

50-244
RECEIVED

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 17, 1978

Docket No. 50-244

Rochester Gas & Electric Corporation
ATTN: Mr. Leon D. White, Jr.
Vice President
Electric and Steam Production
89 East Avenue
Rochester, New York 14649

Gentlemen:

Your letter of September 5, 1978 regarding the Systematic Evaluation Program (SEP) documentation procedures and resolution of eight "essentially complete topics" included several comments and suggestions. Our response to your comments and suggestions are enclosed.

We appreciate your responsiveness to our August 17, 1978 letter and your constructive comments.

Sincerely,

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:

- 1. Response to RG&E Comments
- 2. Staff SER on QA Program

cc: See next page

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cc

Lex K. Larson, Esquire
LeBoeuf, Lamb, Leiby & MacRae
1757 N Street, N. W.
Washington, D. C. 20036

Mr. Michael Slade
1250 Crown Point Drive
Webster, New York 14580

Rochester Committee for
Scientific Information
Robert E. Lee, Ph.D.
P. O. Box 5236 River Campus
Station
Rochester, New York 14627

Jeffrey Cohen
New York State Energy Office
Swan Street Building
Core 1, Second Floor
Empire State Plaza
Albany, New York 12223

Director, Technical Development Programs
State of New York Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

Rochester Public Library
115 South Avenue
Rochester, New York 14627

K M C Inc.
ATTN: Mr. Jack McEwen
1747 Pennsylvania Avenue, N.W.
Suite 1050
Washington, D. C. 20006

Dairyland Power Cooperative
ATTN: Mr. John P. Madgett
General Manager
2615 East Avenue, South
La Crosse, Wisconsin 54601

ENCLOSURE 1

RESPONSE TO RG&E COMMENTS ON NRC AUGUST 17, 1978 LETTER

1. Comment: RG&E has noted that although topics VI-7.D and VII-1.B are resolved, the subjects will apparently be reviewed as a part of other topics.

Response: Topics VI-7.D and VII-1.B address "Long Term Cooling Pressure Failures" and "Trip Uncertainty and Setpoint Analysis Review of Operating Data Base." The conclusion to the staff assessment of topic VI-7.D states that "the effect of ECCS leakage will be assessed on the SEP plants during the Design Basis Event, DBE, evaluation of LOCAs." This is the only aspect of this topic that will be reviewed as a part of another topic. The conclusion to the staff assessment of topic VII-1.B indicates that the topic will be further considered as part of the assessment of topic XVI, Technical Specifications. As noted in the staff assessment, the staff is presently reviewing more detailed information on instrument error and drift to evaluate its impact, if any, upon the safety margins of the trip setpoints being used in other plants. At this time, we are not aware of any deficiency in the Technical Specifications of SEP plants resulting from the generalized method of evaluating trip setpoints. However, if further staff review of instrument error and drift indicates that further review of the SEP plants is warranted, such reviews will be performed as part of topic XVI.

It should also be noted that the staff is attempting to assure that the review of all topics is done in a balanced and integrated manner. As noted in the enclosure to the August 17, 1978 letter, topics will not be considered "closed out" until the comprehensive staff assessment of all topics and design basis events has been completed. This is a fundamental principle of the SEP review concept.

2. Comment: RG&E suggests that each staff assessment include references to all information presented in the docket that is applicable and that the staff reissue the assessments issued on August 17, 1978 with adequate reference materials incorporated.

Response: We agree with your suggestion. Our documentation procedures have been revised as shown in the enclosed revision to page 5 of the NRC Response to the SEP Owners Group Suggestions. In addition, the previously issued assessments will be revised and reissued to include appropriate references.

3. The attachment to your letter comments on three of the topic assessments for Ginna. We are currently revising these assessments in response to your comments and will be issuing them in the near future. The staff "Safety Evaluation Report, 9/30/74" referred to in our assessment of Topic XVII was an internal report providing input to the staff safety evaluation regarding issuance of the full term operating license for Ginna and was also the basis for our letter of October 2, 1974. Since the issuance of that staff SER has been significantly delayed, we are, at your request, enclosing a copy of the 9/30/74 staff safety evaluation report as revised by our review of your November 1, 1974 submittal. We have reviewed your revision to the Ginna QA Program dated January 30, 1976 and have approved the organizational changes included in that revision and in your application for amendment dated January 30, 1976 by Amendment No. 12 dated April 7, 1977.

- 5 -

The content of staff assessments documenting completion of individual topics or areas of concern and applicable references will be informally discussed with the licensees to ensure that the information used is factual and current and accurately portrays the facility. Initial assessments of individual safety topics or design basis events will be placed in the Public Document Room and forwarded to the licensee for comment. The initial assessments will be supplemented as needed to include correction or additional comments. At the completion of the program all initial assessments will be consolidated and a final assessment will be issued. NRC meeting minutes will typically be forwarded to the licensees for their review. Comments received will be placed in the Public Document Room.

