

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-454/85047(DRP)

Docket No. 50-454

License No. NPF-37

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Byron Station, Unit 1

Inspection At: Byron Station, Byron, IL

Inspection Conducted: November 1 - December 3, 1985

Inspectors: J. M. Hinds, Jr.
P. G. Brochman
J. A. Malloy

Approved By: *RF Warrick for*
W. L. Furney, Chief
Reactor Projects Section 1A

12/13/85
Date

Inspection Summary

Inspection on November 1 - December 3, 1985 (Report No. 50-454/85047(DRP))

Areas Inspected: Routine, unannounced safety inspection by the resident inspectors of licensee action on previous inspection findings; IEBs; operations summary; LERs; containment local leak rate tests; surveillance; maintenance; operational safety; regional administrators tour; management meetings and other activities. The inspection consisted of 145 inspector-hours onsite by three NRC inspectors including 24 inspector-hours during off-shifts.

Results: Of the seven areas inspected, no violations or deviations were identified in six areas; one violation was identified in the remaining area (failure to perform a Technical Specification Surveillance within the required time interval and the failure to follow a Technical Specification Action Requirement - Paragraph 5.c). The violation cites the failure to perform a Technical Specification Surveillance within the required time interval and with no operable D.C. bus due to the missed surveillance a Technical Specification Action Requirement was not followed; however, the D.C. busses were subsequently found to be operable when the surveillance was performed; therefore, the public health and safety were not affected.

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DETAILS

1. Persons Contacted

Commonwealth Edison

- *C. Reed, Vice President Nuclear Operations
- *D. Galle, Assistant Vice President & General Manager, Nuclear Station
- *K. Graesser, Division Vice President, Nuclear Division
- #*R. Querio, Station Manager
- *V. Schlosser, Project Manager
- #*R. Pleniewicz, Production Superintendent
- #*R. Ward, Services Superintendent
- *R. Tuetken, Startup Superintendent
- #*L. Sues, Assistant Superintendent, Operations
- #*G. Schwartz, Assistant Superintendent, Maintenance
- #*T. Joyce, Assistant Superintendent, Technical Services
- #W. Burkamper, Quality Assurance Supervisor, Operations
- #*F. Hornbeak, Technical Staff Supervisor
- #*A. Chernick, Compliance Supervisor
- *T. Higgins, Training Supervisor
- *J. Langan, Compliance Group
- #W. Pirnat, Compliance Group
- *K. Yates, Onsite Nuclear Safety
- #D. Robinson, Onsite Nuclear Safety

The inspectors also contacted and interviewed other licensee and contractor personnel during the course of this inspection.

*Denotes those present during the management meeting on November 20, 1985.

#Denotes those present during the exit interview on December 3, 1985.

2. Action on Previous Inspection Findings (92701)

(Closed) Unresolved Item (454/85025-03(DRP): Discrepancies in LER 454/85050. The inspector reviewed Revision 1 to this LER and verified that the length of time the surveillance had not been performed was revised. The LER was also revised to reflect the violations of Technical Specification 4.0.4 which occurred when Mode 1 was entered without the surveillance being current. This LER is also discussed in Paragraph 5.a.

3. IE Bulletin (IEB) Followup (92703)

(Closed) IEB (454/85002-BB): Problems with under voltage trip attachments on Westinghouse Type DB-50 Reactor Trip Breakers. The inspector reviewed the licensee's response which stated that this IEB was not applicable to Byron because Byron's Reactor Trip Breakers are Westinghouse Type DS-416; vice, Type DB-50.

4. Summary of Operations

The unit remained shutdown for entire month for a planned 51 day outage.

5. Licensee Event Report (LER) Followup (90712)

- a. (Closed) LERs (454/85050-LL; 454/85061-LL; 454/85088-LL; 454/85092-LL): An in-office review was conducted for the following LERs to determine that the reporting requirements were fulfilled, immediate corrective action was accomplished and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications.

