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USNRC REGION II
ATLANTA, GEORGIA

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FPL
FLORIDA POWER & LIGHT COMPANY

June 11, 1980
L-80-178

Central File
50-335

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

Dear Mr. O'Reilly:

Re: RII:JPO
50-335
IE Bulletin 80-05

Florida Power & Light Company has reviewed the subject bulletin and has the following response:

1. Tanks with cover gas which can be valved to contain RCS water are provided in Table 1. Also provided are the tank internal design pressures, their system designations and volumes. As requested in the bulletin, our evaluation will be limited to low pressure tanks, or tanks with an internal design pressure of 15 psig or below. Thus, based on Table 1, only the RWMS Holdup Tanks and Refueling Water Storage Tanks (RWST) are considered. Adequate measures have been taken to protect these tanks against vacuum conditions that could result in tank damage. These measures are discussed in our response to item 2 below.

2. The systems reviewed in item 1 included the Reactor Coolant System, the Chemical Volume and Control System, the Safety Injection System, and the Radioactive Waste Mangement System. As indicated in item 1, the only tanks requiring further consideration are the RWMS holdup tanks and RWST.

   The four RWMS holdup tanks are each designed in accordance with ASME Section VIII Division 1 and have an external design pressure of 2 psig. There are three pumps connected to the tanks, each with a run out flow of ∿130 gpm for a combined total of ∿390 gpm. Thus, the maximum expected flow out of a given RWMS holdup tank would be ∿390 gpm or 52 SCFM. The tanks have a nitrogen cover gas system which maintains a 1 psig over pressure. The cover gas system utilizes one Model 95L Fisher pressure regulator (1 psig outlet setting and normal N_2 inlet pressure of 10 psig) feeding a 3 inch supply header to all four tanks. Calculations were performed to determine the N_2 flow rate available (assuming worst case pressure drop) to a given RWMS holdup tank when at an internal pressure of 12.7 psia. The calculated N_2 flow rate to the tank was 57 SCFM.

   This value is in excess of the maximum expected outflow of 52 SCFM which would preclude vacuum conditions which could result in tank damage. This calculation is conservative as normal operating procedures would preclude pumping from one tank with all three pumps.

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The venting capacity of the RWST was calculated assuming all pumps which take suction from the tank are operating at maximum flow simultaneously. The tank was shown to have a safety factor of 7.34 in its venting capacity.

Based on the above discussion, the existing measures for vacuum protection at St. Lucie Unit 1 are adequate and no further modifications are required. As a general note, the St. Lucie/CE letdown system degasses the RCS water through the flash tank prior to reaching the RWMS holdup tanks and clean N_2 is used for cover gas. Both measures significantly reduce the consequences of tank rupture. The Westinghouse units referenced in the bulletin do not degas the water before it enters the holdup tank and most Westinghouse units utilize a waste gas decay tank as cover gas supply.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/MAS/cph

cc: Director, Office of Inspection and Enforcement
Harold F. Reis, Esquire

TABLE 1

	TANK	*SYSTEM	QUANTITY	VOLUME (Gal)	DESIGN PRESSURE PSIG INT/EXT
1.	Pressurizer Quench Tank (QT)	RCS	1	1,570	100/15
2.	Reactor Drain Tank (RDT)	RWMS	1	1,600	25/15
3.	Volume Control Tank (VCT)	CVCS	1	4,700	75/15
4.	Flash Tank (FT)	RWMS	1	400	70/15
5.	CVCS Holdup Tanks (HUT)	RWMS	4	40,000 (each)	10/2
6.	Refueling Water Storage Tanks	SIS	1	525,000	Atmospheric

*RCS - REACTOR COOLANT SYSTEM AND AUXILIARIES

CVCS - CHEMICAL VOLUME AND CONTROL SYSTEM

RWMS - RADIOACTIVE WASTE MANAGEMENT SYSTEM