APPENDIX D

SAFETY EVALUATION REPORT

R. E. GINNA NUCLEAR POWER PLANT UNIT NO. 1

QUALITY ASSURANCE FOR FULL-TERM OPERATING LICENSE

DOCKET NO. 50-244

General

The description of the Quality Assurance (QA) Program for the Full-Term Operating License of the R.E. Ginna Nuclear Power Plant Unit No. 1 is contained in Supplement IV to Technical Supplement Accompanying Application for a Full-Term Operating License, including Revisions 1 and 2. Our evaluation of the QA Program for the full-term operating license phase is based on a review of this description and discussions with the applicant to determine if Rochester Gas and Electric's (RG&E's) QA Program for the R. E. Ginna Nuclear Power Plant Unit No. 1 complies with the requirements of Appendix B to 10 CFR Part 50.

Our review of the RG&E QA Program included:

- (1) A detailed evaluation of the QA Program description as contained in Revision 2 of Supplement IV to Technical Supplement Accompanying Application For A Full-Term Operating License.
- (2) A meeting and discussions with RG&E representatives which resulted in replacing the QA Program description with the present description in revised Supplement IV to Technical Supplement Accompanying Application For A Full-Term Operating License.

Organization

The major RG&E organizations participating in the quality assurance program are Purchasing, Engineering, Electric and Steam Production, Plant Operations Review Committee and Nuclear Safety Audit and Review Board. Figure IV.2-1 shows these organizations and their relationship to the corporate organization. Figures IV.2-2 thru 5 shows a more detailed breakdown of the Quality Assurance, Station Superintendent, Quality Control, and Engineering organizations.

The Chairman of the Board of RG&E directed the establishment of the QA Program and issued the governing policy statement to implement the program and make the Program provisions mandatory. He also established the Nuclear Safety Audit and Review Board to review and audit plant operations.

The Vice President, Electric and Steam Production has corporate responsibility for the operation of Ginna Station and has overall responsibility for and authority to direct quality affecting activities. He has assigned the responsibility for the detailed development and overall coordination of the quality assurance program to the Quality Assurance Coordinator who is under the administrative control of the Assistant Chief

Engineer. This organizational alignment places the Quality Assurance Coordinator in a position where he does not report to a manager with cost and schedule responsibilities and where he reports to an organizational level above the Station Superintendent who is responsible for operating the plant.

The organizational position of the QA Coordinators indicates that he is sufficiently free from the pressures of cost and schedule to effectively implement his functions.

The QA Coordinator is located offsite, at the corporate headquarters, and is responsible for establishing and executing the overall quality assurance program. He provides management with objective information concerning quality, independent of the individual or group directly responsible for performing the specific activity. He is assisted by a staff as shown in Figure IV.2-2. With the aid of this staff, the QA Coordinator prepares quality assurance policies and procedures; coordinates supplier qualification and surveillance; establishes and helps implement the in-service inspection program; interprets 10 CFR 50 Appendix B, applicable regulatory, and code requirements related to plant modifications; reviews engineering and procurement documents; develops and qualifies procedures for special processes;

assures personnel are trained and qualified in special processes, and nondestructive inspection activities; and provides functional guidance to the onsite Quality Control Engineer. We find these authorities and responsibilities acceptable to carry out the QA Coordinator's function.

The Ginna Station Superintendent is responsible for the operation, maintenance, repair, refueling, and modification of Ginna Station in accordance with the requirements of the quality assurance program. The Ginna Station Superintendent has reporting to him, on the same organizational level as the other organizational groups of the Superintendent's staff, the Quality Control Engineer (See Figure IV.2-3).

The QC Engineer is responsible to the Station Superintendent for assuring that activities affecting quality are prescribed and carried out in accordance with approved drawings, specifications, and procedures. He is assisted in his duties by a permanent staff as shown on Figure IV.2-4, and such additional inspectors as are required by the level of work activities. The QC Engineer reviews procurement documents initiated at the plant; is responsible for the control of documents and records stored at the plant; coordinates inspection activities and assures that inspection requirements are included in approved procedures; coordinates the receipt inspection of incoming materials, parts, and components, and the processing of material deficiency reports;

coordinates the processing of corrective action reports and assures that corrective action is taken; performs routine surveillance of other groups involved in quality affecting activities; and provides the Station Superintendent with objective information concerning the quality of station activities.

For purchased material, the Quality Assurance Coordinator's staff has the authority to reject material, or if necessary, stop work. When conditions adverse to quality are found at the Ginna Station, the QC Engineer has the authority to reject or stop work on maintenance, repair, refueling, or modifications deficiencies. In case of operating deficiencies, the QC Engineer may recommend stop work action to the Station Superintendent.

