



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
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September 11, 1998

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EAs 98-175 and 98-231

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$88,000 (NRC Inspection Report Numbers 50-254(265)/97023(DRS) and
50-254(265)/98011(DRS))

Dear Mr. Kingsley:

This refers to two inspections conducted from October 14, 1997 to May 22, 1998, at the Commonwealth Edison Company's (ComEd) Quad Cities Nuclear Power Station (Quad Cities). The inspections identified several apparent violations associated with ComEd's (1) implementing procedures for the post-fire safe shutdown analysis and, (2) changes to safe shutdown procedures that involved an unreviewed safety question. The NRC discussed significant inspection findings with members of the ComEd staff at a public management meeting conducted in the Region III office on December 19, 1997. The results of the inspections were discussed at exit interviews conducted on April 15 and May 22, 1998. On June 18, 1998, an open predecisional enforcement conference was held in the Region III office to discuss the apparent violations.

Based on the information developed during the inspection and the information provided by ComEd representatives during the predecisional enforcement conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice), and the circumstances surrounding them are described in detail in the subject inspection reports.

The violations in the Notice represent inadequacies in ComEd's capability to shutdown the Quad Cities facility following a postulated design basis fire. When it identified in September 1997 that it may not be able to shutdown the Quad Cities facility following a postulated design basis fire, ComEd implemented compensatory measures including shutting down Unit 2. However, during a December 19, 1997, public meeting that occurred after several months of NRC inspections, ComEd acknowledged NRC inspection findings that concluded that despite the compensatory measures, ComEd had not demonstrated and could not demonstrate that the Quad Cities design basis fire safe shutdown analysis and implementing procedures were adequate. Subsequently, ComEd shutdown Unit 1 and kept Unit 2 shut down while the

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analysis and procedures were revised and validated. These violations indicated a broad lack of understanding on the part of the Quad Cities' staff for the importance of having analyzed, proceduralized, and validated means for achieving and maintaining safe shutdown following a design basis fire. During the enforcement conference, ComEd acknowledged that inadequate knowledge and ownership of the fire protection program, along with inadequate management involvement and support for correcting identified deficiencies in the safe shutdown program were several of the root causes for these violations. ComEd stated that it expected that operators would have been able to achieve and maintain safe shutdown based on their training and various procedures including abnormal and emergency operating procedures (EOPs) and equipment not described in the Quad Cities safe shutdown analysis. However, the NRC concluded that some equipment necessary to achieve safe shutdown may not be available or accessible and that reliance on unanalyzed impromptu measures such as combining sections of EOPs during the fire would not provide reasonable assurance that operators could achieve post-fire safe shutdown conditions.

Additionally, in response to the safe shutdown issue, ComEd changed its safe shutdown procedures to permit the use of the station blackout diesel generator in lieu of the emergency diesel generators without first performing a safety evaluation to confirm that the departure from the Updated Final Safety Analysis Report (UFSAR) did not constitute an unreviewed safety question. The required safety evaluation was performed after substantial intervention by the NRC staff. When performed, the NRC staff identified that the safety evaluation was deficient because it did not consider all necessary manual actions required to operate the station blackout diesel generator. These actions included manual unloading and reloading of electrical buses and diesel engine refueling sooner than previously anticipated. ComEd subsequently determined that the additional manual actions needed to utilize the station blackout diesel involved an unreviewed safety question that required Commission approval prior to implementation of the change. The failure to perform a safety evaluation for a change to the facility as described in the USFAR that was subsequently determined to be an unreviewed safety question constitutes a violation of 10 CFR 50.59, "Changes, Tests, and Experiments."

These violations represent a very significant safety concern because they involve inadequacies in ComEd's capability to shutdown the Quad Cities facility following a postulated design basis fire. Due to the design of the Quad Cities facility, the alternative shutdown capabilities relied heavily on administrative controls to use opposite unit equipment and to implement a large number of manual actions. If a design basis fire occurred in certain fire areas, the capability of meeting shutdown performance goals, such as reactor coolant makeup, reactor heat removal, process monitoring, and support functions, varied from area to area. Also of concern is ComEd's ability to evaluate fire protection issues as demonstrated by the weaknesses in its preparation of the safety evaluation. In sum, because a postulated fire would so damage equipment that reasonable assurance did not exist that safe shutdown could be achieved and maintained using analyzed equipment and procedures, the violations were classified in the aggregate, in accordance with NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions (Enforcement Policy)," as a Severity Level II problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$88,000 is considered for the Severity Level II problem. Because the Quad Cities facility has been the subject of escalated enforcement actions within the last two years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. *Identification* credit was warranted because the Quad Cities engineering staff identified all of the technical concerns regarding the inadequacies in the Quad Cities alternative shutdown capabilities.² *Corrective Action* credit was not warranted due to the extensive involvement by the NRC, including involvement in identifying the 10 CFR 50.59 violation, to focus ComEd resources to obtain comprehensive corrective actions. The NRC's involvement culminated in the December 19, 1997 management meeting, during which the NRC pointed out significant deficiencies in ComEd's corrective actions. This meeting resulted in ComEd shutting down the remaining operating unit and maintaining both units shutdown until these safe shutdown violations were corrected. Since *Identification* credit was warranted and no *Corrective Action* credit was warranted, the civil penalty assessment for the violations is \$88,000.

Therefore, to emphasize the importance of maintaining the post-fire safe shutdown capabilities for all fire areas and the acknowledgment of ComEd's recognition that the Quad Cities 10 CFR 50.59 program was in need of comprehensive corrective action, I have been authorized after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Regulatory Effectiveness, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$88,000.

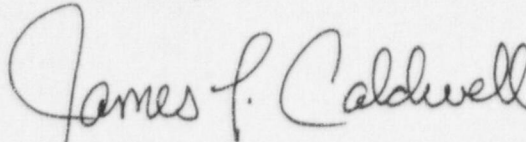
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. Notwithstanding the apparent comprehensiveness of your corrective actions associated with the 10 CFR 50.59 violation, and in light of the prior similar violations, you should describe why you believe your actions will be effective in preventing additional violations of 10 CFR 50.59. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

¹ EA 97-591 issued two Severity Level III problems with a \$330,000 civil penalty on March 12, 1998, for inadequate procedures for surveillance testing of the primary coolant system boundary and an inadequate 10 CFR 50.59 safety evaluation associated with changes to the surveillance procedures.

² While the NRC was involved in identifying the 10 CFR 50.59 issue, for purposes of assessment, this was considered in determining Corrective Action credit.

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

Sincerely,



James L. Caldwell
Acting Regional Administrator

Docket Nos. 50-254; 50-265
License Nos. DPR-29; DPR-30

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

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