<u>LER No.</u>	<u>Title</u>
454/85050-01	Failure to Comply With Technical Specification 3/4.2.5.
454/85061-01	Reactor Trip on Low Steam Generator Level Due to Inadvertent Feed Pump Trip
454/85088-01	Auto Start of OB VC M/U Fan
454/85092	Delayed Fire Watch Due to Key Stuck in Vital Area Door Lock

No violations or deviations were identified.

- b. (Closed) LERs (454/85090-LL; 454/85091-LL; 454/85094-LL): Through direct observation, discussions with licensee personnel, and review of records the following LERs were reviewed to determine that the reporting requirements were fulfilled, immediate corrective action was accomplished and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications.

<u>LER No.</u>	<u>Title</u>
454/85090	Reactor Trip on Low loop Flow While Venting Flow Transmitter.
454/85091	Automatic Actuation of Auxiliary Building Charcoal Booster Fan Due to Incorrectly Landed Relay.
454/85094	Automatic Actuation of VC Makeup Fan Due to Iodine Detector Failure on Radiation Monitor OPR31J.

No violations or deviations were identified.

- c. (Closed) LER (454/85093-LL): This LER described an event on October 27-28, 1985, while in Mode 5, involving the failure to perform Technical Specification Surveillances within the required interval for D.C. Busses 111 and 112 and consequently, the failure to follow the Technical Specification Action Requirements with both Busses inoperable.

The D.C. Busses consist of a lead acid battery and a battery charger. Technical Specification 4.8.2.2 requires that one 125 volt D.C. Bus (111 or 112) fed from its battery and its associated charges shall be demonstrated OPERABLE per Technical Specification 4.8.2.1.1 and 4.8.2.1.2. Technical Specification 4.8.2.1.1 states: "Each D.C. bus shall be determined OPERABLE and energized from its battery at least once per seven days by verifying correct breaker alignment." Technical Specification 4.8.2.1.2 states, in part: "Each 125 volt battery bank and its associated charger shall be demonstrated OPERABLE...at least once per seven days by verifying that: (1) the parameters in Table 4.8-2 meet the Category A limits, and (2) the total battery terminal voltage is greater than or equal to 126 volts on float charge..." Byron Operating Surveillance 1BOS 8.2.1.2.a-1, "125 VDC Battery Bank and Charger Operability Weekly Surveillance", implements these requirements.

Permission to conduct this surveillance was granted at 2230 on October 25, 1985; however, the surveillance was not performed at that time because Battery 112 was on an "Equalizing" charge; vice, a "Float" charge. The BOS does allow the battery to be taken off an "Equalizing" charge to perform the surveillance and then to be placed back on an "Equalizing" charge. The individual performing the surveillance overlooked this fact and chose not to perform the surveillance.

Subsequently, inadequate review of the surveillance schedule by operating personnel allowed the "critical" date of 2359 on October 27, 1985, to be exceeded (by 13.9 hours). The "due" date is defined as the scheduled date by which the surveillance should be completed. The "critical" date is defined as the due date plus a 25% margin by which the surveillance must be completed, or else the Technical Specification will be exceeded. This fact was discovered by licensee personnel at 1330 on October 28, 1985. The failure to perform 1BOS 8.2.1.2.a-1 within the required time interval is a violation of Technical Specification 4.8.2.2 (454/85047-01a(DRP)).

Technical Specification 4.0.3 states, in part: "Failure to perform a Surveillance Requirement within the specified time interval shall constitute a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation..." Technical Specification 3.8.2.2 states, in part: "As a minimum, one 125 volt D.C. bus fed from its battery and its associated full-capacity charger shall be OPERABLE, while in Modes 5 and 6. With the required battery bank and/or full-capacity charger inoperable, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes or movement of irradiated fuel; initiate corrective action to

restore the required battery bank and full-capacity charger to OPERABLE status as soon as possible, and within eight hours, depressurize and vent the Reactor Coolant System through at least a two square inch vent." With both Bus 111 and Bus 112 inoperable the Reactor Coolant System (RCS) should have been depressurized and vented via a two square inch vent. Fortuitously, the RCS had been depressurized for planned maintenance, however, it had not been vented by a two square inch vent. The failure to vent the RCS with a two square inch vent within eight hours is a violation of Technical Specification 3.8.2.2 (454/85047-01b(DRP)).