The qualification requirements for the Quality Assurance Coordinator and the Quality Control Engineer are described in the Technical Supplement and the Technical Specifications and are sufficient to assure technical competence.

In the organizational structure of RG&E, two advisory groups are utilized to review and audit plant operations. These are the Plant Operations Review Committee, which is onsite, and the Nuclear Safety Audit and Review Board, which is offsite. The Plant Operations Review Committee, of which the QC Engineer is a member, reviews all proposed operating and maintenance procedures, and changes thereto; reviews all proposed tests and experiments; reviews proposed changes to Technical

Specifications; reviews all proposed changes or modifications to plant systems, or equipment; reviews all plant operations to detect potential safety hazards; and investigates all reported instances of violations of Technical Specifications.

Based on our review of the QA organization for Ginna, we conclude that both onsite and offsite QA personnel have sufficient organizational freedom to assure their independence and have been given sufficient authority and responsibility to effectively implement the QA Program in accordance with the requirements of Appendix B to 10 CFR Part 50. We conclude that the two level approach of a corporate QA organization and a station QA organization, plus the use of a corporate Nuclear Safety Audit and Review Board and a station Plant Operations Review Committee, provides an effective overcheck on the QA Program.

QA Program

The original description of RG&E's QA Program, presented in Supplement No. 15 to the FSAR and Section 6.0 Technical Specifications, did not adequately describe a QA Program for operations. The staff requested a more detailed and comprehensive description which was submitted in Supplement IV to Technical Supplement Accompanying Application for A Full-Term Operating License and Revisions 1 and 2 thereto.

The QA Program activities are defined by a Ginna Station Quality Assurance Manual which contains the requirements of the program and which assigns the responsibilities for implementation of the program. The manual is developed and maintained by the Quality Assurance Coordinator and is reviewed and approved by the Vice President, Electric and Steam Production.

The program is implemented through Quality Assurance, Quality Control, Engineering and Purchasing procedures. The procedures are developed and maintained by the responsible organizations and reviewed and approved by the Quality Assurance Coordinator. The program description provides a matrix of the quality related procedures (QA, QC, Engineering and Purchasing) cross referenced to the criteria of 10 CFR 50 Appendix B. Included with this matrix is an abstract of the contents of each procedure. Based on our review of this matrix, we conclude that each criterion of 10 CFR 50 Appendix B has been satisfied in the QA Program.

Organizational interfaces are defined and controlled by sections of the Quality Assurance Manual and Quality Assurance Procedures.

RG&E has committed to conform with the "Orange Book" (Guidance on Quality Assurance Requirements During the Operations Phase of Nuclear Power Plants), the "Gray Book" (Guidance On Quality Assurance During Design and Procurement Phase of Nuclear Power Plants), and all of the AEC Regulatory Guides and ANSI Standards listed in these two books. We find this commitment to be added assurance for a full and complete QA Program in accordance with Appendix B, 10 CFR 50.

The listing of structures, systems, and components covered by the quality assurance program are prepared and maintained by Engineering and are reviewed and approved by Quality Assurance. Classification is in accordance with Regulatory Guide 1.29.

The QA indoctrination and training program at Ginna has several facets. 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 organization is the responsibility of each department performing an activity affecting quality. Quality Assurance assists in establishing training requirements and assures that personnel are trained by auditing training records. In addition to training in quality assurance, each department conducts on-the-job training to assure that personnel are qualified for their primary work assignments. RG&E uses ANSI N18.1-1971 "Selection and Training of Nuclear Power Plant Personnel" as their guide for selection and training of personnel and has incorporated into the Ginna Station Quality Assurance manual the guidance outlined in Regulatory Guide 1.58 (ANSI N45.6-1973) for qualification of inspection, examination and testing personnel. Nondestructive examination personnel are qualified and certified in accordance to ANSI Recommended Practice SNT-TC-1A.

We find RG&E's QA Indoctrination and training program satisfactory.

RG&E has provided for regular assessment of the QA Program at the corporate and station superintendent level in the following manner. The Ginna Station Superintendent is regularly provided with objective information concerning the quality of station activities by the Quality Control Engineer. He regularly receives reports from the Quality Assurance Coordinator covering the quality overchecks performed by the corporate organization. In addition, the Station Superintendent is Chairman of the Plant Operations Review Committee and has representation on the Nuclear Safety Audit and Review Board. The Plant Operations Review Committee meets monthly and is responsible for reviewing and recommending disposition to the Station Superintendent of proposed operating and maintenance procedures, proposed tests, and experiments, proposed changes to Technical Specifications, and proposed changes to plant systems. In addition, the Committee reviews plant operations to detect potential safety hazards, investigates reported instances of violations of technical specifications and investigates abnormal occurrences.

The Nuclear Safety Audit and Review Board conducts periodic audits of plant operations. In performing the aforementioned activities the Station Superintendent can effectively and regularly assess the QA Program at the station level.

