UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

FEB 04 1980

Docket No. 50-293

Boston Edison Company M/C Nuclear
ATTN: Mr. G. Carl Andognini, Manager
Nuclear Operations Department
800 Boylston Street
Boston, Massachusetts 02199

Gentlemen:

This Information Notice is provided as an early notification of a possibly significant matter. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If further NRC evaluations so indicate, an IE Circular or Bulletin will be issued to recommend or request specific licensee actions. If you have questions regarding this matter, please contact this office.

Sincerely,

for Boyce H. Grier
Director

Enclosures:
1. IE Information Notice No. 80-04
2. List of Recently Issued IE Information Notices

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cc w/encls:
P. J. McGuire, Pilgrim Station Manager

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ENCLOSURE 1

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

SSINS No.: 6870
Accession No.:
7912190655

IE Information Notice No. 80-04
Date: February 4, 1980

BWR FUEL EXPOSURE IN EXCESS OF LIMITS

On November 1, 1979, and December 17, 1979, respectively, the licensees of the Quad Cities Unit No. 1 and Monticello Nuclear Power Plants informed the Nuclear Regulatory Commission that the actual peak average planar exposure of some fuel assemblies in the core was beyond the maximum average planar exposure value of the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) limits specified in the plant Technical Specifications.

In the case of Quad Cities, the licensee was aware that some fuel assemblies would approach and exceed the exposures for which MAPLHGR limits had been analyzed. In the interim, the station process computer was used to calculate higher exposure MAPLHGR limits via an extrapolation routine, while awaiting determination of the additional high exposure MAPLHGR limits using standard licensing analysis methods. When the actual limits were made available for comparison with the extrapolated values, it was determined that the process computer had extrapolated values non-conservatively. Although the new MAPLHGR limits extensions were immediately entered into the computer, the new limits had not yet been submitted for review and approval by the NRC.

With regard to Monticello, the licensee became aware that the 30,000 MWD/T maximum exposure specified in the plant Technical Specifications was being exceeded after several months of operation had elapsed. Although the high burnup fuel assemblies had at no time exceeded the MAPLHGR value corresponding to 30,000 MWD/T, MAPLHGR limits calculated by standard licensing analysis methods showed that lower MAPLHGR values should have been utilized at the higher exposures. Again although the new MAPLHGR limits were promptly substituted, the new limits were not at the time formally approved by the NRC.

In both cases, it was subsequently determined by the licensees that the actual operating MAPLHGR values had at no time exceeded the revised MAPLHGR limits at the higher exposures. The licensees subsequently requested amendments t their Technical Specifications, adding MAPLHGR limits for average planar exposures values beyond the actual peak average planar exposure projected for the present cycles. These changes have been reviewed and approved by the staff.

Additionally, fuel rod thermal-mechanical design and safety analyses for the subject fuel are dependent on local (peak pellet) exposure conditions. The peak pellet exposure basis for those analyses is 40,000 MWD/T. Since the peak

pellet exposure exceeds the fuel assembly maximum average planar exposure as fuel assembly average planar exposure increases, the concern is raised that the 40,000 MWD/T fuel thermal-mechanical analysis basis exposure could also be approached or exceeded. Investigations conducted by the licensees showed that the peak pellet exposure had not nor would not exceed the fuel thermal-mechanical design maximum basis during the current operating cycles.

The potential for occurrence of the above events can be decreased by (a) surveillance procedures which require periodic comparison of actual peak average planar exposure and peak pellet exposure values to approved exposure limits, and (b) use of the computer to provide an alarm or flag as an aid to indicate when approved exposure limits are being approached.

This Information Notice is provided to inform licensees of a significant safety matter. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If you have any questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

ENCLOSURE 2

IE Information Notice No. 80-04
Date: February 4, 1980

RECENTLY ISSUED IE INFORMATION NOTICES

Information Notice No.	Subject	Date Issued	Issued to
79-29	Loss of Nonsafety Related Reactor Coolant System Instrumentation During Operation	11/19/79	All Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
79-30	Reporting of Defects and Noncompliances, 10 CFR Part 21	12/6/79	All Power Reactor Facilities with an OL or CP
79-31	Use of Incorrect Amplified Response Spectra (ARS)	12/13/79	All Power Reactor Facilities with an OL or CP
79-32	Separation of Electrical Cables for HPCI and ADS	12/21/79	All Power Reactor Facilities with an OL or CP
79-33	Improper Closure of Primary Containment Access Hatches	12/21/79	All Power Reactor Facilities with an OL or CP
79-34	Inadequate Design of Safety-Related Heat Exchangers	12/31/79	All Power Reactor Facilities with an OL or CP
79-35	Control of Maintenance and Essential Equipment	12/31/79	All Power Reactor Facilities with an OL or CP
79-36	Computer Code Defect in Stress Analysis of Piping Elbow	12/31/79	All Power Reactor Facilities with an OL or CP
79-37	Cracking in Low Presssure Turbine Discs	12/31/79	All Power Reactor Facilities with an OL or CP
80-01	Fuel Handling Events	1/4/80	All Power Reactor Facilities with an OL or CP
80-02	8X8R Water Rod Lower End Plug Wear	1/25/80	All BWR Facilities with an OL or CP
80-03	Main Turbine Electro-hydraulic Control System	1/31/80	All Power Reactor Facilities with an OL or CP