



**NRC Revised Order EA-03-009**

Palo Verde Nuclear  
Generating Station

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ATTN: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 1  
Docket No. STN 50-528  
Special Report 1-SR-2006-001  
Report of Boron Deposit at Control Element Drive  
Mechanism Vent**

Dear Sirs:

Attached please find Special Report 1-SR-2006-001 prepared and submitted by Arizona Public Service (APS) pursuant to NRC Revised Order EA-03-009, dated February 20, 2004. Section IV.D of the Order requires licensees to perform certain visual inspections to identify potential boric acid leaks from pressure-retaining components above the Reactor Pressure Vessel head. Section IV.E of the Order requires licensees to submit reports detailing the inspection results within sixty (60) days after returning plants to operation.

This special report details the results of visual inspections performed at PVNGS Unit 1 subsequent to a reactor shutdown on January 17, 2006. The visual inspections were performed in accordance with the Boric Acid Corrosion Prevention Program which APS implements to identify and prevent boric acid corrosion of reactor pressure boundary components.

In accordance with 10 CFR 50.4(b)(1), copies of this report are being provided to the Region IV Administrator and the Palo Verde NRC Senior Resident Inspector.

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No commitments are being made to the NRC by this letter.

If you have questions regarding this submittal, please contact James Proctor, Section Leader, Compliance, at (623) 393-5730.

Sincerely,

A handwritten signature in black ink that reads "David Mauldin". The signature is written in a cursive style with a large, stylized initial "D".

CDM/SAB/JAP/DJS/ca

Attachment

cc: B. S. Mallet, Region IV Administrator  
M. B. Fields, PVNGS Project Manager  
G. G. Warnick, Sr. Resident Inspector  
Assistant General Counsel for Materials Litigation and Enforcement  
Rulemaking and Adjudication Staff

**Attachment**  
**Palo Verde Nuclear Generating Station Unit 1**  
**Special Report No. 1-SR-2006-001**  
**Boron Deposit Found at Control Element Drive Mechanism Vent**  
**Docket No. STN 50-528**

**Reporting Requirement:**

The NRC Revised Order EA-03-009, "Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated February 20, 2004, Section IV.D requires that certain visual inspections be performed to identify potential boric acid leaks from pressure-retaining components above the reactor pressure vessel head.

Additionally, Section IV.E of the NRC Order requires that licensees submit reports detailing the inspection results performed per section IV.D within sixty (60) days after returning the plant to operation if a leak or boron deposit was found during the inspection.

**Background:**

On January 17, 2006, Palo Verde Unit 1 was shutdown to repair vibrations on Safety Injection Valve SIA – UV 651. Subsequent to the reactor shutdown, routine visual inspections were performed in accordance with the Boric Acid Corrosion Prevention Program (APS procedure 70TI-9ZC01). APS implemented the Boric Acid Corrosion Prevention Program to prevent boric acid corrosion of reactor pressure boundary components and to ensure the provisions of USNRC Generic Letter No. 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants" were met.

**Report Detailing Inspection Results:**

During boric acid walk-downs on January 18, 2006, one Unit 1 boric acid residue site was identified above the Reactor Pressure Vessel (RPV) head. The site was located on the Versa Vent for control element drive mechanism (CEDM) no. 23. The site did not exhibit evidence of an active leak, nor did the boric acid residue contact the RPV head or related insulation and no carbon steel was affected.

The Versa Vent was left as is since rework would have required a major disassembly of the CEDM main power and position indication cables. A work order was generated in accordance with the corrective action program to rework the Versa Vent. Unit 1 was returned to operation (Mode 1) on January 20, 2006.