PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 1, 1997

EA 97-264

Mr. K. Graesser
Site Vice President
Byron Station
Commonwealth Edison Company
4450 N. German Church Road
Byron, IL 61010

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - $55,000 (NRC Special Inspection Report No. 50-454/97009; 50-455/97009)

Dear Mr. Graesser:

This refers to the special inspection conducted from May 27 through June 5, 1997, at the Byron Unit 1 and Unit 2 reactor facilities. An exit meeting was conducted on June 5, 1997, and the inspection report was issued on July 25, 1997. A predecisional enforcement conference was conducted on September 11, 1997, to discuss the inspection issues related to strict compliance with Technical Specifications (TS) for the Centrifugal Charging (CV) system and containment isolation valves and issues related to Emergency Core Cooling System (ECCS) written procedures.

Based on the information developed during the inspection and the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice) and Proposed Imposition of Civil Penalty and the circumstances surrounding them are described in detail in the subject inspection report.

Section I.A.1 of the Notice addresses two examples of failing to strictly comply with TS surveillance test requirement 4.5.2.b(1) which requires the ECCS pump casings and discharge piping high points outside of containment be vented at least once every 31 days. In the first example, on February 16, 1996, a Braidwood Station system engineer discovered that the CV pump casing and high point vents were not being vented every 31 days as required. The decision to not strictly comply with the TS was partially based by the Byron Station staff on the fact that the CV pump casings did not have vents. A subsequent operability assessment (96-007) determined that the intent of the TS was being met based on factors such as the pressure in the piping and the CV system design and piping configuration. However, this operability assessment failed to recognize that TS requirements were not being strictly met and that a TS change was needed. The failure to recognize that the TS requirements were not being strictly met and to seek a TS change was identified by the NRC.

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The second example addresses the failure to include a high point vent valve (1RH027) in residual heat removal (RH) system surveillance test procedure 1/2 BOS 5.2.b-1. This procedure is used to meet the requirements of TS surveillance test 4.5.2.b(1). The failure to include this valve in the surveillance test procedure was identified by the NRC.

The potential safety consequence of this violation was low. Venting of the ECCS is required to ensure that no air is entrained in the ECCS that could result in water hammer or air binding that could prevent proper pump/system performance. Due to the pressure in the CV system piping and the system configuration, this was not likely to occur. In the RH system, high points that were adjacent to 1RH027 were vented on a quarterly basis. In addition, the ultrasonic testing, performed by the Byron Station staff, of selected CV high points and the venting of 1RH027 found no entrained air.

Section I.A.2 of the Notice addresses two examples of failing to comply with TS Table 4.3-2, Functional Unit 3.a.(2), which requires that Containment Isolation Phase A Isolation automatic actuation logic and actuation relays receive a slave relay test on a quarterly basis. The slave relay test shall include a continuity check, as a minimum, of associated testable actuation devices. In the first example, the continuity check for the slave relay contacts that actuate the CV letdown orifice isolation valves had not been performed since April 29, 1991. In the second example, the continuity check for the slave relay contacts that actuate the CV letdown isolation valves had not been performed since June 13, 1991. Prior to these time frames, actual stroking of the valves was performed, which provided the continuity check.

On September 25, 1990, Westinghouse Corporation notified Byron Station that stroking the CV letdown line valves, 1/2CV8152 and 1/2CV8160, which was done when performing the quarterly slave relay containment isolation tests, could result in thermal transients on the CV piping and nozzles and a high fatigue usage factor. To minimize this effect, Westinghouse recommended a visual verification and/or electrical continuity test of the slave relay contact actuation instead of stroking the valve. Although not specifically identified by Westinghouse, Byron Station determined that the letdown orifice isolation valve (1/2CV8149A/B/C) slave relay test should also be changed in the same manner for thermal transient concerns. To accomplish the test without stroking the valves, jumpers were installed across the letdown valve contacts and fuses were pulled on the letdown orifice isolation valves to prevent valve actuation when performing the TS required quarterly surveillance test. Verification of the slave relay contact actuation was not performed as part of this new testing methodology.

The potential safety consequence of this violation is low. Other contacts on the relay were verified to be operable by observing the actuation of other equipment and the valves were actually stroked using these contacts approximately every 18 months (every refueling outage) to satisfy other TS surveillance test requirements. In addition, had these valves failed to close during an accident, the emergency operating procedure would have instructed the operators to close the valves manually, which could be done without reliance on these contacts.

While the potential safety consequences of these violations is low, the regulatory significance is high. In the case of the CV system venting, the Byron Station's staff continued to operate outside of TS requirements even after discovering that the TS were not being strictly complied with and did not seek a TS change from the NRC in order to comply. NRC involvement was necessary in order to ensure that strict compliance with the TS requirements and the necessary TS changes were made. The failure to request the necessary TS changes denied the NRC the opportunity to determine whether safety issues were involved. In the case of the failure to perform the required continuity checks on Containment Isolation Phase A Isolation relays,

Byron Station's staff believed that the intent of the TS requirements were being met. Again, they did not realize the importance of strictly complying with TS requirements.

Based on the foregoing, these violations have been classified in the aggregate in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 as a Severity Level III problem. In accordance with the Enforcement Policy, a base civil penalty in the amount of $55,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years[1], the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment in Section VI.B.2 of the Enforcement Policy.

Identification credit was not warranted because the Byron Station staff had an opportunity to correct the violation in February 1996 when the TS noncompliance was identified for the CV pump venting. The NRC identified the continued violation of the TS surveillance testing requirements during the 1997 inspection. In addition, it was the NRC that identified the failure to perform the venting of the Unit 1 RHR heat exchanger high point vent valve. The NRC recognizes that the Byron Station staff identified the failure to perform quarterly continuity tests for the slave relay contacts. However, this occurred after the NRC identified the ECCS TS issues.

Corrective Action credit was warranted based on the corrective actions implemented and discussed at the enforcement conference. The corrective actions included: (1) ultrasonic testing inspection of vulnerable areas in the CV system; (2) review of selected TS surveillance tests to verify strict compliance; (3) submittal of appropriate license amendment requests; (4) revision of affected procedures; (5) distribution of a Station Manager letter which stress's strict compliance with TS requirements; (6) revision of Unit 1 monthly surveillance test procedure to incorporate the 1RH027 vent valve; (7) review of ECCS isometric drawings to verify all high point vent valves are included in the surveillance test procedures; (8) review of all slave relay surveillance test procedures (to be completed by November 7, 1997); and (9) evaluation of a slave relay test modification (to be completed by December 5, 1997).

Therefore, to emphasize the importance of strict compliance with Technical Specifications, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of $55,000 for the Severity Level III problem.

The violation described in Section II of the Notice discusses one Severity Level IV violation that was not assessed a civil penalty. This violation addresses a failure to provide adequate instructions to ensure the safety injection (SI) pump casings were vented. Specifically, procedure 1/2BOS 5.2.b-1 provided no specific direction to the operator as to what valves were

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[1] A Notice of Violation for a Severity Level III problem was issued on December 11, 1995 (EA95-197) and a $100,000 proposed civil penalty and a Notice of Violation was issued on February 27, 1997 (EA 97-508) for Severity Level III problems.

to be open to vent the SI pumps. Since operators routinely had to perform additional steps not included in the procedure in order to vent the SI system, numerous opportunities existed for the inadequate procedure to be identified. This violation is classified in accordance with the Enforcement Policy as a Severity Level IV violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket No. 50-454 & 50-455
License No. NPF-37 & NPF-66

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

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