

ROCHESTER GAS AND ELECTRIC CORPORATION  
R.E. GINNA NUCLEAR POWER PLANT

Revision 14 to:

Quality Assurance Program for  
Station Operation

DOCKET NO. 50-244

December, 1988

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## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	QUALITY ASSURANCE PROGRAM FOR STATION OPERATION	
1.	Quality Assurance Program	1
2.	Organization	4
3.	Design Control	9
4.	Procurement Document Control	11
5.	Instructions, Procedures and Drawings	13
6.	Document Control	14
7.	Control of Purchased Material, Equipment and Services	16
8.	Identification and Control of Materials, Parts and Components	20
9.	Control of Special Processes	21
10.	Inspection	22
11.	Test Control	23
12.	Control of Measuring and Test Equipment	24
13.	Handling, Storage and Shipping	26
14.	Inspection, Test and Operating Status	27
15.	Nonconforming Materials, Parts and Components	28
16.	Corrective Action	29
17.	Quality Assurance Records	30
18.	Audits	31



## LIST OF TABLES

<u>Table Number</u>	<u>Title</u>	<u>Page</u>
1-1	Quality Assurance Program Procedures Subject Listing	34
4-1	Procurement Document Requirements	47
18-1	Audit List	48

## LIST OF FIGURES

<u>Figure Number</u>	<u>Title</u>	<u>Page</u>
2-1	Management Organization	52
2-2	Quality Assurance/Quality Control Organization	53
2-3	Ginna Station Organization	54
2-4	Electric Transmission and Distribution Organization	55
2-5	Engineering Division Organization	56
2-6	Ginna station Review and Audits Functions	57



## QUALITY ASSURANCE PROGRAM FOR STATION OPERATION

### 1. Quality Assurance Program

The Quality Assurance Program has been developed by the Rochester Gas and Electric Corporation to assure safe and reliable operation of the R. E. Ginna Nuclear Power Plant. This program applies to all activities affecting the safety related functions of the structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. These quality affecting activities include operation, maintenance, repair, inservice inspection, refueling, modification, test and inspection. In addition, the Quality Assurance Program applies to the activities associated with the packaging of licensed radioactive materials to be shipped in accordance with 10 CFR Part 71.

The basic Rochester Gas and Electric Corporation quality assurance policy is established by the Chairman of the Board and Chief Executive Officer. This policy is implemented under the overall direction of the President, through the Vice President, Production and Engineering, Director, Quality Assurance/Quality Control, General Manager, Nuclear Production, the Plant Manager, Ginna Station, Chief Engineer and heads of other supporting departments.

The program is governed by a Ginna Station Quality Assurance Manual which contains the requirements and assignment of responsibilities for implementation of the program. The manual is prepared, reviewed, and maintained by Quality Assurance and approved by the President.

The program is implemented through Quality Assurance/Quality Control, Ginna Station, Engineering, General Maintenance, Research and Science, Electric Transmission and Distribution, and Purchasing procedures. These procedures are prepared and approved by the responsible organization and reviewed and concurred with by Quality Assurance. The procedures are contained in separate manuals maintained by the responsible organization. All these procedures are reviewed for adequacy at least once every two years by the responsible organization. Table 1-1 provides a listing of the subjects and a short description of the subject matter which is contained in the procedures.

Organizational interfaces are defined and controlled by sections of the Quality Assurance Manual. Organizational responsibilities are described in Section 2.





The Quality Assurance Program covers all existing Seismic Category I and Class 1E structures, systems, and components, including their foundations and supports. Activities affecting the quality of these structures, systems, and components are controlled to an extent consistent with their importance to safety. A detailed listing of the structures, systems, and components covered by the Quality Assurance Program, based on Section 3.2. of the Updated Final Safety Analysis Report, is contained in the Quality Assurance Manual.

Details of the system boundaries and the quality classification of water-and-steam-containing components are contained on system flow drawings. The listing of structures, systems, and components covered by the Quality Assurance Program and the system flow drawings are prepared and maintained by Engineering and reviewed and concurred with by Quality Assurance.

Modifications or additions to existing structures, systems, and components are designated the same seismic classification as the existing system. New structures, systems, and components are designated a seismic classification in accordance with the guidelines in USNRC Regulatory Guide 1.29, Revision 3.

Supervisory personnel are indoctrinated in quality assurance policies, manuals, and procedures to assure they understand that these are mandatory requirements which must be implemented and enforced. Personnel responsible for performing activities affecting quality are trained and indoctrinated in the requirements, purpose, scope, and implementation of quality related manuals and procedures. Refresher sessions are held periodically and retraining is required whenever a new procedure is issued or a major revision is made to an existing procedure. Training of personnel not in the Quality Assurance/Quality Control organization is the responsibility of each department performing an activity affecting quality. Quality Assurance/Quality Control assists in establishing training requirements and assures that personnel are trained by auditing training.

In addition to training in quality assurance, each department conducts on-the-job training to the extent necessary to assure that personnel are qualified for their primary work assignments.

The General Manager, Nuclear Production is responsible for the formal training, qualification, licensing, and re-qualification of operators, as necessary. Where necessary, personnel are trained in radiation protection, plant safety and security.



The Nuclear Safety Audit and Review Board is required to review the status and adequacy of the Quality Assurance Program at least once every two years to assure that it is meaningful and is effectively complying with corporate policy and 10CFR50, Appendix B. This review consists of audits or of a review equivalent to an audit performed by company personnel or outside organizations.

The Quality Assurance Program is designed to meet the requirements of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants." The program conforms to the following NRC Regulatory Guides and ANSI Standards:

- a. NRC Regulatory Guide 1.8, Revision 1, "Personnel Selection and Training."
- b. NRC Regulatory Guide 1.28, Revision 2, "Quality Assurance Program Requirements (Design and Construction)."
- c. AEC Regulatory Guide 1.30, Revision 0, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment."
- d. AEC Regulatory Guide 1.33, Revision 0, "Quality Assurance Program Requirements (Operation)," and regulatory staff comments and supplementary guidance contained in the document entitled "Guidance on Quality Assurance Requirements During the Operations Phase of Nuclear Power Plants," Revision 0 dated October 1973 (Orange Book - Revision 0)
- e. AEC Regulatory Guide 1.37, Revision 0, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants."
- f. NRC Regulatory Guide 1.38, Revision 2, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants."
- g. NRC Regulatory Guide 1.39, Revision 2, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants."
- h. NRC Regulatory Guide 1.58, Revision 1, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel."
- i. NRC Regulatory Guide 1.64, Revision 1, "Quality Assurance Requirements for the Design of Nuclear Power



Plants."

- j. NRC Regulatory Guide 1.74, Revision 0, "Quality Assurance Terms and Definitions."
- k. NRC Regulatory Guide 1.88, Revision 2, "Collection, Storage and Maintenance of Nuclear Power Plant Records."

Note: When record storage facilities are not designed in accordance with the requirements of Regulatory Guide 1.88, duplicate records are kept in two separate storage locations in separate buildings which are physically isolated from each other.

- l. NRC Regulatory Guide 1.116, Revision 0-R, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems."
- m. NRC Regulatory Guide 1.123, Revision 1, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants."
- n. ANSI N45.2.12, D3, R4, 2/74 "Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants."
- o. NRC Regulatory Guide 1.146, Revision 0, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants."

## 2. Organization

The major organizations participating in the Quality Assurance Program are Purchasing, Engineering, Ginna Station, General Maintenance, Electric Transmission and Distribution, Research and Science, and Quality Assurance/Quality Control; the Plant Operations Review Committee; and the Nuclear Safety Audit and Review Board. Figure 2-1 is an organizational chart showing these organizations and their relationship to the corporate organization.

Positions responsible for the principal elements of the quality assurance program are:

- Chairman of the Board and Chief Executive Officer
- President
- Vice President, Production and Engineering
- Chief Engineer
- Director, Nuclear Engineering Services
- Director, Quality Assurance/Quality Control



Manager, Divisional Services  
Manager, Quality Assurance  
Purchasing Agent  
General Manager, Nuclear Production  
Plant Manager, Ginna Station  
Superintendent, Ginna Support Services  
Superintendent, Ginna Production  
Division Training Manager  
Nuclear Assurance Manager  
Superintendent, Electric Substations  
Superintendent, General Maintenance  
Quality Services Coordinator  
Director, Research and Science

In addition to the above individuals, two advisory groups are utilized to review and audit plant operations. These groups are the Plant Operations Review Committee and the Nuclear Safety Audit and Review Board. The Plant Operations Review Committee acts in an advisory capacity to the Plant Manager, Ginna Station and the Nuclear Safety Audit and Review Board advises the Vice President, Production and Engineering. The qualifications of members and the responsibilities of these organizations are described in Section 6.0, Technical Specifications, Appendix A to Provisional Operating License No. DPR-18.

The Chairman of the Board of the Rochester Gas and Electric Corporation directed the establishment of the Quality Assurance Program and issued the governing policy statement. He has established the Nuclear Safety Audit and Review Board to review and audit plant operations. The Chairman of the Nuclear Safety Audit and Review Board is responsible to the President on all activities of the Nuclear Safety Audit and Review Board.

The President has overall responsibility and authority for directing the Quality Assurance Program and shall be responsible for the approval of the Quality Assurance Manual.

The Vice President, Production and Engineering reports to the President and has corporate responsibility for operation of Ginna Station in accordance with applicable regulatory requirements. He is responsible for establishing the policies and requirements necessary to assure safe and reliable operation of Ginna Station. He is also responsible for those items delineated in Section 6.0, Technical Specifications.

The Chief Engineer is responsible for supervising the Engineering Division which is responsible for establishing policies and requirements for fuel management and the design





and construction of major modifications in accordance with applicable design bases, regulatory requirements, codes and standards. He is also responsible for safety related maintenance, repair, modifications and inspections performed at the General Maintenance facility, for support of these activities at Ginna Station, and for special processes and the inservice inspection program performed by the Research and Science Department. As requested by Ginna Station, he is also responsible for reviewing unique maintenance and repair procedures for major equipment. The Chief Engineer is also responsible for the retention of records at Ginna Station and the Engineering offices.

The Director, Nuclear Engineering Services is responsible to the Chief Engineer for designing and constructing major modifications in accordance with applicable design bases, regulatory requirements, codes and standards and for nuclear fuel management.

The Director Quality Assurance/Quality Control is responsible for establishing the overall Quality Assurance Program. He is responsible for assuring that all planned and systematic actions necessary to provide adequate confidence that Ginna Station will operate safely and reliably are established and followed. He provides management with objective information concerning quality, independent of the individual or group directly responsible for performing the specific activity. He has the authority and organizational freedom to assure all necessary quality activities are performed. He is responsible for maintaining a staff, Figure 2-2, for the conduct of staff training and for directing its activities.

The Manager, Quality Assurance reports to the Director, Quality Assurance/Quality Control. He and the Quality Assurance Staff are responsible for formulating corporate quality assurance policy and for assuring its implementation. This includes writing Quality Assurance policies, assuring that the program satisfies the requirements of 10CFR50, Appendix B, and for maintaining the total program up to date. The Manager, Quality Assurance is also responsible for establishing and implementing a comprehensive audit program, as well as, reviewing the procedures of the organizations participating in the Quality Assurance Program. The staff is also responsible for auditing aspects of the Quality Assurance Program and for ensuring significant conditions adverse to quality are corrected. They are responsible for assuring that proper codes, standards, and quality requirements are specified in design, procurement, and installation documents. They are responsible for assuring that the suppliers of safety-related material, equipment and services are properly



qualified, and they are responsible for conducting audits and surveillances at these supplier's facilities. In addition, the staff assists the Manager, Quality Assurance, in the preparation of the audit schedule, audit status reports, corrective action report summaries and in the preparation and maintenance of the Quality Assurance/Quality Control Procedures Manual.

