POLICY ISSUE
(Information)

Mokar Thadani - I approved EDO changes to say that we will report annually. JMT 8/19

August 18, 1992 SECY-92-285

For: The Commissioners

From: James M. Taylor
Executive Director for Operations

Subject: STATUS REPORT ON THE MARK I CONTAINMENT PERFORMANCE IMPROVEMENT PROGRAM

Purpose: To inform the Commission of the status of the implementation of the Mark I Containment Performance Improvement (CPI) program and our intention to report annually instead of semi-annually in the future.

Background: In the SRM of July 11, 1989, the Commission directed the staff to implement the Mark I CPI program items proposed in SECY-89-017, "Mark I Containment Performance Improvement Program." The staff summarized its previous actions implementing the Commission's directives in its report of February 19, 1992 (SECY-92-054). In that report, the staff summarized the status of the Mark I plants' implementation of the hardened wetwell vent modification, the station blackout (SBO) rule, and other CPI items which were included for implementation in the Commission's Individual Plant Examination (IPE) program. This report summarizes the actions of the staff and the industry on the Mark I CPI program during the past 6-months.

Discussion: In SECY-92-054, the staff stated that it believes that conducting a few audits of the hardened vent designs before the physical modifications are made could give the NRC confidence that the installed hardened vents can perform their intended functions without inadvertently degrading the original design basis of the plant or introducing any situations in which systems could interact in an adverse manner. These audits are planned for fall 1992.

Contact:
M. Thadani, NRR
504-1476

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NOTE: TO BE MADE PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF THIS PAPER.

In SECY-92-054, the staff reported that it was reviewing the analysis submitted by the Power Authority of the state of New York (PASNY) showing that the existing hardened wetwell vent at the James A. FitzPatrick Nuclear Power Plant (FitzPatrick) has a reliable venting capability to meet the overpressure challenges to the FitzPatrick containment integrity posed by postulated severe accidents. The staff evaluated PASNY's analysis and requested that PASNY submit further analysis to verify that the FitzPatrick vent path meets the Boiling Water Reactor Owners Group (BWROG) criteria requiring that the vent paths have an adequate venting capacity, the valves in the vent paths can withstand the conditions of venting, and the radiation monitors in the vent paths can alert the control room operators of any radioactive releases occurring during containment venting. PASNY will submit its response to the staff's questions by August 10, 1992. The staff expects to complete the evaluation of PASNY's response by October 1992.

In a letter of March 13, 1992, Northeast Nuclear Energy Company (NNECO) informed NRC that it moved its installation schedule for hardened vent modification at the Millstone Nuclear Power Station, Unit 1, from January 1993 to early 1994. NNECO indicated that the delay resulted from the extended shutdown of Millstone, Unit 1 in 1991. At the staff's urging, NNECO agreed to plan for earlier hardened vent modifications at Millstone, Unit 1, if an outage of sufficient duration occurred between January 1993 and early 1994. The staff finds NNECO's commitment acceptable and will monitor its activities for hardened vent modifications at Millstone, Unit 1.

In SECY-91-261, the staff discussed the status of its review of the licensees' implementation of the Commission's rule regarding station blackout. The staff reported that the licensees for most plants had used nonconservative assumptions in calculating the adequacy of the battery capacity and heat-up rate of the control room and other areas containing SBO equipment. In SECY-92-054, the staff reported that it expects to resolve these issues by May 1992. The staff also stated that it was working with the Philadelphia Electric Company, the licensee for Peach Bottom Atomic Power Station, Units 2 and 3 (Peach Bottom), to resolve the staff's disagreement with the licensee's claim that an existing emergency diesel generator (EDG) qualifies as an alternate ac source as required by the SBO rule. The staff has completed the review of Mark I plants' compliance with the SBO rule for all plants except the Vermont Yankee Nuclear Power Station and Peach Bottom. The schedule for implementing approved SBO rule actions ranges from March 1992 to December 1995. The staff finds this schedule acceptable.

The staff requested that the Vermont Yankee Nuclear Power Corporation, the licensee for the Vermont Yankee plant, verify that its alternate ac power will be available from the Vernon Hydroelectric Power Station upon demand after an SBO event. If the licensee can confirm that power will be available upon demand, the staff would approve Vermont Yankee's actions as being in compliance with the SBO rule.

The Peach Bottom licensee is considering constructing an underground tie line from Conowingo Hydroelectric Station to Peach Bottom to serve as the alternate ac source to satisfy the requirements of the SBO rule. The staff generally agrees with this proposal but has requested that the licensee confirm that the power from the Conowingo Hydroelectric Station would be available to Peach Bottom in the event of an SBO event. If the licensee can confirm the availability of power, the staff would approve the Peach Bottom proposal for compliance with the SBO rule.

In SECY-91-261, the staff indicated that three of the CPI program items for alternate water supply, enhanced reactor pressure vessel depressurization using the automatic depressurization system (ADS), and emergency procedures and training were incorporated in Individual Plant Examination (IPE) programs as Supplement 1 to Generic Letter (GL) 88-20, "Initiation of the Individual Plant Examination for Severe Accident Vulnerabilities 10 CFR 50.54(f)." In SECY-92-054, the staff reported that the licensees have indicated delays in completing IPE evaluations and submitted an estimated schedule for receiving Mark I plant IPEs. The staff has received the IPE submittals from PASNY for the FitzPatrick plant, Northern States Power (NSP) Company for its Monticello Nuclear Generating Plant, and NNECO for Millstone, Unit 1. The licensees for the Pilgrim plant, Fermi 2, and Hatch, Units 1 and 2, have revised their schedules. The Pilgrim and Fermi 2 IPEs are now expected in September 1992 (after a 5-month delay), and the Hatch, Units 1 and 2 IPEs are now expected in December 1992 (after a 3-month delay).

The staff examined the IPE submittals for FitzPatrick, Millstone Unit 1, and Monticello to verify that they include complete responses to the Mark I CPI program issues in Supplement 1 to GL 88-20. However, the staff is continuing to review these submittals. PASNY has concluded that, based on the insights gained from its IPE for FitzPatrick, it has determined actions to reduce the risk of the loss of containment heat removal capability. It recommends using the fire protection system to remove containment heat. PASNY will modify operating procedures and train its operators to use the fire protection system for removing

containment heat. NNECO has indicated that containment spraying and venting reliability should be improved by replacing the drywell spray valve motor-operators at Millstone, Unit 1, with environmentally qualified operators. NSP adopted two of the improvements proposed in Supplement 1 to GL 88-20 for incorporation in its Monticello plant. Monticello has an alternate water supply for drywell and vessel injection. The licensee plans to enhance the ADS such that it could be operated during a loss of offsite power. NSP examined its emergency operating procedures and concluded that changing the procedures "will not significantly change any actions modelled in the IPE."

The staff will report its progress in reviewing these IPEs in the future reports of the industry's and the staff's actions to implement the Mark I CPI program. Since the future activities on the Mark I CPI program will be on a long term schedule, the staff intends to change the frequency of the future status reports from semiannual to annual.

James H. Sniezek /for

James M. Taylor
Executive Director
for Operations

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