







MAY 31 1988

L-88-244

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Boric Acid Corrosion of Carbon Steel Reactor Pressure  
Boundary Components in PWR Plants (Generic Letter 88-05)

By letter dated March 17, 1988, the NRC forwarded to all operating pressurized water reactors (PWRs) the above referenced generic letter (GL). In that GL the NRC stated that it was requesting information to assess safe operation of PWRs when reactor coolant leaks below technical specification limits develop and the coolant containing dissolved boric acid comes in contact with and degrades low alloy carbon steel components.

To this end, the NRC requested assurances that a program has been implemented consisting of systematic measures to ensure that boric acid corrosion does not lead to degradation of the reactor coolant pressure boundary. FPL's response to GL 88-05 for St. Lucie Plant is attached.

If additional information is required, please contact us.

Very truly yours,

*W. F. Conway*  
W. F. Conway  
Senior Vice President - Nuclear

WFC/EJW/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II,  
USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant

EJW88-05.GL

*Adol  
A. 1/11*

STATE OF FLORIDA            )  
  ) ss.  
COUNTY OF PALM BEACH    )

W. F. Conway being first duly sworn, deposes and says:

That he is Senior Vice President - Nuclear, of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

W. F. Conway  
W. F. Conway

Subscribed and sworn to before me this  
31 day of May, 1988.

Roberta S. Economy

NOTARY PUBLIC, in and for the County of  
Palm Beach, State of Florida

My Commission expires \_\_\_\_\_  
Notary Public, State of Florida  
My Commission Expires June 1, 1989  
Bonded Thru Troy Fain - Insurance, Inc.

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U.S. DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C.

ATTACHMENT

GL 88-05 PROGRAM

In response to Generic Letter 88-05 St. Lucie Plant is revising its program for dealing with Reactor Coolant System (RCS) leaks. Currently, St. Lucie performs leak inspections after the RCS has been opened for maintenance or for refueling. This program will be expanded to include inspections that may be done at power or after reactor trips. A procedure will be written to implement these additional inspections and is expected to be in place by July 15, 1988. Responses for the specific generic letter items are as follows:

1. The program should include a determination of the principal locations where leaks that are smaller than the allowable technical specification limit can cause degradation of the primary pressure boundary by boric acid corrosion. Particular consideration should be given to identifying those locations where conditions exist that could cause high concentrations of boric acid on pressure boundary surfaces.

Response

The principle locations where leakage could degrade the RCS pressure boundary will be identified. These locations will be included in the new procedure.

2. The program should include procedures for locating small coolant leaks (i.e., leakage rates at less than technical specifications limits). It is important to establish the potential path of the leaking coolant and the reactor pressure boundary components it is likely to contact. This information is important in determining the interaction between the leaking coolant and reactor coolant pressure boundary materials.

Response

The procedure will include actions to be taken in the event of an indication of an RCS leak (e.g., sump level, flow, leak rate) in conjunction with an unexplained increase in containment airborne activity. Areas susceptible to boric acid corrosion will be identified.

3. The program should include methods for conducting examinations and performing engineering evaluations to establish the impact on the reactor coolant pressure boundary when leakage is located. This should include procedures to promptly gather the necessary information for an engineering evaluation before the removal of evidence of leakage, such as boric acid crystal buildup.

Response

An examination method will be provided in the above procedure. It will contain the necessary requirements (leak rates, temperatures, pressures, boric acid samples, affected equipment, etc.) for engineering evaluations. Engineering procedures currently exist which provide for evaluations of non-conformances such as those which might result from RCS leaks.

4. The program should include corrective actions to prevent recurrences of this type of corrosion. This should include any modifications to be introduced in the present design or operating procedures of the plant that (a) reduce the probability of primary coolant leaks at the locations where they may cause corrosion damage and (b) entail the use of suitable corrosion resistant materials or the application of protective coatings/cladding.

Response

Corrective actions are covered under current plant procedures. Consideration of design changes will be done on a case-by-case basis.

