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Docket Nos. 50-250 and 50-251

> Dr. Robert E. Uhrig, Vice President Advanced Systems and Technology Florida Power and Light Company Post Office Box 529100 Miami, Florida 33152

Docket File NRC PDR Local PDR ORB 1 File D. Eisenhut OELD OI&E (1) M. Grotenhuis C. Parrish NSIC ACRS (10) J. Heltemes M. Haughey



Dear Dr. Uhrig:

We have completed our preliminary review of your letter dated January 20, 1982 regarding Purge and Vent Valve Operability for the Turkey Point Plant Unit Nos. 3 and 4. In order to complete our review we need the additional information as described in the enclosure to this letter. Please provide this information within 45 days of the receipt of this letter.

In addition to purge and vent valves operability the use of debris screens was addressed in your January 20, 1982 submittal. Our review of this issue is not yet complete.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Steven A. Varga, Chief Operating Reactors Branch No. 1 Division of Licensing

Enclosure: As stated

cc: See next page









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Robert E. Uhrig Florida Power and Light Company

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PURGE AND VENT VALVE OPERABILITY FOR TURKEY POINT 3 AND 4

- 1. The licensee's submittal states that because of limitations of the valve operator, the valve disc openings must be limited to 30 and 35 degrees or less for the 54 inch and 48 inch butterfly valves respectively. The stress analyses submitted was for torque loads on a 48 inch and a 54 inch valve closing from the 90 degree (full open) position. The stress analyses submitted showed valve parts in both valves to be over stressed when closing against torque loads in the full open position. The stress analysis should be revised for the worst case torque loading for smaller angles of opening to show valve parts are not over stressed from the 30 degree and 35 degree openings.
- 2. Stress allowables used in the stress analysis were not conservative in all cases. Example: ASME Section III allowables were used for material not included in ASME allowable materials. Sy was substituted for Sm for this material (A-276) as an Sm was not available. The allowable stresses used should be reevaluated, revised and justified in all cases. Three dimensional stress conditions and their interaction must be considered.
- 3. All four installations of these valves at Turkey Point 3 and 4 show elbows located shortly upstream. Tests performed to develop the torque loads on these valves were done for strictly uniform approach flow. Tests performed for other butterfly valves have indicated significantly higher torques may occur as a result of non-uniform approach flow. Non-uniform approach flow may occur from elbows, bends, or tees located upstream of the valve or from a partially open valve located upstream of the valve. The licensee should submit the following information: orientation of the valve shafts with respect to the elbow immediately upstream, closure direction of the valve disc with respect to the upstream elbow, and separation distances between valves. Additional testing may be required to confirm straight-line, uniform approach flow is conservative.

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4. Pratt model tests for dynamic torque experienced pressure losses in the piping upstream of the valve. As a result, the test valves did not experience the full differential pressure from containment pressure to atmospheric pressure. Verify the pipe losses from the test are conservative with respect to the actual installation taking no credit for non-safety-related (Seismic Category I) piping.



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