U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-454/86012

Docket No. 50-454 License No. NPF-37

Licensee: Commonwealth Edison Company
Post Office Box
Chicago, IL 60690

Facility Name: Byron Station, Unit 1

Inspection At: Byron Site, Byron, IL

Inspection Conducted: March 17-21, 24-27, 31, and April 1-3, 1986

Inspectors: H. A. Walker — Date: 4/21/86

R. N. Sutphin — Date: 4/21/86

Approved By: F. C. Hawkins, Chief
Quality Assurance
Programs Section — Date: 4/21/86

Inspection Summary

Inspection on March 17-21, 24-27, 31, and April 1-3, 1986 (Report No. 50-454/86012 (DRS))

Areas Inspected: Unannounced inspection by two regional inspectors of QA program annual review; receipt, storage and handling of material; onsite review committee; audit program implementation; surveillance program; surveillance testing and calibration control; maintenance program and maintenance program implementation. The inspection was conducted in accordance with NRC Inspection Procedures Nos. 35701, 38702, 40700, 40704, 61700, 61725, 62700 and 62702.

Results: Of the eight areas inspected, no violations or deviations were identified in six areas. Two violations were identified in the remaining two areas (failure to assure that test requirements were met, Paragraph 2.3.(2)).; failure to calibrate plant instrumentation within specified periods, Paragraph 2.f.(2).b).

DETAILS

1. Persons Contacted

Commonwealth Edison Company

G. A. Barth, Stores Supervisor
#A. D. Britton, QA Inspector
*#W. B. Burkamper, Operations QA Supervisor
*A. J. Chernick, Compliance Supervisor
*H. R. Erickson, Sr., Master Mechanic
#F. Hornbeck, Technical Staff Supervisor
#P. Johnson, Master Instrument Mechanic
*#T. P. Joyce, Assistant Superintendent, Technical Services
*#J. E. Langan, Compliance Staff
*P. J. O'Neill, Quality Control Supervisor
*#R. Pleniewkz, Production Superintendent
*#R. E. Querio, Station Manager
*T. K. Schuster, Assistant Technical Staff Supervisor
*#M. Snow, Assistant Compliance Supervisor
#D. J. Spityel, Station Surveillance Coordinator
*R. C. Ward, Services Superintendent
*K. E. Yates, Nuclear Safety

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*J. M. Hinds, Jr., Senior Resident Inspector
#P. Brockman, Resident Inspector
*W. L. Forney, Chief, Projects Section 1A

Other personnel were contacted as a matter of routine during the inspection.

*Indicates those attending the exit meeting on March 26, 1986.
#Indicates those attending the exit meeting on April 3, 1986.

2. Program Areas Inspected

This inspection was conducted to verify compliance with regulatory requirements and operational QA program commitments. The inspection was performed by reviewing applicable procedures and records, conducting personnel interviews and observing work activities. The inspection results are documented in the following sections of the report.

a. Quality Assurance Program Annual Review

The inspector reviewed Byron quality assurance program activities to verify that management personnel had responded to changes made in the Byron quality program commitment documents since fuel load and startup. These documents include the Commonwealth Edison Quality

Assurance Manual, the FSAR, and the Technical Specifications. Reviews were conducted to verify that the changes were properly identified and implemented.

The inspector included applicable instructions, procedures, and related records in his review. Interviews with selected personnel were also conducted.

(1) Byron Administrative Procedure, BAP500-6, "Byron Station Quality Assurance Training Program" provides the outline of the Quality Assurance (QA) Program (QAP) training requirements to assure that suitable proficiency is developed and maintained for safety-related activities. Attachment "A" to the procedure, BAP600-A1, is the Nuclear Station QA Manual Matrix. The Matrix indicates job specific QA training requirements and is used in the selection of station management personnel for training on revised documents. BAP600-6 provides that positions as identified on the Matrix must receive revision training on applicable sections of the QA manual, and that this training shall be completed within sixty (60) days of the procedure's revision date. The inspector found the program for training and retraining on QA program revisions to be acceptable.

(2) The inspector found that Byron Station did not have a well documented approach for the communication and feedback of Quality Assurance Program change implementation information. The Compliance Supervisor, the QC Supervisor and the Onsite Review Function personnel were involved in this process; however, none of the three had policies or procedures that clearly addressed the accountability for implementation of changes. Changes to the Quality Assurance Manual (QAM) were reviewed by the QC Supervisor onsite and a letter was written, and distributed with his comments; however, no reply, response or accountability for implementation of changes was required. As a result, the status of implementation of QAM changes was unknown. Pending a further review of this situation by the licensee this item is unresolved (50-454/86012-01).

(3) In a letter, dated March 14, 1986, the QC Supervisor included a comment on the review of the February 28, 1986, revision to the CECo QAM. This comment noted the fact that QP 10-54 deleted the requirement for a copy of the original Purchase Order on Q.P. Form 10-54-2, "Request for Interstation Material Transfer." The NRC inspector questioned this as it appeared to be a violation of 10 CFR 50, Appendix B, Criterion VIII, "Control of Purchased Material Equipment, and Services," and requested that the licensee review their position on this change. The inspector was later informed that the licensee will add the deleted requirement to the QAM at the next revision. Pending the completion of the

reinstatement of the requirement to have a copy of the original Purchase Order accompany interstation material transfers, this item is unresolved (50-454/86012-02).

b. Receipt, Storage, and Handling of Equipment and Materials Program

The inspector reviewed the licensee's program on the Receipt, Storage, and Handling of Equipment and Materials to verify that they were properly implementing the QA program in this area.