The Manager, Quality Assurance is a graduate engineer with at least six years of responsible experience, of which two years is in quality assurance and three years in the design or operation of nuclear power plants.

The Director, Research and Science is responsible for supervising and directing a staff, Figure 2-5 which is responsible for the development and qualification of procedures utilized for special processes. He is responsible for providing functional guidance and direction for those methods. He is responsible for establishing the Inservice Inspection Program and for coordinating changes thereto. He is also responsible for the routine maintenance of lifting and handling equipment and for the testing and evaluation of Ginna Station materials.

The Manager, Divisional Services is responsible to the Chief Engineer for providing records maintenance, document control, schedule and administrative support services to the Engineering Division and other organizations as appropriate.

The Purchasing Agent is responsible for the procurement of materials, services, and components, from qualified suppliers, in accordance with applicable commercial, technical, and quality requirements. He maintains a listing of qualified suppliers determined through an evaluation made by Purchasing, Engineering, Quality Assurance and the other involved departments as appropriate.

The General Manager, Nuclear Production is responsible to the Vice President, Production and Engineering for directing Ginna nuclear production activities and those support activities associated with Production Systems and Services, Training, and Emergency Planning.

The Plant Manager, Ginna Station is responsible to the General Manager, Nuclear Production for the overall on-site safe operation of Ginna Station. He is responsible for the performance of all Ginna Station quality affecting activities in accordance with the requirements of the quality assurance program. He is responsible for providing qualified personnel to perform these activities in



accordance with approved drawings, specifications, and procedures. He is also responsible for those items delineated in Section 6.0, Technical Specifications.

The Superintendent, Ginna Support Services reports to the Plant Manager, Ginna Station and is primarily responsible for the performance of modification, support maintenance, and fire protection activities in accordance with the requirements of the quality assurance program.

The Superintendent Ginna Production reports to the Plant Manager, Ginna Station, and is responsible for operations, health physics and chemistry, refueling, results and tests, and operational assessment in accordance with the requirements of the quality assurance program.

The Plant Manager, Ginna Station and Superintendents are assisted by other designated staff members, Figure 2-3, in the implementation of certain Quality Assurance Program requirements at the plant. These staff members are assigned responsibility for testing, storage of material and equipment, operation and test status control, calibration and control of measuring and test equipment, maintenance of material handling equipment, operator training, and control of all activities involving operation, maintenance, repair, refueling and modification.

The Division Training Manager is responsible to the General Manager, Nuclear Production for maintaining and implementing INPO accredited training program.

The Nuclear Assurance Manager reports to the Director Quality Assurance/Quality Control and is responsible for assuring that station activities affecting quality are prescribed and carried out in accordance with approved drawings, specifications, and procedures. He is a member of the Plant Operations Review Committee and delegates the day to day quality assuring planning and work monitoring responsibilities to the station Quality Control Engineers and QC Inspectors. The Quality Control Engineers are responsible for the review of procurement documents initiated at Ginna and for the review of plant procedures which involve maintenance, repair, refueling, modification, and testing. They are also responsible for the coordination of inspection activities and the assurance that inspection requirements are included in approved procedures at Ginna Station and shop work travelers at General Maintenance. This includes the receipt inspection of incoming materials, parts and components and the processing of nonconformance reports at Ginna Station and the General Maintenance shops. Quality Control personnel initiate corrective action reports and assure that corrective action



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is taken. They also perform routine surveillance of other groups involved in quality affecting activities and provide reports to Ginna supervision and management with objective information concerning the quality of these activities.

The Superintendent, General Maintenance, is responsible for supervising and directing a staff, Figure 2-5, which supervises the performance of safety related maintenance, repair and modification activities performed at the General Maintenance facility. He is also responsible for providing trained and qualified welders, riggers and crane operators for the support of Ginna activities.

The Quality Services Coordinator is responsible for the preparation of Quality Maintenance, Quality Research and Science and Quality Engineering procedures and for the training of the corresponding personnel in the implementation of these procedures. He also coordinates the processing of replies to audit reports for the three departments.

The Superintendent Electric Substations Department is responsible for directing a staff, Figure 2-4 which is responsible for providing relay engineering, maintenance and testing services. He is also responsible for design, modification and construction activities at Station 13A and for supporting the Engineering department's design and construction activities at Ginna. He is also responsible for coordinating and for providing support documentation for any design modifications initiated within the Electric Transmission and Distribution Division.

### 3. Design Control

Design activities are performed by Rochester Gas and Electric Corporation personnel or are subcontracted to organizations providing services to Rochester Gas and Electric.

Engineering is responsible for the design and control of design activities (including design interfaces) for major modifications of structures, systems or components.

Augmenting this effort is the design and technical support provided by the Electric Substations Department for those activities for which Electric Transmission and Distribution is responsible. In this regard they support Engineering for design of safety related modifications.

Ginna Station is responsible for the design and control of design activities for Minor modifications of structures, systems, or components. Ginna Station is also responsible





for classifying station originated modifications as either Major or Minor. Engineering reviews and concurs with modifications being classified as Minor. Minor modifications typically involve (1) component changes which involve vendor design and are limited to the extent that the change does not impact existing performance requirements, (2) additions within Seismic Category I buildings which perform no safety functions and which either interface with Seismic Category I or Class 1E items or whose failure could reduce the functioning of any safety related component required for safe shutdown of the plant to an unacceptable level, (3) changes to a safety related system determined not to be major (i.e., vents, drains, alarms, indicating lights, etc.).

Design control is implemented by means of procedures which include: design considerations, design review requirements; internal and external interface control considerations; design document review, approval, distribution, control, and revision requirements; and corrective action. Design considerations include, as appropriate: physics, stress, materials, thermal, hydraulic, radiation and accident analysis; appropriate design bases, codes, standards and regulations; acceptability for operation, maintenance and repair; acceptance and rejection criteria; and quality standards and other quality assurance requirements. Design verification utilizes various methods such as formal design reviews, alternate calculations, or tests, as appropriate, to assure the adequacy of the design.

The design of plant modifications is verified by an engineer other than the one who performed the original design. For Major modification design, this may be done by Engineering department design engineers or consulting engineers as requested. For Minor modification station design, this may be done by Ginna Station, Engineering department design engineers or consulting engineers, as appropriate.

Spare or replacement parts must at least meet the original equipment's technical and quality requirements. For plant modifications, standard, "off-the-shelf", commercial or previously approved materials, parts, and equipment are selected and reviewed for suitability of application by the design engineer.

Changes to a modification design are normally reviewed and approved in accordance with the same procedures as the original modification design. Supplemental procedures are established for the review and approval of field changes. In general, design changes including field changes, are reviewed and approved by the organizations or individuals that performed, reviewed and approved the original design.



Where this is not practical, other responsible design organizations or individuals are designated, provided they have access to pertinent background information and are competent in the specific design area.

Design verification and field change systems are methods utilized to detect, document and correct design process errors and deficiencies. In addition, the corrective action system, described in Section 16, is utilized to control and document corrective action to preclude recurrence of those design process errors and deficiencies which are considered to be a significant condition adverse to quality.

Quality Assurance is responsible for assuring that design control procedures, whether the work is done by Rochester Gas and Electric or by other organizations, are prepared and implemented and incorporate appropriate design control practices, checks, and reviews. Design control procedures are reviewed to assure that an independent verification is performed.

Engineering and Ginna Station are responsible for establishing measures for the proper control of design documents and revisions there-to, to assure that distribution is to responsible individuals and in a timely manner to prevent inadvertent use of superseded design information. The measures include the use of document revision levels, document transmittals, release stamps, field change request forms and distribution lists.

Design documents are collected, stored, and maintained in accordance with Section 6 and 17, as appropriate. Design documents include design criteria, analyses, specifications, drawings, design review records, and changes thereto.

Quality Assurance/Quality Control, through preparation assistance and/or review, assure the proper inclusion of quality standards in the design of major and minor modifications. Quality Assurance is also responsible for assuring that adequate inspection requirements are included in specifications. The Manager, Quality Assurance reviews and approves any deviations from quality standards when they occur.

Plant modifications are controlled by means of applicable Ginna Station, Engineering, Electric Transmission and Distribution, and Quality Assurance procedures. These procedures provide for the preparation, review, and approval of design documents, safety analyses, and plant modification procedures. Plant modifications are reviewed by the Plant



Operations Review Committee and Nuclear Safety Audit and Review Board as required by Section 6.0, Technical Specifications.

4. Procurement Document Control

Procurement document control applies to the control of procurement documents for materials, parts, components, and services required to perform quality affecting activities. Such documents may be prepared by Rochester Gas and Electric or by a contractor and include purchase requisitions, purchase orders, service agreements, contracts, specifications, and drawings.

Procurement of materials, parts, components, and services is initiated by department staff personnel. Procurement procedures require that organizations preparing procurement documents consider and include, as appropriate, the items listed in Table 4-1.

Procurement documents, including those requesting spare or replacement parts, initiated at Ginna Station are reviewed by Quality Control and approved by the designated Station supervision. Procurement documents initiated in Engineering, Research and Science, Electric Transmission and Distribution, General Maintenance and Quality Assurance are reviewed by Quality Assurance and approved by designated departmental supervision.

Evidence of review and approval of procurement documents is recorded on the documents or on the attached control form. The attached control form identifies to Purchasing a procurement method which will ensure that the selected supplier is capable of providing the item or service in accordance with the requirements of the procurement documents. Considerations used in selecting a supplier and for determining the corresponding procurement method are described in Section 7

After purchase requisitions, service agreements, contracts, specifications, and drawings have received the required reviews and approvals, a purchase order is issued by Purchasing to the selected supplier and controlled as described in Section 7. These documents are maintained by Purchasing, by the originating department, and/or by the receiving locations, as appropriate, until procurement is completed.

Under no circumstances are purchasing requirements altered (except for quantity or pricing) during order placement unless review and concurrence is obtained from those who were required to review, concur with, and approve the



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original documents as described above. Changes or revisions to procurement documents are subject to the same review and approval requirements as the original documents.

Originating department technical review of procurement documents includes verification of applicable regulatory, code and design requirements. Quality Assurance/ Quality Control review of the above includes checks to verify proper inclusion of the quality standards, quality assurance program requirements, method of procurement and the applicable acceptance criteria. Ginna Administrative Services reviews procurement documents for spare or replacement parts to determine similarity, compatibility, and acceptance criteria of the original design. Quality Control also reviews procurement documents for spare or replacement parts for adequacy of the quality requirements.

5. Instructions, Procedures, and Drawings

Each Rochester Gas and Electric company organization, involved in quality related activities, is responsible for developing, reviewing, approving, and implementing procedures as required to implement the Quality Assurance Program. These procedures cover activities such as document control, training of personnel, and responsibilities and duties of personnel. Quality Assurance reviews and concurs with these procedures. Table 1-1 provides a summary of the subject matter contained in the procedures which are used to implement the quality assurance program. Procurement documents require suppliers and contractors to have appropriate instructions, procedures, specifications, and drawings.

Ginna Station is responsible for providing and implementing instructions and procedures associated with operation, maintenance, repair, in-service inspection, refueling, modification and testing. This includes instructions and procedures listed in USAEC Regulatory Guide 1.33 for administrative control; general plant operation; startup, operation, and shutdown of safety related systems; correction of abnormal, off normal, or alarm conditions, response to emergencies and other significant events; radioactivity control; control of measuring and test equipment; chemical and radiochemical control; and fuel handling and refueling. Ginna Station is responsible for appropriate changes to such documents upon receipt of regulatory directives, instructions from Rochester Gas and Electric management, or the completion of plant modifications. Ginna Station is also responsible for the





preparation and issuance of those minor modification design documents not provided by Engineering or the equipment supplier.

General Maintenance is responsible for providing and for implementing procedures associated with shop work required to support Ginna Station maintenance, repair and modification activities.

