



Commonwealth Edison

One First National Plaza, Chicago, Illinois

Address Reply to: Post Office Box 767
Chicago, Illinois 60690

December 23, 1982

Mr. James G. Keppler, Regional Administrator
Directorate of Inspection and
Enforcement - Region I'I
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Byron Station Units 1 and 2
IE Inspection Report No.
50-454/82-22 and 50-455/82-16

Reference (a): November 23, 1982 letter from R. L. Spessard
to Cordell Reed

Dear Mr. Keppler:

Reference (a) provided the results of an inspection by Messrs. W. Forney and K. Connaughton on September 1 through October 31, 1982 of activities at Byron Station. During the inspection it was determined that certain activities were not in compliance with NRC requirements. Attachment A to this letter contains Commonwealth Edison's response to the Notice of Violation which was appended to reference (a).

In responding to Violation 4 we have included a description of actions being taken to address the adequacy of details which are no longer available for reinspection.

To the best of my knowledge and belief the statements contained in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison employees, contractor employees, or consultants. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please address further question regarding these matters to this office.

Very truly yours,

original signed by T.R. Tramm for

L. O. DelGeorge
Director of Nuclear Licensing

Attachment
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RESPONSE TO NOTICE OF VIOLATION

VIOLATION 1

10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants states in part:

"XVI Corrective Action Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformancies are promptly identified and corrected."

Byron Station Startup Manual, Revision 11, dated 1982, Section 4.1.4 "Deficiencies," states in part: "The person, or persons, assigned to carry out corrective action complete the work and briefly describe the results."

Contrary to the above, on September 3, 1982, Project Construction, indicated, on Deficiency Report Form No. 1702, that corrective action (installation of the reactor cavity sump weirplate) had been completed and forwarded the Deficiency Report for closeout.

Installation of the weirplate was incomplete in that three of nine weirplate mounting bolts required to maintain a leak tight seal between the weirplate and the weirwall were not installed.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The weir plate of the reactor cavity sump is affixed to a flange of the sump by three 1/4" capscrews along each side and the bottom. The weir plate was installed by putting it in place and, using the flange of the sump as a template, drilling holes in the plate. At that time the capscrews were installed and tightened. The three 1/4" diameter holes along the bottom were not noticed by the pipefitters doing the work. The Project Construction Department cognizant engineer inspected the installation, noticed the six bolts were tight, the weir plate was straight, and appeared to be operable.

As the sump and weir plate are not safety-related there were no contractor QC inspections performed on the weir installation. After discovery of the problem by the Tech Staff the remaining three holes were located, drilled, and capscrews installed within a few hours. The test then proceeded.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE

A session will be held with Project Construction Department personnel to retrain them in Byron Startup Manual procedures and stress the importance of physical verification of deficiency completion and drawing compliance.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

December 17, 1982.

VIOLATION 2a

10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants states in part:

"XV Test Control ...A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents."

The Byron FSAR, Chapter 17.0, Quality Assurance, states in part: "Therefore the CE Topical Report CE-1-A, Revision 7 and all subsequent revisions unless otherwise noted in this chapter, is the basis for the QA Program at Byron/Braidwood Station."

Commonwealth Edison Company Topical Report CE-1A, Quality Assurance Program for Nuclear Generating Stations, Revision 20 dated February 17, 1982, Section 11, states in part: "Preoperational tests which are performed on critical safety Category 1 equipment are controlled by approved written procedures..."

Byron Station Startup Manual, Revision 11 dated October 12, 1982, Section 4.1 states: "Deficiencies are documentation of incomplete or improper installation, documentation, design, or testing identified at the time of Turnover for Test, or thereafter. The individual who identifies an item of incomplete or improper installation, documentation, design or testing will complete the Deficiency Description on the Deficiency Report Form (Form SU 4-1), and provide the originator's name and the date."

Byron Startup Manual, Revision 11, dated October 12, 1982, Section 4.6 states in Part: "The System Test Engineer will determine which deficiencies must be cleared prior to testing."

Contrary to the above:

- a. On October 1, 1982, during Containment Spray System preoperational testing, Licensee test personnel learned that electrical drawing 6E-4030-CS-08, Revision C, incorrectly specified the time delay associated with the "Eductor 1A Additive Flow Low" annunciator as 200 msec while the preoperational test procedure and instrument data sheet specified the time delay to be approximately 30 seconds. A Deficiency Report was not written until October 4, 1982, after the inspector had informed test personnel that the failure to do so appeared to be in noncompliance with the Byron Startup Manual.

