

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

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Document Control Branch (Document Control Desk)

SUBJECT: Forwards addl info re PORV & block valve TS, in response to  
 NRC request concerning util 921125 proposed license amends  
 to revise TS 3/4.4.4, 3/4.4.9.3 & associated bases sections,  
 per GL 90-06.

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L-94-054  
10 CFR 50.90

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

Subject: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed License Amendments  
Additional Information - Generic Letter 90-06  
TAC Nos. M77464, M77465, M77389, and M77390

By letter L-92-285, dated November 25, 1992, Florida Power & Light Company (FPL) submitted proposed license amendments to revise the Turkey Point Units 3 and 4 Technical Specifications 3/4.4.4, "Relief Valves," 3/4.4.9.3, "Overpressure Mitigating Systems," and the associated Bases sections 3/4.4.4, "Relief Valves." The purpose of this letter is to provide in the attachment additional information as requested by members of the NRC staff.

If you have any questions regarding this information, please contact us.

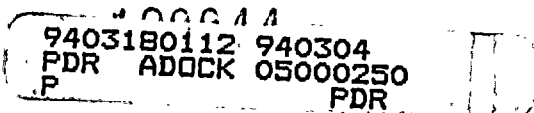
Very truly yours

T. F. Plunkett  
Vice President  
Turkey Point Plant

Attachment

TFP/OIH

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
T. P. Johnson, Senior Resident Inspector, USNRC, Turkey  
Point Plant



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**Information Regarding  
PORV and Block Valve Technical Specifications**

As a result of FPL's submittal of November 25, 1992 (Reference 2), the NRC staff has identified some additional information that is required to clarify FPL's position related to the Power Operated Relief Valve and Block valve Technical Specifications submitted in response to Generic Letter 90-06 (Reference 3). The two areas identified by the staff relate to the reliability of the emergency feedwater supplies at Turkey Point and the design aspects of the Pressurizer Auxiliary Spray valve at Turkey Point.

**Reliability of Emergency Feedwater**

The Turkey Point plant is capable of providing feedwater to the steam generators from three separate sources:

1. The main feedwater pumps,
2. the auxiliary feedwater pumps, or
3. the Standby Steam Generator Feedwater Pumps (SSGFP)

The main feedwater pumps require the availability of offsite power and the operation of the condenser and condensate system for operation. This is the normal feedwater supply during plant operation.

The auxiliary feedwater (AFW) system at Turkey Point consists of three steam driven auxiliary feedwater pumps, each of which is capable of providing 100% of the emergency feedwater requirements for both nuclear units. Water for the AFW pumps is provided by two condensate storage tanks, one for each unit. Steam may be supplied to the AFW pump turbines from either unit. The AFW pump turbines are vented directly to atmosphere and are thus not impacted by the availability of the plant condenser. The AFW system is designed to safety-related requirements and is capable of operation with no on-site AC power available (Reference 1).

To augment the AFW system at Turkey Point, a Standby Steam Generator Feedwater system was installed in the early 1980s. The standby feedwater system consists in part of two electric driven feedwater pumps, each of which is capable of providing 100% of the emergency feedwater needs to both units. Water for the standby pumps is provided by a separate demineralized water storage tank. This system is not safety-related and is powered electrically from a separate non-vital 4.16 kV electrical bus (i.e. the "C" bus). The "C" bus is presently capable of being powered from the non safety-related blackstart diesel generators at Turkey Point. FPL has submitted a Proposed License Amendment

(PLA) to eliminate reliance on the blackstart diesel generators. In this case, one of the SSGFPs will be powered from offsite power using the "C" bus and the remaining SSGFP will be directly powered with its own non-safety diesel (Reference 4). Subject to NRC approval, this design modification is expected to be implemented in 1995.

As described above, the Turkey Point plant has a 500% capacity emergency feedwater system that is comprised of both the safety-related AFW system and the non safety-related standby feedwater system. More recently designed plants are provided with two electric driven and one steam driven auxiliary feedwater pumps, for a total emergency feedwater capacity of 300%. Failures associated with this later design are dominated by instances where the steam driven pump is taken out of service for maintenance and a challenge occurs to the plant with a concurrent common mode failure of the electric driven AFW pumps. These failure sequences are not applicable to Turkey Point due to the fact that during any anticipated maintenance evolution, there would always be diverse (i.e. electric and steam driven) sources of feedwater available to the plant. This significantly reduces the likelihood of a total loss of feedwater event at Turkey Point.

#### Auxiliary Spray Valve Design

The auxiliary spray valve is a fail closed air-operated valve. The solenoids used to operate this valve are powered from vital DC power supplies. The power supply design incorporates a transfer switch to permit valve operation from outside the control room in the event of a control room evacuation.

Air to operate the auxiliary spray valve is supplied by the instrument air system. Instrument air for each unit is provided by redundant diesel driven air compressors that do not require the availability of either on-site or offsite AC power.

The design incorporates the use of vital DC power and AC independent instrument air to provide a highly reliable design.

Attachment to  
L-94-54  
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References

1. Turkey Point Updated Final Safety Analysis Report, Rev. 11, November 1993.
2. FPL letter L-92-285, "Proposed License Amendments Response to Generic Letter 90-06 Resolution of Generic Issues 70 and 94," dated November 25, 1992.
3. Generic Letter 90-06, "Resolution of Generic Issue 70, 'Power-Operated Valve and Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection for Light-Water Reactors,' Pursuant to 10 CFR 50.54(f)," dated June 25, 1990.
4. FPL letter L-93-200A, "Proposed License Amendments - Elimination of Cranking Diesel Generators," dated September 3, 1993.



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