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

September 12, 1997

EA 97-224

Mr. J. Brons
Acting Site Vice President
Zion Generating Station
Commonwealth Edison Company
101 Shiloh Boulevard
Zion, Il 60099

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT 50-295/304-97003 (DRS))

Dear Mr. Brons:

This refers to the inspection conducted at the Zion Nuclear Power Plant from December 7, 1996 to May 27, 1997. The inspector reviewed the circumstances surrounding your November 7, 1996, identification that removal of a block wall during the Unit 2 refueling outage bypassed the normal fuel building ventilation system. The inspector discussed the significance of the issues and the need for lasting and effective corrective action with members of your staff at the inspection exit meeting on May 27, 1997. The report documenting our inspection was sent to you by letter dated July 9, 1997. Our July 9, 1997 letter, offered you the option to request a predecisional enforcement conference or respond to the apparent violations. You elected to respond to the apparent violations and did not request a predecisional enforcement conference.

The NRC determined that violations of NRC requirements occurred. This determination was based on the information developed during the inspection; the information that your staff provided during the exit meeting; your Licensee Event Report Number 295/304-96026 dated December 9, 1996; and your August 8, 1997, response to the apparent violation documented in the inspection report. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the inspection report.

The initial plant design failed to compensate for the unfiltered ventilation flow path that maintenance personnel routinely created when they removed a block shield wall during each Unit 1 and Unit 2 refueling outage. Additionally, previous reviews by your site maintenance and engineering staffs lacked sufficient rigor to identify that an unfiltered ventilation flow path was created whenever the block shield wall was removed. The block wall located between the containment hatch area and the fuel handling building (FHB) was routinely removed to facilitate movement of large equipment into/out of the containment during outage activities. Removal of the block wall created an unfiltered ventilation flow path from the FHB and/or containment to the environment during outage activities. Because of this practice, the potential dose at the site boundary during a fuel handling accident increased by a factor of two. Your staff identified this condition on November 7, 1996, during a system walk down performed by a system engineer.

Auxiliary Building/Fuel Building Ventilation Test (Surveillance procedure PT-19) tested the ventilation system before each refueling outage and during fuel moves; however, it was always performed with the block shield wall removed. The test failed to alert engineers that approximately one-third of the air exhausting the FHB bypassed the filter ventilation system because your staff had not adequately analyzed the function of the block shield wall and the effect that its removal had on the ventilation system. Local radiation monitors could realign the exhaust path through the ventilation filters if high radiation was present in the ventilation flow path. However, the Technical Specifications do not require operability of these radiation monitors during a refueling outage. Therefore, there was no assurance that the monitors would have been available to realign pipe tunnel exhaust through the charcoal filters. The initial plant design assumed all exhaust would be filtered prior to release to the environment. Your operating practice resulted in unfiltered exhaust to the environment. This violated two NRC requirements as described in the Notice. These violations are classified in the aggregate according to the "General Statement of Policy and Procedure 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 $50,000 is considered for Severity Level III violations occurring before November 12, 1996. Since the noncompliance period occurred before November 12, 1996, a base civil penalty of $50,000 was considered for this case. Because your facility has been the subject of escalated enforcement action[1] within the last two years, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* by the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. You were given credit for both identifying this deficiency and for initiating prompt and effective corrective action. Your corrective actions included a modification to the ventilation ductwork to ensure that the ventilation exhausts via a filter path; a revision to the procedure for safety evaluations (SE) to include an expanded set of design issue worksheet for consideration and use by SE preparers and reviewers; additional training for all SE preparers; and establishment of an engineering assurance group, consisting of experienced engineering personnel to verify that the SEs are complete, correct, and adequately justified.

Therefore, to encourage prompt identification and comprehensive correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

The NRC has concluded that information regarding the reason for these violations, the corrective actions taken and planned to correct the violations and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket in

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1 **EAs 97-222 and 97-223** issued two Severity Level III Problems and a Severity Level III Violation with a $330,000 civil penalty for a reactivity management problems and command/control problems that occurred during the February 21, 1997, plant shutdown; the displacement of reactor coolant from the reactor vessel on March 8, 1997; and the failure of the corrective action program to implement effective corrective actions for previous occurrences of these events. These problems were identified during inspections conducted from February 1997 to April 1997.

Inspection Report No. 50-295/304-97003, Licensee Event Report 295/304-96026, and your letter dated August 8, 1997. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, please follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

Sincerely,

A. Bill Beach
Regional Administrator

Enclosure: Notice of Violation

Docket Nos.: 50-295, 50-304
License Nos.: DPR-39, DPR-48

cc w/encl: R. J. Manning, Executive
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