



Palo Verde Nuclear  
Generating Station

**Gregg R. Overbeck**  
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**EA-03-009**

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102-04894-GRO/SAB/RJR  
February 28, 2003

Secretary  
Office of Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
ATTN: Rulemakings and Adjudications Staff  
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Docket Nos. STN 50-528, 50-529 and 50-530  
License Nos. NPF-41, NPF-51 and NPF-74  
20-Day Answer to NRC Order Establishing Interim  
Inspection Requirements for Reactor Pressure Vessel Heads,  
Dated February 11, 2003**

In accordance with 10 C.F.R. § 2.202(a)(2) and §50.4, Arizona Public Service (APS) Company, hereby submits its answer to the February 11, 2003, Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors. APS does not request a hearing on the Order. APS consents to the Order modifying the licenses as delineated in Section IV of the Order. APS' consent to this Order supersedes the previous commitments made to the NRC as a result of Bulletins 2001-01, 2002-01 and 2002-02.

For the Unit 3 refueling outage scheduled to begin on March 29, 2003, the Unit will be in the moderate primary water stress corrosion cracking (PWSCC) susceptibility category. APS is planning to implement the requirements of the Order in the upcoming outage by performing an Order Section IV.C.2(a) examination of the Reactor Pressure Vessel (RPV) head vent nozzle and an Order Section IV.C.2(b)(i) examination of the 97 control element drive mechanism (CEDM) nozzles.

As directed in the Order and pursuant to the procedure specified in Order Section IV.F, APS is requesting relaxation of the requirements of Order Sections IV.C(1)(b)(i) and IV.C.(2)(b)(i) for the CEDM nozzles and has provided the information required by Order Section IV.F in the attachment to this letter. Approval of this relaxation is requested by March 20<sup>th</sup> to support the Unit 3 refueling outage.

APS will also be pursuing relaxation of specific requirements in Order Sections IV.C (1) and IV.C (2) requiring volumetric examination of the RPV head vent nozzle in a

U. S. Nuclear Regulatory Commission  
Office of Secretary of the Commission  
20-Day Response to NRC Order Establishing Interim Inspection Requirements for  
Reactor Pressure Vessel Heads  
Page 2

separate request. It is expected that this relaxation will be required by the spring 2004 outage.

No new commitments are being made to the NRC by this letter. If you have any questions concerning this matter, please contact Mr. Scott Bauer at (623)-393-5978.

Sincerely,



GRO/SAB/RJR/kg

Attachment: Request for Relaxation of Order Requirements

cc:

S. J. Collins (w/attachment)  
E. W. Merschoff (w/attachment)  
N. L. Salgado (w/attachment)  
J. N. Donohew (w/attachment)

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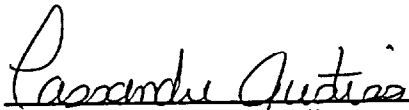
Office of Secretary of the Commission (w/attachments)  
Facsimile Number 301-415-1101

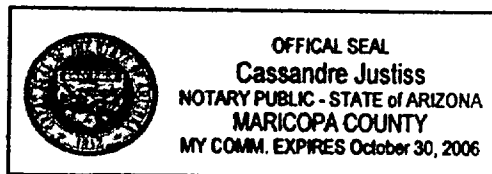
STATE OF ARIZONA        )  
  ) ss.  
COUNTY OF MARICOPA    )

I, Gregg R. Overbeck, represent that I am Senior Vice President – Nuclear, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, and that to the best of my knowledge and belief, the statements made therein are true and correct.

  
\_\_\_\_\_  
Gregg R. Overbeck

Sworn To Before Me This 28<sup>th</sup> Day Of February, 2003.

  
\_\_\_\_\_  
Notary Public



\_\_\_\_\_  
Notary Commission Stamp

**ATTACHMENT**

**Request for Relaxation of Order Requirements**

## Relaxation Request

### I. ASME Code Component(s) Affected

Component number: B4.12  
Description: Control Element Drive Mechanism nozzle penetration (97)

Code Class: 1

### II. Applicable Code Addition and Addenda

Second 10-year inservice inspection interval code for Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2, and 3: The American Society of Mechanical Engineers (ASME) Code, Section XI, 1992 Edition, 1992 Addenda.

Construction code for PVNGS Units 1, 2, and 3: ASME Section III, 1971 Edition, 1973 Winter Addenda.

Installation code for PVNGS Units 1, 2, and 3: ASME Section III, 1974 Edition, 1975 Winter Addenda.

### III. Applicable Order Requirement

Order Sections IV.C(1)(b)(i) and IV.C.(2)(b)(i)

Ultrasonic testing of each reactor pressure vessel (RPV) head penetration nozzle (i.e., nozzle base material) to the bottom of the nozzle.

