



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
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March 11, 1983

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

Subject: Byron Station Units 1 and 2
Response to IE Inspection Report Nos.
50-454/82-27 and 50-455/82-21
NRC Docket Nos. 50-454/455

References (a): R. C. Knop letter to Cordell Reed
dated January 26, 1983

(b): T. R. Tramm letter to J. G. Keppler
dated February 7, 1983

Dear Mr. Keppler:

Reference (a) provided the results of an inspection conducted by Messrs. W. Forney and K. Connaughton of your office during the period between November 1 and December 31, 1982, of activities at our Byron Station. During that inspection, certain activities appeared to be in noncompliance with NRC requirements. The Attachment to this letter provides the Commonwealth Edison Company response to the Notice of Violation as appended to Reference (a).

Our delay in transmittal of this response until March 11, 1983 was discussed Mr. C. E. Norelius of your office on both February 25 and March 3, 1983. Additionally, our response to Item No. 1 discusses your concerns regarding notification in accordance with 10 CFR 50.55(e) as requested in Reference (a).

To the best of my knowledge and belief, the statements contained herein and 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, consultants and contractors. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

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Please address any questions that you or your staff may have concerning this matter to this office.

Very truly yours,

A handwritten signature in dark ink, appearing to read "D. L. Farrar", with a stylized flourish at the end.

D. L. Farrar
Director of Nuclear Licensing

EDS/rap

Attachment

cc: RIII Inspector - Byron

6059N

ATTACHMENT

Response to Notice of Violation

Violation 1

10 CFR 50, Appendix B, Criterion V, states in part that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings....and shall be accomplished in accordance with these instructions, procedures, or drawings."

Commonwealth Edison Company Topical Report CE-1-A, "Quality Assurance Program for Nuclear Generating Stations", Revision 21, dated June 6, 1982, states in Section 5 that "activities affecting quality are required....to be prescribed by documented instructions, procedures, or drawings." Section 3 states that designs and materials will conform to....applicable codes, standards, regulatory requirements, SAR commitments and appropriate quality standards as applicable".

Contrary to the above, the following examples of failure to comply with the requirements were identified:

- a. The design basis bolting commitments as specified in the FSAR and specifications were not adequately translated into design drawings and internal documents; in that high strength bolting practice actually implemented was not consistent with design specifications.
- b. The installation of hangers for Unit 1, HVAC Nos. S-1847 and S-1848 were not installed as required by S&L Sketch S-0207.

Response 1.a

In order to respond to Item 1.a, we believe that it is necessary to discuss the examples identified in the text of the Inspection Report that ultimately lead Region III to their conclusions set forth in Item 1.a above. Therefore, the following response addresses the examples of alleged inadequate translation of the requirements pertaining to the use of jam nuts on bolted connections.

Item 3a - Use of Jam Nuts on Structural Steel Bolted Connections

CORRECTIVE ACTION TAKEN - It is our judgement that no corrective action is required because the claim that neither the definition of snug-tight nor reference to the appropriate code is given on a design drawing is incorrect.

Sargent & Lundy drawing S-1097 Revision U by reference in Note 1 to drawing S-1141 defines snug-tight. This definition is contained in Note 36 on drawing S-1141. The

reason that previous revisions to S-1097 did not require the use of the jam nut is because the installation requirements on the American Bridge Division erection drawings stated to burr the bolt threads. This requirement to burr the bolt threads is to ensure that the nut does not loosen over time. S&L revised the drawing to include the use of jam nuts as an added precaution.

Item 3b - Use of Jam Nuts on Cable Tray Hangers and Conduit Hangers

CORRECTIVE ACTION TAKEN - A reinspection of the cable tray and conduit hangers where jam nuts are specified will be performed to ensure conformance with the design drawings.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE - S&L issued Engineering Change Notice 3270 dated January 4, 1983, which specifies how the jam nut is to be installed. This engineering change notice covers all the design drawings listed under the NRC Inspection Report Item 3.b.(2).

