UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596-5368

AUG 13 1992

Docket Nos. 50-528 and 50-530
License Nos. NPF-41 and NPF-74
EA 92-119

Arizona Public Service Company
ATTN: Mr. W. F. Conway
Executive Vice President, Nuclear
Post Office Box 53999, Station 9012
Phoenix, Arizona 85072-3999

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - $100,000
NRC INSPECTION REPORT NOS. 50-528, 529, 530/92-15; 50-530/92-19; AND 50-528, 529, 530/92-23

This refers to the NRC inspections conducted on April 4-10, May 8-14, and June 15-19, 1992, at the Palo Verde Nuclear Generating Station. The results of the inspections were documented in the referenced NRC inspection reports, which were transmitted to you on June 17, June 5, and June 29, 1992, respectively. These reports addressed apparent violations of NRC requirements, some of which had existed for some time, related to three issues: (1) failures of reactor trip breakers during testing, (2) the incorrect installation of the internals of a high pressure safety injection check valve (a containment isolation valve), and (3) the loss of control room annunciator event in Unit 3. These matters were discussed with you during an enforcement conference held in the Region V Office on July 9, 1992. Our discussion during the enforcement conference was summarized in Meeting Report No. 50-528, 529, 530/92-25, transmitted to you on July 24, 1992.

The apparent violations in our inspection reports have been addressed as four violations in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The first and most significant of these violations involves your failure to establish adequate procedures covering the maintenance of the reactor trip breakers at Palo Verde. This was caused by the failure to incorporate available vendor information into site procedures and resulted in the partial opening of a reactor trip breaker during a surveillance test and the failure of other trip breakers to re-close after opening. The second violation, also involving reactor trip breakers, involves the failure of personnel to initially recognize the safety significance of a reactor trip breaker failing to open and the failure to quarantine and establish formal troubleshooting for three days after the event. This resulted in approximately 100 cycles of the breaker before formal troubleshooting was invoked.

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The third violation involves the backwards installation of the internals of a high pressure safety injection system check valve (a containment isolation valve), due to inadequate details in the maintenance procedure and to a failure to perform adequate post-maintenance testing. The fourth violation involves the loss of control room annunciator event in Unit 3 on May 4, 1992. This event was caused by the failure of your personnel to follow procedures for protection of plant equipment during work activities. The work activity involved investigation of circuit breaker auxiliary contacts for control room annunciators. The failure to follow procedures resulted in a loss of control room annunciators when an annunciator circuit lead was dropped onto a 480 volt bus during this work. This event was classified as an Alert when the plant computer no longer provided alarm information to the control room operators. The unit remained in an Alert for over two days.

We note that the planner who prepared the work order that led to the loss of annunciators, failed to review archived work orders as required by plant procedures. Had that review taken place, your staff would have recognized that the continuity check had already been performed, and that there was no need to reperform an activity with the attendant risks to personnel and equipment that exist anytime work is conducted on energized electrical equipment. Because the event was caused by poor work practices and not the decision to perform the work, the failure to follow the work order development procedure was of minor significance and is considered a non-cited violation.

Collectively, these four violations reflect: (1) weaknesses in your control of work activities to assure that appropriate information is included in work documents (i.e., procedures and work orders), and (2) failure to effectively communicate your management expectations to supervisors and workers and to assure the expectations are properly implemented. The failure of your personnel to fully appreciate the safety significance of the malfunction of a reactor trip breaker to fully open is of particular concern in light of the numerous NRC and industry notifications regarding the importance of proper maintenance of reactor trip breakers. It also appears that in your continuing efforts to resolve the problems found in the General Electric (GE) reactor trip breakers, you have emphasized that the GE breakers had always demonstrated the ability to trip open and have not focused on a timely resolution of the issues to ensure continued operability of the breakers. Any problem associated with reactor trip breakers should be pursued aggressively and resolved promptly. You now appear to be taking appropriate steps to resolve these problems. However, your continued management attention is needed to assure that the desired results are achieved.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), 10 CFR Part 2, Appendix C, the violations are classified in the aggregate as a Severity Level III problem. To emphasize the importance the NRC places on the appropriate control of work activities, especially those related to safety significant equipment such as reactor trip breakers, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations, and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of $100,000. The base value of a civil penalty for a Severity Level III problem is $50,000. The escalation and mitigation factors in the Enforcement Policy were considered as discussed below.

Regarding identification, your staff identified some of the violations and the NRC identified others. Therefore, on balance, neither mitigation nor escalation is appropriate.

Your corrective actions related to Violations B and D were generally good. However, your corrective actions related to the continuing reactor trip breaker problems (Violation A) were not fully effective in obtaining timely support from the vendor and in addressing all the potential problems and the possible effects on opening of the breaker. This appears to be due to your conclusion that the problems with the GE breakers were limited to its ability to re-close after opening and not to its safety function to open. In addition, your initial review of the incorrectly installed high pressure safety injection check valve (Violation C) did not focus on the fact that two other similar incorrect installations had occurred during preoperational testing of Unit 3 in 1986. Therefore, on balance, neither escalation nor mitigation is appropriate regarding your corrective actions.

Regarding licensee performance, maintenance has generally been performed acceptably at Palo Verde; however, the NRC issued civil penalties on February 3, 1992, related to a crane operated near an offsite transmission line and related to core alterations being performed without appropriate supervision. These events reflected weaknesses in the conduct of work activities at Palo Verde and in the use of industry information. The events included in the current enforcement action also reflect similar weaknesses, in that industry and the NRC have provided numerous documents related to reactor trip breaker maintenance. On balance, 50 percent escalation of the base civil penalty was warranted for past performance.

Regarding prior opportunity to identify, potential problems related to maintenance activities for reactor trip breakers had been communicated to APS personnel, but in one case your

personnel incorrectly concluded that the information was not applicable to Palo Verde, and in others your personnel failed to incorporate the information into applicable site procedures. In addition, while the civil penalties issued in February 1992 highlighted your failure to use industry information on crane incidents, you did not use this information to review your actions related to other notable industry events, such as reactor trip breakers, and to determine whether your vendor manual upgrade program for trip breakers was appropriately prioritized. With respect to the improperly installed check valve, in addition to the prior notice provided by similar problems, NRC Information Notice 88-70 informed the industry of the failure to test check valves for reverse flow closure capability. However, because there was no specific prior notice for the loss of annunciator event, a 50 percent rather than 100 percent escalation of the base civil penalty under this factor was warranted.

The other mitigation and escalation factors were evaluated and no other adjustments were considered warranted.

In summary, the base civil penalty was escalated 50 percent for your overall performance, and an additional 50 percent for the prior opportunities to have identified the deficiencies in the reactor trip breaker maintenance procedures and the improperly installed check valve. No other adjustments were considered warranted, resulting in 100 percent escalation of the base civil penalty.

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 this 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 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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 procedure of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

J. B. Martin
Regional Administrator

Enclosure: Notice of Violation and
Proposed Imposition of Civil
Penalty

cc:
Mr. O. Mark DeMichele, APS
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Mr. S. C. Guthrie, APS
Mr. Thomas R. Bradish, APS
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Mr. William A. Wright, Acting Director, Arizona Radiation Regulatory Agency
Chairman, Maricopa County Board of Supervisors
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