

January 10, 2001

Mr. Thomas F. Plunkett
President - Nuclear Division
Florida Power & Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
TURKEY POINT, UNITS 3 AND 4, LICENSE RENEWAL APPLICATION

Dear Mr. Plunkett:

By letter dated September 11, 2000, Florida Power and Light (FPL), submitted for the Nuclear Regulatory Commission's (NRC) review an application pursuant to 10 CFR Part 54, to renew the operating license for Turkey Point Nuclear Plant, Units 3 and 4. The NRC staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete its safety review. Specifically, the enclosed questions relate to Sections 2.3.4 and 3.5, "Steam and Power Conversion Systems."

Please provide a schedule by letter, electronic mail, or telephonically for the submittal of your responses within 30 days of the receipt of this letter. Additionally, the staff would be willing to meet with FPL prior to the submittal of the responses to provide clarifications of the staff's requests for additional information.

Sincerely,

/RA/

Rajender Auluck, Senior Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Program
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure: Request for Additional Information

cc w/encl: See next page

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*See previous concurrence

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REQUEST FOR ADDITIONAL INFORMATION
TURKEY POINT UNITS 3 AND 4
DOCKET NOS. 50-250, 50-251

Steam and Power Conversion Systems

RAI 2.3.4-1 UFSAR Section 10.2.2 states that the MSIVs are maintained closed by the instrument air system. On Unit 3, a safety related nitrogen supply subsystem functions as a backup to the instrument air system. On Unit 4, safety related air accumulators are provided to perform this backup function. In Table 3.5-1 of the LRA, Unit 4 MSIV instrument air accumulator tanks are listed as subject to AMR.

Why are the Unit 3 MSIV instrument air supply components treated differently from Unit 4 for an AMR? Explain (a) why the air reserve tanks (3T252 - 3T256 in drawing No. 3-MS-03) and the associated piping in Unit 3 are not identified as within the scope of license renewal and (b) why the nitrogen bottles for Unit 3 are not included in Table 3.5-1 as being subject to an AMR. These air reserve tanks are relied upon to maintain the safety function of the instrument air system, and the nitrogen bottles are passive and long lived.

RAI 2.3.4-2 In drawing No. 0-FW-02 of the LRA, the demineralized water storage tank, T61, is identified as within the scope of license renewal and subject to an AMR. The intended function for the tank is the pressure boundary. The evaluation boundary for the tank and associated piping ended at several normally opened valves such as DWDS-3-021, DWDS-020, DWDS-4-021, DWDS-064, DWDS-017, CDPL-4-029, and CDPL-3-029. Since these valves are normally opened, a failure of downstream piping of these valves may affect the pressure boundary of the tank.

Provide the basis for your determination of the evaluation boundary, which ended at these opened valves but not further downstream of the flow paths at the same pressure boundary. Address the compliance of 10 CFR 54.4(a)(2) as applied to this case.

RAI 2.3.4-3 Drawing Nos. 3-FW-04 and 4-FW-04 are related to the steam generator blowdown system, which is identified as within the scope of license renewal. The evaluation boundary for piping between the containment isolation valves and containment boundary ended at several normally opened valves, SGML-3-011, SGML-3-031, SGML-3-049, SGML-4-011, SGML-4-031, and SGML-4-049. Since these valves are normally opened, a failure of downstream piping of these valves may affect the containment isolation.

Provide the basis for your determination of the evaluation boundary, which ended at these opened valves but not further downstream of the flow paths at the same pressure boundary. Address the compliance of 10 CFR 54.4(a)(2) as applied to this case.

RAI 2.3.4-4 In drawing No. 0-AFW-01, the steam turbines for AFW pumps and associated piping and valves are identified as within the scope of license renewal. The

intended function is the pressure boundary for the auxiliary feedwater system. The reviewer noticed that the evaluation boundary for the piping system ended, in some cases, at the components such as open valves, flow reducers, or orifices (e.g. ST-49, ST-52, ST-46, 2O-461C, 2O-462C, RO-6265C, ...etc.) that are not pressure boundary. A failure of downstream piping of these components may affect the pressure boundary of the auxiliary feedwater system.

Provide the basis for your determination of the evaluation boundary, which ended at these components but not further downstream of the flow paths at the same pressure boundary, in accordance with 10 CFR 54.4(a)(2).

- RAI 3.5-1 Section 3.5 of the LRA lists the systems included for aging management review for license renewal. The systems included are main steam and turbine generators, feedwater and blowdown, auxiliary feedwater and condensate storage systems. Provide your rationale for not providing aging management review of extraction steam system and components in condensate transfer system, such as piping, valve and pump housings that have pressure-retaining function and are not replaced based on qualified life or specified time period.
- RAI 3.5-2 For components in Table 3.5-1 such as valves, tubing/fittings, filters, flex hoses, and rupture disks made of stainless steel that are exposed to internal air/gas environment, no aging management is provided. Explain why the effects of moisture and liquid pooling are not considered in air/gas environment that can contribute to aging effects of loss of material due to pitting corrosion and cracking.
- RAI 3.5-3 In Tables 3.5-1 and 3.5-2 for carbon steel bolting, explain why the effect of humidity in the external environment is not considered to cause aging that leads to loss of material due to general corrosion and loss of preload.
- RAI 3.5-4 Table 3.5-2 lists the components subject to an aging management review for the feedwater and blowdown systems. Provide your justification for excluding aging management review of feedwater pump casing, blowdown pump casing, and blowdown heat exchanger shell that have pressure-retaining function and are not replaced based on qualified life or specified time period.
- RAI 3.5-5 Provide justification for excluding flow accelerated corrosion (FAC) as an aging mechanism that can cause wall thinning in auxiliary feedwater piping components and in auxiliary feedwater pump turbine piping. The staff notes that while FAC is not in the scope of auxiliary feedwater steam piping inspection program, the scope of the FAC program includes feedwater, blowdown, main steam and turbine generators.
- RAI 3.5-6 The steam and power conversion systems are exposed to internal environments of treated water, lubricating oil, and air/gas; and external environments of outdoor, containment air, underground, and potential borated water leaks. The only parts of systems or components considered to be inaccessible for inspection are those that are buried or embedded/encased in concrete. In Section 3.5 of the LRA, the applicant indicated that the Standby Steam

Generator Feedwater System contains sections of buried stainless steel piping, exposed to soil/fill and ground water chemicals. Discuss the aging management review for these buried piping section at Turkey Point to ensure that all aging mechanisms are adequately managed.

- RAI 3.5-7 Table 2.3-6, "Steam and Power Conversion Systems Evaluation Boundaries," shows that the sample systems 3-SAMP-02 and 4-SAMP-02 are within the SPCS evaluation boundary. However, these systems are not addressed either in Section 2.3.4 or in Section 3.5. Provide their aging management review and discuss their intended functions, material, environments, aging effects and aging management programs and activities.
- RAI 3.5-8 In Tables 3.5-1 and 3.5-2, the applicant relied on the Boric Acid Wastage Surveillance Program to manage the aging effects of mechanical bolting in piping connections and closures to ensure that boric acid corrosion does not lead to degradation of the pressure boundary. The Boric Acid Wastage Surveillance Program manages aging effects associated with aggressive chemical attack, provide a discussion of how this program manages aging effects associated with elevated temperatures and stress levels to prevent loss of preload in mechanical bolting.

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