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED - The reinspection to ensure that installation conforms to the design drawing requirements will be complete by 4/15/83.

Item 3c. - Use of Jam Nuts for Mechanical Component Supports

CORRECTIVE ACTION TAKEN - In our judgement, no corrective action is required because the statement that there is no guidance provided for installation of either the strength or the jam nut is incorrect.

Sargent & Lundy Drawing M-919, Sheet 4, Revision "G", Note 6 does provide the necessary installation guidance.

Item 3.d - Use of Jam Nuts for HVAC Duct Hanger Auxiliary Structural Components

CORRECTIVE ACTION TAKEN - In our judgement, no corrective action is required because there is no design requirement for the use of jam nuts for HVAC duct hanger auxiliary structural components where bolting is required. The provisions under Specification F/L 2782 covers bolting requirements.

Item 3e - Use of Jam Nuts for Miscellaneous Components

Corrective Action Taken - Verification of the proper torque values will be performed to ensure conformance with the design drawings.

Corrective Action Taken to Avoid Further Noncompliance

S&L performed an extensive review to substantiate torque values on equipment anchor bolts. This activity was initiated in May 1982. The results of the review are given on Sargent & Lundy drawing M-1212, Sheet 1, Revision "U", which was transmitted to the Byron site on December 15, 1982.

Date When Full Compliance Will Be Achieved

Verification of torque values for equipment installed will be completed by May 13, 1983.

The balance of equipment to be installed will be torqued to the proper value at the time of installation.

The Commonwealth Edison Company was requested to explain the basis for our determination that the conditions identified in Violation 1 did not warrant NRC notification in accordance with 10 CFR 50.55(e). The conditions referred to in Item 1.a. of Violation 1 were not reported because in our judgement, had they remained uncorrected, they would not be expected to adversely affect the safety of plant operation. In addition, as indicated in the above response, corrective action for the examples was either in progress or the initiation of a program was contemplated.

Response 1.b

Corrective Action Taken and Results Achieved

Deficiencies in the installation of hangers S-1847 and S-1848 were documented in NCR's 761 and 763. These hangers will be reinspected as part of the program described below and specific resolutions will be obtained where required.

Corrective Action Taken to Avoid Further Noncompliance

As a result of HVAC installation problems identified at other nuclear sites, a review of HVAC installation work at Byron Station was conducted by Site QA and Construction Departments. This review identified that safety-related ductwork, hangers and accessories were not installed in accordance with dimensional tolerances and typical details as shown on Sargent and Lundy design drawings. There also was a deficiency in the implementation of the Reliable Sheet Metal QA program since these dimensional deficiencies were not identified during the QC inspection process. These deficiencies were documented on CECO. NCR's 757-766 and Region III was notified of a reportable construction deficiency pursuant to 10 CFR 50.55(e) on January 5, 1983. The 30-day report on deficiency 83-01 was submitted on February 7, 1983 (Reference (b)).

The following actions are being taken to correct these deficiencies:

1. Reliable Sheet Metal procedures addressing installation and inspection are being revised to maintain better control of these activities.
2. The present design tolerances are being clarified and additional tolerances are being provided in order to achieve proper installation and inspection of HVAC Systems.
3. Safety-related HVAC field installation work is being reinspected in accordance with revised procedures to insure compliance with design details and tolerances.

Date When Full Compliance Will Be Achieved

The specific items identified in this report will be reinspected and corrected by April 25, 1983. The entire HVAC reinspection program and required rework will be completed prior to fuel load.

Commonwealth Edison Company was requested to explain the basis for its determination that the conditions identified in Violation 1 did not warrant NRC notification in accordance with 10 CFR 50.55(e). As described in the response to Item 1.b of Violation 1 above, the general HVAC installation problem was, in fact, reported to the NRC as documented in Reference (b).

Violation 2

10 CFR 50, Appendix B, Criterion X, states in part "a program for inspection of activities affecting quality shall be established and executed.....to verify conformance with the documented instructions.