By 1354 on October 28, 1985, the surveillance had been completed successfully. The licensee's corrective actions included reviewing this event with shift personnel, requiring that surveillances must be done by the "due" date; vice, the "critical" date, entering the "due" date on the surveillance form, notifying the shift engineer when a surveillance has not been completed by its "due" date, and revising the surveillance procedure to split Busses 111 and 112 into two separate procedures so that both Busses would not become inoperable if a surveillance was missed. Based on these corrective actions, this violation is considered closed and consequently no response is required.

6. Containment Local Leak Rate Test (LLRT) Witnessing (61720)

The inspectors witnessed performance of portions of the LLRT procedures in order to verify that testing was conducted in accordance with the technical specifications and procedural requirements, test data was properly recorded, test equipment was properly calibrated and performance of licensee personnel conducting the tests demonstrated an understanding of assigned duties and responsibilities. Testing of the following valves was observed:

Containment Isolation Valves

1SD002E
1SD005C
1WM191

No items of noncompliance or deviations were identified.

7. Monthly Surveillance Observation (61726)

The inspector observed Technical Specifications required surveillance testing on Containment Penetration Overcurrent protective devices for valves 1RC8003A and 1RC8003D and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with Technical Specifications and procedure requirements and were reviewed by personnel other than the individual

directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

No violations or deviations were identified.

8. Monthly Maintenance Observation (62703)

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with Technical Specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented. Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

Diesel Generator 1DG01KA

Modification to Steam Generator Chemical Feed System M6-1-85-677

Following completion of maintenance on the diesel generator and the chemical feed system modification, the inspector verified that these systems had been returned to service properly.

No violations or deviations were identified.

9. Operational Safety Verification (71707)

The inspectors observed control room operation, reviewed applicable logs and conducted discussions with control room operators during the month of November. During these discussions and observations, the inspectors ascertained that the operators were alert, cognizant of plant conditions, attentive to changes in those conditions, and took prompt action when appropriate. The inspectors verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the containment, auxiliary, turbine and rad-waste buildings were conducted to observe plant equipment

conditions, including potential fire hazards, fluid leaks and excessive vibration and to verify that maintenance requests had been initiated for equipment in need of maintenance.

The inspectors verified by observation and direct interviews that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the month of November, the inspector walked down the accessible portions of the vital AC power system to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in accordance with the requirements established under technical specifications, 10 CFR and administrative procedures.

No violations or deviations were identified.

10. Regional Administrator's Tour on November 20, 1985 (92700)

NRC Region III Administrator James G. Keppler accompanied by R. F. Warnick, Chief, Reactor Projects Branch 1; L. A. Reyes, Chief, Operations Branch; W. L. Forney, Chief Reactor Projects Section 1A; and the Resident Inspector staff toured Byron Units 1 and 2 and met with licensee station and corporate management and also attended the management meeting described in Paragraph 11.

11. Management Meetings (30702)

On November 20, 1985, Messrs. J. G. Keppler, Regional Administrator; R. F. Warnick, Chief, Reactor Projects Branch 1; L. A. Reyes, Chief, Operations Branch; W. L. Forney, Chief, Reactor Projects Section 1A; and the NRC resident inspector staff met with licensee management and supervisory personnel denoted in Paragraph 1 of this report. These meetings were held to assess overall facility status, plant operations and to discuss licensee actions to reduce LERs, improve communications and integrated plant operations.

12. Exit Interview (30703)

The inspectors met with licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on December 3, 1985. The inspectors summarized the purpose and scope of the inspection and the findings. The inspectors also 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/processes as proprietary.