Palo Verde Nuclear
Generating Station

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EA-03-009

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

Subject: **Palo Verde Nuclear Generating Station (PVNGS)**
Unit 1
Docket No. STN 50-528
Special Report 1-SR-2003-001
Boron Deposit Found at Control Element Drive Mechanism Vent

Dear Sirs:

Attached please find Special Report 1-SR-2003-001 prepared and submitted pursuant to the NRC Order EA-03-009, dated February 11, 2003, which established interim inspection requirements for reactor pressure vessel heads at Pressurized Water Reactors. This special report details the results of a visual inspection performed at PVNGS Unit 1 on March 27, 2003 to identify potential boric acid leaks from pressure-retaining components above the reactor pressure vessel head.

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

In accordance with 10 CFR 50.4(b)(1), one copy of this report is provided to the Region IV Regional Office, and one copy is provided to the Palo Verde NRC Resident Inspector.

If you have any questions, please contact Dan Marks, Section Leader, Compliance, at (623) 393-6492.

Sincerely,

Gregg R. Overbeck

Attachment

cc: Regional Administrator, NRC Region IV (all with attachment)
J. N. Donohew (Project Manager)
N. L. Salgado (Sr. Resident Inspector)
Assistant General Counsel for Materials Litigation and Enforcement
Rulemaking and Adjudication Staff

A101

Attachment

Palo Verde Nuclear Generating Station Unit 1

Special Report No. 1-SR-2003-001

Boron Deposit Found at Control Element Drive Mechanism Vent

Docket No. STN 50-528

Reporting Requirement:

The NRC Order EA-03-009, "Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," (accession number ML0303804700,) dated February 11, 2003, Section IV.D requires that identified leaks or boron deposits be inspected to verify the integrity of the affected area and penetrations.

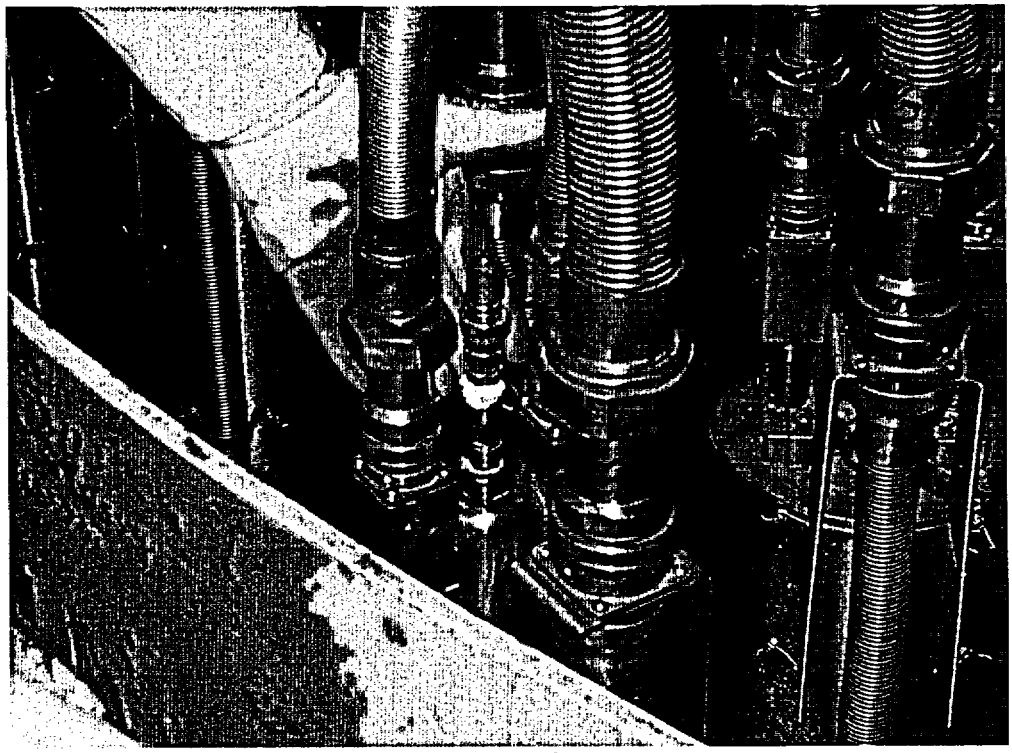
Additionally, Section IV.E of the NRC Order requires that the licensee shall submit a report detailing the inspection results performed per section IV.D within sixty (60) days after returning the plant to operation if a leak or boron deposit was found during the inspection.

