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

Docket No. 50-219

OCT 29 1979

Jersey Central Power and Light Company
ATTN: Mr. Ivan R. Finfrock, Jr.
Vice President
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Gentlemen:

The enclosed IE Bulletin 79-17, Revision 1, is forwarded to you for information. No written response is required. If you desire additional information regarding this matter, please contact this office.

Sincerely,

for Boyce H. Grier
Director

Enclosures:
1. IE Bulletin No. 79-17, Revision 1 w/Attachment
2. List of IE Bulletins Issued in the Last Six Months

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215-337-5282

cc w/encls:
J. T. Carroll, Station Superintendent

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ENCLOSURE 1

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

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IE Bulletin No. 79-17
Revision 1
Date: October 29, 1979

PIPE CRACKS IN STAGNANT BORATED WATER SYSTEMS AT PWR PLANTS

Description of Circumstances:

IE Bulletin No. 79-17, issued July 26, 1979, provided information on the cracking experienced to date in safety-related stainless steel piping systems at PWR plants. Certain actions were required of all PWR facilities with an operating license within a specified 90-day time frame. R1

After several discussions with licensee owner group representatives and inspection agencies it has been determined that the requirements of Item 2, particularly the ultrasonic examination, may be impractical because of unavailability of qualified personnel in certain cases to complete the inspections within the time specified by the Bulletin. To alleviate this situation and allow licensees the resources of improved ultrasonic inspection capabilities, a time extension and clarifications to the bulletin have been made. These are referenced to the affected items of the original bulletin. R1

During the period of November 1974 to February 1977 a number of cracking incidents have been experienced in safety-related stainless steel piping systems and portions of systems which contain oxygenated, stagnant or essentially stagnant borated water. Metallurgical investigations revealed these cracks occurred in the weld heat affected zone of 8-inch to 10-inch type 304 material (schedule 10 and 40), initiating on the piping I.D. surface and propagating in either an intergranular or transgranular mode typical of Stress Corrosion Cracking. Analysis indicated the probable corrodents to be chloride and oxygen contamination in the affected systems. Plants affected up to this time were Arkansas Nuclear Unit 1, R. E. Ginna, H. B. Robinson Unit 2, Crystal River Unit 3, San Onofre Unit 1, and Surry Units 1 and 2. The NRC issued Circular No. 76-06 (copy attached) in view of the apparent generic nature of the problem.

During the refueling outage of Three Mile Island Unit [illegible] of this year, visual inspections disc[illegible] in the spent fuel cooling system pipi[illegible] removal system. These cracks were fou[illegible] and later confirmed by liquid penetran[illegible] cracking was reported to the NRC in a [illegible] 1979. A preliminary metallurgical ana[illegible] section of cracked and leaking weld jo[illegible]

R1 - Identifies those additions or rev[illegible]

DUPLICATE DOCUMENT

Entire document previously entered into syst[illegible] under:
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