LISTING COVERING REVISION OF

TOPICAL REPORT CE-1

Listed below is Revision 21 dated 6/6/82 to the Commonwealth Edison Company Quality Assurance Program Topical Report CE-1:

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components. The Program is applicable to the maintenance, modification, operating and refueling quality assurance activities from the time the Operating License is issued to the end of the operating life of the items. Repairs are performed as maintenance activities and alterations as modifications. The Program covering operations, including quality control, are planned and implemented in accordance with procedures necessary to provide Commonwealth Edison Company adequate confidence that a safety-related structure, system or component performs satisfactorily in service.

B. Organizational Responsibilities for Major Activities

Design

Control of design quality is essentially a four-stage process. Designs originated by either the NSSS Supplier or Architect Engineer are subjected to internal review by the designer and an independent internal party (or parties). The NSSS Supplier and Architect Engineer designs are evaluated by each other as well as by personnel from one or more Edison departments. These steps constitute the primary design evaluation for all safety-related and ASME Section III items in the Station. Appropriate document distribution and control has been established to permit an effective effort in this area. Comments on designs resulting from these evaluations are presented in letter form, by telephone (with written follow-up) or in meetings with published minutes. Edison has final authority with respect to decision making on designs.

Procurement

Procurement control and follow-up for NSSS components is established and maintained by the NSSS Supplier. Edison and the Architect Engineer evaluate the NSSS Supplier procurement specifications, and Edison audits and inspects the NSSS Supplier control measures. Procurement of and follow-up on non-NSSS components and services are directly controlled by Edison, based on the Architect Engineer specifications which have been evaluated by Edison. The Architect Engineer is used to assist in this effort, as Edison's agent, as requested by Edison.

Construction

Construction quality assurance is an Edison responsibility. Edison exercises managerial control of all site construction activities. The site Quality Assurance Group maintains close surveillance of on-site contractor's and other associated construction quality assurance activities. The NSSS Supplier furnishes technical and Quality Control assistance for on-site activities relating to the NSSS. On-site contractors' quality assurance programs are independently evaluated by Edison Quality Assurance. 21

Pre-service Testing

Pre-service testing, consisting of preoperational and start-up testing, is controlled by Edison. The Architect Engineer and the NSSS Supplier furnish rough draft test procedures to Edison. Based on these, a final draft is written by Edison. This final draft is subjected to internal Edison evaluation and evaluation by the Architect Engineer or the NSSS Supplier as appropriate. The tests are managed and performed by Edison with technical assistance from the NSSS Supplier as appropriate. The evaluation of the test results is performed by Edison and confirmed by independent internal Edison evaluations. Further independent evaluations by the Architect Engineer or the NSSS Supplier are performed as required by Edison.

Operations

Commonwealth's managerial and administrative control of the Quality Assurance Program for operating nuclear stations, as illustrated in Figures 1-0, 1-1, and 1-6 includes review and approval of procedures by the personnel described in this document.

Quality Procedures and revisions thereto for the Company Manual are concurred with by the principally involved departments. The Director of Quality Assurance (Operating) reporting to the Manager of Quality Assurance, verifies that the Quality Procedures for Operating contained in the Company Manual or Station Quality Procedures comply with the policy described in this document. Similarly, the Supervisor Quality Assurance (Maintenance) verifies that the Quality Procedures for maintenance, modifications, in-service inspection and Stores activities comply. The Manager of Quality Assurance directs the quality assurance activities covering operations and approves the Quality Assurance Procedures covering operating, maintenance, modifications, in-service inspection and Stores activities for use in the Station. 15

Station Procedures and instructions and revisions thereto for the Station Procedures Manual are reviewed and approved as provided in the Technical Specifications. The station Quality Assurance Engineer or Inspector reporting to the Director of Quality Assurance (Operating) provides surveillance of the preparation and revision of the station operating procedures and instructions to assure compliance with the policies contained in the Quality Assurance Program. The Quality Assurance Engineers or Inspectors for maintenance, reporting to the Supervisor Quality Assurance (Maintenance), provide surveillance of the preparation of procedures and instructions for maintenance, modifications, in-service inspections and Stores activities to assure compliance with the policy contained in the Quality Assurance Program. Temporary changes to procedures which do not change the intent of the original procedures, may be made with the concurrence of qualified individuals as 15

described by Technical Specifications. Such temporary changes are subsequently reviewed, approved and authorized in a manner commensurate to that used for the original procedure.