Commonwealth Edison Company Topical Report CE-1-A, "Quality Assurance Program for Nuclear Generating Stations", Revision 21, dated June 6, 1982, states in Section 10 "Inspection Programs will be established to provide assurance that quality control surveillance, inspections.....are performed. Written procedures or checklists will be used to specify and verify final inspections and tests".

Contrary to the above, HVAC hanger installations have been completed without quality control inspection requirements being identified, without quality control inspections being performed, without quality records being established.

Corrective Action Taken And Results Achieved

The response to Item 1.b in Violation 1 describes the actions taken to assure that these and other HVAC installations will be properly inspected and that specific deficiencies will be corrected.

Corrective Action Taken To Avoid Further Noncompliance

The Inspection Report indicates that this violation also relates to the installation of bolted connections on HVAC duct hanger structural components. The HVAC contractor is preparing a procedure to provide instructions for the joining of items with threaded fasteners and requirements for the inspection and documentation of bolted connections.

HVAC contractor craft personnel and Q.C. inspectors will be trained in the proper use of the bolting procedure.

Date When Full Compliance Will Be Achieved

Procedure approval and training will be completed by March 25, 1983.

Violation 3

10 CFR 50, Appendix B, Criterion V states in part that "activities affecting quality shall be prescribed by documented instructions, procedures or drawings.....and shall be completed in accordance with these instructions, procedures, or drawings".

Commonwealth Edison Company Topical Report CE-1-A "Quality Assurance Program for Nuclear Generating Stations", Revision 21, dated June 6, 1982, states in Section 5 that "activities affecting quality are required.....to be prescribed by documented instructions, procedures, or drawings".

American National Standard ANSI N45.2.2-1972, "Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants", states in Section 2: "This section contains requirements that are to be fulfilled.....". Section 2.1 states that ".....Planning shall take into account the need for preparation and control of procedures and work instructions as necessary to comply with specified requirements.....to assure that.....handling activities have been incorporated and that they can be accomplished as specified." Section 2.2 states "Procedures and instructions shall be generated, used, and maintained current."

American National Standard ANSI N45.2.15-1981 "Hoisting, Rigging and Transporting of Items for Nuclear Power Plants" states in Section 2: "This section contains requirements that are to be fulfilled.....". Section 2.1 states ".....Planning shall take into account the need for the preparation and control of procedures and work instructions.....". Section 2.2 states "Procedures and instructions as required by this standard shall be generated, approved, implemented, and maintained current."

Contrary to the above, the Unit 2 reactor vessel closure head was installed in the reactor vessel on December 20, 1982, and the Unit 1 reactor vessel closure head, upper internals and lower internals were being removed from the reactor vessel without use of a current authorized handling procedure. The required planning effort had not been accomplished to ensure proper cleanliness of the work area, preparation and issue of a handling procedure, and without performing a proper visual examination of lifting and handling equipment, and without performing appropriate nondestructive testing of the handling equipment.

A review of records indicate that the Unit 1 reactor vessel closure head and/or internals had previously been handled once and the Unit 2 reactor vessel closure head and/or internals had been previously handled four times without utilizing proper planning, use of a current authorized handling procedure and appropriate nondestructive testing of lifting and handling equipment.

Corrective Action Taken and Results Achieved

As documented in the Inspection Report, removal of the closure head was terminated when this violation was identified by the inspector. NISCo Procedure ES-3004-40, Rev. A, "General Handling Procedure", which includes lifting of the reactor vessel head and internals, was given interim approval on December 21, 1982. Work resumed on December 22, 1982 using the new procedure.

Previous lifts were observed by a manufacturer's representative and were accomplished without damage.

Corrective Action Taken To Avoid Further Noncompliance

NISCo personnel were trained in the proper use and implementation of this procedure. The proper implementation of NISCo's "General Handling Procedure" will be verified through ongoing audit and surveillance activities.

Date When Full Compliance Was Achieved

January 19, 1983.