Electric Transmission and Distribution is responsible for the preparation and implementation of relay inspection and testing procedures as required to direct detailed inspections and testing activities for which they are responsible. Electric Transmission and Distribution also assists in the preparation of routine relay maintenance and testing procedures used by their personnel in the annual Ginna Station protective relay surveillance program.

Engineering is responsible for providing approved specifications, and drawings associated with major modifications and when minor modifications necessitate drawings or specifications. These documents require those performing the work to obtain, understand, and comply with appropriate procedures, specifications and drawings. Engineering has established procedures for revising drawings and specifications. These procedures cover updating of as-built drawings after plant modifications and the revision, approval, distribution, and control of all drawings and specifications.

Research and Science is responsible for providing and for implementing instructions and procedures associated with special processes, routine maintenance and inspection of cranes and handling equipment as well as materials testing and inservice inspection.

Quality Assurance/Quality Control is responsible for the preparation and implementation of quality control inspection procedures utilized for detailed inspection activities at Ginna Station and General Maintenance. This organization is also responsible for providing and for implementing procedures for audit related activities.

Persons preparing and approving documents are responsible for assuring that specifications, instructions, procedures, and drawings include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished and assuring that the documents are kept current.

Indoctrination and training of personnel is provided by the responsible organizations to ensure that quality affecting activities are conducted in accordance with established



documents. In addition, surveillance by Quality Control personnel, as described in Section 10 and audits by Quality Assurance as described in Section 18 are used to verify that quality affecting activities are being performed in accordance with approved instructions, procedures and drawings.

6. Document Control

Procedures are established to control the issuance of procedures, instructions, drawings, and specifications. Standard document control requirements are contained in the Quality Assurance Manual. The Plant Manager, Ginna Station is responsible for the control of all documents issued at Ginna Station. Electric Transmission and Distribution is responsible for the control of documents issued by their organization. Engineering controls the distribution of controlled manuals issued for Engineering, General Maintenance, Research and Science, Quality Assurance/Quality Control, Purchasing and Electric Transmission and Distribution. Each organization controlling documents has a separate procedure to control documents in accordance with the requirements of the Quality Assurance Manual.

The Quality Assurance Manual designates responsibilities and defines requirements for the preparation, review and approval of documents. Each department responsible for an activity is responsible for providing the necessary review and approval of instructions, procedures or drawings to assure that they are adequate, and include appropriate qualitative and quantitative requirements. Quality Control representatives, assigned to support departmental maintenance, repair, refueling and modification activities, review governing procedures, prior to use, to assure quality assurance requirements are included. The Plant Operations Review Committee has the responsibility for reviewing Ginna Station procedures prior to their approval as required by Section 6.0, Technical Specifications. Detailed inspection, test and examination procedures used by qualified personnel require the review and concurrence of the responsible technical person associated with that activity. Ginna Station, General Maintenance, Engineering, Research and Science, Purchasing, and Electric Transmission and Distribution quality assurance implementing procedures require the review and concurrence of Quality Assurance and the approval of the appropriate department supervisor.

Quality Assurance/Quality Control procedures are approved by the Director, Quality Assurance/Quality Control.

The Quality Assurance Manual requires that documents be controlled as appropriate, considering the type of document



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involved, its importance to safety, and the intended use of the document. It specifies the types of documents which must be controlled; identifies the difference between controlled and uncontrolled copies of the same document; includes the method for identifying holders of controlled copies; requires that only controlled copies of a document be used for official purposes; requires that lists of effective revisions be issued periodically; requires lists of document holders to be maintained by the distributors; and requires that distributors transmit controlled documents using approved forms internally and externally.

Types of documents which are controlled include Technical Specifications, UFSAR, Quality Assurance Manual, procedures (such as quality assurance, engineering, purchasing, repair, maintenance, test, calibration, fuel handling, modification, and administrative), specifications and drawings. Suppliers of materials, equipment, and services are required in procurement documents to provide for control of documents, including manufacturing, inspection and testing instructions.

The Quality Assurance Manual further requires that each organization provide in its procedures for measures: to assure that documents are available when required; to properly review and approve documents such as procedures, instructions, specifications, and drawings; to provide the same reviews and approvals for changes to documents as was required of the original document; to require that organizations which review and approve documents have access to pertinent information and adequate knowledge of the original document intent; to assure that approved changes are promptly transmitted for incorporation into documents; and to assure that obsolete or superseded documents are eliminated from the system and not used.

Quality Assurance/Quality Control is responsible for review and concurrence of procurement documents for all procuring organizations and, therefore, procurement document control requirements.

Quality Assurance and the Quality Control organizations are further responsible for review, inspection, surveillance, and audit, as appropriate, of document control systems to assure adequate systems are implemented.

#### 7. Control of Purchased Material, Equipment, and Services

Procurement documents, supplier selection, planning for item or service acceptance, control of supplier performance and acceptance of items and services are five major means used in controlling purchased material, equipment and services.



All procurement is conducted in accordance with procurement documents as stated in Section 4. All reviews, inspections, surveillances, and audits are conducted by personnel who are competent in establishing whether or not a supplier is capable of providing acceptable, quality products.

Procurement planning is utilized by the procuring organizations for determining the methods to be used for acceptance of the item or service as well as requirements for the control of the supplier performance. Source inspection (surveillance), certificate of conformance, receipt inspection and post installation test are methods which are considered for item acceptance with receipt inspection utilized in the acceptance of all items. In lieu of these methods, acceptance of services is based on either or a combination of: (1) surveillance of the activity and (2) review of objective evidence for conformance to the procurement document requirements (i.e. certifications, stress reports etc.). The extent of the acceptance methods and associated verification activities will vary and be a function of the relative importance and complexity of the purchased item or service and the suppliers past performance.

Consideration for the control of supplier performance includes the necessity for document submittals or surveillance, and under what situation the supplier is to report nonconformances.

Results of the planning are incorporated in the procurement documents and or on the attached procurement control form as described in Section 4.

Selection of a supplier is based on the evaluation of its capability to provide the item or services in accordance with the requirements of the procurement documents. The evaluation which is accomplished during the procurement planning, determines the necessity for the supplier selection to be from the approved suppliers list maintained by Purchasing. Purchasing utilizes the approved suppliers list for the selection source of those suppliers required to have a satisfactory quality assurance program. The evaluation guidelines for source selection considers the item complexity, method(s) of acceptance and for a replacement item, if the source is to be restricted to the original supplier. For engineered and off-the-shelf items procured from suppliers required to have a quality assurance program, supplier selection is from the approved suppliers list or one who is in the process of being added to the list, after having its capability evaluated to purchaser satisfaction. Items or services which meet industry standards and are typically utilized in applications other than nuclear may be purchased from





suppliers not listed on the approved suppliers list provided that item acceptance can be based on acceptance of standard commercial quality which is supplemented, as necessary, with source surveillance, pre- or post-installation tests, receipt tests, commercial supplier test reports, commercial supplier certificates, or receipt inspection. Items or services which have nuclear quality requirements which normally require the supplier to implement a quality assurance program but for which no such supplier can be practicably utilized may also be purchased from suppliers not listed on the approved suppliers list provided that verification of nuclear quality can be accomplished by methods such as source surveillance, pre- or post-installation tests, receipt tests, supplier test reports, supplier certificates, or receipt inspection as approved by Quality Assurance. Departmental procedures establish guidelines for source selection evaluations and for documenting the results on the procurement control form through indication of the corresponding procurement method. The purchase requisition will also identify the source when replacement parts are to be procured from the original equipment supplier.

Addition of a supplier to the approved suppliers list is based on satisfactory evaluation of the supplier's capability by Quality Assurance, Purchasing and other departments, as appropriate.

For engineered items, Engineering is responsible for evaluating the overall design or manufacturing capability of the supplier including his particular technical ability to produce the design, service, item, or component delineated in the procurement documents. As part of this review, the supplier's design capabilities, machinery capabilities, handling capabilities, testing facilities, service capabilities, and experience are reviewed.

Quality Assurance is responsible for evaluating the supplier's overall quality assurance organization and program in accordance with applicable codes, standards, applicable parts of 10CFR50 Appendix B, and Rochester Gas and Electric requirements. The review includes consideration of: company organization, quality assurance personnel qualifications, review and control of design documents, manufacturing procedures, quality assurance procedures, calibration practices, acceptance criteria, required quality assurance records and their retention, and quality assurance requirements and controls imposed by the supplier on his subcontractors. Supplier evaluation is conducted by means of procedures or checklists which identify applicable regulatory or code quality assurance requirements.



Ginna Station, Research and Science, Quality Assurance/Quality Control and Electric Transmission and Distribution evaluate the suppliers of inspection, test, and calibration services which they intend to use.

The departments responsible for performing supplier evaluations shall document their results in reports which discuss areas investigated, findings, and conclusions. As applicable, concurrence of Purchasing, Engineering, Quality Assurance/Quality Control, Ginna Station, Research and Science, General Maintenance, and Electric Transmission and Distribution is required to place a supplier on the qualified suppliers' list. One organization can remove a supplier from the list without concurrence of the others.

Measures are established by Engineering and Quality Assurance to control supplier performance for engineered items. These measures typically include the processing of change information, surveillance of supplier activities and the control of documents exchanged with the supplier. In addition, each department procuring off-the-shelf items or services establishes similar measures for the control of supplier performance. With the exception of processing change information, the need for and applicable extent of purchaser controls of the supplier are determined during procurement planning.

Quality Assurance is responsible for determining and documenting the degree of supplier surveillance (including review, inspection, or audit) required during design, fabrication, inspection, testing, and shipping, and for providing the required surveillance. The objective of supplier surveillance is to provide a sampling review of the supplier's quality assurance program implementation and of product conformance with respect to the purchase order requirements. For complex engineered items, Quality Assurance and Engineering are responsible for joint development of surveillance plans in advance of surveillance trips to identify areas to be reviewed.

The results of the surveillance trip are documented by means of inspection sheets or trip reports which are distributed to the Manager, Quality Assurance, and the department which initiated the procurement. When a deviation from purchase order requirements is noted, the Quality Assurance representative has the authority to inform the vendor that a particular item is unacceptable, to issue a nonconformance report, or to stop work, if necessary.

Quality Assurance/Quality Control is responsible for surveillance of Ginna Station site contractors to assure



that they meet all technical and quality requirements. The reporting and documenting of contractor surveillance is managed in a manner similar to supplier surveillance.

The verification methods for the acceptance of items and services are specified on the attached procurement control form during procurement planning and the purchase requisition preparation.

Department supervision is responsible for receiving and storing items pending their acceptance. Upon receipt, the department stockkeeper logs the item, places a "hold" tag on the item, and notifies Quality Control that the item has arrived.

Quality Control is responsible for receipt inspection at Ginna Station and General Maintenance upon delivery of items and associated services for maintenance, repair, modification, and refueling. This inspection includes the use of written procedures or checklists to verify that the items and services conform to the procurement documents (if this has not been performed by source inspections) and that documentary evidence of conformance is available at the plant prior to installation or use. Documentary evidence sufficient to identify the codes, standards or specifications met by the purchased material, equipment, and services is retained. In the event a final source inspection for the acceptance is conducted prior to receipt by RG&E, Quality Control performs an inspection for shipping damage or lost parts and a document check to assure that the required documentation has been reviewed and is complete. A receiving inspection checklist is completed for all items received to document the extent of the inspection performed, including the documents checked, and the inspection results.

If the item and documentation are adequate, Quality Control labels the item as "Accepted", files the documentation and receipt inspection results, and releases the item for storage or use. If the item is nonconforming or the documentation is unsatisfactory, Quality Control initiates a nonconformance report which is controlled in accordance with Section 15.

All items issued must bear an acceptance tag and have documentation to support the acceptability of the item. In the event the traceability is lost or the documentation review is unsatisfactory, the item becomes nonconforming and may not be released for use.



