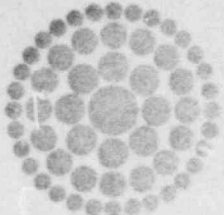


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**Florida  
Power**  
CORPORATION

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November 29, 1979

File: 3-C-3-a-4

Mr. J. P. O'Reilly  
Director  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Suite 3100  
101 Marietta Street  
Atlanta, GA 30303

Subject: Crystal River Unit 3  
Docket No. 50-302  
Operating License No. DPR-72  
IE Bulletin 79-17, Revision 1  
Pipe Cracks in Stagnant Borated Water Systems

Dear Mr. O'Reilly:

Enclosed is our response to IE Bulletin 79-17, Revision 1.

Please contact this office if you require any additional discussion concerning our response.

Very truly yours,

FLORIDA POWER CORPORATION

*P. Y. Baynard*

P. Y. Baynard  
Manager  
Nuclear Support Services

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RESPONSE TO IE BULLETIN NO. 79-17, REVISION 1

ITEM 1: For this review, the term "stagnant, oxygenated borated water systems" refers to those systems serving as engineered safeguards having no normal operating functions and contain essentially air saturated borated water where dynamic flow conditions do not exist on a continuous basis. However, these systems must be maintained ready for actuation during normal power operations. Where your definition for stagnant differed from the one given above please supplement your previous response within 30 days of this Bulletin revision.

RESPONSE: Since Florida Power Corporation's review of the safety related stainless steel systems to identify portions containing stagnant oxygenated borated water was based on the same definition of stagnant oxygenated borated water as presented in NRC Bulletin 79-17, Revision 1, no supplemental information is required.

ITEM 2: All operating PWR facilities shall complete the following inspection on the stagnant piping systems identified in Item 1 at the earliest practical date but not later than twelve months from the date of this bulletin revision. Facilities which have been inspected in accordance with the original Bulletin, Sections 2(a) and 2(b) satisfy the requirements of this Revision.

- (a) Until the examination required by 2(b) is completed, a visual examination shall be made of all normally accessible welds of the engineered safety systems at least monthly to verify continued systems integrity. Similarly, the normally inaccessible welds, shall be visually examined during each cold shutdown.

The relevant provisions of Article IWA 2000 of ASME Code Section XI and Article 9 of Section V are considered appropriate and an acceptable basis for this examination. For insulated piping, the examination may be conducted without the removal of insulation. During the examination particular attention shall be given to both insulated and noninsulated piping for evidence of leakage and/or boric acid residues which may have accumulated during the service period preceding the examination. Where evidence of leakage and/or boric acid residues are detected at locations, other than those normally expected, (such as valve stems, pump seals, etc.) the piping shall be cleaned (including insulation removal) to the extent necessary to permit further evaluation of the piping condition. In cases where piping conditions observed are not sufficiently definitive, additional inspections (i.e., surface and/or volumetric) shall be conducted in accordance with Item 2.(b).

RESPONSE TO IE BULLETIN NO. 79-17, REVISION1 (Continued)

RESPONSE: The following procedures are being revised to perform visual evaluation of normally accessible welds of the engineered safety systems during the monthly ISI pump test to verify continued systems integrity.

| <u>Procedure No.</u> | <u>System</u>         |
|----------------------|-----------------------|
| SP-340               | Makeup & Purification |
| SP-340               | Decay Heat            |
| SP-340               | Building Spray        |

A procedure will be developed to perform visual inspection, during cold shutdown, of the normally inaccessible welds.

ITEM 2: (b) An ultrasonic examination shall be performed on a representative sample of circumferential welds in normally accessible\* portions of systems identified by 1 above. It is intended that the sample number of welds selected for examination include all pipe diameters within the 2-1/2-inch to 24-inch range with no less than a 10 percent sampling being taken. The approach to selection of the sample shall be based on the following criteria:

- (1) Pipe Material Chemistry - As a first consideration, those welds in austenitic stainless steel piping (Types 304 and 316 ss) having 0.05 to 0.08 wt. % carbon content based on available material certification reports.
- (2) Pipe Size and Thickness - An unbiased mixture of pipe diameters and actual wall thickness distributed among both horizontal and vertical piping runs shall be included in the sample.
- (3) System Importance - The sample welds shall focus the examination primarily on those systems required to function in the emergency core cooling mode and secondly on the containment spray system.

The U.T. examination sample may be focused on noninsulated piping runs. The evaluation shall cover the weld root fusion zone and a minimum of 1/2 inch on the pipe I.D. (counterbore area) on each side of the weld. The procedure(s) for this examination shall be essentially in accordance with ASME Code Section XI, Appendix III and Supplements of the 1975 Winter Addenda, except all signal responses shall be evaluated as to the nature of the

\* Normally accessible refers to those areas of the plant which can be entered during reactor operation.

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RESPONSE TO IE BULLETIN NO. 79-17, REVISION 1 (Continued)

reflectors. Other alternative examination methods, combination of methods, or newly developed techniques may be used provided the procedure(s) have a proven capability of detecting stress corrosion cracking in austenitic stainless steel piping.

For welds of systems included in the sample having pipe wall thickness of 0.250 inches and below, visual and liquid penetrant surface examination may be used in lieu of ultrasonic examination.

- (c) If cracking is identified during Item 2(a) and 2(b) examinations, all welds in the affected system, shall be subject to examination and repair considerations. In addition, the sample welds to be examined on the remaining normally accessible noninsulated piping shall be increased to 25 percent using the criteria outlined in paragraph 2(b). In the event that cracking is identified in other systems at this sampling level, all accessible and inaccessible welds of the systems identified in Item 1 shall be subject to examination.

RESPONSE: Gilbert Associates is developing an inspection program for Florida Power Corporation which will be consistent with the above requirements. This program is scheduled for submittal to Florida Power Corporation December 20, 1979. It will be reviewed by Florida Power Corporation and Babcock and Wilcox, and will be finalized.

ITEM 5: Provide a written report to the Director of the appropriate NRC Regional Office within 30 days of the date of this bulletin revision addressing the results of your review if required by Item 1. Provide a schedule of your inspection plans in response to Item 2(b) in those cases in which the inspections have not been completed.

RESPONSE: No review was required by Item 1.

Florida Power Corporation will begin inspections of accessible portions of piping systems prior to our next refueling outage.