Managerial and Administrative Controls

Lines of authority and responsibility for the Quality Assurance Program are documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities or descriptions of key quality assurance positions including those providing technical support or audit responsibility.

In general, the Quality Assurance Program provides that an activity is verified as being correctly performed, that Quality Assurance activities are performed independent of the individual or group directly responsible for performing a specific activity, and that quality assurance functions have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of the solutions.

The responsibilities for implementation of the Quality Assurance Program are assigned to the Vice Chairman, Executive Vice Presidents, Vice President (Engineering), Vice President - Nuclear Operations, Manager of Station Construction, Manager of Projects, Vice President (Purchasing), Vice President (Divisions) and Manager of Quality Assurance. The organizations or personnel named herein and reporting to the Vice President (Engineering), Vice President of Nuclear Operations, Manager of Station Construction, Manager of Projects, the Vice President (Purchasing) and Manager of Quality Assurance may assign to other organizations or personnel, the work of establishing and executing any part of the Quality Assurance Program under their cognizance, but the assigning organizations or personnel retain responsibility for such assignments. Figures 1-0, 1-1 and 1-6 illustrate the functional and administrative responsibilities of the major organizations and personnel participating in the Quality Assurance Program for operating nuclear stations. Dashed lines represent the functional responsibility for establishing and administrating the procedures and instructions. Solid lines represent responsibility for implementing the procedures and instructions. Dotted lines represent audit responsibility for verifying compliance with the procedures and instructions independent of the person or group directly responsible for performing the activities. 14 14

The specific responsibilities for the Quality Assurance Program are described in the following paragraphs.

1.1 General

As assigned in the policy statement for the Corporate Quality Assurance Manual by the Chairman and President, the Vice

Chairman of Commonwealth Edison Company has overall responsibility for the Quality Assurance Program covering the design, construction and operation of the Company's nuclear generating stations. Similarly assigned, authority and responsibility is assigned to the Manager of Quality Assurance for quality assurance with respect to design, procurement, construction and operation if the Company's nuclear power stations. Further, other authorities and responsibilities are as delineated in the organization section.

The Executive Vice Presidents, Vice President (Engineering); Manager of Quality Assurance; Vice President Nuclear Operations; Vice President (Divisions); Manager of Station Construction; Manager of Projects and Vice President (Purchasing) are responsible for implementation of the Quality Assurance Programs as described herein.

The Manager of Projects directs the design, construction and pre-operations operating activities involving the project during the initial design and construction of the nuclear unit or for other specially established projects after the unit has been placed into operation. The Project Managers, reporting to the Assistant Manager of Projects and the Manager of Projects, are responsible for the Project activities involving project engineering, construction, testing, and preoperational and start-up operations. The Projects Department Engineering, Construction and Operation groups have line responsibility involving the project during the initial design, construction and preoperational operations of the nuclear unit. The Project Engineering, Project Construction and Project Operation groups are formulated respectively from the Station Nuclear Engineering and Station Construction Departments and the Production Nuclear Division which have functional responsibility and control of the corresponding Projects Department organizations. The Project Operation group for a respective unit shall revert back to the Production Nuclear Division when an operating license becomes effective. The Project Construction and Project Engineering groups shall revert back, respectively, into the Station Construction and Station Nuclear Engineering when the nuclear unit is placed into commercial operation. Also, during the projectized phase, the applicable respective Station Construction Department, Station Nuclear Engineering and Production Nuclear Division procedures shall correspondingly apply to the Project Construction, Engineering and Operations activities as established by interface procedures or documents between the Station Construction and Engineering Departments and the Nuclear Division, respectively, and the related Project groups. 21

The Station Nuclear Engineering Manager, reporting to the Assistant Vice President responsible for Station Nuclear Engineering, Nuclear Licensing and Nuclear Fuel Services, who in turn, reports to the Vice President (Nuclear Operations), has functional responsibility and control during initial design, construction and startup for the activities involving design, test procedures, and the baseline

a. Implementation of the modification and maintenance portion of the Quality Assurance Program.

b. The preparation and revision of the Station Procedures for the modification and maintenance.

c. The completion of documentation showing that the required inspections and tests were performed for modification, maintenance and material receipts. He shall also review and approve receiving inspection documentation.

d. The proper and satisfactory completion of modification, maintenance and reported corrective action. He shall also review and approve such completion and corrective action.

e. The incorporation of approved engineering changes into maintenance and operating procedures.

f. Completion of ASME Code requirements.

g. In-service inspection and Stores activities.

h. Adherence to Technical Specification requirements where involved with modification, maintenance and in-service inspection activities.

