



Constellation Nuclear

Calvert Cliffs Nuclear Power Plant

*A Member of the
Constellation Energy Group*

June 27, 2002

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
30 Days After Plant Restart Responses to NRC Bulletins 2001-01, 2002-01, and
Supplement to the 15-day Response to Bulletin 2002-01

REFERENCES:

- (a) NRC Bulletin 2001-01: Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles, dated August 3, 2001
- (b) NRC Bulletin 2002-01: Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity, dated March 18, 2002
- (c) Memorandum from D. M. Skay (NRC) to R. Laufer (NRC), "Documentation of Conference Call to Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 on June 4, 2002, Regarding Response to Bulletin 2002-01"

The purpose of this letter is to forward Calvert Cliffs Nuclear Power Plant, Inc.'s (CCNPP's) "30 Days After Plant Restart" responses to Nuclear Regulatory Commission (NRC) Bulletin 2001-01 (Reference a) and Bulletin 2002-01 (Reference b). Additionally, as agreed upon during the June 4, 2002 conference call with the NRC staff (Reference c), we are providing supplemental information to our 15-day response to Bulletin 2002-01.

Bulletin 2001-01 was issued, "to: (1) request that addressees provide information related to the structural integrity of the reactor pressure vessel head penetration (VHP) nozzles for their respective facilities, including the extent of VHP nozzle leakage and cracking that has been found to date, the inspections and repairs that have been undertaken to satisfy applicable regulatory requirements, and the basis for concluding that their plans for future inspections will ensure compliance with applicable regulatory requirements, and (2) require that all addressees provide to the NRC a written response in accordance with the provisions of 10 CFR 50.54(f)."

Bulletin 2002-01 was issued to require pressurized-water reactor addressees, "to submit: (1) information related to the integrity of the reactor coolant pressure boundary including the reactor pressure vessel head and the extent to which inspections have been undertaken to satisfy applicable regulatory requirements, and (2) the basis for concluding that plants satisfy applicable regulatory requirements related to the structural integrity of the reactor coolant pressure boundary and future inspections will ensure continued

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ATTACHMENT (1)

**30 DAYS AFTER PLANT RESTART RESPONSES TO
BULLETINS 2001-01 AND 2002-01 AND SUPPLEMENT TO
CALVERT CLIFFS NUCLEAR POWER PLANT'S
15-DAY RESPONSE TO BULLETIN 2002-01**

ATTACHMENT (1)

**30 DAYS AFTER PLANT RESTART RESPONSES TO
BULLETINS 2001-01 AND 2002-01 AND SUPPLEMENT TO
CALVERT CLIFFS NUCLEAR POWER PLANT'S
15-DAY RESPONSE TO BULLETIN 2002-01**

Bulletin 2001-01 Requested Information 5

Addressees are requested to provide the following information within 30 days after plant restart following the next refueling outage:

- a. a description of the extent of vessel head penetration (VHP) nozzle leakage and cracking detected at your plant, including the number, location, size, and nature of each crack detected;
- b. if cracking is identified, a description of the inspections (type, scope, qualification requirements, and acceptance criteria), repairs, and other corrective actions you have taken to satisfy applicable regulatory requirements. This information is requested only if there are any changes from prior information submitted in accordance with this bulletin.

CCNPP Response

- a. Calvert Cliffs Unit 1 completed a 100% visual examination of the top of the reactor vessel head either under insulation or with insulation removed. The complete circumference of every nozzle was examined. There was no evidence of leakage of reactor coolant through the alloy 600 nozzles or their attachment welds. There was no degradation of the reactor vessel head. We conclude there are no throughwall cracks or leaks on the Calvert Cliffs Unit 1 reactor vessel head.
- b. Since no cracking or leakage was identified this question is not applicable.

Bulletin 2002-01 Required Information 2

Within 30 days after plant restart following the next inspection of the reactor pressure vessel head to identify any degradation, all pressurized-water reactor addressees are required to submit to the Nuclear Regulatory Commission (NRC) the following information:

- a. the inspection scope (if different than that provided in response to Item 1.D) and results, including the location, size, and nature of any degradation detected,
- b. the corrective actions taken and the root cause of the degradation.

CCNPP Response

- a. Calvert Cliffs Unit 1 completed a 100% visual examination of the top of the reactor vessel head either under insulation or with insulation removed. The complete circumference of every nozzle was examined. There was no evidence of leakage of reactor coolant through the alloy 600 nozzles or their attachment welds. There was no degradation of the reactor vessel head. We conclude there are no throughwall cracks or leaks on the Calvert Cliffs Unit 1 reactor vessel head.
- b. Since no cracking or leakage was identified this question is not applicable.

Supplement to Bulletin 2002-01 15-Day Response

NRC Question 1

Your 15-day response to Bulletin 2001-01 indicated that the boric acid observed during your recent Unit 1 outage was attributable to a previous incore instrumentation (ICI) flange penetration leak. Provide your

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basis for concluding that the source of the boric acid was the previous ICI leakage event. Discuss whether or not the deposits could be masking leakage from the control element drive mechanism (CEDM) nozzles.

CCNPP Response

The boric acid deposits observed during the 2002 Unit 1 refueling outage were formed in a donut shape nearby the ICI nozzle, directly below the insulation gap. The leakage from the ICI flange connection occurred above the insulation and flowed through gaps in the insulation to form the donut shape residue on the vessel head. No trails of boric acid were found from the CEDM nozzles. Therefore, we concluded that the deposits could not have been formed by leakage from the CEDM nozzles.

NRC Question 2

With regards to the boric acid residue found during the Unit 1 inspections in 2002, your 15-day Bulletin 2002-01 response stated that there was no evidence of structurally significant degradation. Quantify any degradation that was identified (i.e., even if the degradation was not structurally significant).

CCNPP Response

Following removal of the boric acids deposits found during the Unit 1 inspections, we observed some surface discoloration (rust) beneath the deposits. We concluded that the surface rust was not detrimental to the structural integrity of the reactor vessel.