8. Identification and Control of Materials, Parts, and Components

The identification and control of materials, parts, and components is accomplished in accordance with written requirements and applies to material, parts, or components in any stage of fabrication, storage, or installation. Identification and control requirements are established by either an existing procedure or requirements documents which are prepared during the planning stages of a project. The identification and control requirements cover items such as: traceability to associated documents such as drawings, specifications, purchase orders, manufacturing test data and inspection documents, and physical and chemical mill test reports; specification of the degree of identification to preclude a degradation of the item's functional capability or quality; and the proper identification of materials, parts, and components prior to release for manufacturing, shipping, construction, and installation.

Engineering and Quality Assurance are responsible for assuring that drawings and specifications contain appropriate requirements for the identification and control of materials, parts, or components, as appropriate. Suppliers are required to assure that all required documentation for an item is properly identified and related to the item. Each item is required to be physically identified, either by marking on the item or by tags. Physical identification by purchase order number is used to the maximum extent possible for relating an item at any time to applicable documentation. Identification is either on the item or records traceable to the item. Where physical identification is impractical, physical separation, procedural control, or other appropriate means are employed.

The Plant Manager, Ginna Station is responsible for maintaining identification and control of materials, parts, or components received, stored, installed, and used at the plant. Procedures covering the identification and control of materials, parts, and components at the plant are approved by the Plant Manager, Ginna Station. The responsible supervision of other departments which receive material which is to be stored away from the plant are responsible for establishing procedures for identification and control and for maintaining identification and control of material, parts, or components, stored or used in their area of responsibility.

In the event that traceability is lost for a specific item, it is handled as nonconforming material and deviations and waivers are controlled and documented in accordance with Section 15.



271

1993

1993





9. Control of Special Processes

Written procedures are established to control special processes, such as welding, heat treating, and nondestructive examination to assure compliance with applicable codes, standards, and design specifications. Qualification of personnel and procedures complies with the requirements of applicable codes and standards. When special process qualification requirements are not included in existing codes and standards, they are described in procedures which give details of the special process, the personnel qualification requirements, the equipment necessary, and the special process qualification requirements.

Initiators of procurement activities are responsible for requiring suppliers, in procurement documents, to control special processes in accordance with the above requirements. Quality Assurance/Quality Control personnel are responsible for reviewing procurement documents to ensure that requirements for control of special processes are included.

Rochester Gas and Electric procedures for special processes are prepared, reviewed, and approved by Materials Engineering and Inspection Services. Special process procedures submitted by suppliers and contractors are reviewed and concurred with by Materials Engineering and Inspection Services.

The Ginna Station Maintenance Manager and Manager, Nuclear Assurance are responsible for assuring that personnel performing special processes under their cognizance are qualified and are using qualified procedures in accordance with applicable codes, specifications, and standards. Within the Research and Science Department, the Manager, Materials Engineering and Inspection Services is responsible for the qualification of NDE personnel and procedures. The Manager, Materials Engineering and Inspection Services is responsible for the qualification of welding procedures and the training and qualification of welders. Records for personnel and procedures to demonstrate that required qualifications have been obtained and kept current are maintained at Ginna Station.

Quality Assurance/Quality Control perform surveillance, inspections, and audits of special processes performed by Rochester Gas and Electric or contractors to assure compliance with procedures.



## 10. Inspection

Procedures prepared for the control of activities include inspection requirements and hold points as required by drawings, instructions, requirements documents, specifications, codes, standards, or regulatory requirements. For clarification and to distinguish from preventive maintenance inspections, the following controls are associated with the quality assurance function inspections and referred to as verification inspections. Instructions for conducting detailed verification inspections are contained in inspection procedures. These inspection procedures and all supporting specifications and drawings are provided to inspection personnel for use prior to performing the inspection. Inspection requirements and hold points are utilized to verify conformance of activities to the documented instructions, specifications, and drawings for accomplishing the activity. Inspection procedures include the identification of quality characteristics to be inspected, a description of the method of inspection to be used, the identification of the group responsible for performing the inspection, the acceptance and rejection criteria, the requirements for the recording of inspection results, and the requirements for providing evidence of completion and certification of the inspection activity. Verification inspections are performed by qualified inspection personnel who are independent of the personnel performing the work. Outside contractors are required by procurement documents to have and follow similar procedures and to use independent inspectors. Inspectors are sufficiently trained to adequately evaluate the activity they are inspecting.

Quality Control personnel are responsible for performing verification inspections, as required, during plant operation, maintenance, repair, in-service inspection, refueling, modification, and testing when the work is performed by Rochester Gas and Electric personnel. When the work is performed by outside contractors, Quality Control is responsible for surveillance of the subcontractor's inspection activities. All inspection equipment is calibrated and controlled in accordance with Section 12. Calibration status is verified by inspection personnel prior to performing an inspection operation.

In the event an inspection of processed material or products is impossible or impractical, indirect control by monitoring processing methods, equipment, and personnel is provided. Both inspection and process monitoring are required when control is inadequate without both.



Quality Assurance is responsible for the adequate inclusion of inspection requirements in specifications.

The Manager, Nuclear Assurance is responsible for assuring that adequate inspection requirements and hold points are included in maintenance, repair, refueling, modification and testing procedures. He is also responsible for the assignment of qualified inspection personnel required for the inspection of quality affecting activities and for coordinating the performance of and conducting the surveillance of inservice inspection.

The Manager, Nuclear Assurance is also responsible for assuring that adequate inspection requirements are included in procedures, instructions and/or checklists controlling maintenance, modification and repair activities and related fabrication processes at the General Maintenance facility.

With the exception of that which pertains to Pump and Valve Testing, the Director Research and Science is responsible for establishing the requirements for the Inservice Inspection Program. Quality Assurance is responsible for establishing the requirements for the Inservice Pump and Valve Testing Program. The program for inservice inspection of the reactor coolant system and other safety related systems is contained in Section 4.2, Technical Specifications.

#### 11. Test Control

Whenever testing is required to demonstrate that a material, part, component, or system will perform satisfactorily in service, a test program is instituted employing written and approved procedures which are in accordance with basic requirements established in Technical Specifications, drawings, instructions, procurement documents, specifications, codes, standards, and regulatory requirements. The test program requires the identification, control, and documentation of all tests, and the preparation of written procedures required for satisfactory accomplishment of the testing. Written test procedures and checklists include: necessary test equipment and calibration requirements; material requirements; test personnel requirements; prerequisite plant and equipment conditions; limiting conditions; detailed performance instructions for the testing method and test equipment instrumentation; acceptance and rejection criteria; instructions for disposition of deviations; data collection requirements; and test result approval.



The Plant Manager, Ginna Station is responsible for the station test program, which includes the surveillance test program required by Section 4.0, Technical Specifications and testing associated with modifications.

Test procedures are prepared by the plant staff, reviewed by the Plant Operations Review Committee and Quality Control, and approved by the Plant Manager, Ginna Station. The Plant Manager, Ginna Station is responsible for the performance of the required tests in a correct and timely manner utilizing written and approved procedures. When contractors are employed for tests, the contractor is required to perform testing in accordance with his quality assurance program requirements. All test results are required to be documented, reviewed, and approved by those responsible for performing the test.

When requested by Ginna Station, Electric Transmission and Distribution performs test activities to determine the cause of protective relay malfunctions. These test activities are performed in accordance with approved procedures by qualified personnel.

Engineering and Quality Assurance are responsible for assuring that required tests for major modifications are included in specifications. Engineering and Electric Transmission and Distribution assistance in the preparation of modification-related test procedures may be provided to the Ginna Station staff. The Ginna Station Technical Manager is responsible for the adequate inclusion of test requirements in minor modification design documents and for reviewing modification-related test results for acceptability to design requirements. Reviews of minor modification design by Quality Control verifies adequate inclusion of test requirements.

## 12. Control of Measuring and Test Equipment

The calibration and control system for measuring and test equipment includes calibration procedures, establishment of calibration frequencies, and maintenance and control requirements of measuring and test instruments, tools, gauges, shop standards, and nondestructive test equipment which are to be used in the measurement, inspection, and monitoring of components, systems, and structures. Calibration procedures include step-by-step methods for calibration and requirements for instrument accuracy. Calibration frequency is based on required accuracy, degree of usage, stability characteristics, manufacturer's recommendations, experience, and other conditions affecting measurement capability.





Control of measuring and test equipment requires: a recall system assuring timely calibration of equipment; a system providing unique identification of equipment, traceability to calibration test data, and identification of the next calibration date on the equipment; a system providing traceability of shop standards to nationally recognized standards (where national standards do not exist, procedures contain instructions to document the basis for calibration) and periodic revalidation of shop standards; a system providing for records to be maintained which indicate the complete status of all items under the calibration system including the maintenance, calibration results, abnormalities, and last and future calibration dates; and a system controlling the purchase requirements of new equipment to be entered into the calibration and control system including requirements for accuracy, stability, and repeatability under normal use conditions. In the event a measuring instrument (i.e. shop or field standard) is found out of calibration, an investigation is conducted to determine the validity of previous measurements.

The Plant Manager, Ginna Station is responsible for the procedures and program required to assure control and calibration of measuring and test equipment at Ginna Station in accordance with the above requirements. Instruments specified in Section 4.1, Technical Specifications, are included in the program. Tools, gauges, and instruments necessary for maintenance, inspection, and test are calibrated and controlled in accordance with station procedures. Measuring, test or inspection equipment used by Quality Control is included in the program.

The Director, Research and Science and Superintendent, Electric Meter and Laboratory, are responsible for establishing a program and the preparation of procedures for the control and calibration of measuring and test equipment used by their respective departments.

### 13. Handling, Storage, and Shipping

Ginna Station Supervision is responsible for developing and implementing procedures for the handling, storage, shipping, preservation, and cleaning of material and equipment delivered to or located at Ginna Station. General Maintenance, Electric Transmission and Distribution, and Research and Science are responsible for preparing and implementing procedures for the handling, storage, shipping, preservation, and cleaning of material and equipment delivered to or located in their work areas. In addition, within the Research and Science Department, the Manager, Materials Engineering and Inspection Services is responsible for preparing and implementing procedures for the routine



maintenance and inspection of lifting and handling equipment. Under normal circumstances, manufacturer's specific written instructions and recommendations and purchase specification requirements are invoked for cleanliness, preservation, special handling, and storage with respect to environmental requirements. In the absence of, or in addition to, specific manufacturer requirements, the department superintendent may invoke additional requirements in accordance with department procedures.

The Chief Engineer is responsible for specifying in procurement documents and in engineering specifications that written procedures be used, as appropriate, for the handling, shipping, storage, cleaning, and preservation of materials and equipment procured for major modifications. These procedures are prepared by contractors, by the station staff, or by staff members of General Maintenance or Electric Transmission and Distribution as appropriate. Rochester Gas and Electric procedures are reviewed and approved as described in Section 6.

In the preparation of procurement documents, department procedures, and contractor procedures, consideration of handling, shipping, storage, cleanliness, and preservation is given to all material and equipment throughout various stages of manufacturing and installation prior to operational acceptance.

Quality Assurance is responsible for review of Engineering specifications to assure that proper handling, storing, and shipping requirements have been specified. Quality Control is responsible for surveillance of handling, storage, and shipping activities by suppliers, Rochester Gas and Electric personnel, and contractors.

#### 14. Inspection, Test, and Operating Status

Equipment or systems not ready for normal service are clearly identified by use of tags, control logs, and other suitable means to indicate the status in a positive manner. The identification is sufficient to positively indicate the status of the particular equipment or system being isolated.

The Plant Manager, Ginna Station is responsible for indicating the status of operating equipment or systems to be removed from service for maintenance, repair, or modification in accordance with the approved Electric System Operating Rules. The Plant Manager designates personnel who have station holding authority.