1.5 Production Department Responsibilities

1.5.1 Production - Nuclear Division

1.5.1.1 Division Vice President and General Manager, Nuclear Stations | 21

The Commonwealth Edison Company production stations are divided into two Production Divisions - Fossil and Nuclear. The Division Vice President and General Manager in charge of each Division is responsible for the safe and reliable operation and maintenance of the plant assigned to his division. | 21

The Division Vice President and General Manager, Nuclear Stations reports to the Vice President (Nuclear Operations) and has line responsibility for the administration, management and direction of all Production Department activities at operating nuclear stations. During construction and preoperation operating activities, he has functional responsibility and control of Project operation activities and assumes operating responsibility when an operating license becomes effective. He is responsible for implementation of the Quality Procedures for the Quality Assurance Program and for development of Station procedures for the Station Procedures Manual. He is also responsible for obtaining and authorizing the use of services, or required liaison or interface with, other Commonwealth Edison Company departments such as: Accounting, Industrial and Public Relations, Purchasing, Engineering, Construction, Materials Analysis and Operational Analysis. He is responsible for approval of requisitions for the procurement of services from vendors and contractors. He provides liaison between the Regional Nuclear Regulatory Commission's Director of the Office of Inspection and Enforcement and the Office of the Production Department. 21

He is responsible, through the Station Superintendent, for the management of each assigned power station. This includes all activities such as, operation, maintenance and refueling, and authorization of modifications performed at the Station, compliance with all regulations and licenses, personnel selections, training and related activities. He assigns responsibility for preparation and implementation of the Station Procedures Manual to the Station Superintendent including the Maintenance Procedures.

The Division Vice President and General Manager, Nuclear Stations coordinates the planning of each assigned station's activities with the activities of other plants on the Commonwealth Edison Company system and with the System Power Supply Manager. 21

16.0 CORRECTIVE ACTION

A corrective action system will be used to assure that such items as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances which are adverse to quality and might affect the safe operation of a nuclear generating station are promptly identified and corrected.

Corrective action measures for nonconformances are included in the design, source fabrication and on-site construction, erection and operational phases. Corrective action measures involving design will be processed as design change requests. Corrective action measures in the source fabrication phase are required in the quality assurance programs of individual vendors including the NSSS Supplier.

For the Project Engineering-Construction phase and modifications undertaken by Station Construction, on-site corrective action measures shall consist of a program for: (1) reporting nonconformances to Engineering by Construction; (2) recording nonconformance reports (NCR's) in a log for follow-up by Quality Assurance as to resolution and satisfactory completion; (3) prompt resolution and approval of corrective actions by Engineering; (4) assurance by Construction that the corrective action has been taken; (5) sign-off approval and close-out of NCR's by Site Quality Assurance that satisfactory corrective action has been taken; and (6) issuance by Engineering of monthly reports indicating the status of all NCR's submitted for resolution. 14 14

Implementation of corrective action will be accomplished at the source of deficiency by appropriate contractor personnel as directed by cognizant Edison engineers. Project or Station Construction, as applicable has responsibility for implementation of the correction. Quality Assurance is responsible for follow-up and final approval that the nonconformances have been corrected satisfactorily. 14

For corrective action nonconformances, the Edison Site Quality Assurance Superintendent or designee will establish and maintain a Nonconformance Report (NCR) Station Log to monitor the prompt resolution and closing of all NCR's plus maintain a file of all NRC's or equivalent documents that are submitted by the site for CECo resolution and approval.

The cumulative monthly deviation report, which indicates the NCR number, deviation description and resolution, such as reject, replace, use-as-is or repair, approval status, date of resolution and whether corrective action is completed, is distributed to involved corporate and line management for information, review and possible action. The responsible manager brings significant nonconformances to the attention of corporate management for action where satisfactory resolution cannot be achieved by Engineering with a contractor.

For Operations, corrective action identified from nonconformances, incidents and deviations, trend studies and audits are verified for satisfactory completion to preclude repetition.

When corrective action is required to correct nonconformance to Code requirements, such corrective action shall be made available to the Authorized Nuclear Inspector. Any revision to Travelers involved with corrective action related to nonconformance for station modifications shall be reviewed with the Authorized Nuclear Inspector for his review and insertion of hold points.