(1) The inspector verified that receipt, storage and handling of material was accomplished in accordance with the appropriate administrative controls, instructions, and procedures. Requirements for receipt inspections were followed.

(2) Examinations for conformance with purchase orders were conducted, and records were generated and maintained. Nonconforming items were tagged and segregated, and controls existed for conditional releases. The licensee had provided for four levels of storage in accordance with ANSI N 45.2.2, 1972. Shelf life controls were developed and used.

(3) The inspector selected five shipments that were in various stages of the receipt, handling and storage process including two electrical items, two mechanical items, and one instrument item. All were found to meet requirements; however, one item, a rubber gasket, did not have a shelf life specified by the supplier. The responsible mechanic had selected "Unlimited" as the shelf life to be used. The NRC inspector questioned the basis for this selection of "Unlimited," and the licensee agreed to review this matter further. The inspector has no further questions on this item at this time.

The licensee has provisions for the procurement of standard off-the-shelf items, commercial grade, and has a program for the evaluation of them for safety-related applications. When these items have processes specified on the Purchase Order they are followed and verified at Receipt Inspection. If nothing was specified in the Purchase Order, the applicable master mechanic has the responsibility to take the appropriate action to ensure the item meets the requirements of the application in the safety-related system prior to use.

The inspector selected four items in storage, one electrical, one instrument, one mechanical, and one with a shelf life requirement, to verify that tagging and marking provided the means for tracing the item back to the purchase documents, receipt documents, and quality certification documents. All four items were traceable and the inspector reviewed all of the related document packages for the items. The licensee was maintaining the records and the storage conditions in accordance with their commitments.

c. Onsite Review Committee

The inspector reviewed the activities of the Onsite Review Functions to verify that they were conducted in accordance with Technical Specifications and other regulatory requirements.

(1) The onsite reviews were performed in accordance with the Technical Specifications (TS). The TS identified this activity as the Onsite Review and Investigative Function and established the Technical Staff Supervisor, or other comparably qualified individual as the senior participant to provide appropriate directions. In most instances reviews were performed by qualified individuals rather than by groups in committee meetings.

(2) One committee meeting was held for onsite review during the inspection. The NRC inspector attended this meeting as an observer and verified that the TS requirements were satisfied.

(3) The inspector reviewed reports of previous activities of the Onsite Review and Investigative Function. He also reviewed 50.59 evaluations and deviation reports. All were found to be in accordance with TS requirements and the applicable procedures.

d. Implementation, Audit Program

The inspector reviewed the implementation of the Audit Program to verify that qualified personnel are conducting routine audits to ensure that licensee activities are in conformance with regulatory requirements, commitments, and industry guides and standards.

(1) The inspector witnessed the planning and preparation for the next audit scheduled. Personnel qualifications of auditors were checked and the plans were developed in accordance with the schedules and commitments.

(2) Audit reports from three previous audits, QAA 06-86-02, QAA 06-86-07, and QAA 06-86-29 were reviewed and found to be in accordance with requirements.

(3) Qualifications of auditors were checked and found to be up to date and in accordance with requirements.

(4) The audit schedule for 1986 was reviewed and found to be in accordance with commitments. Actual performance of audits was ahead of schedule in most instances.

e. Surveillance Program, Testing and Calibration

The inspector reviewed the surveillance program and surveillance testing and calibration control for the Byron Station. Checks were

made to verify adequate implementation. Increased sample sizes were used in this inspection because of the recent SALP rating in this area. Specific surveillance requirements were selected from the Technical Specifications and verified through appropriate surveillance procedures and the respective surveillance records. The selected requirements, including testing intervals, were verified as incorporated into appropriate procedures, the surveillance tracking systems, and history files. Selected surveillance test records were reviewed to verify completion of surveillance testing and calibration, to ensure that testing requirements are met, and to verify acceptable retrievability of records. The following observations were made:

(1) Based on reviews of the selected samples, Technical Specification requirements appear to be properly implemented and controlled with the one exception described in Paragraph (2). Tracking and performance of surveillances was acceptable and surveillance results were adequately documented.

(2) During the review of surveillance test records for BOS DC-21, "ESF Station Battery Daily Surveillance" the inspector noted that on December 10, 1985, two voltage measurements exceeded the specified maximums, BOS DC-21, Revision 0 designates these voltage maximums as acceptance criteria. The surveillance cover sheet for this surveillance indicated that the surveillance results were satisfactory. The surveillance procedure also requires that out-of-tolerance parameters be circled in red. This was not done on these surveillance records. In the post surveillance record reviews there were no indications these deficiencies were noted. In discussing this item with personnel performing the reviews, the inspector was informed that the station technical staff considered the surveillance to be acceptable. Technical staff personnel emphasized that this particular test was not a technical specification requirement. Another reviewer was not sure of the purpose of his review.