Background:

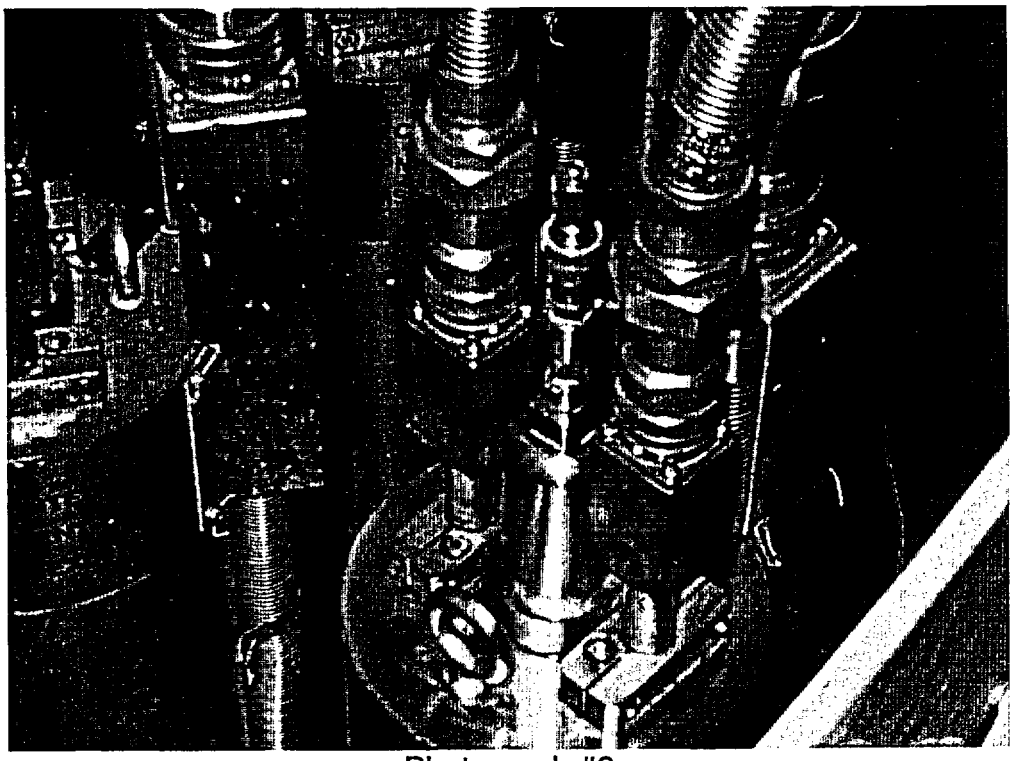
On March 27, 2003, at approximately 09:43 Mountain Standard Time Palo Verde Nuclear Generating Station Unit 1 was manually tripped from approximately 98% rated thermal power due to a condenser tube plug failure. Visual inspections were performed to identify potential boric acid leaks from pressure-retaining components above the reactor pressure vessel (RPV) in accordance with the Palo Verde boric acid walkdown procedure, 70TI-9ZC01. Unit 1 was returned to operation (Mode 1) on March 31, 2003 at approximately 21:30 Mountain Standard Time.

Report Detailing Inspection Results:

One leak site above the RPV head was identified in the inspection. The leak was located on the Versa-Vent for control element drive mechanism (CEDM) # 88. The slight leak was not active and did not contact carbon steel. The attached photograph #1 shows the affected area. The deposit stayed in the area of the vent and did not make it down to the RPV head or related insulation. The source was most likely the vent ball / seating surface interface. The attached photograph #2 shows the affected area after the existing boron accumulation had been removed. A work order was initiated to rework the vent during the next Unit 1 refueling outage currently scheduled to start on April 4, 2004.



Photograph #1



Photograph #2