At the Corporate level the Nuclear Safety Audit and Review Board is required to review the status and adequacy of the QA Program every 6 months for the first two years and then at least once every two years thereafter. This review consists of audits performed by company personnel or outside consultants.

With the type of review and assessment described by the foregoing, we find that RC&E's methods for regularly assessing the scope, implementation, and effectiveness of the QA Program, as required by Appendix B, are acceptable.

For plant modifications, the Program provides for a design review by an engineer other than the one who performed the original design. The design is also reviewed by the Plant Operations Review Committee for acceptability for operation, maintenance, and repair. Design changes, including field changes, are subject to the same review and approval as the original design. Quality Assurance verifies that design control procedures are prepared, implemented and that they incorporate appropriate

design control practices, checks, reviews, and requirements for the performance of an independent design verification.

Procurement documents are reviewed by Engineering to assure verification of appropriate classifications, technical requirements and code application. Quality Assurance reviews to assure procurement documents include checks to verify proper codes, regulatory requirements, and material specifications are invoked; FSAR and Technical Supplement commitments are covered; appropriate acceptance or rejection criteria are incorporated; and quality assurance requirements are incorporated. Procurement documents can not be altered without review and concurrence of those responsible for preparation and review of the original document.

Provisions are made to identify controlled and uncontrolled documents. Only controlled copies of a document can be used for official purposes. Controlled documents are transmitted by approved forms internally and externally. A master list identifying the current revision of documents is issued periodically and obsolete or superseded documents are eliminated from the system.

The four major means that are used to control purchased material, equipment, components and services are procurement documents, supplier selection, supplier surveillance and receipt inspection. Suppliers must be on an

approved suppliers list prior to being issued a purchase order. Supplier evaluations are conducted by a team of qualified personnel from Quality Assurance Engineering and Purchasing. Quality Assurance determines and documents the degree of surveillance required at suppliers and performs the necessary surveillance. Quality control performs receipt inspection for those items not source inspected. Items are properly tagged and accepted material must have documentation to support the acceptability of the item. All items must be properly identified and their acceptance status established before they are released for assembling and installation. In case traceability is lost the item is handled as nonconforming.

We find that these provisions for design, procurement, and material control are adequate to meet the requirements of Appendix B.

Inspections are performed by Quality Control 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 adequately trained to evaluate the activity they are inspecting and they work to documented instructions.

The Ginna test program requires the identification, control, and documentation of all tests and the use of written procedures to accomplish the test. Test procedures call out the necessary test equipment and calibration requirements, test personnel requirements, prerequisite plant and equipment conditions, acceptance, and rejection criteria, data collection requirements, and test result approvals. Engineering reviews and approves all modification-related test results. Inspection, Tests, and Operating Status are indicated by the use of tags, labels, or work inspection and test status sheets. The Ginna QA Program requires that equipment or systems not ready for normal use be clearly identified and controlled by designated personnel who have station holding authority. We find these measures acceptable.

Control of measuring and test equipment is accomplished by the use of a recall system, a unique identification of equipment, and 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.

Nonconforming materials parts and components are identified with a hold tag and reported on a material deficiency report. Quality control issues material deficiency reports, recommends disposition, initiates repair or rework, and inspects and approves repaired or reworked items. Engineering reviews and approves recommended dispositions. Items are repaired or reworked only in accordance with documented procedures and drawings, prepared and approved by Engineering. Items which are accepted for use with a known deficiency are fully documented and processed. In addition, they must be approved by the Vice President, Electric and Steam Production prior to use.

Conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are reported on a corrective action report. The corrective action reports identify the condition, the cause of the condition and the corrective action taken. Quality Assurance reviews all corrective action reports to assure the cause of the condition is determined and corrective action has been taken to preclude repetition. Completed corrective action reports are submitted to the Vice President, Electric and Steam Production to keep him aware of significant conditions adverse to quality. We find sufficient provisions in the QA Program to control nonconformances and conditions adverse to quality.

The basic requirements for quality assurance records retention and maintenance are established by Quality Assurance. Record requirements include those records required by Section 6.5 Technical Specifications, the quality assurance program and procurement documents. Also included are all documents and records associated with operation, maintenance, repair, refueling and modification of systems, structures, and components covered by the QA Program. Records are readily available to authorized personnel on sign-out cards and accountability is maintained by the document control activity. Records are stored in facilities designed to prevent destruction or duplicate records are kept in separate buildings physically isolated from each other.