### IV. Proposed Alternative

Ultrasonic testing of each RPV head penetration nozzle (i.e., nozzle base material) to approximately 0.6 inches above the top of the nozzle's chamfer face.

### V. Basis of Alternative for Providing Acceptable Level of Quality and Safety

Due to the design of the funnel attachment to the CEDM nozzles (i.e., threaded connection with plug weld, see Figure 1), APS is unable to fully comply with the requirement to perform UT to the bottom of the nozzle.

Experience gained from the previous two UT examinations completed at

PVNGS (Unit 2 Refueling outage 10 and Unit 1 Refueling Outage 10 in the spring and fall of 2002) has shown that scanning becomes impractical and ineffective from approximately 0.6 inches above the top of the nozzle's chamfer face to the bottom of the nozzle (see Figure 1, Detail "G"). Ultrasonic scans in this area do not yield useful data because of the geometry of the nozzle and funnel and the multiple signals reflected back by the threaded surfaces.

The examination proposed by APS would include the heat-affected zone on either side of the J-groove weld. This examination is sufficient to reliably detect cracking of RPV head nozzles which could cause corrosion of the RPV head or pose a safety concern because of the possibility of a nozzle ejection or loss-of-coolant accident. The proposed alternative provides an acceptable level of quality and safety.

#### **VI. Duration of Proposed Alternative**

APS requests relaxation of this requirement for the upcoming Unit 3 refueling outage and for all subsequent refueling outages in Units 1, 2 and 3 where ultrasonic examination techniques are used to inspect the inside diameter of the CEDM nozzle.

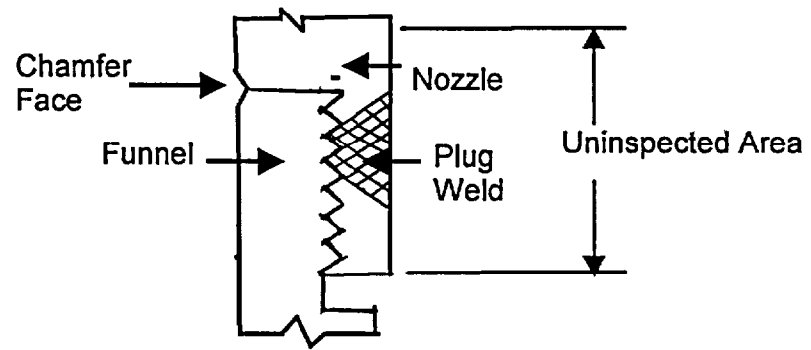
#### **VII. Conclusion**

Section IV.F of the Order states:

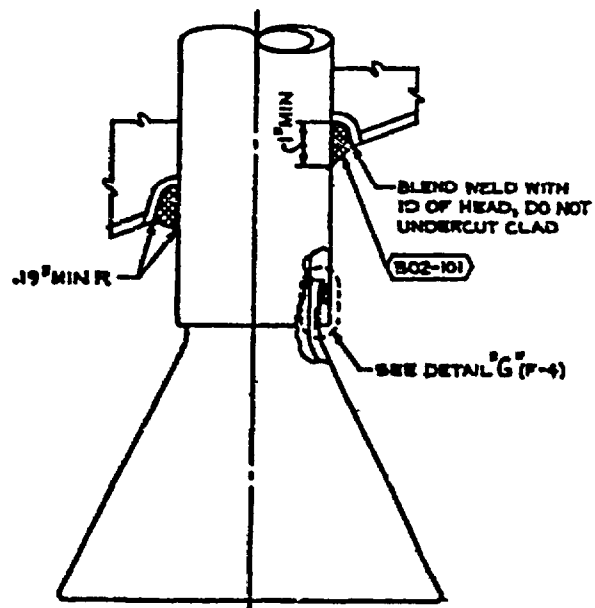
"The Director, Office of Nuclear Reactor Regulation, may, in writing, relax or rescind any of the above conditions upon demonstration by the Licensee of good cause. A request for relaxation regarding inspection of specific nozzles shall also address the following criteria:

1. The proposed alternative(s) for inspection of specific nozzles will provide an acceptable level of quality and safety, or
2. Compliance with this Order for specific nozzles would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety."

APS believes that compliance with the inspection requirements of this Order would not yield useful data because of the geometry of the nozzle and funnel and the multiple signals reflected back by the threaded surfaces. The proposed alternative discussed in Section IV provides an acceptable level of quality and safety. Therefore, we request that the proposed alternative be authorized pursuant to Order Section IV.F.(1).



Detail G



Typical Penetration No.s 1 thru 97

Figure 1