Personnel who have station holding authority are responsible for directing the status change of equipment and systems in accordance with the approved station holding procedures. System status is indicated through the use of hold tags, block tags and corresponding control logs.

Equipment or system inspection and test status are indicated by use of test tags, labels, or work inspection and test status sheets. Written procedures control the use of hold tags, test tags, and labels. The procedures require the recording of the name of the person placing and removing the tag.

Systems, components, and equipment which are found to be unacceptable during or after testing are clearly identified.

Fuel handling operations involving fuel assemblies or other radioactive sources are identified and controlled by the use of tags, stamps, or other suitable means.

Maintenance, repair, or modification of components, systems, or structures utilizes procedures, travelers, data sheets and checklists to indicate status of the work, inspections and tests and corresponding acceptance or rejection for a particular component, system, or structure. These job control forms are prepared jointly by the job supervisor and Quality Control and maintained at a designated control location to indicate the status and the completion of required inspections and tests.

Quality Control monitors the status change of Ginna Station activities for their compliance to approved procedures and assures that inspection results are properly logged. Material Engineering and Inspection Services establishes the procedures for implementing the inspection status sheets utilized during inservice inspection.

15. Nonconforming Materials, Parts, and Components

Procedures are established for the control, evaluation and disposition of deficient material, parts, and components. Materials, parts, or components which do not conform to the drawing or specification requirements are identified with a tag and reported on a nonconformance report. Quality Control is responsible for issuing nonconformance reports, initiating repair or rework, and inspecting and approving repaired or reworked items. Prior to installation or use, nonconforming items generally remain in a Quality Control receiving inspection area until approved disposition has been received. Nonconforming items which are released for installation to meet critical fabrication schedules are controlled by Quality Control to prevent inadvertent use



prior to clearance of the nonconformance. After installation or use, nonconforming items are identified and controlled until approved disposition has been implemented.

Nonconformances identified at a supplier's facility and reported to RG&E, which have supplier recommended dispositions of use-as-is, or repair, are normally processed by the department originating the procurement. Organizations which specify the requirement being dispositioned are responsible for reviewing and approving the supplier recommended disposition. This also applies to nonconformances discovered after receipt inspection, during handling or after installation or use.

Items are repaired and reworked only in accordance with approved procedures and current drawings. Quality Control assures that approved procedures and/or drawings are available for use prior to the repair or rework and reinspects all repaired or reworked items. The repair or rework must be verified as acceptable by an inspection of the affected item which is at least equal to the original inspection method.

Items which are accepted "use-as-is" are fully documented with the drawing or specification requirement and technical justification for acceptance. All such items are approved prior to use by the cognizant organization having responsibility for the requirement. In addition, those "use-as-is" nonconformances which also deviate from a Design Criteria requirement shall require additional approval of the Vice President, Production and Engineering.

Quality Control issues monthly nonconformance status reports. Copies of nonconformance reports are forwarded to Quality Assurance for review, tabulation and processing of periodic trend reports to management. Adverse trends form a basis for supplier re-evaluation or for other corrective action.

#### 16. Corrective Action

Quality Assurance establishes the requirements for identification, review and correction of significant conditions adverse to quality. Significant conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are reported on a corrective action report. Significant conditions adverse to quality include conditions affecting safety, conditions which could result in plant shutdown, high maintenance items, and operating procedure





deficiencies. The corrective action report identifies the condition, the cause of the condition, and the corrective action taken.

Corrective action reports may be initiated by Quality Assurance/Quality Control, Engineering, Ginna Station, General Maintenance, Research and Science, Electric Transmission and Distribution or Purchasing staff personnel. Corrective action reports initiated at Ginna Station are submitted to Quality Control for review prior to further processing. Corrective action reports initiated by departments other than at Ginna Station are reviewed and processed by Quality Assurance.

When a significant condition adverse to quality at Ginna Station is identified, Quality Control evaluates the affect of continuing the activity. If continuing the activity would obscure or preclude identification and correction of the deficiency, continuing the activity would increase the extent of the deficiency or lead to an unsafe condition, stop work action is taken. Quality Control Supervision has authority to stop work on maintenance, repair, inservice inspection, refueling, modification, testing or inspection deficiencies, at Ginna Station. Quality Control may recommend stop work action to the Plant Manager, Ginna Station on operating deficiencies.

The Manager, Quality Assurance has authority to stop work for conditions identified in Purchasing, Engineering, Research and Science, Electric Transmission and Distribution or cognizant supplier associations.

The Plant Operations Review Committee reviews all corrective action reports initiated at Ginna Station and recommends interim corrective action if the action does not represent a change in configuration of the deficient item. The Committee recommends permanent corrective action for all conditions adverse to quality which involve operating procedures.

Significant conditions adverse to quality identified in General Maintenance and Research and Science are submitted to the Quality Services Coordinator for review. The Quality Control Supervision has the authority to stop or limit work activities within General Maintenance.

Conditions adverse to quality which involve design deficiencies or a recommended corrective action which involves a design change are reviewed by Ginna Station or Engineering as applicable. The cognizant organization determines the cause of the condition and recommends corrective action to preclude repetition.



Quality Assurance reviews all corrective action reports to assure that the cause of the condition has been determined and that corrective action has been taken to preclude repetition.

Corrective action summary reports are submitted to the Vice President, Production and Engineering and departmental supervision to keep them aware of significant conditions adverse to quality, related causes and corrective action being taken.

#### 17. Quality Assurance Records

Quality Assurance is responsible for establishing the basic requirements for quality assurance record retention and maintenance. Engineering, as directed by the Chief Engineer, is responsible for the retention and maintenance of Engineering and Ginna Station records. Quality Assurance, Purchasing, Research and Science, General Maintenance and Electric Transmission and Distribution departments are responsible for assuring the maintenance and retention of records which they originate. This may be accomplished either by retaining the records in their department or by forwarding them to the Ginna Station or Engineering record retention locations as appropriate. Each organization retaining records is responsible for preparation, review, approval, and implementation of specific quality assurance record procedures for their areas of responsibility in accordance with these requirements. The records which fall within quality assurance record requirements include those records required by Section 6.10 of the Technical Specifications and the Quality Assurance Program. All records associated with the operation, maintenance, repair, inservice inspection, refueling, modification, inspection and testing of structures, systems, and components covered by the quality assurance program are included.

Ginna Station records include operating logs; the results of inspections, tests, and the monitoring of plant activities; drawings, procurement documents and material analyses; calibration procedures and reports; and nonconformance and corrective action reports. Records of the qualification of personnel, procedures, and equipment for special processes and the results of reviews are maintained at Engineering or Ginna Station as appropriate.

Inspection and test records contain a description of the type of test or inspection activity, evidence of completion of the activity, results, the name of the inspector or data recorder, the acceptance or rejection of the activity, and a record of any nonconformances.



22



The requirements and responsibilities for record accessibility and transmittal are described in the Quality Assurance Manual sections as appropriate. Requirements and responsibilities for preparation, inspection, identification, review, storage, retrieval, maintenance, and the retention of quality assurance records are in accordance with applicable quality assurance record procedures, codes, standards, and procurement documents. Records are available to authorized personnel.

Removal of records from storage is documented on sign-out cards and accountability is maintained by the responsible record control activity.

Records are either stored in record storage facilities which are designed to prevent destruction of records due to fire, flooding, theft, and deterioration by temperature or humidity conditions; or, duplicate records are kept in two separate storage locations in separate buildings which are physically isolated from each other.

Record keeping procedures provide for receiving, classifying, indexing, labeling, and preparing records for storage. The procedures establish retention requirements, accessibility, control of obsolete record destruction, and control for issuance and return of all records.

Engineering is responsible for maintaining plant operating records as required in Section 6.10, Technical Specifications.

Engineering is also responsible for maintaining off-site prepared design records, such as specifications, drawings, design review reports, and design control documentation; quality assurance records, such as audit reports and supplier surveillance reports; purchasing records, such as supplier qualifications, bid evaluations, and purchase orders.

#### 18. Audits

Compliance with all aspects of the quality assurance program and the effectiveness of the program is determined by audits of all organizations performing quality affecting activities. Quality Assurance is responsible for conducting audits of each organization involved in the quality assurance program on a planned, periodic basis. Audit intervals are based on the status and safety importance of activities being performed.



Audits of Ginna Station, Engineering, Research and Science, General Maintenance, Electric Transmission and Distribution, and Purchasing organizations are performed annually. Table 18-1 is a list of the activities to be audited in each of the organizations. Audit frequencies are based on the level of activity in each area. Audit schedules are established to assure that each of the activities are audited at the frequency specified in Section 6 Technical Specifications which includes annually for those activities required to meet the criteria of Appendix B, 10CFR Part 50. Additional audits are conducted as required by special conditions or circumstances.

Each audit requires the development of an audit plan to provide information about the audit, such as the functional areas to be audited, the names and assignments of those who will perform the audit, the scheduling arrangements, and the method of reporting findings and recommendations. The audits are performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited.

Audit results are documented and reported to the supervisor and division head having responsibility in the area audited, the Vice President, Production and Engineering and the Nuclear Safety Audit and Review Board. Within a specified period of time, the person having supervisory responsibility in the area audited is required to review the audit results, take necessary action to correct the deficiencies identified by the audit, and document and report the corrective action.

Quality Assurance is responsible for developing audit plans and audit checklists, designating and training audit personnel, and conducting audits.

Audits may be conducted by Quality Assurance engineers or other qualified personnel, such as technical specialists from other company departments and outside consultants.

Audits of major contractors, subcontractors, and suppliers are conducted during the early stages of design and procurement, as required, to evaluate their quality assurance program for compliance with all aspects of the procurement documents. Audits are conducted, as required, to assure that major contractors, subcontractors, and suppliers are auditing their suppliers' quality assurance programs in accordance with procurement documents. During the project, additional audits are performed, as required, to assure all quality assurance program requirements are properly implemented in accordance with procurement documents.





Quality Assurance performs regular analyses of audit results to evaluate quality trends. Results of these analyses are provided to management for their regular review.



Table 1-1  
Quality Assurance Program Procedures  
Subject Listing

<u>Quality Assurance/Quality Control Procedures</u>	<u>Appendix B Criteria</u>
Indoctrination of Quality Assurance/Quality Control and Supervisory Personnel	I
Training of Quality Assurance Personnel	I
Management Review of the Quality Assurance Program	I
Periodic Review of Quality Assurance/Quality Control Procedures	I
Quality Assurance/Quality Control Group Organization and Responsibilities	II
Quality Assurance Review of Rochester Gas and Electric Design Criteria	III
Quality Assurance Review of Rochester Gas and Electric Engineering Specifications	III
Quality Assurance Review of Architect/Engineer's Design Documents	III
Requisitioning Quality Assurance/Quality Control Services	IV
Quality Review of Rochester Gas and Electric Procurement Documents	IV
Preparation, Review and Approval of Rochester Gas and Electric Q.A. Specifications	IV
Preparation, Review and Approval of Ginna Station Quality Assurance Manual	V
Preparation, Review and Approval of Quality Assurance/Quality Control Procedures	V
Review of Departmental Procedures	VI
Preparation, Review and Approval of Procedure Deviation Requests by Quality Assurance/Quality Control	VI
Evaluation of Suppliers by Quality Assurance	VII



Table 1-1 (cont'd)

<u>Quality Assurance/Quality Control Procedures</u>	<u>Appendix B Criteria</u>
Supplier Surveillance	VII
Control of Supplier Performance	VII
Quality Assurance Evaluation of Bids	VII
Inspection and Surveillance Activities	X
Qualification of Surveillance and Inspection Personnel	X
Preparation of Inservice Pump and Valve Testing Program	XI
Quality Assurance Review of Nonconformance Reports	XV
Preparation, Review and Processing of Corrective Action Reports by Quality Assurance	XVI
Qualification of Auditing Personnel	XVIII
Audit Scheduling and Planning	XVIII
Performance of Quality Assurance Audits	XVIII
Reporting and Follow-Up of Audit Findings	XVIII
Conduct of Quality Assurance During and in Follow-Up of USNRC and Management Audits	XVIII
Response to Audits	XVIII