This system will provide follow-up to assure that corrective measures are effectively implemented. Also, significant conditions are reported by the responsible manager and nonconforming items are routinely reported by the responsible engineering organization to appropriate levels of management.

The Technical Staff Supervisor verifies completion of corrective actions for maintenance, repair, refueling and operation activities. The Station Quality Assurance Supervisor for maintenance and operating issues reports indicating the status of corrective action in progress. These reports are routed to the Division Vice President and General Manager, Nuclear Stations and the Manager of Quality Assurance and reviewed to assure prompt implementation of the corrective action. 21

Site contractors and off-site vendors will be required to follow-up on corrective action commitments within their quality program. The Site Quality Assurance Superintendent or designee will be responsible for surveillance of site corrective action. The Project Engineering Project Engineer is responsible for assuring that review and evaluation of nonconformance reports are carried out to determine the need of corrective action.

18. AUDITS

Audits will be performed by Commonwealth Edison Company and/or its contractors, subcontractors and vendors to verify the implementation and effectiveness of quality programs under their cognizance. The number and experience of persons participating in audits will vary according to the nature and significance of the audit.

Audits under the responsibility of the Manager of Quality Assurance will cover quality systems for engineering, construction, modifications, maintenance, in-service inspection and Stores activities. Audits will be performed to evaluate the implementation of the quality assurance programs and the adherence to procedures and controls. Certifications and records will also be evaluated. Product audits assess the effectiveness of inspections and tests that are specific to the fabrication, installation, construction, testing and operation of an item.

The performance and compliance of each operating station to the Quality Assurance Program is assured through review surveillance and audit of operations by the Quality Assurance Engineer or Inspector under the direction of the Station Quality Assurance Supervisor who is responsible for operating quality assurance to the Director of Quality Assurance (Operating) and through review, surveillance and audit of maintenance, modifications, Stores and in-service inspection activities by Quality Assurance Engineers or Inspectors (Maintenance) under the direction of the Station Quality Assurance Supervisor who is responsible for such quality assurance activities to the Supervisor Quality Assurance (Maintenance). 20

Audits will be conducted using checklists or an agenda approved by responsible Quality Assurance Department personnel and will be conducted to evaluate compliance with all aspects of the Quality Assurance Program. Audits will be initiated early to assure effective quality assurance during design, procurement, manufacturing, construction and installation, inspection and test and be performed efficiently in order to achieve a minimum of interference with work in progress and minimum disruption of

organizations being audited. An audit plan will be maintained in order to schedule audits of site contractors. Audits of off-site contractors generally will be conducted in conjunction with plant visits for witnessing inspection points by a qualified auditor. Also, periodically Quality Assurance will participate in such audits or perform independent audits to assure effectiveness of the program, compliance to the program and fulfillment of procurement requirements.

The elements in the quality program, in procurement documents and in related codes and standards, are subject to systems audits. Also, items received, fabricated and constructed or installed for use by Commonwealth Edison Company in its nuclear power plants are subject to audits.

Audits will be performed selectively at various stages of contracts on a varying frequency, based on the nature and safety significance of the work being done to verify compliance and determine the effectiveness of procedures, inspections, tests, process controls and documentation. For Code materials, when a Material Manufacturer or Material Supplier, as applicable, does not hold a Quality System Certificate (Materials), the CECo audit frequency shall be at least once annually during the interval in which CECo purchased material is being controlled by the Material Manufacturer or Material Supplier. In addition to these audits, Quality Assurance will conduct approximately annually, overall system audits of the NSSS vendor, the Architect Engineer, site contractors, and involved Edison Departments. Audits of CECo are also performed by the Authorized Inspection Agency as required by the ANSI N-626 series of Standards.

For operating stations, periodic Quality Assurance Department audits will be performed to verify compliance with, and the effectiveness of the program. Audits covering operating will be performed in accordance with the Technical Specifications under the direction and responsibility of the Director of Quality Assurance (Operating) independent of the Production Department. Surveillance, in-service inspection and Stores activities will be performed under the direction and responsibility of the Quality Assurance Supervisor (Maintenance). Audit results and recommendations of corrective action will be documented and reviewed with the management of the Station. Verification of the completion of corrective action recommended in audit reports will be performed by the Technical Staff Supervisor or Quality Control Supervisor. Follow-up of open station items is tracked by the Action Item Record's (AIR) System. Where an audit item is placed under the AIR system for tracking completion, approval as to satisfactory completion of corrective action shall be obtained from the responsible station Quality Assurance Engineer or Inspector. 21