PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

Docket No. 50-344
License No. NPF-1
EA 89-162

OCT 5 1989

Portland General Electric Company
ATTN: Mr. David W. Cockfield
Vice President, Nuclear
121 S.W. Salmon, TB-17
Portland, Oregon 97204

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - $280,000
(NRC Inspection Report No. 50-344/89-19)

This refers to the Nuclear Regulatory Commission (NRC) special inspection conducted by Messrs. R. C. Barr and J. F. Melfi from July 12, 1989 through August 8, 1989. This special inspection examined the circumstances and conditions associated with the findings of debris in and near the containment recirculation sump (sump), and of missing and damaged sump screens. The report was sent to you by letter dated August 15, 1989, and identified apparent violations of NRC requirements. These apparent violations, their causes, and your corrective actions were discussed with you during an enforcement conference held on August 24, 1989. The summary of the enforcement conference was sent to you by letter dated September 1, 1989.

The violations in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involved the failure to assure that the Emergency Core Cooling System (ECCS) would function during recirculation from the sump after a Loss of Coolant Accident (LOCA). The violations resulted, in part, from (1) an inadequate understanding and implementation of sump design bases, (2) inadequate problem resolution/corrective action implementation of sump-related conditions, and (3) ineffective management and supervisory oversight of sump-related maintenance, surveillance, engineering and quality activities. Problems in these areas have been the subject of previous management meetings, and were emphasized in the most recent report of Systematic Assessment of Licensee Performance. As discussed in the enforcement conference, management accountability for plant and personnel performance needs to be assured to improve performance at Trojan.

Violation I.A described in the Notice involves the fact that for an indeterminate period of time, from at least the 1988 refueling outage and possibly since initial startup, the recirculation phase of the ECCS function has been inoperable. Had the ECCS been called upon to operate during a LOCA with the damaged and missing recirculation sump screens, ECCS function would probably have been seriously degraded or even lost due to debris either (1) clogging or restricting ECCS flow paths or, (2) wedging between the pump impellers and casings. The likely failure of multiple ECCS flow paths and pumps occurring under expected design basis accident conditions is a significant safety violation.

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Violation I.B concerns the failure to perform an adequate inspection of the containment and sump areas to ensure removal of all debris that had the potential to be transported to the sump during a LOCA and restrict water flow to the ECCS pumps during the recirculation phase. This violation was caused in part by a poorly written procedure that lacked specificity, and in part by the poor performance of the individuals charged with supervising and conducting this critical inspection. This poor performance by station personnel is not an isolated case and not limited to just one group as the inspections were conducted on a number of occasions and included multiple disciplines.

Violation I.C concerns the significant failure to inspect the containment sump screens for damage. This violation can be partly attributed to the poorly written inspection procedure, and partly to the lack of management control which allowed your inspectors to divide the inspection activities among themselves without agreeing as to what areas each inspector was responsible for. Consequently, none of the inspectors felt responsible for the sump and this inspection was not performed. This is again another reflection of management's failure to assure that expectations and performance were consistent with regard to this very important safety system.

Violation II.A concerns the failure of Station Management to take adequate corrective action for past problems with containment sump debris. In 1980, an RHR pump was rendered inoperable when a weld rod became wedged between the pump impeller and casing ring area. One event such as this should be all that is required to sensitize management to the importance of maintaining sump cleanliness. However, this was not the case. Your QA inspections found a tool in the sump on July 8, 1988, that had been signed out for use during the 1987 outage. Your management failed to recognize the significance of this finding and act upon the QA recommendations. Consequently, more debris of the type that disabled the RHR pump in 1980 was again found in the sump area on July 8, 1989. Even then, your management failed to assure that all remaining debris was removed prior to placing the reactor in mode 4 on July 14, 1989. It was the NRC resident inspectors, who insisted on performing their own inspection of the sump area, who identified additional debris that had been missed by your closeout inspection. The lack of management sensitivity to such significant safety problems cannot be condoned.