Response to Violation 2a

Corrective Action Taken and Results Achieved

On Friday afternoon, October 1, the System Test Engineer STE encountered the document discrepancy recorded in the inspection report. Although drawing 6/20E-1-4030 CS08, Rev. C specified 200 msec for the time delay, the range specified in the test procedure of 20-60 seconds was taken from the S&L Data Sheet, which has been designated as the primary design document. When the test resumed on the morning of Monday, October 4, the Resident Inspector informed the STE that failure to document the discrepancy as a test deficiency was in non-compliance with the Byron Startup Manual. The STE immediately wrote System Deficiency 017.10-044 to document the deficiency. Later in the morning he brought the concern to the attention of the Tech Staff Supervisor and Preop Coordinators. On October 9, 1982, the Instrument Maintenance Department also wrote Instrument Discrepancy Report 1-469-82 to track the documentation discrepancy.

Corrective Action Taken to Avoid Further Non-compliance

A discussion was held at the daily Group Leader's meeting on October 7, 1982 regarding the need to record any deficiency concerning a system including document deficiencies. The Group Leaders later explained to the STE's that System Deficiencies were required whenever discrepancies relating to preoperational testing were found between design documents.

On November 9, 1982, Tech Staff Memo 82-38 formally reissued the Project Engineering Department letter dated October 18, 1982 which specified the source documents for design setpoints to be verified through preoperational testing. The Tech Staff Memo also re-emphasized that the Byron Startup Manual requires deficiencies be written for document conflicts.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on November 9, 1982.

VIOLATION 2b

- b. Test personnel attempted to perform Section 9.2 of the Containment Spray preoperational test while unable to determine the impact of Deficiency No. 2.017.10-005 on testing. Testing could not be complete due to this deficient condition.

Response to Violation 2b

Corrective Action Taken and Results Achieved

The system deficiencies 2.017.10-005 and 2.017.10-0006 were reviewed prior to starting the test with the intent to meet the requirements of the Byron Startup Manual. The status of the containment spray pump control circuits was incorrectly assessed from these deficiencies. The error was discovered when section 9.2 could not be completed. The Containment Spray Test was temporarily stopped and the Tech Staff Supervisor was notified of the problem. The Tech Staff Supervisor instructed the STE to re-review all system deficiencies prior to resuming the test to preclude further occurrences of this type. This was done on October 5, 1982.

Corrective Action Taken to Avoid Further Non-compliance

The following actions will be taken:

1. Construction and OAD will be more specific in writing of deficiencies.
2. Startup Group will do a more thorough review of all deficiencies they process.
3. Technical Staff will do a more thorough job of reviewing deficiencies as part of the pretest activities.

On October 20, 1982, the importance of the pretest review of deficiencies and properly assessing the impact of the deficiencies on the execution of the test was stressed to the Group Leaders at the morning Group Leader meeting. The Group Leaders later reviewed this with the STE's.

Date When Full Compliance Will Achieved

Full compliance was achieved on November 1, 1982.

VIOLATION 3

10 CFR 50, Appendix B, Criterion XIII states, in part, that "Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment to prevent damage or deterioration."

The Commonwealth Edison Company Quality Assurance Program contains, in Quality Requirement QR 2.0 a commitment to the regulatory position of Regulatory Guide 1.38, Revision 2 which endorses the requirements of ANSI N45.2.2-1972. Section 6.5 of ANSI N45.2.2 states in part that, "(6.1.1) Levels and methods of storage necessary are defined to minimize the possibility of damage or lowering quality due to corrosion, contamination, deterioration, or physical damage. (6.2.2) Cleanliness and good housekeeping practices shall be enforced at all times in the storage areas. (6.4.2) Items shall have all covers, caps plugs or other closures intact, covers removed for internal access at any time for any reason shall be immediately replaced and resealed after completion of the purpose for removal."

Contrary to the above, the Licensee does not have an adequate program to ensure proper care and preservation of safety related equipment as evidenced by numerous instances of missing or damaged penetration covers and piping end caps identified during tours of Units 1 and 2 containments and the auxiliary building between September 1 and October 31, 1982. This is a repetitive item of noncompliance identified in Inspection Report No. 50-454/82-02.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The covers referenced by the violation have been replaced and resealed.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE

Preservation procedures will be revised to clarify and redefine types of acceptable pipe and penetration end covers. These end covers will be metal, plastic, wood, or other durable material. Additionally, the frequency of contractor QC walkdown surveillances will be increased to more promptly detect deviations from requirements for storage of mechanical components and equipment.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Preservation procedures will be revised by January 15, 1983. QC surveillances will be ongoing.

