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

Subject: Beaver Valley Power Station (BVPS), Unit No. 1
BV-1 Docket No. 50-334, License No. DPR-66
NRC Bulletin 2004-01 Inspection 60-Day Report for 1R16

References:

1. NRC 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," dated May 28, 2004.
2. FirstEnergy Nuclear Operating Company (FENOC) 60-Day Response to NRC Bulletin 2004-01 for BVPS (Letter L-04-081 dated July 27, 2004).
3. FENOC Supplemental Response to NRC Bulletin 2004-01 for BVPS (Letter L-04-128 dated September 29, 2004).

During the recent BVPS Unit 1 1R16 Refueling Outage, a visual inspection of Alloy 82/182/600 material locations in the pressurizer penetrations and steam space piping, within the scope of NRC Bulletin 2004-01 (Reference 1), was performed. This inspection was conducted per the FENOC response for BVPS (References 2 and 3) to the Bulletin. In accordance with the Bulletin, a 60-day report, detailing the inspection results, is being provided. The BVPS Unit 1 Evaluation Report for 1R16 Pressurizer Penetration Inspections is enclosed with this letter.

There are no new regulatory commitments contained in this letter. If there are any questions concerning this matter, please contact Mr. Larry R. Freeland, Manager, Regulatory Compliance at 724-682-4284.

Sincerely,

L. W. Pearce

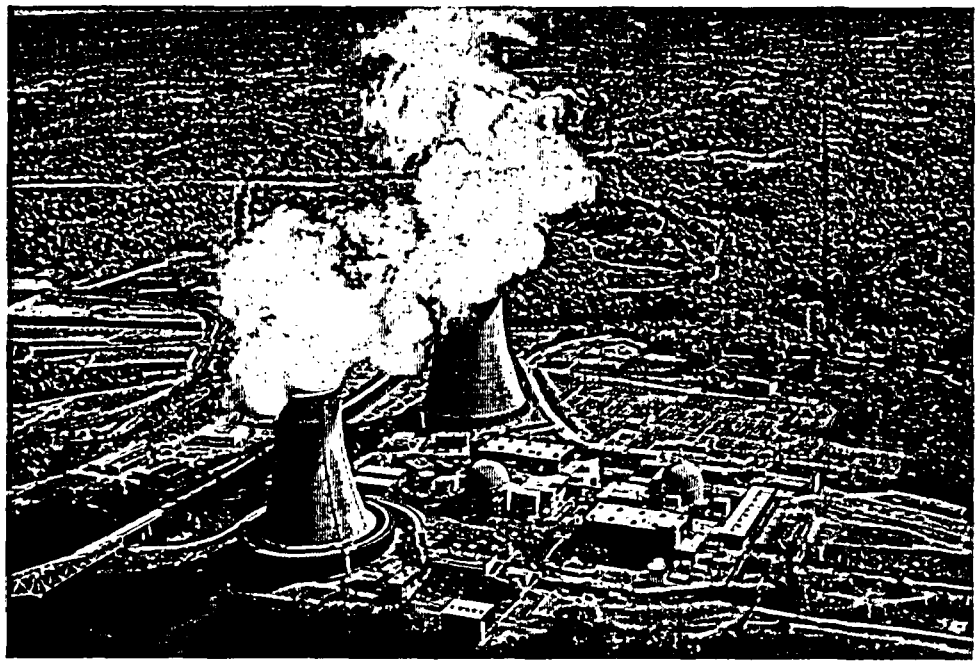
L. William Pearce

Enclosure

A110

c: Mr. T. G. Colburn, NRR Senior Project Manager
Mr. P. C. Cataldo, NRC Sr. Resident Inspector
Mr. S. J. Collins, NRC Region I Administrator

FirstEnergy Nuclear Operating Company (FENOC)



Evaluation Report for

1R16

Beaver Valley Unit 1

Pressurizer Penetration

Inspections

(Ref: NRC Bulletin 2004-01)

December 2004

Introduction

NRC Bulletin 2004-01 was issued on May 28, 2004, advising PWR licensees that current methods of inspecting Alloy 82/182/600 materials used in the fabrication of pressurizer penetrations and steam space piping connections may need to be supplemented with additional measures to detect and adequately characterize flaws due to primary water stress corrosion cracking (PWSCC). The Bulletin also requested that licensees provide information related to the materials of fabrication of these locations, as well as, the scope, method, and frequency of past and future inspections of these locations to ensure that degradation of Alloy 82/182/600 materials used in the fabrication of pressurizer penetrations and steam space piping connections will be identified, adequately characterized, and repaired. BVPS responded to Bulletin 2004-01 via FENOC letter L-04-081, dated July 27, 2004.

