



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE, SUITE 210  
WALNUT CREEK, CALIFORNIA 94596-5368

OCT 16 1990

Docket Nos. 50-528, 50-529, and 50-530  
License Nos. NPF-41, NPF-51, and NPF-74  
EA 90-121

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

Dear Sir:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$125,000 (NRC INSPECTION REPORT NOS. 50-528/90-02, 90-25, and 90-35)

This letter refers to the NRC inspections conducted from January through August 1990, at the Palo Verde Nuclear Generating Station. The results of these inspections were documented in the referenced NRC inspection reports. During the inspections, apparent violations of NRC requirements were identified involving the failure to ensure the adequacy of the emergency lighting system. A transcribed Enforcement Conference was held on July 10, 1990 to discuss the reliability, design and testing of the installed emergency lighting units.

The enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) concerns: (1) your failure to implement an adequate Quality Assurance (QA) program for fire protection, as required by your operating licenses, and (2) your failure to comply with the requirement to have emergency lighting capable of operating for a minimum of eight hours in all areas needed for operation of safe shutdown equipment.

Those conditions require you to implement and maintain in effect all provisions of the fire protection program described in the FSAR, which include a QA Program to assure that appropriate test controls and corrective actions are exercised in the fire protection area. However, the test controls applied to the 8-hour emergency lighting system were inadequately implemented in that: (1) test procedures allowed preconditioning of the batteries, which could mask their as-found condition, (2) the total scope of the system failures and corrective maintenance performed is unknown as performed maintenance activities were not documented under a quality related program, and (3) based on the historical failure data available, tests were not scheduled at a frequency adequate to preclude numerous recurrent failures. Additionally, adequate corrective action was not taken for those repetitive failures that were documented and no evaluation was performed to permit the continued use of the nonconforming emergency lighting units. Had you properly implemented the QA program requirements, many of the examples cited in Violation B probably would not have occurred.

CERTIFIED COPY  
RETURN RECEIPT REQUESTED

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Violation B addresses the persistent hardware problems experienced over the past 3 years. Though those problems were generally limited to specific types of emergency lighting units, those units provided the principle sources of light for the Control Room, Control Building and Auxiliary Building, areas of the facility that have a significant impact on the ability to achieve safe shutdown in the event of a fire. The problems cited in the violation concerned all three units, some of which existed for over a year without being corrected.

In our view, these violations illustrate your failure to acknowledge and resolve a technical problem of which you should have been aware and fully capable of resolving. This is particularly disturbing given your experience with the consequences of inadequate lighting during an event in March 1989 which led, in part, to an extended shutdown of your units. The lack of emergency lighting contributed to the severity of that event. If you had taken a broader view of emergency lighting and identified the QA weaknesses following the March 1989 event, the need for the enclosed enforcement action may have been avoided.

During the Enforcement Conference, you discussed the corrective actions that you have implemented to date, and the current status of compliance with applicable Fire Protection Program requirements. Specifically, you have implemented several actions to ensure the availability of your emergency lights in the future (e.g., replacement of batteries that had inadequate capacity, increased surveillance frequencies, and revised test procedures), and you have underway an effort to assure proper implementation of QA program requirements as they apply to your Fire Protection Program as a whole. However, cognizant engineering and technical support personnel do not appear to be involved in the routine evaluation and trending of lighting maintenance activities. Thus, as recently as August 31, 1990, NRC inspectors observed that cognizant emergency lighting system engineers continue to be involved in plant maintenance activities affecting emergency lighting only when requested.

To emphasize the importance of 1) maintaining the availability of emergency lighting to ensure your capability to safely shut down the reactors in the event of a fire, 2) fully addressing problem areas once identified, and 3) adhering to quality assurance requirements, 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 in the amount of \$125,000 for the violations described in the enclosed Notice. Violations A and B are significant violations of fire protection requirements established to protect and enable operation of safe-shutdown equipment identified in the fire hazards analyses, and have been classified in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990) (Enforcement Policy) to focus on the underlying programmatic deficiencies.

The base value of a civil penalty for a Severity Level III violation or problem is \$50,000. The escalation and mitigation factors in the enforcement policy were considered and the base civil penalty was escalated 150 percent. A 50



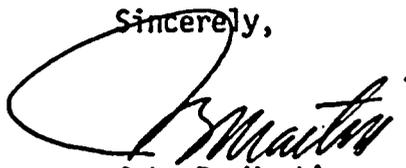
percent escalation factor was applied because the NRC identified these violations, even though you should have identified them. An additional 100 percent escalation factor was applied for your poor past performance involving required emergency lighting, as evidenced by the Severity Level III problem for which you were cited in a Notice dated September 1, 1989, and a Severity Level IV problem for which you were cited in a Notice dated March 21, 1990. Also, your past performance in the areas of engineering and technical support and quality oversight has been poor as evidenced by the Category 3 ratings in each area during the last SALP. Mitigation is not proposed for your corrective actions because while those actions which now are underway appear comprehensive, they were not sufficiently prompt. The other factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty was deemed warranted.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice in preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. This response should not take a narrow approach limited to emergency lighting or the specific examples cited, but rather address the broad issue of QA for fire protection so that you will identify any other problems in this area. 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, the enclosure, and your response will be placed in the NRC Public Document Room.

The responses directed by this letter and the accompanying Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



John B. Martin  
Regional Administrator

Enclosure: Notice of Violation and Proposed  
Imposition of Civil Penalty

cc: See next page



cc w/enclosure:

Mr. Jack N. Bailey, APS

Mr. Blaine E. Ballard, APS

Mr. Thomas R. Bradish, APS

Mr. O. Mark DeMichele, APS

Mr. James M. Levine, APS

Mr. Robert W. Page, APS

Mr. E. C. Simpson, APS

Mr. Arthur C. Gehr, Esq., Snell & Wilmer

Mr. Al Gutterman, Newman & Holtzinger P. C.

Mr. Charles R. Kocher, Esq., Assistant Counsel, SCE Company

Mr. James A. Boeletto, Esq.

Mr. Charles B. Brinkman, Combustion Engineering, Inc.

Mr. Charles Tedford, Director, Arizona Radiation Regulatory Agency

Chairman, Maricopa County Board of Supervisors

Mr. John W. Norman, Chief, Arizona Corporation Commission