Table 1-1 (cont'd)

<u>Ginna Procedures</u>	<u>Appendix B Criteria</u>
Ginna Quality Assurance Program Implementation	I
Training of Ginna Personnel	I
Ginna Administrative and Engineering Staff Responsibilities	II
Ginna Modification Project Organization	II
Plant Operations Review Committee Operating Procedure	II
Control of Station Modification	III
Station Modification Installation Acceptance and Completion	III
Preparation, Review and Approval of Design Documents	III
Preparation, Review and Approval of Minor Modification Safety Analysis	III
Control of Procurement Documents for Purchased Materials, Parts, Components and Services	IV
Requisition Services from General Maintenance	IV
Plant Procedures	V
Plant Procedure Control and Distribution	VI
Control of Engineering Documents	VI
Vendor Manual Control	VI
Receipt and Acceptance of Purchased Materials	VII
Supplier Qualification Technical Evaluation	VII
Control of Purchased Services	VII
Control of Accepted Material, Parts and Components	VIII
Identification and Marking of Material	VIII





Table 1-1 (cont'd)

<u>Ginna Procedures</u>	<u>Appendix B Criteria</u>
Control of Welding, Heat Treating and Nondestructive Examination	IX
Welding Equipment Performance Verification	IX
Nondestructive Examination	IX
Preventive Maintenance Programs for Electrical, Mechanical and Valves	X
Inservice Inspection	X, XIV
Environmentally Qualified Equipment Maintenance Program	X
Performance of Tests	XI
Qualification of Test Personnel	XI
Calibration and Control of Measuring and Test Equipment Installed Plant Instruments and Equipment	XII
Maintenance and Inspection of Material Handling Equipment	XIII
Control of Material Handling and Handling Equipment	XIII
Storage and Preservation of Materials	XIII
Control of Heavy Loads at Ginna	XIII
Electric System Operating Rules	XIV
Test Status Control	XIV
Bypass of Safety Function or Jumper Control	XIV
Control of Temporary Modifications	XIV
Control and Disposition of Nonconforming Materials	XV
Issue of Nonconformance Reports	XV
Corrective Action at Ginna Station	XVI



Table 1-1 (cont'd)

<u>Ginna Procedures</u>	<u>Appendix B Criteria</u>
Ginna Records	XVII
Record Storage Facility and Equipment	XVII
Maintenance and History Program	XVII
Ginna Station Response to Internal Audits	XVIII



Table 1-1 (cont'd)

<u>Engineering Procedures</u>	<u>Appendix B Criteria</u>
Indoctrination and Training	I
Engineering Department Organization and Responsibilities	II
Preparation, Review and Approval of Design Input Documents	III
Preparation, Review and Approval of Design Analyses	III
Preparation, Review and Approval of Engineering Drawings	III
Preparation, Review and Approval of Specifications	III
Design Verification	III
Preparation, Review and Approval of Safety Analyses	III
Review and Approval of Architect Engineer or Consultant Design Documents	III
Preparation, Review and Approval of Field Change Requests	III
Purchase Requisition	IV
Engineering Procedures	V
Engineering Procedure Deviation Request	V
Distribution and Control of Documents by the Control Number Method	VI
Control of Documents by the List of Current Revisions Method	VI
Distribution of Documents by the List of Correspondence Procedures	VI
Receipt, Control and Distribution of Drawings and Aperture Cards	VI
Supplier Evaluation	VII



Table 1-1 (cont'd)

<u>Engineering Procedures</u>	<u>Appendix B Criteria</u>
Preparation, Review and Approval of Bid Requests, Bid Evaluations and Recommendations for Award	VII
Engineering Review of Nonconforming Materials, Parts or Components	VX
Initiating and Responding to Corrective Action Reports	XVI
Records	XVII
Engineering Response to Audits	XVIII





Table 1-1 (cont'd)

<u>Purchasing Procedures</u>	<u>Appendix B Criteria</u>
Periodic Review of Purchasing Procedures	I
Indoctrination and Training of Purchasing Personnel	I
Purchasing Department Organization and Responsibilities	II
Preparation, Review, Approval and Issuance of Purchase Orders and Changes to Purchase Orders	IV
Requests for Bids and Bid Evaluation	IV
Purchasing Procedures	V
Purchasing Procedure Deviation Request	V
Supplier Evaluation	VII
Establishment and Maintenance of Qualified Suppliers List	VII
Supplier Nonconformance Report Processing	XV
Purchasing Department Response to Corrective Action Reports and Corrective Action Reporting	XVI
Purchasing Records	XVII
Purchasing Response to Audits	XVIII



Table 1-1 (cont'd)

<u>General Maintenance Procedures</u>	<u>Appendix B Criteria</u>
Indoctrination and Training	I
General Maintenance Organization and Responsibilities	II
Documentation and Control of Modification/ Fabrication Activities	III
Preparation, Review and Approval of Purchase Requisitions and Related Procurement Documents	IV
Quality Maintenance Procedures	V
Quality Maintenance Procedure Deviation Requests	V
Preparation, Review and Approval of General Maintenance Fabrication Route Cards	V
Control and Distribution of Documents Regulating Safety Related Activities	VI
Receipt and Acceptance of Purchased Materials	VII
Control of Accepted Material, Parts and Components	VIII
Traceability of Material	VIII
Issue, Control and Storage of Weld Consumables	VIII
Control of Welding	IX
Conduct of Crane operators	XIII
Control and Disposition of Nonconforming Material, Parts and Components	XV
Corrective Action at General Maintenance	XVI
Quality Maintenance Records	XVII
General Maintenance Response to Internal Audits	XVIII



Table 1-1 (cont'd)

<u>Research and Science Procedures</u>	<u>Appendix B Criteria</u>
Indoctrination and Training	I
Research and Science Organization and Responsibilities	II
Preparation, Review and Approval of Purchase Requisitions and Related Procurement Documents	IV
Quality Research and Science Procedures	V
Quality Research and Science Procedure Deviation Request	V
Preparation, Review and Approval of Material Handling Equipment Instructions	V
Control and Distribution of Documents Regulating Safety Related Activities	VI
Receipt and Acceptance of Purchased Materials	VII
Preparation, Review and Approval of Supplier Evaluation	VII
Welding Procedure Preparation Review and Approval	IX
Welding Procedure Qualification	IX
Heat Treating Procedures	IX
Welder Qualification and Currency	IX
Nondestructive Examination Procedures	IX
Nondestructive Examination Procedures Manual	IX
Nondestructive Examination Personnel Qualification	IX
Inservice Inspection Program and Plans	X
Incorporating Ginna Modifications into Inservice Inspection Program	X
Test Control	XI



Table 1-1 (cont'd)

<u>Research and Science Procedures</u>	<u>Appendix B Criteria</u>
Test Personnel Qualifications	XI
Calibration and Control of Nondestructive Examination Instruments	XII
Inspection and Maintenance of Material Handling Equipment	XIII
Overhead and Gantry Cranes	XIII
Inspection and Maintenance of Portable Lifting and Handling Equipment	XIII
Underhung Cranes, Jib Cranes and Monorail Systems	XIII
Slings and Related Apparatus	XIII
Classification and Training of Material Handling Equipment Personnel	XIII
Mobile Hydraulic Cranes	XIII
Inspection and Maintenance of Jacks	XIII
Forklift Loading Forks	XIII
Training and Qualification of Crane Operators	XIII
Lifting Devices in the Containment Vessel	XIII
Control and Disposition of Nonconforming Material, Parts and Components	XV
Corrective Action at Research and Science	XVI
Quality Research and Science Records	XVII
Research and Science Response to Internal Audits	XVIII





Table 1-1 (cont'd)

<u>Electric Transmission Procedures and Distribution Procedures</u>	<u>Appendix B Criteria</u>
Quality Assurance Program Implementation for Electric Transmission and Distribution Department	I
Training of Electric Transmission and Distribution Personnel	I
Electric Transmission and Distribution Organization	II
Design/Modification Activities Control	III
Control of Procurement Documents for Purchased Parts, Components and Services	IV
Preparation, Review, and Approval of Electric Transmission and Distribution and Laboratory Procedures	V
Control of Electric Transmission and Distribution Procedures, Schedules and Test Form Books	VI
Supplier Qualification Technical Evaluation	VII
Receipt and Acceptance of Instrumentation and Standards Equipment	VII
Control of Purchased Services for Electric Meter and Lab	VII
Identification and Control of Materials, Parts and Components	VIII
Performance of Tests at Ginna Station	XI
Performance of Tests at the Electrical Laboratory	XI
Qualification of Test Personnel	XI
Calibration and Control of test Instruments	XII
Handling, Storage and Shipping	XIII
Inspection and Test Status at Electric Meter and Laboratory	XIV
Control and Disposition of Nonconforming Parts and Components	XV



Table 1-1 (cont'd)

<u>Electric Transmission and Distribution Procedures</u>	<u>Appendix B Criteria</u>
Initiating and Processing of Corrective Action Reports	XVI
Control of Quality Assurance Records	XVII
Response to Audits	XVIII



TABLE 4-1  
Procurement Document Requirements

Items to be considered for inclusion in procurement documents include:

1. Scope of Work - Detailed statement of the work to be performed.
- \*2. Technical Requirements - by reference to specific drawings, specifications, codes, regulations, procedures or instructions, including revisions, that describe the items or services to be furnished. Also identified shall be test, inspection and acceptance requirements, and any special requirements for such activities as designing, identification, fabrication, cleaning, erecting, packaging, handling, shipping and extended storage.
- \*3. Quality Assurance Program Requirements - which require the supplier to have a documented quality assurance program that implements portions or all of 10CFR50 Appendix B as well as applicable quality assurance program requirements of other nationally recognized codes and standards. Also included shall be the requirement that the supplier incorporate appropriate quality assurance program requirements in subtier procurement documents.
- \*4. Right of Access - to include the facilities and records of the supplier for source inspection and audit by the Purchaser or parties designated by the purchaser. Also included shall be provisions for the identification of witness and hold points and the minimum time of advance notice.
- \*5. Documentation Requirements - Submittal approval and retention requirements for documents such as quality assurance manuals, special process and test procedures, materials records, calculations and analyses.
- \*6. Nonconformance - Requirements for reporting and disposition of nonconformance to procurement requirements.

\* - Included in the review by Quality Assurance/Quality Control.



