



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Docket File

November 19, 1971

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, DRL

THRU: C. G. Long, Chief, PWR Project Branch No. 2, DRL

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NOVEMBER 16, 1971, SITE VISIT TO METROPOLITAN EDISON COMPANY - THREE MILE ISLAND PLANT, UNIT 1 AND 2 (DOCKET NOS. 50-289 AND 50-320)

Primary purpose of the site visit was to get a first hand look at the cavities in the concrete poured in the ring girder area of the containment structure of Unit 1, as discussed in a meeting with the applicant on November 3, 1971, in Bethesda. Mr. L. Beratan, Compliance, Bethesda, and Mr. S. Folsom, Compliance, Region I, participated in the site visit. A list of the principal persons contacted is enclosed.

The applicant has obtained so far, five bore cores from the ring girder segments containing the lower trumpets, none from other segments. The cores were inspected and they indicate that solid concrete exists beyond the cavities. Visual inspection of the boreholes with a borescope had started, but no results were available.

At the November 3, 1971, meeting the applicant said that a shallow survey for cavities was performed by probing the solid concrete at close intervals with a 4 inch long steel bit. To avoid cracking of solid concrete he now uses a rotating steel bit.

The cross^{sec}tion of a mockup of a repaired cavity was inspected. A good bonding between existing and fresh concrete was obtained using an epoxy bonding material. However, the mockup itself and the repair procedures used represent simplified conditions. No rebar, tendon conduits or any other steel was used. The cavity therefore, was not a natural one. Excavation of the cavity with air hammers was not necessary thus eliminating possible cracks in the solid concrete. Filling the cavity with concrete was greatly simplified due to the absence of any structural material. Tests were not intended to be performed to determine the strength of the interface.

The northside of the ring girder area was inspected. Cavities exist over the entire 180°. At the present the applicant is proceeding with preparations for the repair. Most of the rebar and all damaged tendon conduits are being cut out and the cavities are being excavated. Removal of a large amount of solid concrete is necessary in some areas to gain access to cavities behind the trumplates. The high concentration of various steel components in the affected region complicates the procedure greatly.

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The applicant is proceeding with completing the containment structure. The pouring of concrete in 90° segment of the outer dome ring was observed.

The applicant stated that he will continue with the excavation and re-installation of rebar and tendon conduits; however, he will not proceed with pouring concrete in the cavity until our review of his repair procedures is completed. I emphasized the need to document these procedures in detailed form as soon as possible so that there will be sufficient time for review by the staff. At the present the applicant intends to have all repairs completed by April 1972.

H. Schierling

H. Schierling
PWR Project Branch No. 2
Division of Reactor Licensing

Personnel Contacted

Metropolitan Edison - General Public Utilities

J. H. Wright
M. J. Stromberg

United Engineers

R. J. Vurpillat
J. C. McKee
F. L. Reed

Gilbert Associates

K. E. Nolland

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