

June 15, 2006

Mr. James M. Levine
Executive Vice President, Generation
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 -
CLOSEOUT LETTER FOR BULLETIN 2004-01 (TAC NOS. MC3497,
MC3498, AND MC3499)

Dear Mr. Levine:

On May 28, 2004, the U.S. Nuclear Regulatory Commission (NRC) issued to the industry Bulletin 2004-01, "Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors." That bulletin informed addressees that current methods of inspecting the pressurizer penetrations and steam space piping connections fabricated from Alloy 82/182/600 materials may need to be supplemented with additional measures (e.g., bare-metal visual inspections) to detect pressurizer penetration and steam space piping connection flaws or leakage. The bulletin requested that addressees provide the NRC with information related to the materials of construction, the inspections that have been performed, and the inspections which will be performed to verify the integrity of the pressurizer penetrations and steam space piping connections.

By letter dated July 22, 2004, Arizona Public Service Company (the licensee) provided its responses to items 1a, 1b, 1c, and 1d of Bulletin 2004-01 for Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2, and 3. The responses described materials of fabrication and past, current, and future pressurizer penetrations and steam space piping inspection programs at Palo Verde.

The licensee's response to item 1a reported that some of the materials used in the fabrication of the pressurizer penetrations and steam space piping connections were Alloy 82/182/600 materials. This reply required the licensee to provide further responses to the remaining items in the bulletin.

In response to item 1b, the licensee described prior inspections and inspection results of pressurizer penetrations and steam space piping connections which had been performed at Palo Verde. The licensee's response included the basis for concluding that the Palo Verde units satisfy the applicable regulatory requirements related to the integrity of pressurizer penetrations and steam space piping connections.

In response to item 1c in the bulletin, the licensee provided a description of the Alloy 82/182/600 pressurizer penetration and steam space piping connection inspection program that will be implemented at your facility during the next and subsequent refueling

outages. The description included the items to be inspected, the percent coverage that would be performed at each location, the inspection methods to be used, the qualification standards for the inspection methods and personnel, the process used to resolve any inspection indications, the inspection documentation to be generated, and the basis for concluding that your plant will satisfy the applicable regulatory requirements related to the structural and leakage integrity of pressurizer penetrations and steam space piping connections. If leaking pressurizer penetrations or steam space piping connections are found, the licensee indicated that follow-up nondestructive examination (NDE) will be performed to characterize flaws in the leaking penetrations. The licensee provided its plans for expansion of the scope of NDE to be performed if circumferential flaws are found in any portion of the leaking pressurizer penetrations or steam space piping connections.

In response to item 1d in the bulletin, the licensee explained why the inspection program identified in the response to item 1c in the bulletin is adequate for the purpose of maintaining the integrity of the reactor coolant pressure boundary for the Palo Verde units and for meeting all applicable regulatory requirements which pertain to your facility.

In your July 22, 2004, letter, you stated that you would provide the information requested in item 2a of Bulletin 2004-01 within 60 days of plant restart following the next inspection of Alloy 82/182/600 pressurizer penetrations and steam space connections. You further stated that a separate response would be provided for each Palo Verde unit. The 60 day responses were provided in letters dated February 23, 2006, July 18, 2005, and February 4, 2005, for Palo Verde Units 1, 2, and 3, respectively. These letters provided statements to the NRC indicating that the inspections described in your response to item 1c of the bulletin were completed during recent outages for all three Palo Verde units and these letters also provided a description of the as-found condition of the locations inspected. The licensee also described any findings of relevant indications of through-wall leakage and follow-up NDE performed to characterize flaws in leaking penetrations or steam space piping connections. A summary of all relevant indications found by NDE, a summary of the disposition of any findings of boric acid, and a description of any corrective actions taken and/or repairs made as a result of the indications found was also provided in each of the three letters.

The NRC staff has completed its activities associated with the review of the licensee's responses to Bulletin 2004-01 and finds the licensee's responses to be acceptable. It should be noted that industry commitments or staff regulatory actions may result in the need for you to modify your plans for the inspection and repair of items discussed in Bulletin 2004-01. It is the staff's expectation that you will revise your plans for the inspection and repair of items discussed in Bulletin 2004-01 consistent with other industry commitments or staff regulatory actions.

J. M. Levine

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This closes the staff's efforts with regard to the review of the Bulletin 2004-01 responses for Palo Verde Units 1, 2, and 3. Please contact me at (301) 415-3062, if you have any questions on the subject matter.

Sincerely,

/RA/

Mel B. Fields, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-528, STN 50-529,
and STN 50-530

cc: See next page

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March 2006