VIOLATION 4

10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants states, in part:

"XVI Corrective Action...Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

The Commonwealth Edison Quality Assurance Manual defines a nonconformance as: "A deficiency in characteristic, documentation or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformance include: physical defects, test failures, incorrect or inadequate documentation and deviation or variation from prescribed processing, inspection or test procedures."

Commonwealth Edison Quality Procedure QP No. 15-1, "Reporting Quality Nonconformances During Construction and Test," Section 5.3 states, in part:

"Upon detection by Commonwealth Edison Company of an onsite nonconformance, a Nonconformance Report (NCR), Form 15-1.1, is initiated by the Site Construction Superintendent or Project Engineer with review and signature by the Site Quality Assurance Superintendent, or designees. The NCR shall contain sufficient description to positively identify the nonconformance, and, when applicable, a suggested resolution. The NCR is submitted, as applicable, to the Project Engineering or Station Nuclear Engineering Department Project Engineer for review and approval."

Contrary to the above, the Licensee did not issue Nonconformance Reports or perform formal evaluations of the impact on quality of safety related equipment resulting from failures of contractors to perform required quality control inspections, as evidenced by the following examples of missed quality control inspections identified by the Licensee and not evaluated to determine appropriate corrective action.

- a. The quality control inspection required by Sequence No. 3 of Hunter Process Sheet 1RC018D, "Final Setting of Unit 1 Steam Generators" was identified in January 1979, as not being documented and therefore not verifiable as having been performed.
- b. The quality control inspections of all four Unit 1 Safety Injection Accumulators prior to grouting, required by Hunter Site Implementing Procedure 4.201, Revision 2, were identified as not having been performed after grouting had been completed.

- c. The quality control inspections to verify lubrication of reactor coolant pump support anchor bolts required by Hunter Process Sheet 1RCOLP, Revision 2, were not performed.

VIOLATION 4a

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The missed hold point on Hunter Process Sheet 1RCOLBD is the subject of a Non-Conformance Report (Hunter Corporation Non-Conformance Report Number 337, dated 12-15-82). The missed hold point, which consists of a QC signoff that the steam generator support column surfaces were free from deleterious material or nicks, gouges, etc. will be evaluated and reviewed during the resolution of the NCR by the appropriate engineering group.

The production supervisor and two representatives of Project Construction Department who physically witnessed the steam generator setting have affirmed the surfaces were clean and free from damage.

CORRECTIVE ACTION TO AVOID FURTHER NONCOMPLIANCE

Hunter's activities and objectives dealing with installation and inspection package review have been reviewed with the goal of discovering and resolving package discrepancies in a more timely fashion.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

The corrective action for violation 4a was achieved December 15, 1982, and the action to avoid further noncompliance was reviewed and outlined by December 17, 1982 (this is an ongoing activity).

VIOLATION 4b

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

A Non-Conformance Report (Hunter Corporation Non-Conformance Report Number 335, dated 12-10-82) has been written and will be used to track resolution of missed inspection of Safety Injection Accumulator foundation anchor bolts prior to grouting. A review of the documentation that is available from the structural contractor indicates that prior to slab placement the anchor bolts were checked by Blount (the structural contractor) QC. The Grout Placement Checklist is signed by Blount's QC inspector, a representative of Commonwealth Edison Company Project Construction Department, and Commonwealth Edison Company QA Department. The review performed by the Project Construction Department personnel included the feature

of determination that anchor bolts be free from damage and acceptable. In addition these anchor bolts will be checked for angularity and damage on visible areas.

CORRECTIVE ACTION TO AVOID FURTHER NONCOMPLIANCE

On December 15, 1981 SIP 4.201, Revision 3 was incorporated to include Hunter Corporation Equipment Inspection Checklist (Form HC-159) as the document necessary to record requirement for and inspection of equipment installation. All equipment installed to date has been inspected to these requirements and where applicable non-conformance reports for evaluation and corrective action have been created.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

SIP 4.201, Revision 3 was implemented by January 27, 1982, all equipment installed to date has been checked using the Equipment Inspection Checklist.

VIOLATION 4bC

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

A Non-Conformance Report (Hunter Corporation Nonconformance Report Number 322, dated 10-25-82) has been written to document and track resolution of the missed witness point. The bolt tightening procedure used, the Turn-of-Nut method, achieves sufficient pretension of the bolt with or without lubricant. The lubrication of the bolts is good practice but not a requirement of ASME Section III.

CORRECTIVE ACTION TO AVOID FURTHER NONCOMPLIANCE

Hunter's Site Implementation Procedures have been revised to clarify QC signoffs and production supervisors have been retrained to assure that signoffs are complete before work can proceed.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

October 25, 1982