Audits are conducted of each organization involved in the quality assurance program to determine compliance with all aspects of the QA Program and to determine the effectiveness of the program. Audits are performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. The Ginna QA Program requires that audit results be documented and reported to the responsible supervisor who must review the results, take necessary action to correct the deficiency, and document and report the corrective action. Audit results are also reported to the Vice President, Electric and Steam Production and the Secretary of the Nuclear Safety Audit and Review Board. Audits are conducted, as required, to assure that major contractors, subcontractors, and suppliers are auditing their suppliers' quality assurance programs. The QA Coordinator regularly analyzes audit results to evaluate quality

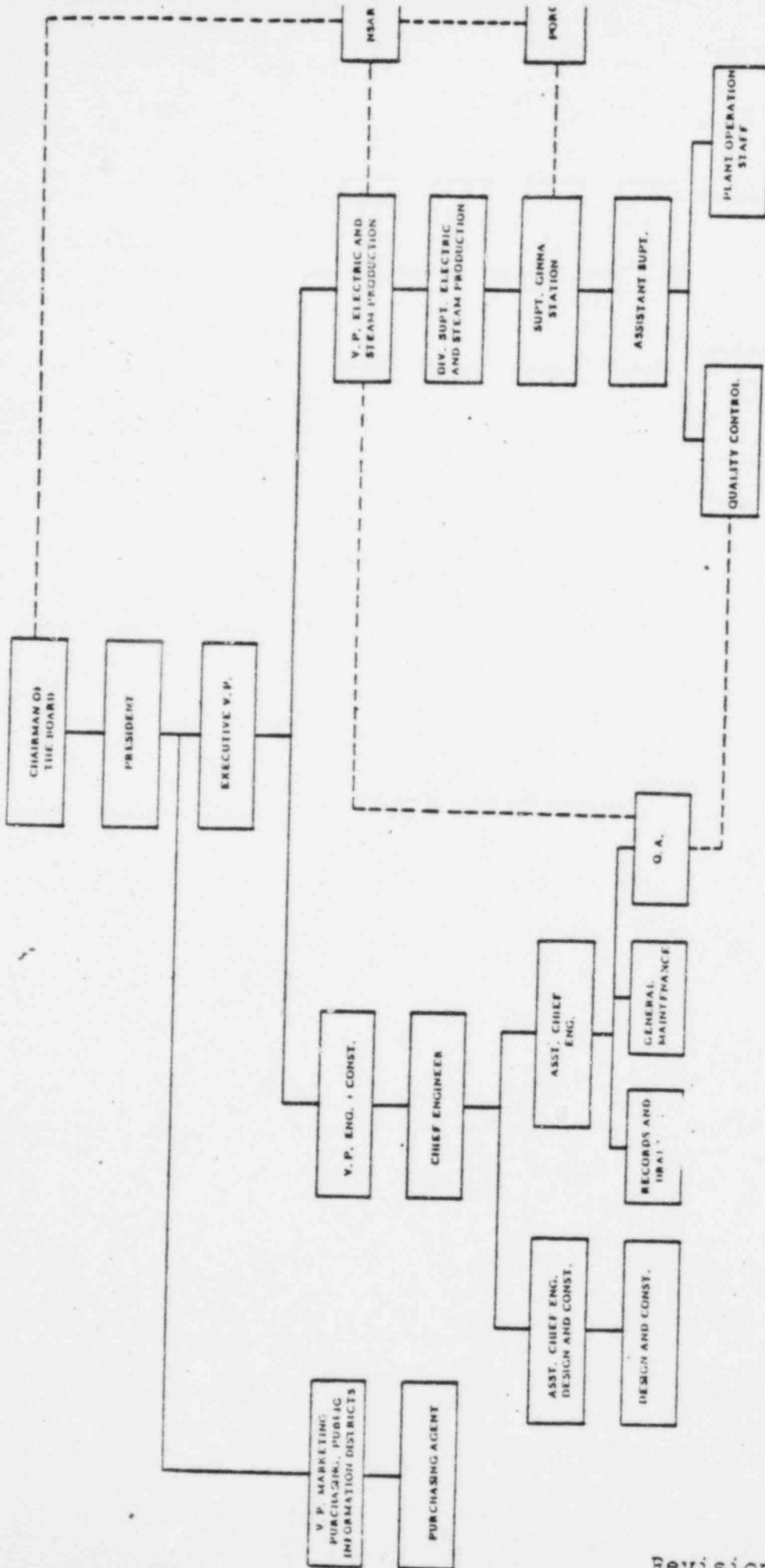
trends. Results of these analyses are provided to management for their regular review. RG&E tabulates the planned audits and expected frequency in Table II.18-1 in the QA Program description. Additional audits will be conducted as required by special conditions or circumstances. Based on our review of the audit provisions in the QA Program, we conclude that the requirements of Appendix B will be implemented.

We conclude from our review of the QA Program activities to be conducted at Ginna that RG&E has adequate provisions, delineated by written policies and procedures, to comply with the criteria of 10 CFR 50 Appendix B for operating, maintaining, repairing, refueling and modifying R. E. Ginna Nuclear Power Plant, Unit No. 1.