Table 18-1  
Audit List

<u>Functional Organization</u>	<u>Activities Audited</u>
Engineering	Indoctrination and Training Design Control Procurement Document Control Document Control Records Procurement Control
Purchasing	Indoctrination and Training Procurement Document Control Records and Document Control Procurement Control
Ginna Station	QA Indoctrination and Training Ginna Staff Training, Retaining-Qualification and Performance Modification Maintenance and Repair Procurement Control Document Control and Records Inservice Inspection Surveillance Testing Handling, Storage and Shipping Facility Operation Conformance to all provisions contained in Technical Specifications and applicable license conditions Refueling Calibration and Control of Measuring and Test Equipment Health Physics & Chemistry Security Plan and Procedures Emergency Plan and Procedures *Fire Protection Program and Implementing Procedures Corrective Action associated with deficiencies occurring in facility equipment, structures,





TABLE 18-1 (cont'd)  
Audit List

<u>Functional Organization</u>	<u>Activities Audited</u>
	systems or methods of operation Transportation of Radioactive Waste Fire Protection and Loss Prevention Program Inspection and Audit ***Fire Protection and Loss Prevention Program Independent Inspections and Audits Radiological Environmental Monitoring Program and Results Thereof *Offsite Dose Calculation Manual and Implementing Procedures *Process Control Program and Implementing Procedures  *Biennially ***Triennial
General Maintenance	Indoctrination and Training Maintenance and Repair Procurement Control Document Control and Records Shop Fabrication and Repairs Control of Measuring Equipment Special Processes Handling, Storage and Shipping Inspection and Surveillance
Electric Transmission and Distribution	Indoctrination and Training Design/Modification Control Procurement Control Document Control and Records Handling and Shipping Control of Measuring and Test Equipment Test Control



TABLE 18-1 (cont'd)  
Audit List

<u>Functional Organization</u>	<u>Activities Audited</u>
Research and Science	Indoctrination and Training Handling, Storage, and Shipping Procurement Control Welding and NDE Inservice Inspection Document Control Control of Measuring and Test Equipment Test Control Records
Quality Assurance/Quality Control	Inspection and Surveillance



——— LINES OF SUPERVISION AND ADMINISTRATION  
 - - - - LINES OF COMMUNICATION

# R. E. GINNA NUCLEAR POWER PLANT MANAGEMENT ORGANIZATION CHART

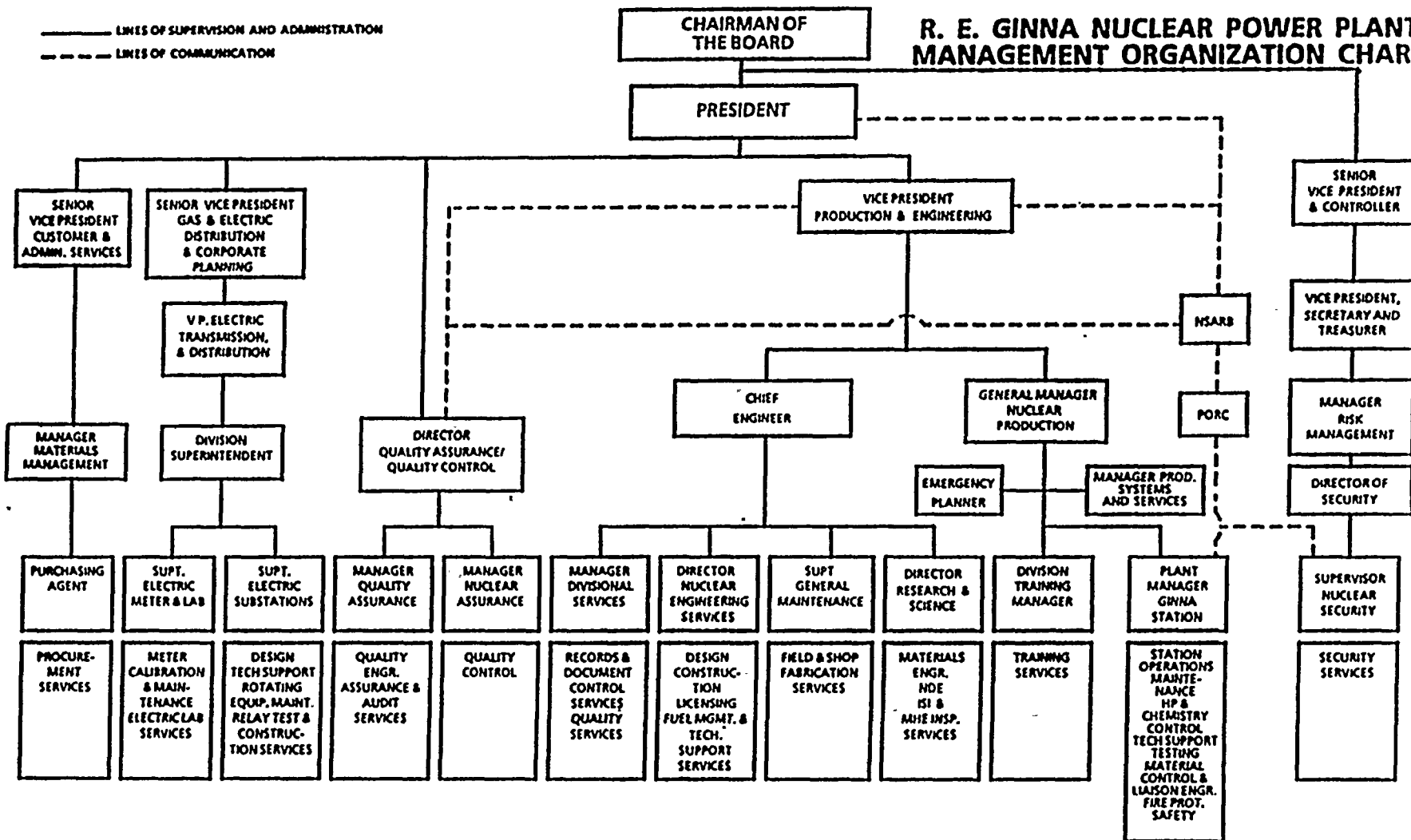


Figure 2-1



# QA/QC ORGANIZATION

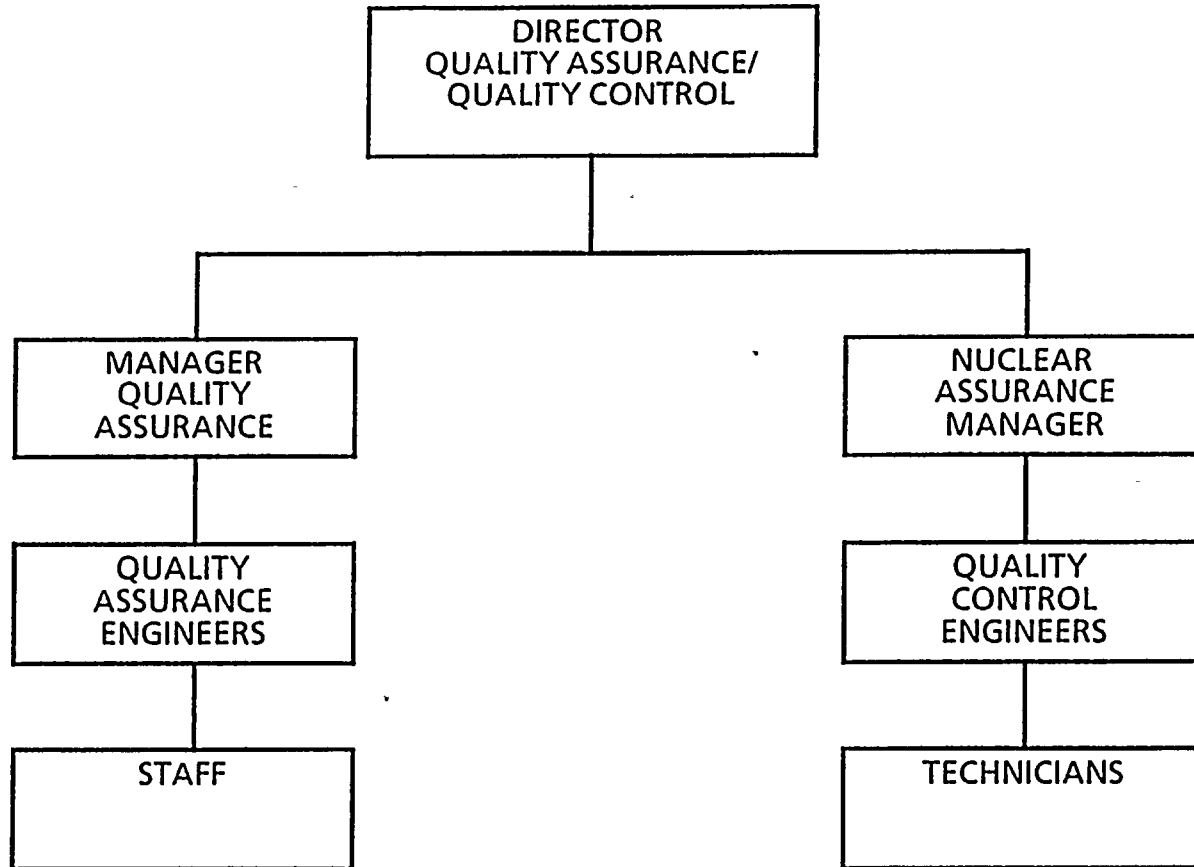
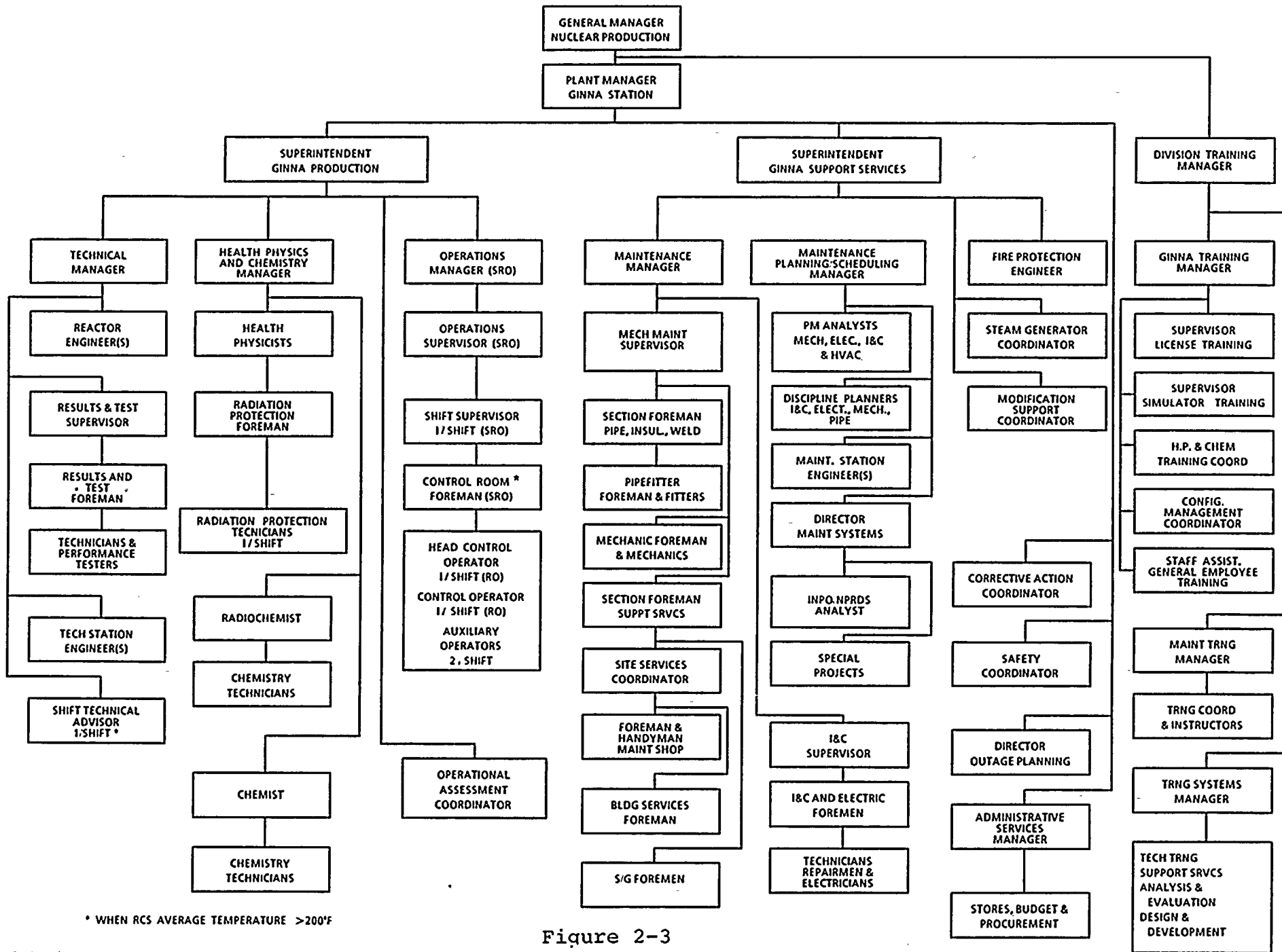