The BVPS Unit 1 commitment to Bulletin 2004-01 for the 1R16 refueling outage is as follows:

> A 100% bare metal visual inspection of the five (5) Alloy 82/182 nozzle-to-safe-end welds associated with the pressurizer spray (1), relief (1), and safety (3) nozzles. (Reference: L-04-081, dated July 27, 2004).

These nozzles represent the only BVPS Unit 1 Alloy 600/82/182 locations in the pressurizer penetrations and steam space piping connections within the scope of Bulletin 2004-01.

In addition, BVPS provided a supplemental response to Bulletin 2004-01 via FENOC letter L-04-128, dated September 29, 2004, in which BVPS stated:

> ...if circumferential cracking is observed in either the pressure boundary or non-pressure boundary portions of any locations covered under the scope of the Bulletin, FENOC will enter the issue into the BVPS Corrective Action Program, develop plans to perform an adequate extent-of-condition evaluation, and will discuss those plans with cognizant NRC technical staff prior to restarting the affected unit.

The BVPS 1R16 bare metal visual inspections of these Alloy 82/182 weld locations was planned prior to this Bulletin commitment in response to the "Needed" recommendation identified in Materials Reliability Program (MRP) 2004-05, dated April 2, 2004, and as part of the BVPS Alloy 600/690 Management Program.

Pressurizer Nozzle Configuration

The five BVPS Unit 1 Alloy 82/182 pressurizer nozzle-to-safe-end welds are configured as shown in the Figure below. The safety (3) and relief (1) nozzle are 6" nozzles. The spray (1) nozzle is a 4" nozzle. All nozzle-to-safe-end welds are full penetration butt welds.

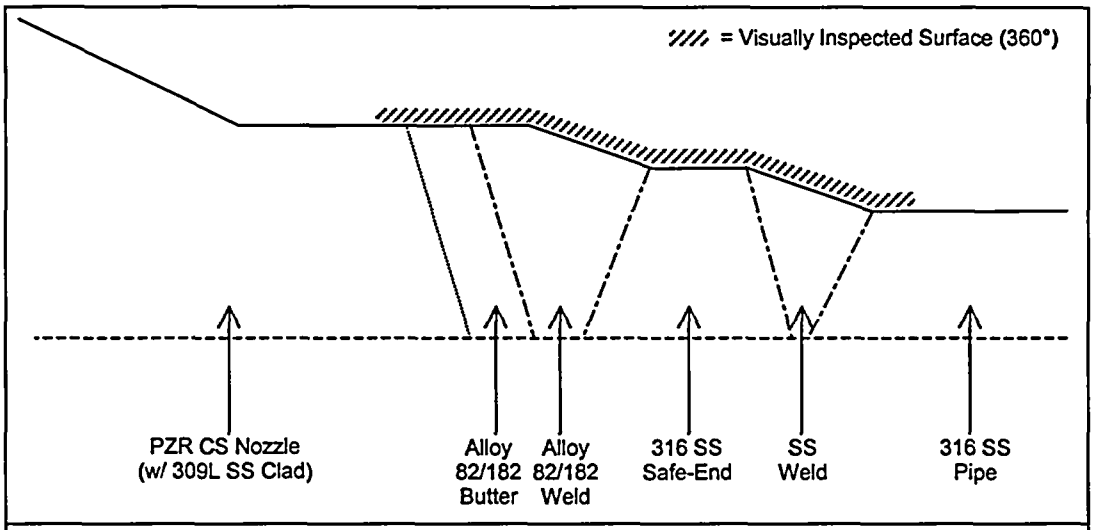


Figure: BVPS Unit 1 PZR Nozzle Configuration

Inspections Performed

In order to facilitate the visual inspections of the five pressurizer nozzles, insulation was removed around each nozzle. Bare metal visual inspections were performed 360° around each nozzle, covering 100% of the outside diameter surface from the carbon steel nozzle base material out to the stainless steel pipe, including the Alloy 82/182 buttering and weld. The inspections were documented on still images and visual inspection logs. All examinations were performed by FENOC VT-2 qualified personnel, and approved by the FENOC Level III visual inspector.

Inspection Results

The bare metal visual inspections conducted on the five Alloy 82/182 pressurizer steam space nozzles during 1R16 identified no indications of RCS leakage or nozzle weld cracking. Inspection results were documented via still images and visual inspection reports, and the insulation was re-installed.

Summary

The five (5) Alloy 82/182 nozzle-to-safe-end welds associated with the pressurizer spray (1), relief (1), and safety (3) nozzles are the only BVPS Unit 1 components within the scope of NRC Bulletin 2004-01. Bare metal visual inspections were completed during 1R16 in accordance with BVPS commitments identified in FENOC Bulletin response L-04-081. The visual inspections identified no indications of leakage from any of the five pressurizer nozzles. As such, the action addressed in BVPS supplemental Bulletin response L-04-128 did not apply during 1R16. Future inspections will be performed in accordance with the frequencies and methods previously identified in BVPS commitments to Bulletin 2004-01.