VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 14, 2007

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
11555 Rockville Pike
Rockville, Maryland 20852

Serial No. 07-0717
NAPS/ETS R1
Docket No. 50-338
License No. NPF-4

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNIT 1
ORDER EA-03-009 SIXTY-DAY REPORT
REACTOR PRESSURE VESSEL HEAD INSPECTION RESULTS

On February 20, 2004, the NRC issued the First Revised Order (EA-03-009) establishing interim inspection requirements for reactor pressure vessel heads. In accordance with the Order's inspection and reporting requirements, this letter provides the results of the visual inspections performed to identify potential boric acid leaks from pressure-retaining components above the reactor pressure vessel head (RPVH) during the North Anna Unit 1 fall 2007 refueling outage.

If you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Sincerely,

Gerald T. Bischof
Vice President – Nuclear Engineering

Commitments made in this letter: None

Attachment: Sixty-Day Report - Reactor Pressure Vessel Head Inspection Results - North Anna Power Station Unit 1

CC: U.S. Nuclear Regulatory Commission
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Attachment

Order EA-03-009
Sixty-Day Report - Reactor Pressure Vessel Head Inspection Results
North Anna Power Station Unit 1

Virginia Electric and Power Company
(Dominion)

Sixty-Day Report Reactor Pressure Vessel Head Inspection Results North Anna Power Station Unit 1

Introduction

During the North Anna Unit 1 fall 2007 refueling outage (N1R19), Virginia Electric and Power Company (Dominion) performed an examination of the reactor vessel head to meet the First Revised NRC Order EA-03-009 issued February 20, 2004. This examination consisted of a bare metal visual examination of the head surface (including 360° around each RPV head penetration nozzle).

Inspections

The bare metal visual examination used remote techniques to examine the vessel head surface and penetration areas behind the shroud. Direct visual examination techniques were performed to examine the vessel head surface outside the shroud down to the vessel flange.

Boric acid was observed on penetration number 49, but the boric acid was determined to be from a leaking mechanical connection for Core Exit Thermocouple Nozzle Assembly (CETNA) No. 2. Some penetration masking was observed at five penetrations due to the accumulation of debris. Isotopic analyses were performed on representative samples of the debris, which did not identify the presence of active boric acid leakage.

The bare metal visual examination performed consisted of a combination of an as-found condition and as-left condition examination. An as-found visual examination of the head surface and head penetration annulus region was performed to document the condition of the unmasked regions of the head and extent of the masking. The head surface was then cleaned to remove all debris that obstructed an effective bare metal visual examination. An as-left examination was performed of the entire head (>95%) to determine the condition of the head and to establish a baseline condition for comparison with future bare metal examinations.

Examination results

The as-left bare metal visual examination revealed no evidence of degradation of the head surface or evidence of leakage. Greater than 95% of the head surface and 360° around each head penetration was effectively examined with the bare metal visual examinations performed this outage. The area of the PRV head surface obscured by support structure interferences, which are located at the RPV head elevations down slope from the outermost RPV head penetration, was unable to be effectively examined with the bare metal visual examination. However, the bare metal visual examination of the remaining head surface included those areas of the RPV head upslope and downslope from the support structure interferences to specifically identify any evidence of boron or corrosive product. No evidence of any boron or corrosive products was identified in these regions.