Conclusion

Based on our detailed review and evaluation of Rochester Gas and Electric Company's description of its QA Program presented in Supplement IV to Technical Supplement Accompanying Application For A Full-Term Operating License, including Revisions 1 and 2, we conclude that the onsite QA organization (Quality Control Engineer and his staff) and the offsite QA organization (Quality Assurance Coordinator and his staff) have adequate independence from those organizational individuals and/or groups directly responsible for line activities, cost and schedules, and have sufficient authority to effectively implement their respective QA Program responsibilities. Further, we conclude that adequate QA procedures, requirements, and controls have been described to demonstrate that quality related activities can be conducted in accordance with the requirements of 10 CFR 50 Appendix B, during the operation phase of the R. E. Ginna Nuclear Power Plant Unit No. 1.

ROCHESTER GAS & ELECTRIC CORP.
GINNA STATION
MANAGEMENT ORGANIZATION



----- Supervision and Administration
 - - - - - Other Functional Relationships

FIGURE IV.2-1
NOVEMBER 1, 1974

ROCHESTER GAS AND ELECTRIC CORPORATION
QUALITY ASSURANCE ORGANIZATION

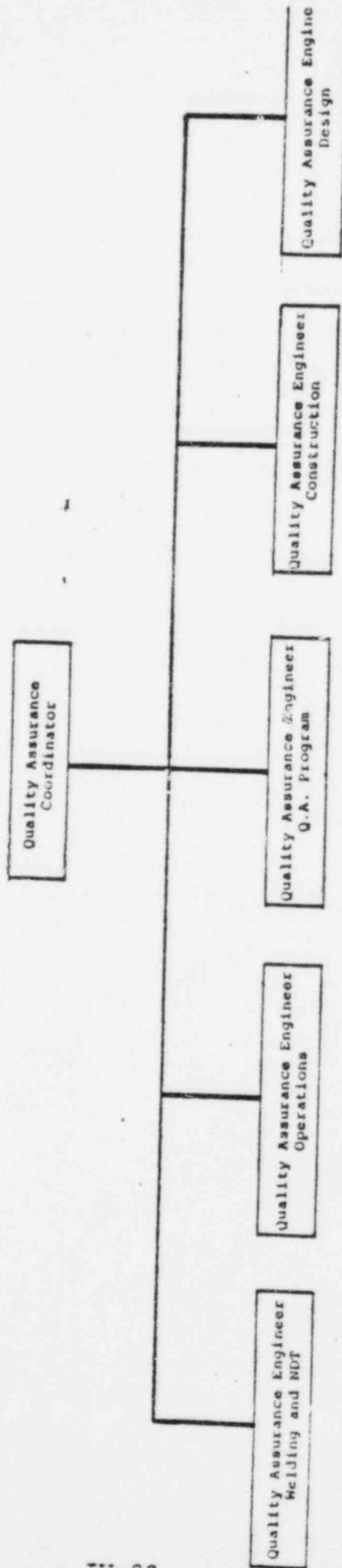
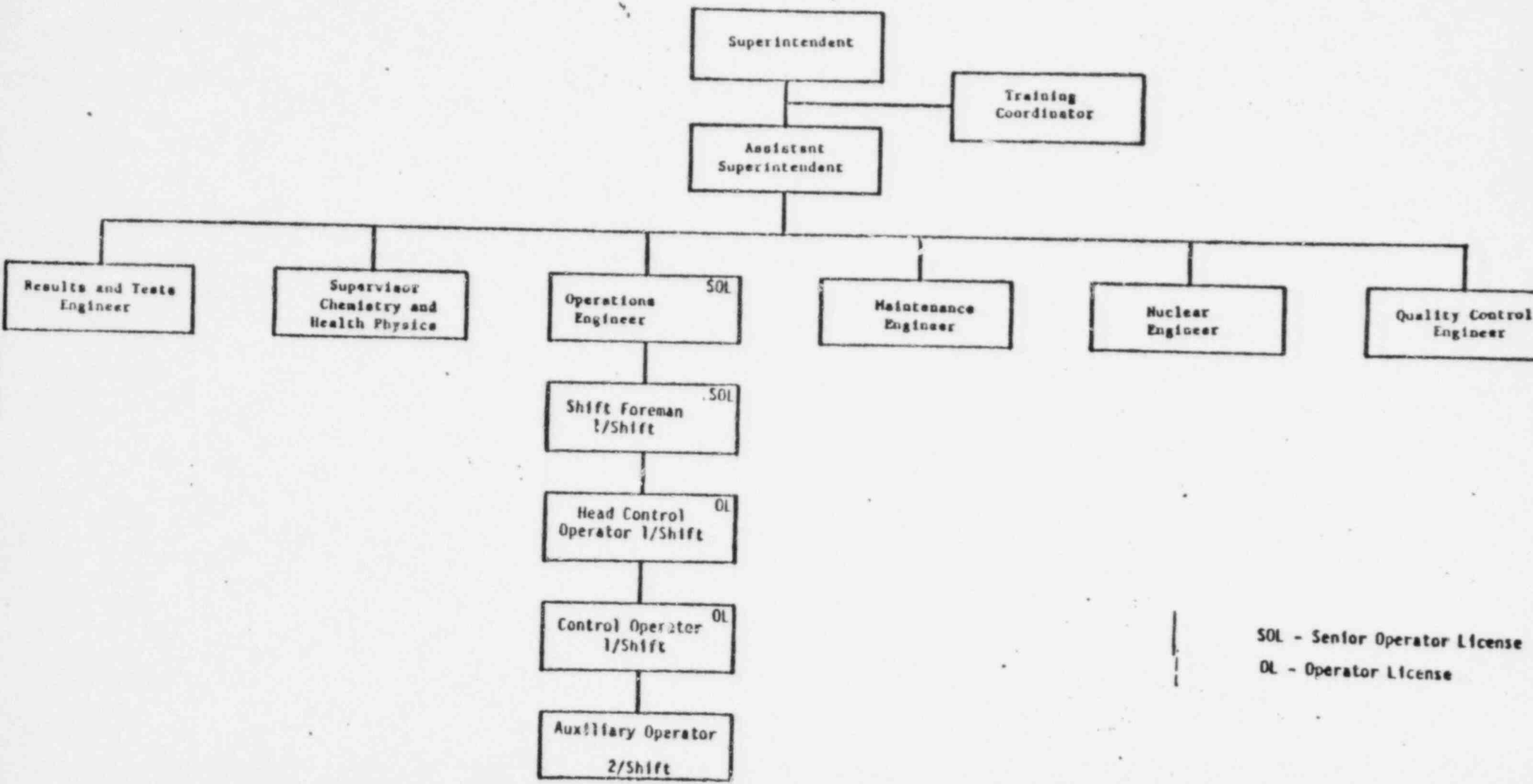


