

# CATEGORY 1

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SUBJECT: Submits results of drywell & suppression pool inspections, in response to NRC Bulletin 96-003, "Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in BWRs."

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 TITLE: NRC Bulletin 96-03, "Potential Plugging of ECCS Strainers by Debris in BWRs."

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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August 4, 1997  
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Docket No. 50-397

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21, RESULTS OF DRYWELL AND SUPPRESSION POOL INSPECTIONS**

- References:
- 1) Letter, dated April 11, 1997, WH Bateman (NRC) to JV Parrish (SS), "Response To NRC Bulletin 96-03, 'Potential Plugging of Emergency Core Cooling Suction Strainers By Debris In Boiling Water Reactors' (TAC NO. M96175)"
  - 2) Letter, dated June 5, 1997, TG Colburn (NRC) to JV Parrish (SS), "Response To NRC Bulletin 96-03, 'Potential Plugging of Emergency Core Cooling Suction Strainers By Debris In Boiling Water Reactors' for Washington Public Power Supply System (WPPSS) Nuclear Project No 2 (WNP-2) (TAC M96175)"

In Reference 1 the staff requested that the Supply System verify that the following inspections were conducted following R12:

- (1) Perform an inspection of the drywell to verify that insulation is not damaged and is properly installed and that any insulation that is damaged or is not properly installed is repaired or replaced. The inspection should be reasonably thorough but may be limited based on your knowledge of the present condition of the insulation and ALARA considerations.
- (2) Perform a thorough drywell and suppression pool closeout inspection to verify that all foreign material has been removed such as maintenance tools, equipment, construction materials, and miscellaneous debris. This inspection should include the downcomers.

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In Reference 1 the staff also requested that the Supply System provide a summary of the results of the inspections within 30 days after startup from the Spring 1997 refueling outage. Furthermore, in Reference 2 the staff provided additional guidance for evaluating insulation found to be discolored.

The drywell insulation inspection and the drywell and suppression pool closeout inspections have been completed satisfactorily. The drywell and suppression pool closeout inspections were performed in the latter part of the refueling outage prior to establishing foreign material control accountability for each area inside containment. Foreign material control is established per plant procedure PPM 1.3.18A, "Drywell/Wetwell Foreign Material Control." This procedure provides instructions for maintaining control of all items entering the drywell which could fit into the wetwell downcomer openings, and any items introduced to the wetwell which might clog the ECCS pump suction strainers, pass through the strainers and damage the ECCS pump internals, or interfere with the pressure suppression function.

The insulation inside the drywell was observed to be in good condition. The insulation installed in high traffic areas showed more signs of wear than the insulation in the remote areas. The scope of the inspection included the accessible areas of the drywell from the 590' to the 499' level. Insulation located within HIGH-HIGH radiation areas was not given a close up inspection, but was observed from radiation protection boundaries and found to be in good repair. No reflective metal insulation was identified as needing repair or replacement. Fiber blanket insulation was repaired or replaced in 21 areas.

Only one location in the drywell was observed to have discolored insulation. The discoloration was due to condensation from an adjacent cooling unit. The insulation in this location was determined to be in good condition. The discoloration is not expected to affect the performance or strength of the insulation.

Prior to the drywell closeout inspections, laborers performed cleaning of the drywell. This cleaning included the removal of outage maintenance consumables such as tape, plastic sheets, and paper. In addition, drywell surfaces were vacuumed. Drywell coordinators also periodically toured the area and identified additional areas to be cleaned. The drywell cleaning was a team effort that used many personnel, each working to reduce the presence of foreign materials. A preliminary closeout inspection was then performed, specifically looking for tape, plastic sheets, paper, and other foreign materials. Several drywell locations were identified during this inspection as requiring additional cleaning. The final drywell closeout inspection was then completed and the drywell was found to be in acceptable condition. Many of the ropes, plastic sheets, scaffolding materials, and other equipment observed during the preliminary inspection had been removed. The remaining foreign materials inside the drywell (scaffolding, protective insulation covers, etc.) that were required to stay in the drywell to support the refueling outage were then tracked and accounted for using the Foreign Materials Control process prior to final containment closeout and plant startup.

A suppression pool closeout inspection above and below the suppression pool (or wetwell) water line was also completed. Many of the items identified during the "above the water line" inspection were in place to support the "below the water line" wetwell dive. These items included



Figure 1 displays a series of eight photographs arranged in a 4x2 grid, illustrating the progression of hair regrowth over time. The columns are labeled 'Before' and 'After', and the rows are labeled '16 weeks', '12 weeks', '8 weeks', and '4 weeks' from top to bottom. The 'Before' column shows a patient with significant hair loss, particularly in the frontal and crown areas. The 'After' column shows the same patient with significant hair regrowth, particularly in the frontal and crown areas, indicating a positive response to the treatment.

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scaffolding, temporary shielding, dive gear, and life rings, and were subsequently tracked by the Foreign Materials Control process. The "below the water line" inspection included the wetwell surfaces (walls, floor), each of the 102 downcomers, and all suction strainers in the suppression pool. This inspection resulted in miscellaneous pieces of tape, plastic, and other debris being removed. After the suppression pool closeout inspection, the Foreign Materials Control process was initiated and maintained prior to final containment closeout and plant startup.

In addition to the above inspections, an additional closeout inspection of the drywell and wetwell was performed in accordance with plant procedures just prior to securing the containment for plant startup. These inspections were performed by the Operations department and provided further verification that loose debris was identified and removed from the drywell and suppression pool areas, and a verification that the Foreign Materials Control process was effective in maintaining foreign material accountability. Furthermore, the NRC resident inspectors toured the drywell and wetwell prior to plant startup and found overall cleanliness conditions satisfactory. They noted some discrepancies, including insulation damage, that were evaluated and corrected accordingly.

Should you have any questions or desire additional information regarding this matter, please contact me or Mr. P. J. Inserra at (509) 377-4147.

Respectfully,

  
P.R. Bemis  
Vice President, Nuclear Operations  
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