related _____ Non-Safety-Related _____ ASME _____ Plant Reliability Related _____
 Engineering Assistance Required: Yes _____ No _____
 Licensing Revisions Required: Final Safety Analysis Report: Yes _____ No _____ Technical Specification: Yes _____ No _____
 Annual Reporting to the Nuclear Regulatory Commission Required: Yes _____ No _____

TESTING	REQUIRED	DRAWINGS AND PROCEDURES	REQUIRED
Installation and Construction		Drawings	
Visual Observation (V.O.), or Construction Test (C.T.)		Operating Procedures	
Modification		Surveillance Procedures	
Functional Test (F.T.), or Step-by-Step Procedure (S.S.)		Maintenance Procedures	
		Operator Training	

APPROVALS: PART 3

MODIFICATIONS REQUIRING ENGINEERING ASSISTANCE
 Concurrence with Proposed Modification:

Technical Staff Supervisor	Date
Operating Engineer	Date
Station Superintendent	Date

MODIFICATIONS NOT REQUIRING ENGINEERING ASSISTANCE PART 4

On-Site Review	Participants Initials	Date
Installation Approved	Technical Staff Supervisor	Date
Installation Approved	Sta Oper Eng/Over Asst Supt	Date
Installation Authorized	Station Superintendent	Date
Install & Const Test Complete	Maint Asst Supt/Maint Inst Mech/Const Eng	Date
QC Approved	Quality Control Supervisor	Date
Modification Testing Cmpl	Operating Engineer/Shift Engineer	Date
Operation Authorized	Operating Engineer/Shift Engineer	Date
QA Approved	QA Engineer or Inspector	Date

ADVANCED APPROVAL FOR MODIFICATION (When Required)

Received From _____ Station Nuclear Engr. Mgr. _____ Date _____

Obtained by _____ Station Superintendent _____ Date _____

On-Site Review	Participants Initials	Date
Installation Authorized	Station Superintendent	Date
Install & Const Test Complete	Maint Asst Supt/Maint Inst Mech/Const Eng	Date
QC Approved	Quality Control Supervisor	Date
Modification Testing Cmpl	Operating Engineer/Shift Eng.	Date
Operation Authorized	Operating Engineer/Shift Engineer	Date
QA Approved	QA Engineer or Inspector	Date

COMPLETION INFORMATION PART 5

Procedures Revised	Technical Staff Supervisor	Date
Arrangements For Training Complete	Station Training Supervisor	Date
Provisions For Annual Reporting Complete	Technical Staff Supervisor	Date
Provision For Revision Of Design Documents Completed	Technical Staff Supervisor	Date
Modification Status Record Updated	Technical Staff Supervisor	Date
QC Approved	Quality Control Supervisor	Date
QA Approved	QA Engineer or Inspector	Date
Documentation Filed	Office Supervisor	Date

CANCELLATION INFORMATION: (Reason for Cancellation) PART 6

Station Superintendent _____ Date _____

QUALITY ASSURED MATERIAL STOCK TAG

QUALITY ASSURED MATERIAL TO REMAIN ON MATERIAL -	611A00 LBS. WELDING ELECTRODE, TYPE MIL-7018, E7018, SIZE 3/32 X 12 IN. LG. 8 LB. CANS, MCKAY NO. 7018 LB.			QUALITY ASSURED MATERIAL OFFICE COPY	611A00 LBS. WELDING ELECTRODE, TYPE MIL-7018, E7018, SIZE 3/32 X 12 IN. LG. 8 LB. CANS, MCKAY NO. 7018 LB.		
	IDENTIFICATION NO.	Lot No. 12345 Heat No. 678910	Bin 1 LOC. 1st Fl. QA		IDENTIFICATION NO.	Lot No. 12345 Heat No. 678910	Bin 1 LOC. 1st Fl. QA
	PURCHASE ORDER NO.	710000			PURCHASE ORDER NO.	710000	
	DATE DOC. REC'D.	2/01/80	DATE ISSUED 3/01/80 BY <u>R. HAYL</u>		DATE DOC. REC'D.	2/01/80	DATE ISSUED 3/01/80 BY <u>R. HAYL</u>

COLOR

Background - Red & White
Letters - Black

SIZE

5/8 Actual size

Implementation of computer printed stock tag effective March 1, 1980. (See addenda for respective stations.)

FIGURE 25

March 25, 1980
(Revision 9)