Figure 2-2





ROCHESTER GAS AND ELECTRIC CORPORATION  
 R. E. GINNA STATION  
 ORGANIZATION



\* WHEN RCS AVERAGE TEMPERATURE >200°F

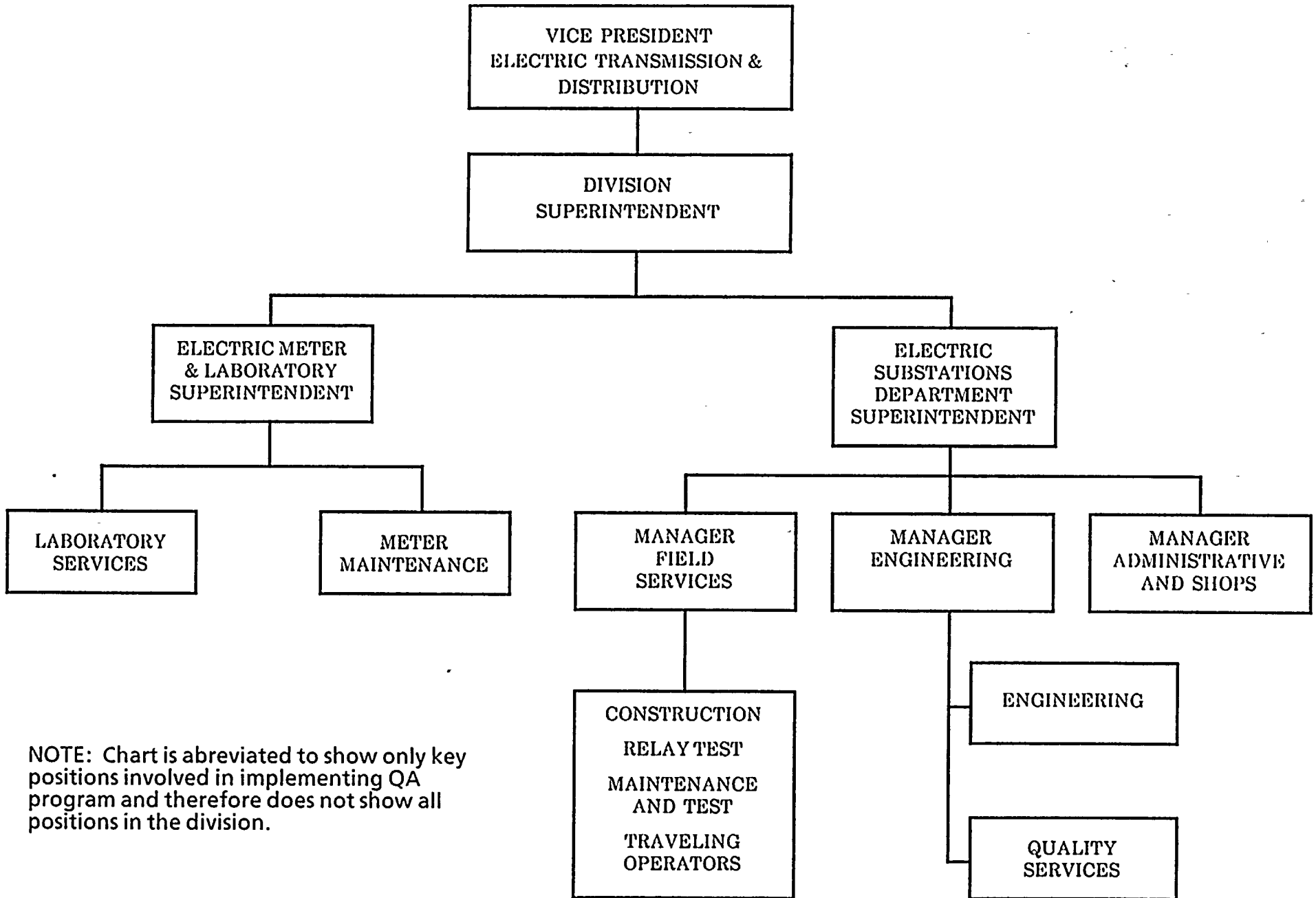
Figure 2-3

-54-

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 December, 1988



# ELECTRIC TRANSMISSION AND DISTRIBUTION DIVISION



NOTE: Chart is abbreviated to show only key positions involved in implementing QA program and therefore does not show all positions in the division.

-55-

Revision 14  
December, 1988

Figure 2-4



# ENGINEERING DIVISION ORGANIZATION

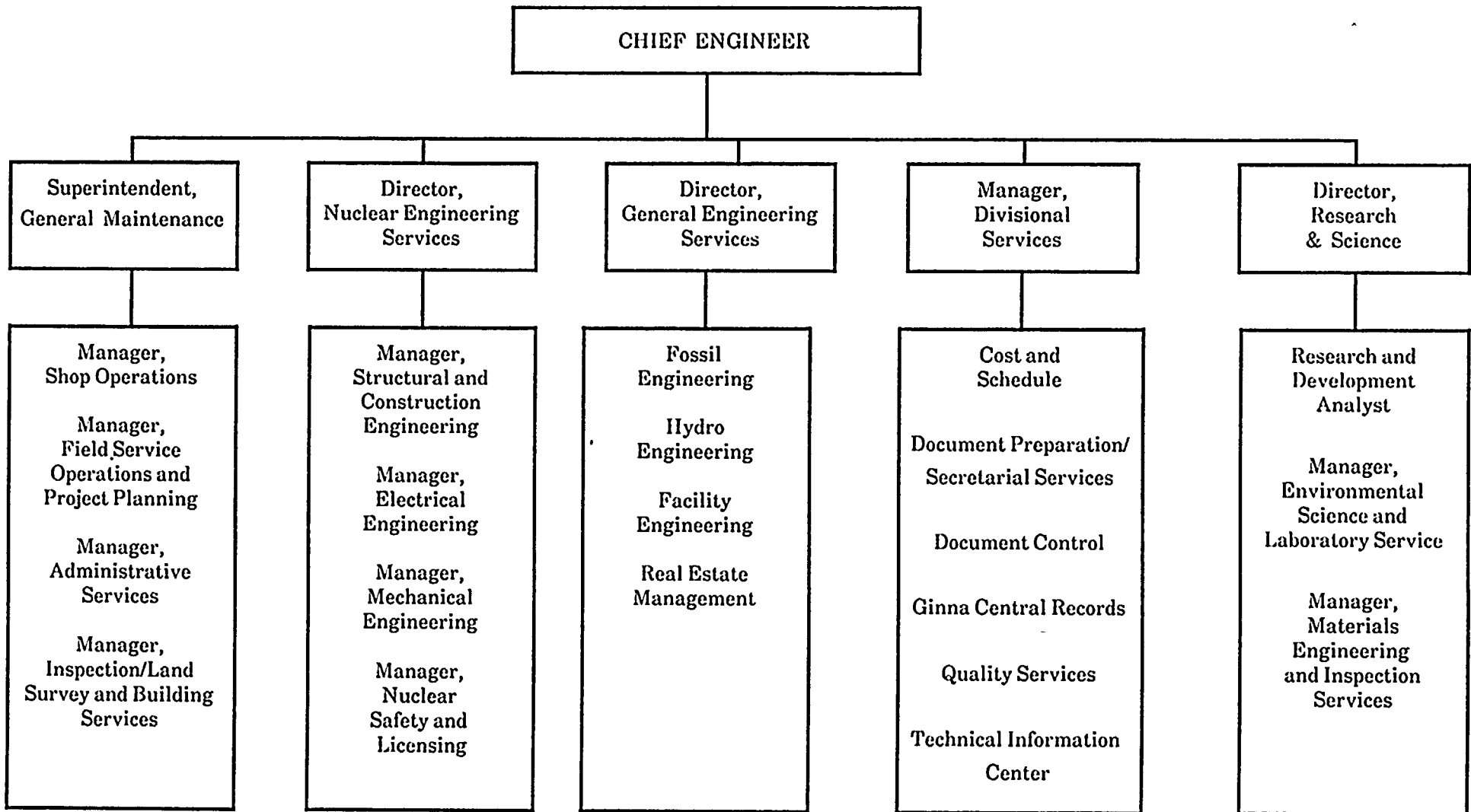


Figure 2-5

-56-

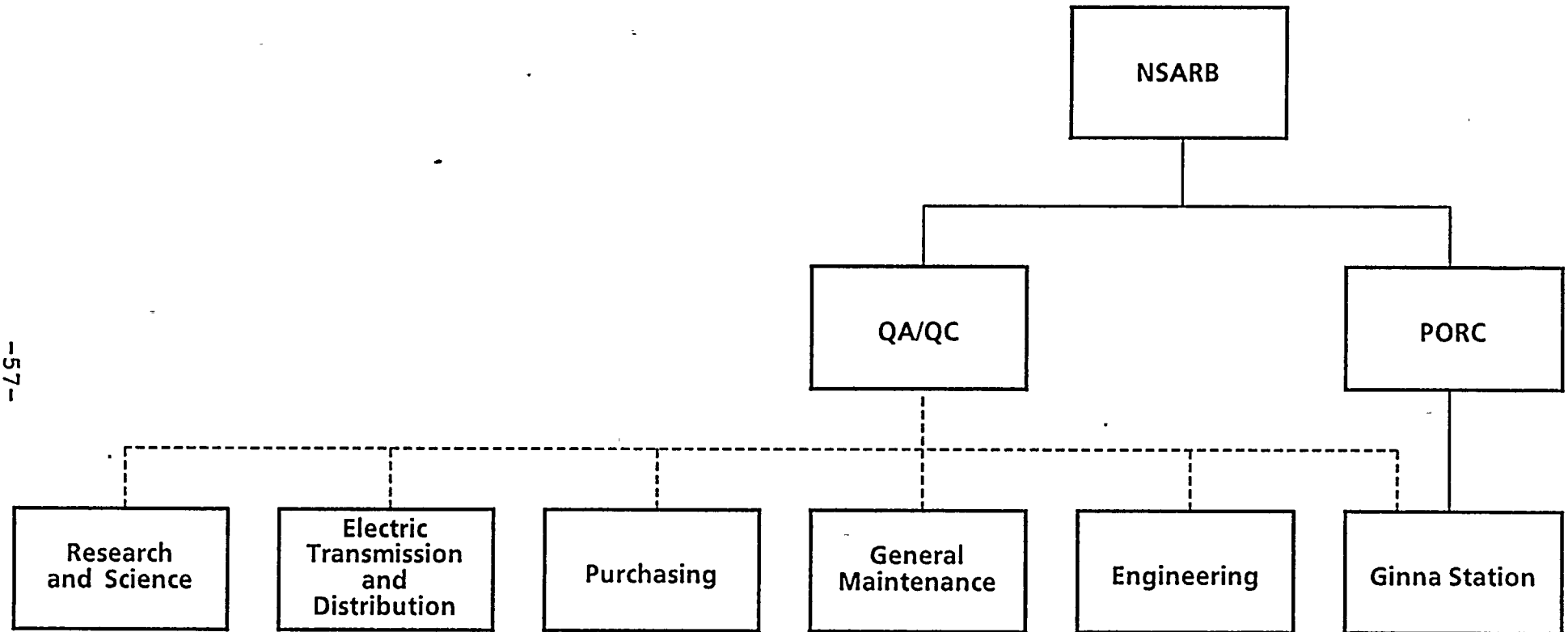
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December, 1988

1. 2



Rochester Gas and Electric Corporation  
Ginna Station

# REVIEW and AUDITS FUNCTIONS



————— Review  
- - - - - Audits

-57-

Revision 14  
December, 1988

Figure 2 - 6