Figure IV.2-2
November 1, 1974

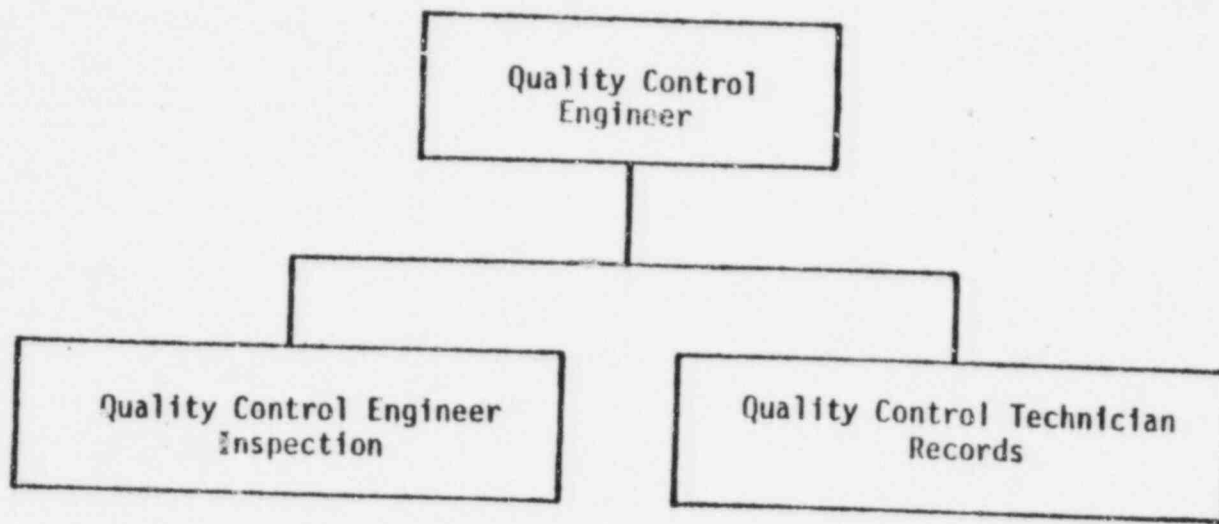
ROCHESTER GAS AND ELECTRIC CORPORATION
 GHNA STATION ORGANIZATION



SOL - Senior Operator License
 OL - Operator License

Figure IV. 2-3
 July 1, 1974

GINNA STATION
QUALITY CONTROL ORGANIZATION



IV-82

Figure IV.2-4

July 1, 1974

Rochester Gas and Electric Corporation