It should be noted, that at the time of the surveillance, Unit 1 was in Mode 5 which only requires that one battery train be operable. No deficiencies were noted in ESF Battery Train III. Further discussions with licensee personnel indicated, that if technical specification requirements are met, then program and procedural requirements are not considered significant. This attitude is not conducive to safe plant operation and is a concern of the inspector.

The failure to assure that test requirements have been satisfied is a violation of 10 CFR 50, Appendix B, Criterion XI (454/86012-03).

(3) The inspector reviewed Quality Assurance records of audits and surveillances conducted on the surveillance program. Coverage appeared to be adequate and no problems were identified.

f. Maintenance Program and Program Implementation

The inspector reviewed the preventative and corrective maintenance programs. Implementation was also covered. During the review the inspector made the following observations:

(1) Corrective maintenance or modification work is initiated by the Nuclear Work Request Form. This form is used to document required approvals as well as completion of work. The Nuclear Work Request with supporting documentation is maintained as a record of the completed work activity.

(a) In reviewing completed Nuclear Work Requests the inspector noted that in one case required material had been transferred from the Braidwood Station for use at Byron. In discussing this item with quality control personnel, the inspector was informed that a copy of the purchase order was used to determine the procurement requirements used in the purchase of the transferred material. The inspector noted that a change had been made in the Commonwealth Edison Operations QA Program eliminating the requirement for a copy of the purchase order to accompany the material. Further discussion of this item is included in Paragraph 2.a.(3) of this report.

(b) In reviewing completed Nuclear Work Requests the inspector noted a potential generic problem concerning the lack of some form of a QA program for an instrument that was classified as non IE and Seismic Category I. The Nuclear Work Request indicated there would be no quality control involvement in the work. The inspector questioned why the QA program or some form of a QA program was not applied to Seismic Category I items. Quality control personnel provided the NRC inspector with a letter dated December 16, 1982, from Mr. E. A. Kaczmarski of CECo engineering which contained the following statement, "Only instrumentation identified as Seismic Category I and Electrical Class 1E are to be considered as Safety Category I." Section 3.2.1.1 of the Byron Final Safety Analysis Report (FSAR) defines Safety Category I as those systems or portions of systems that meet the requirements of Appendix B to 10 CFR 50. The statement from the engineering letter quoted above appears to be in violation of the FSAR. Section 3.2.1.1 of the FSAR entitled "Safety Category I" contains the following statement, "This category includes those structures, systems and components whose safety function is to retain their own integrity and/or not constitute a hazard to other Safety Category I structures, systems, and components." The inspector was concerned that assurances could not be provided that the integrity of Seismic Category I items would remain in place during a seismic event if the quality

program (or portions thereof) were not applied to their removal, replacement (manufacture), and reinstallation resulting from maintenance and modification activities. In discussing this matter with NRR the inspector was informed that NRC did not require that Non IE Seismic Category I items be covered under a quality assurance program. Nonetheless, the lack of application of pertinent QA program elements are considered to be a poor maintenance practice related to these types of instruments (Non-IE Seismic Category I).

(2) The preventative maintenance program utilizes two computerized systems to track and initiate work on routine preventative maintenance items. Periodic maintenance intervals are established using manufacturer's recommendations. Where manufacturer's recommendations are not available, engineering sets the interval based on past experience or an evaluation of the items use. Both systems utilize tracking and notification methods similar to the methods used for tracking plant surveillances. One of the systems is used for mechanical and electrical equipment and the other is used for instrumentation. Reviews of the mechanical and electrical system indicated the system was working properly. In evaluating the system used for plant instrumentation, the inspector reviewed the monthly listing of plant instruments scheduled for calibration during the current month. The listing, dated February 28, 1986, entitled "Station Instrumentation Scheduling File Listing," contained 373 (of 723) instruments which were past due. Most overdue instruments were due within the last year; however, a few were noted to be past due for longer periods. A number of these overdue instruments (27) were determined to be safety-related.

In discussing this matter with licensee personnel, the inspector was informed that the licensee did not have enough instrument technicians to keep the calibrations current. The entire program was being evaluated to determine if calibration intervals for some instruments could be increased and if other instruments could be eliminated from the calibration program. A review of the instruments due for calibration each month was performed by the instrument department and only the more important ones were scheduled for calibration. Calibration of the other instruments was being deferred until the system evaluation could be completed.

The failure to assure that instruments used in activities affecting quality are properly calibrated at specified intervals to maintain accuracy within desired limits is a violation of 10 CFR 50, Appendix B, Criterion XII (454/86012-04).

(3) The inspector reviewed Quality Assurance records of audits and surveillances conducted on the maintenance program. Coverage appeared to be adequate and no problems were identified.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations or deviations. Unresolved items disclosed during this inspection are presented in Paragraphs 2.a.(2) and 2.a.(3) of this report.

4. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the Byron Plant on March 26 and April 3, 1986, and summarized the purpose, scope and findings of the inspection. The inspectors discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents or processes as proprietary.