

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 1
VOIDS IN UNIT 1 PRIMARY CONTAINMENT DOME
NCR'S 1061 AND 1070
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

This deficiency actually encompasses two separate nonconformances. These nonconformances are described below.

During rebar placement in preparation for the second concrete lift on the unit 1 primary containment dome, it was discovered that voids existed between the outer liner surface and inner surface of the nine-inch preliminary dome pour. Hammer sounding revealed suspect areas across the dome. A description of these areas in the nine-inch pour was given in Nonconformance 1061. Sounding also revealed four suspect areas in the vicinity of the primary containment ring girder. These four areas are described in Nonconformance 1070.

Interim Progress

As stated in our first interim report, repair has been completed and documented for NCR 1061. For NCR 1070, suspect areas 1 and 2 are small enough to be acceptable and will not require any repair or further investigation. A small exploratory hole will be drilled through the liner plate in the lower portion of each of suspect areas 3 and 4. If it is determined that the condition is broken bond between the liner plate and concrete, then no concrete repair will be necessary and the holes in the liner plate will be repaired by welding.

However, if voids exist, a second hole will be drilled through the liner plate near the top of the void. Grout will be forced into the void through the lower hole until the void is completely filled, as evidenced by the flow of grout from the upper hole. The volume of grout used will be recorded. After the grout has hardened, the repaired areas will be sounded to verify the adequacy of the repair, and the holes in the liner plate will be repaired.

It has not been verified at this time that suspect areas are voids. However, voids could be caused by lack of thorough vibration of concrete in areas heavily congested by reinforcing steel and liner stiffeners. During placement of unit 2 dome concrete, closer surveillance will be maintained on concrete slump, temperature, and vibration. Particular care will be exercised in the placement and vibration of concrete in congested areas.

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