Engineering Department Organization

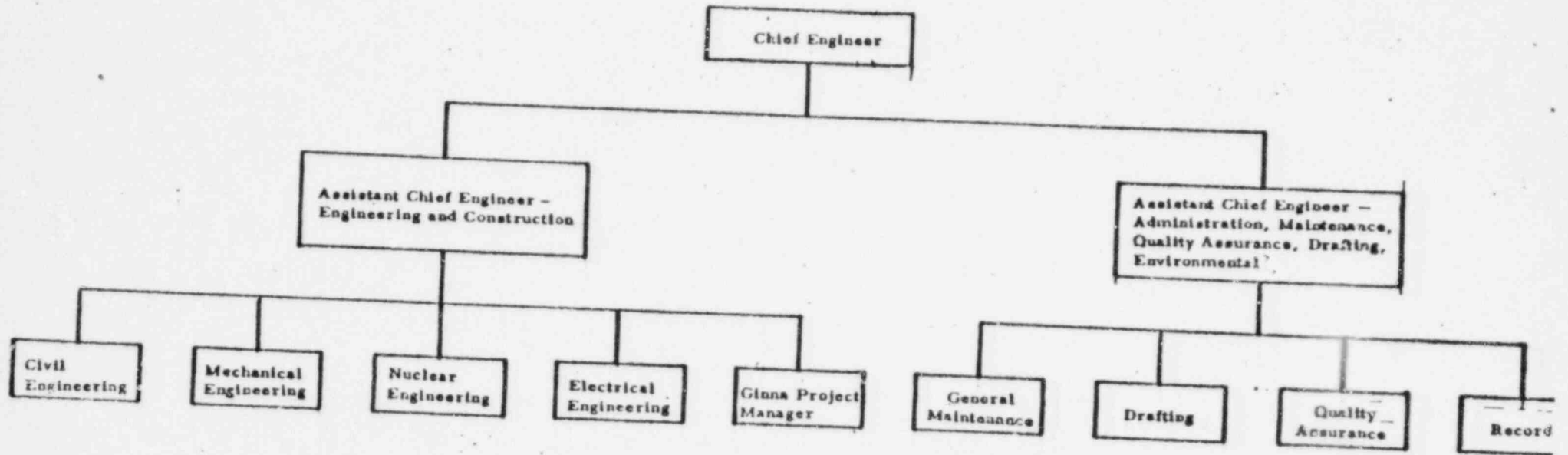


Figure IV. 2-5
November 1, 1974

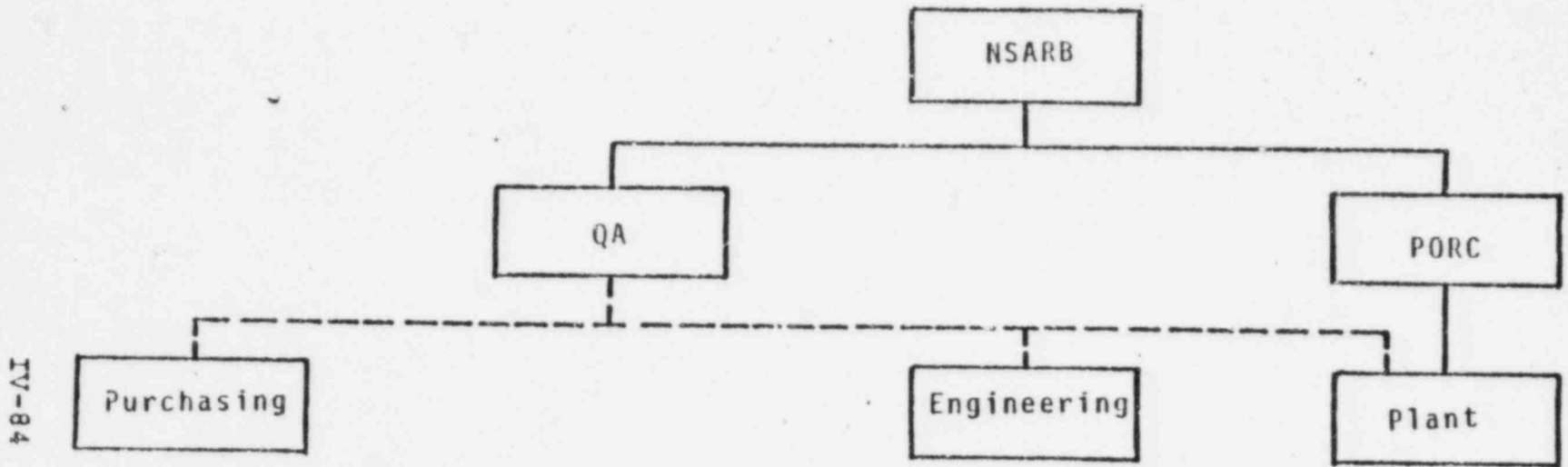
IV-83

Revision 2
November 1, 1974

Rochester Gas and Electric Corporation

Ginna Station

Review and Audits Functions



————— Review

- - - - - Audit

Figure IV. 2-6