



**Commonwealth Edison**

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May 18, 1984

Mr. James G. Keppler  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Subject: Byron Generating Station Unit 1  
I&E Inspection Report No. 50-454/84-16

Reference (a): April 17, 1984 letter from R. D. Walker  
to Cordell Reed.

Dear Mr. Keppler:

Reference (a) provided the report of an inspection at Byron Station in February, March, and April. During this inspection certain activities were found to be not in compliance with NRC requirements. Attachment A to this letter contains Commonwealth Edison's response to the Notice of Violation appended to reference (a).

Please direct further questions regarding this matter to this office.

Very truly yours,

*T. R. Tramm*  
for

D. L. Farrar  
Director of Nuclear Licensing

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Attachments

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ATTACHMENT A

RESPONSE TO NOTICE OF VIOLATION

VIOLATION

10 CFR 50, Appendix B, Criterion XI, Test Control, as implemented by the Commonwealth Edison Quality Assurance Manual, Quality Requirement 11.0 and the Byron Startup Manual requires that test results be evaluated to assure conformance with design and performance requirements; that the data display the adequacy of the equipment to meet specified requirements; and that appropriate and calibrated test equipment be used.

Contrary to the above, the following examples of inadequate implementation of the test program were identified:

1. The Byron Test Review Board analyzed the incorrect curves for the two containment spray pumps in the evaluation of the results of preoperational test procedure CS 17.10, "Containment Spray." Commonwealth Edison's Project Engineering Department failed to correct the Test Review Board error.
2. The Byron Test Review Board analyzed the incorrect curves for the two residual heat removal pumps in the evaluation of the results of preoperational test procedure RH 67.10, "Residual Heat Removal." Commonwealth Edison's Project Engineering Department failed to correct the Test Review Board error.
3. The Byron Station failed to provide all of the strip chart recordings from preoperational test procedure EF 26.11, "ECCS Full Flow," to the Project Engineering Department so that a complete evaluation of the results could be made.
4. The calibrated signal generator chosen by the Byron Technical Staff to serve as a calibration check of the strip chart recorders used in preoperational test procedure EF 26.11, "ECCS Full Flow," was not appropriate in that its setting was changed and its calibration rendered meaningless.
5. Both safety injection pumps were operated at less than 45 gpm in violation of precaution 8.5.1 of preoperational test procedure SI 73.12, "Safety Injection-Flow Balance."
6. Both residual heat removal pumps were operated at less than 500 gpm in violation of precaution 8.6.1 of preoperational test procedure SI 73.12, "Safety Injection-Flow Balance."

EXAMPLES 1 and 2:

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Project Engineering's review of CS-17.10 and RH-67.10 determined the performance of the containment spray and residual heat removal pumps to be acceptable through the use of the correct curves. Project Engineering discovered the incorrect use of the pump curves by the Station TRB but neglected to disclose this finding to the Station TRB in their comments. The performance test data for all four pumps was reviewed subsequent to this inspection. The performance of the residual heat removal pumps is acceptable. Closer examination of the containment spray pump performance data indicates that the pump impellers may not have been installed properly. This matter was reported to Region III on May 4, 1984 pursuant to the requirements of 10 CFR 50.55(e).

ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE:

Project Engineering has reviewed the following thirteen preoperational tests to see if there are any similar differences between the TRB and PED evaluations of matters affecting test acceptance:

03.10	Auxiliary Feedwater
18.11	CVCS
31.10	Fuel Pool Cooling
46.10	I & C Power
51.10	Main Steam
51.11	Main Steam - PORV's
52.10	Excore Detectors
63.11	RC MOV
63.12	RC I & C
69.10	Pressurizer
73.12	Safety Injection
86.10	Diesel Generator Ventilation
99.10	Switchgear Ventilation

Of these thirteen tests, only one (86.10) required supplemental documentation to bring station files up to current standards. The PED review and approval of that test was not completed until May 11, 1984. An earlier initial review letter was not intended to close out the PED review of test 86.10.

Project Engineering Personnel have been instructed to clearly list any future corrections or differences with regard to the Station TRB analysis of results in the PED review letter to the Station TRB. The Station's Post TRB Checklist (TSM #10) has been modified to include an item to remind the TRB to specifically call out any items requiring PED response.



DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

The PED review of other preoperational tests was completed on May 11, 1984. Changes to test review practices were implemented as of May 15, 1984.

EXAMPLE 3

CORRECTIVE ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE:

The Byron Station TRB initially failed to provide PED with all of the strip charts for the EF 26.11 preoperational test. Upon PED request some strip charts were subsequently provided. These charts, when provided, were sufficient for PED to complete the test evaluation. No additional actions are necessary.

ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE:

The Post Test Review Checklist, which is contained in a Tech Staff Supervisor Memo (TSM #10) has been modified to require a determination of what data (rough or final) should be included in the review package to PED. A checklist is also being used to ensure all necessary information is sent to and received by PED.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

May 15, 1984

EXAMPLE 4:

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Each strip chart recorder used to collect data was subsequently checked to verify its accuracy. For a chart speed of 10mm/sec, each recorder was accurate to 0.5%. Project Engineering independently evaluated the test results and determined that the chart speed was accurate. Based on the analyses, the test data for pre-operational test EF26.11 was found to be acceptable without use of the questionable signal generator time reference.

ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE:

Byron Station is reviewing previous uses of strip chart recordings for data collection in order to ensure the adequacy of test results. Also, Tech Staff Supervisor Memo #35, "Guidelines for Strip Chart Recorders" will be revised to incorporate necessary controls and precautions.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

June 1, 1984

EXAMPLES 5 and 6:

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Within the execution of SI-73.12, both the SI and RHR pumps were operated below the minimum flow levels. In both cases the STE was aware of the test precautions and had determined no damage would occur at the lower flow rates. However, no deficiency or test change request was written.

Operation of the RHR and SI pumps below the flowrate listed in the test "Precautions" was also reviewed by PED and found to be acceptable.

ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE:

The Technical Staff Supervisor's Memo (TSM #07), "Documenting of Improper/Incorrect Actions During Testing" has been expanded to specifically include precautions and required corrective actions.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

May 15, 1984