Violation II.B concerns your failure to adequately implement corrective actions for past significant violations of regulatory requirements. In response to two past escalated enforcement actions (EA 86-54 and EA 86-113) regarding safety systems that were rendered inoperable due to a lack of system design bases understanding, you stated that a design bases documentation program would be implemented and system walkdowns performed to ensure that the design bases were well understood and that the safety systems would be operated, maintained and tested in accordance with those bases. However, you failed to follow through with this corrective action in that management did not ensure an adequate program to implement the system engineer walkdowns or otherwise ensure that design bases were acceptably implemented, maintained, and understood. This lack of management involvement resulted in a wide disparity in methodology and quality of the system walkdowns performed as evidenced by the containment spray system walkdown. For that safety system, the walkdown was performed in

1987 while the reactor was operating at power. Consequently, that portion of the system located inside containment, specifically including the sump area, was not walked down. It was only after the NRC began raising the sump debris concern that you subsequently identified the missing mesh screens for the top of the sump baffles on July 17, 1989. These screens may never have been installed since initial plant startup. The absence of such screens in itself renders the sump inoperable. This item is especially significant in that the NRC closed out an Unresolved Safety Issue relating to sump performance by issuing Generic Letter 85-22. Your "In-House" review of this letter took specific exception to the recommendation that covers be provided for the sumps, as fine mesh screens were believed to have been installed, when in fact, they were not.

To emphasize (1) the need to understand and maintain plant design bases, (2) the need for comprehensive and timely corrective action for identified problems, and (3) the need for effective management involvement to assure appropriate maintenance, surveillance, engineering, and quality activities, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of $280,000 for the violations described in the enclosed Notice. The violations have been aggregated into a single Severity Level II problem because each contributed in part to the inoperability of the containment sump. The base value of a civil penalty for a Severity Level II problem is $80,000. Application of the escalation and mitigation factors set forth in Section V.B of 10 CFR Part 2, Appendix C is discussed below.

The base civil penalty has been escalated by 50 percent because although you identified some sump debris, you had adequate prior opportunity to identify all aspects of the inoperable containment sump, but failed to do so until the NRC identified additional sump debris and the damaged screens. Though not initially prompt, your significant corrective actions and plans, which included management changes and a substantial commitment to assure timely, effective problem resolution, were comprehensive and aggressive. Mitigation by 50 percent is therefore warranted. However, 50 percent escalation is warranted for poor past performance since the issue of management involvement to assure the resolution of problems has been a long-standing issue with PGE. A 100 percent escalation for prior notice of similar events is warranted since there were several events and notifications which should have prompted you to find the problem earlier. This includes the 1980 RHR pump event caused by debris similar to that found by the Resident Inspectors on July 14, 1989; the importance of the sump baffle screens highlighted by Generic Letter 85-22 and your "In-House" review; the 1988 discovery by QA of tools in the sump; and the 1989 discovery of debris in the pipe chase area near the CSS/RHR pump section by your Rad Waste Supervisor. Finally, 100 percent escalation is warranted due to the duration of sump's inoperability. This duration is significant because your records review could not determine whether the baffle screens were ever installed. Also, as discussed in the enforcement conference, the containment sump is one of the important components of ECCS subsystems, second only to the RWST in accomplishing the ECCS's decay heat removal function. In total, the base civil penalty has been escalated 250 percent.

Consideration was given to proposing daily civil penalties to emphasize our concern. However, in recognition of your aggressive and comprehensive corrective actions the penalty was not further escalated.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to the Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Action of 1980, Pub. L. No. 95-511.

Sincerely,

John B. Martin
Regional Administrator

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

cc w/enc:
T. D. Walt, General Manager
Technical Functions
C. P. Yundt, General Manager
L. A. Girard, Vice President and General Counsel
D. Stewart-Smith, Administrator
Siting & Regulations, Oregon DOE

Portland General Electric Company

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