IE File

Date: MAY 5 1976

TRANSFER OF LEAD RESPONSIBILITY

Serial No.: IE-RID-76-11

To: R. C. DeYoung, Assistant Director for Light Water Reactors, DPM

Subject: APPARENT DELAMINATION OF THE CONTAINMENT DOME AT CRYSTAL RIVER, UNIT NO. 3, DOCKET NO. 50-302

Responsible Branch Chief: K. V. Seyfrit

Description of Item Requiring Resolution:

On April 17, 1976, the licensee, Florida Power Corporation, reported under the requirements of 10 CFR 50.55(e) that an anchor bolt which was to transfer load to the concrete of the dome had failed to provide sufficient load resistance. Upon further investigation the licensee noted a void in the dome volume in the vicinity of the anchor bolt.

Additional effort has been underway by the licensee with the following tentative information now being available.

1. Nine 4-inch diameter cores have been removed and these indicate the void is apparently the result of a delamination within the 3'-0" dome thickness.
2. At the dome apex the delamination is about 18 inches below the outer dome surface and indicates a delaminated space of about 1-1/2 to 1-3/4 inches radially to the dome. At a point about 6' upward along meridians from the dome-ring girder intersection the delamination is 3 inches below the outer dome surface and indicates very little separation. No cracking is apparent on the surface.
3. A sawed cut-out section of 1' x 2' was made near the anchor which verified the findings made from the core borings.
4. The licensee's consultant, Gilbert Associates, is at the site and additional testing is being performed. Equipment on site includes sonic testing equipment.
5. The licensee has indicated that the delamination may have occurred on December 10, 1974 when a large "boom" was heard which could have

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been the result of the formation of the separation. Investigations at that time revealed no signs of distress. Nearly two-thirds of the dome tendons were stressed at that time.

Based on the information available at this time, it would appear that the delamination is similar to that which occurred at Turkey Point, Unit No. 3, and was reported on August 6, 1970.

Recommendations and Proposed Course of Action:

1. The Office of Nuclear Reactor Regulation will review and evaluate the information associated with this apparent delamination to determine its safety significance.

   Consideration should include, but not be limited to: the original design and the ability of the structure as it now exists to perform the intended function; the additional damage that could result from certain repair programs; the protection of the strength elements from the environment over the plant life; and the instrumentation and test program currently in existence for the structure and the possible repairs which can be made if needed.

2. At the conclusion of the review and evaluation, NRR will notify the Office of Inspection and Enforcement (IE) of the results of the study. If, at the conclusion of the review and evaluation, there is a need for additional information from, or new requirements for the licensee, both the licensee and IE will be so advised by NRR.

3. IE will provide additional information related to this subject as requested or as field information becomes available. Additionally, IE will conduct inspections to confirm the licensee's compliance with new requirements, if any are deemed necessary as a result of the NRR review.

Concurrence:

Original signed by
B. H. Grier

Boyce H. Grier, Director, Division of Reactor Inspection Programs, IE Date

Original signed by R. C. DeYoung

R. C. DeYoung, Assistant Director for Light Water Reactors, DPM Date