

Docket No. 50-324

MAR 2 1988

DISTRIBUTION:

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PD21 r/f ACRS (10)
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Dear Mr. Utley:

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2, INTERGRANULAR STRESS
CORROSION CRACKING INSPECTION PLAN (TAC NO. 66546)

The NRC staff has reviewed your submittals dated October 2 and December 30, 1987, regarding the intergranular stress corrosion cracking (IGSCC) inspection/repair plan for Unit 2 during the Reload 7 Outage. Your October 2 submittal contained an indication that the inspections will be performed in accordance with the draft NUREG-0313, Revision 2, with 72 welds scheduled for inspection using the automated GE SMART UT system (where physical clearances will allow).

Based on the information provided in the October 2 submittal, the proposed IGSCC inspection plan is acceptable. Also, based on the information provided in the December 30, 1987 submittal, as supplemented by information provided during our January 27, 1988 meeting, the use of the mechanical stress improvement process (MSIP) on the 28-inch recirculation nozzles, A1 and B1, is acceptable.

However, we have enclosed comments regarding the inspection plan and the proposed mitigation and repair of Inconel butter welds. These comments should be addressed in the outage inspection/repair report to be submitted at least two weeks prior to the restart of Unit 2 from the Reload 7 Outage.

The reporting and/or recordkeeping requirements contained in this letter, affect fewer than ten respondents; therefore OMB clearance is not required under P.L. 96-511.

Sincerely,

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BB03080293 BB0302
PDR ADOCK 05000324
G PDR

Ernest D. Sylvester, Project Manager
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Division of Reactor Projects I/II

Enclosure: As stated

cc w/enclosure:
See next page

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ENCLOSURE

COMMENTS ON BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

INTERGRANULAR STRESS CORROSION CRACKING (IGSCC) INSPECTION PLAN

DOCKET NO. 50-324 (TAC NO. 66546)

- (1) The October 2, 1987 submittal did not provide detailed information on how the welds in each category were selected for inspection. We request that such selection criteria be provided at the time of reporting the inspection results.
- (2) The listing of Category A weldments should also include the piping welds made of low carbon austenitic stainless steel materials such as 316NG and 304L.
- (3) In CP&L's submittal, the mechanical stress improvement process (MSIP) and pipelock are proposed for mitigation or repair of selected Inconel butter welds. We verbally informed CP&L that, depending on the orientation and size of the flaws in the welds, the proposed mitigation or repair of Inconel butter welds may not be acceptable to the staff. In a December 10, 1987 meeting, CP&L presented a plan to mitigate two axially flawed 28-inch nozzle welds by MSIP for NRC staff information. The proposal was supported by detailed fracture mechanics evaluation. These two nozzle welds were found to contain minor axial flaws during the last refueling outage and were left in an as-is condition. Subsequently, by letter dated December 30, 1987, CP&L again proposed the use of MSIP for these axial flaws in the event that crack growth does not exceed 70% of the throughwall thickness. In a meeting on January 27, 1988, the licensee informed the staff that during the on-going IGSCC inspection, these flaws were found to have not grown. As noted in NUREG-0313, Revision 2, issued by Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," dated January 25, 1988, MSIP is considered as an acceptable mitigation process for IGSCC susceptible weldments. However, it is considered effective only when applied to uncracked weldments or weldments with short or shallow circumferential cracks. The details of the use of MSIP at Brunswick should be addressed in the Reload 7 Outage IGSCC inspection/repair report.