UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

June 4, 2015

Randall K. Edington
Executive Vice President, Nuclear/CNO
Mail Station 7602
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR ARIZONA PUBLIC SERVICE (TAC NUMBER MF6276, NOED NUMBER 15-4-01)

Dear Mr. Edington:

By letter dated June 2, 2015, (ADAMS Accession No. ML15154A877), Arizona Public Service (APS) asked the U.S. Nuclear Regulatory Commission (NRC) to grant enforcement discretion to not enforce compliance with the actions required in Palo Verde Nuclear Generating Station, Unit 3, Technical Specification (TS) 3.5.3, "Emergency Core Cooling Systems (ECCS) – Operating," Required Action B.1. When one ECCS train is inoperable, Limiting Condition for Operation (LCO) Required Action B.1 directs either restoring the affected train to operable status within 72 hours, or else place Unit 3 in operational mode 3 (Hot Standby) within the next 6 hours, and then reduce pressurizer pressure to less than 1837 psia and reactor coolant system cold leg temperature to less than 485°F within the next 12 hours. The subject letter documented information previously discussed between Mr. M. McGhee of your staff and the NRC Senior Resident Inspector at Palo Verde on May 28, 2015, and later during a telephone conference with the NRC and Mr. B. Bement and other members of your staff that began at approximately 5:00 p.m. MST on May 29, 2015. (All time references below will be in Mountain Standard Time.) The principal NRC staff members who participated in the telephone conference on May 29, 2015, are listed in the enclosure. The NRC staff determined that the information in your letter requesting the enforcement discretion was consistent with your verbal request.

The events leading to the APS request began at 6:28 a.m. MST on May 27, 2015, when your staff removed the Unit 3 High Pressure Safety Injection (HPSI) pump A from service for routine preventative maintenance and declared that pump inoperable. A routine oil sample taken from the HPSI motor outboard bearing appeared dark in color. Sample analysis revealed the presence of metal particles indicative of bearing babbitt material. Your staff made three attempts to flush debris from the bearing, but subsequent sampling reconfirmed the presence of babbitt material after each flush. Based on these results, your staff disassembled the pump outboard motor bearing.

Inspections and measurements revealed improper axial adjustment of the motor coupling which caused the motor shaft to be displaced toward the outboard motor bearing. This axial

displacement resulted in the shaft thrust collar coming in contact with the thrust surface on the outboard motor bearing, which damaged the thrust portion of the bearing, so your staff decided to replace the bearing. However, your staff determined that they would not be able to replace the bearing, reassemble the pump, and complete post-maintenance testing within the 72 hours allowed by TS LCO Required Action B.1. Therefore, the subject letter requested a 24-hour extension to the original 72-hour completion time associated with TS 3.5.3 Required Action B.1. Your staff subsequently completed corrective maintenance and testing of the Unit 3 HPSI pump A and restored it to operable status at 5:10 p.m. MST on May 30, within the extended completion time. Unit 3 remained operating at 100 percent power and normal operating pressure and temperature throughout the period HPSI pump A was inoperable.

Your staff determined prompt action to restore the HPSI pump and request enforcement discretion was needed based upon the short time frames associated with the required actions of the TS LCO for the ECCS, the length of time required to complete the repairs, and the safety significance of the affected equipment.

Your staff reviewed past operating history of HPSI motor bearings at the Palo Verde Nuclear Generating Station and found no prior occurrence of a HPSI motor bearing failure.

Your staff took actions in an attempt to avoid the need for this NOED request, including establishment of a dedicated team to troubleshoot the cause of the bearing oil contamination and to make repairs under a maintenance plan using 24-hour coverage. However, the original maintenance activity schedule reflected an expectation that the maintenance would require more than 72 hours to complete the bearing replacement, coupling axial alignment, and post-maintenance testing.

During the telephone conference on May 29 and as further elaborated in your June 2 letter, you indicated that keeping Unit 3 on line was more desirable from a risk perspective. Unit 3 was in a stable configuration with offsite power available to support the non-safety and safety related buses. Based on actual plant conditions on May 29, 2015, your staff quantitatively estimated the Incremental Conditional Core Damage Probability (ICCDP) for Unit 3 for a 24 hour extension to be approximately 4.1E-09, and the Incremental Conditional Large Early Release Probability (ICLERP) to be approximately 2.6E-11. Your staff noted that these values are much less than the 5E-7 and 5E-8 guidance thresholds, respectively, in Inspection Manual Chapter 0410, “Notices of Enforcement Discretion” (ADAMS ML13071A487).

APS representatives stated that although your risk evaluation did not credit compensatory measures, you would implement compensatory risk-management measures for the duration that HPSI Pump A was unavailable. These additional compensatory risk management measures included: (1) suspending work in the switchyard, (2) restricting any work on the Unit 3 reactor coolant system pressure boundary, (3) protecting Unit 3 train B safety injection pumps, (4) protecting the Unit 3 train B engineered safety feature switchgear, (5) protecting both Unit 3 emergency diesel generators, (6) protecting both station blackout generators, and (7) protecting the Unit 3 charging pumps.

Your staff demonstrated that the NOED condition would not result in more than a minimal increase in radiological risk to the public, and noted that the five-day national weather forecast indicated clear weather for the Phoenix area. Your staff also noted that the unavailability of

HPSI Pump A did not impact other external hazards, and concluded that the proposed period of noncompliance was not detrimental to public health and safety or the environment.

The Palo Verde Nuclear Generating Station Plant Review Board reviewed the NOED request and supporting documentation. The board approved the NOED request and did not identify any nuclear safety issue related to the proposed schedule of activities and compensatory measures that were implemented as defense-in-depth measures.

In consultation with the NRC Resident Inspection staff on site at the Palo Verde Nuclear Generating Station, the NRC verified the licensee's oral assertions, including the likely cause and compensatory measures. NRC staff also independently verified the licensee estimates for ICCDP and ICLERP.

Based on the NRC staff's evaluation of Arizona Public Service's request, the staff concluded that granting this NOED is consistent with the NRC's Enforcement Policy and staff guidance and would have no adverse impact on public health and safety. Therefore, as communicated orally to your staff at 5:53 p.m. MST on May 29, 2015, the NRC Region IV Regional Administrator granted enforcement discretion to the Palo Verde Nuclear Generating Station, Unit 3 to extend the completion time for Technical Specification 3.5.3, required Action B.1, to restore the train A HPSI pump to operable status from 72 hours to 96 hours. The additional period of 24 hours provided by the NOED expired at 6:28 a.m. MST on May 31, 2015.

In addition, as discussed during the telephone conference on May 29, 2015, the NRC staff agreed with your determination that a follow-up Technical Specification amendment was not necessary. The staff concluded that an amendment (either a temporary or permanent amendment) was not necessary because the request was for a one-time extension of the required completion time for repairs that was not expected to recur.

As stated in the NRC Enforcement Policy, enforcement action may be taken to the extent that violations were involved for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/

Troy W. Pruett, Director
Division of Reactor Projects

Docket: 50-530
License: NPF-74

Enclosure: List of Participants

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Letter to Randall Edington from Troy Pruett dated June 4, 2015

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR ARIZONA PUBLIC SERVICE (TAC NO. MF6276, NOED NUMBER 15-4-01)

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