UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
Washington, D.C. 20555

INSPECTION AND ENFORCEMENT MANUAL

TEMPORARY INSTRUCTION 2500/16

INSPECTION TO DETERMINE IF A POTENTIAL SEISMIC INTERACTION EXISTS BETWEEN THE MOVABLE IN-CORE FLUX MAPPING SYSTEM AND SEAL TABLE AT WESTINGHOUSE DESIGNED FACILITIES OR FACILITIES WITH SIMILAR DESIGNS

2500/16-01 Purpose

This temporary instruction (TI) provides guidance for inspecting PWR facilities with movable in-core flux mapping systems to determine whether PWR licensees and applicants have performed a system review as a result of IE Information Notice 85-45, "Potential Seismic Interaction Involving The Movable In-Core Flux Mapping System Used in Westinghouse Designed Plants" (Enclosure 1). A Westinghouse (W) Generic letter concerning this problem (Enclosure 2) described the problem and recommended analysis, but did not recommend corrective action.

2500/16-02 Objective

Westinghouse designed plants should be specifically inspected to determine if licensees have reviewed the structural adequacy of their system as recommended by W in their generic letter. It also should be determined whether applicants have implemented any design modifications as a result of the design review. PWR facilities with similar designs also should be inspected to determine what actions, if any, were taken in response to the IE Information Notice.

2500/16-03 Background

On June 22, 1984, Carolina Power and Light Co. (CP&L) informed the NRC of a potential 10 CFR 21 report concerning a design deficiency at their Shearon Harris facility, which is under construction. The report defined a potential seismic interaction between the guide tubes at the seal table and the portions of the flux mapping equipment located above the seal table. The basic problem can be characterized as the classical "class II system over a class I system" situation. Drawings of a typical W in-core flux mapping system are included as Enclosures 3 and 4. CP&L requested W to perform a structural integrity analysis of the in-core flux mapping system. Westinghouse reported to CP&L in December 1984 with recommendations to correct the problem.

On February 12, 1985, CP&L forwarded an interim report to the NRC indicating that they determined this subject to be reportable under the provisions of 10 CFR 50.55(e) and 10 CFR 21 and that a final report would be forwarded to the NRC following structural modifications to the system.

As part of the NRC review of the 10 CFR 21 report, W was contacted to determine the generic implications of the problem. A W safety review found the problem to be a potential significant deficiency and a potential unreviewed safety question. W notified all nuclear power facilities using the W-supplied nuclear steam supply systems of the problem, first by phone and later by letter (Enclosure 2). In this letter, W recommended that each utility investigate the adequacy of the restraints provided for the flux mapping system under seismic loadings.

Further discussions among the NRC, W, and the W Owners Group Regulatory Response Group (RRG) were conducted. On June 10, 1985, the RRG forwarded a letter (Enclosure 5) to the NRC staff that indicated they did not believe a significant safety issue requiring immediate licensee action existed. They did indicate that there was a need to review the structural adequacy of the flux mapping system to preclude any possible interaction with the guide tubes at the seal table. Following these discussions IE Information Notice (IN) 85-45 (Enclosure 1) was issued to all licensees.

2500/16-04 INSPECTION REQUIREMENTS

Inspection effort should be undertaken to ensure that the W recommendations, or appropriate alternate actions, have been implemented and that IE IN 85-45 was received by the utility. Should analysis indicate that an interaction exists, the licensee's plans to correct the deficiency should be recorded in an inspection report as well as the expected completion date.

Those non-Westinghouse plants with a movable in-core flux mapping system similar to the W design also should be inspected to determine if a potential seismic interaction, like the one described in Enclosure 2, may exist. Should this be the case, the inspector should record this in an inspection report, and the regional office should notify E. L. Jordan as indicated below.

2500/16-05 REPORTING REQUIREMENTS

Findings will be documented in the normal inspection report and a copy will be forwarded to E. L. Jordan, Director, Division of Emergency Preparedness and Engineering Response, Office of Inspection and Enforcement, U. S. Nuclear Regulatory Commission. These findings will be used for assessing adequacy of the licensees' responses to the W generic letter.

2500/16-06 EXPIRATION

This temporary instruction shall remain in effect until March 1, 1987 or until inspections at the affected plants are completed, whichever is sooner.

2500/16-07 IE CONTACT

Questions regarding this temporary instruction should be addressed to D. Powell, (301) 492-8373.

2500/16-08 STATISTICAL DATA REPORTING

For 766 input, record the actual inspection effort against Module No. 25015.

END