

50-250 (257)

INFO DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: Mr. George Lear

FROM: Florida Power & Light Company
Miami, Florida
Robert E. Uhrig

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3/31/77

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4/4/77

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DEL. DIVISION
Ltr. re our 2/9/77 ltr. and their 12/10/76 ltr...trans the following:
ACKNOWLEDGED
DO NOT REMOVE
REACOR 4.3501 OPERATIONS UNIT
ELECTRICITY TRG G. 2.00 10-21-76
(1-P)
PLANT NAME: Turkey Point Units 3 & 4
RJL

ENCLOSURE
Consists of requested additional information concerning overpressure protection.....
(4-P)

FOR ACTION/RESPONSE

Lear
Elliot
Parrish

INTERNAL DIS. SECTION

REG FILE

EXTERNAL DISTRIBUTION

CONTROL NUMBER

770950162

TO: Miami, Fla

FROM:

DATE: 16

AS CAT B



1948

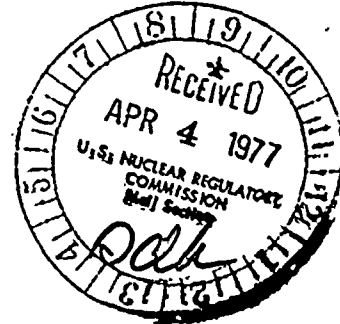
1948



March 31, 1977
L-77-103

REGULATORY DOCKET FILE COPY

Office of Nuclear Reactor Regulation
Attention: Mr. George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555




Dear Mr. Lear:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Overpressure Protection

Your letter of February 9, 1977 requested additional information concerning our December 10, 1976 submittal on overpressure protection. A reply to your request, numbered to correspond to your questions, is attached.

Very truly yours,


Robert E. Uhrig
Vice President

REU/MAS/cpc

Attachment

cc: Mr. Norman C. Moseley, Region II
Robert Lowenstein, Esquire

THE UNIVERSITY OF CHICAGO

ATTACHMENT A

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
Overpressure Protection

I. FPL Overpressure Mitigating System - Design Features

Our letter of March 1, 1977 (L-77-74) described in detail the FPL proposed "Overpressure Mitigating System". This system is based on the "Reference Mitigating System" described in our letter of December 10, 1976 (L-76-422) with certain design features added to be responsive to the NRC design criteria. All items of concern listed in paragraphs a through g of the February 9 NRC letter were addressed in the March 1 FPL letter.

II. Additional Information

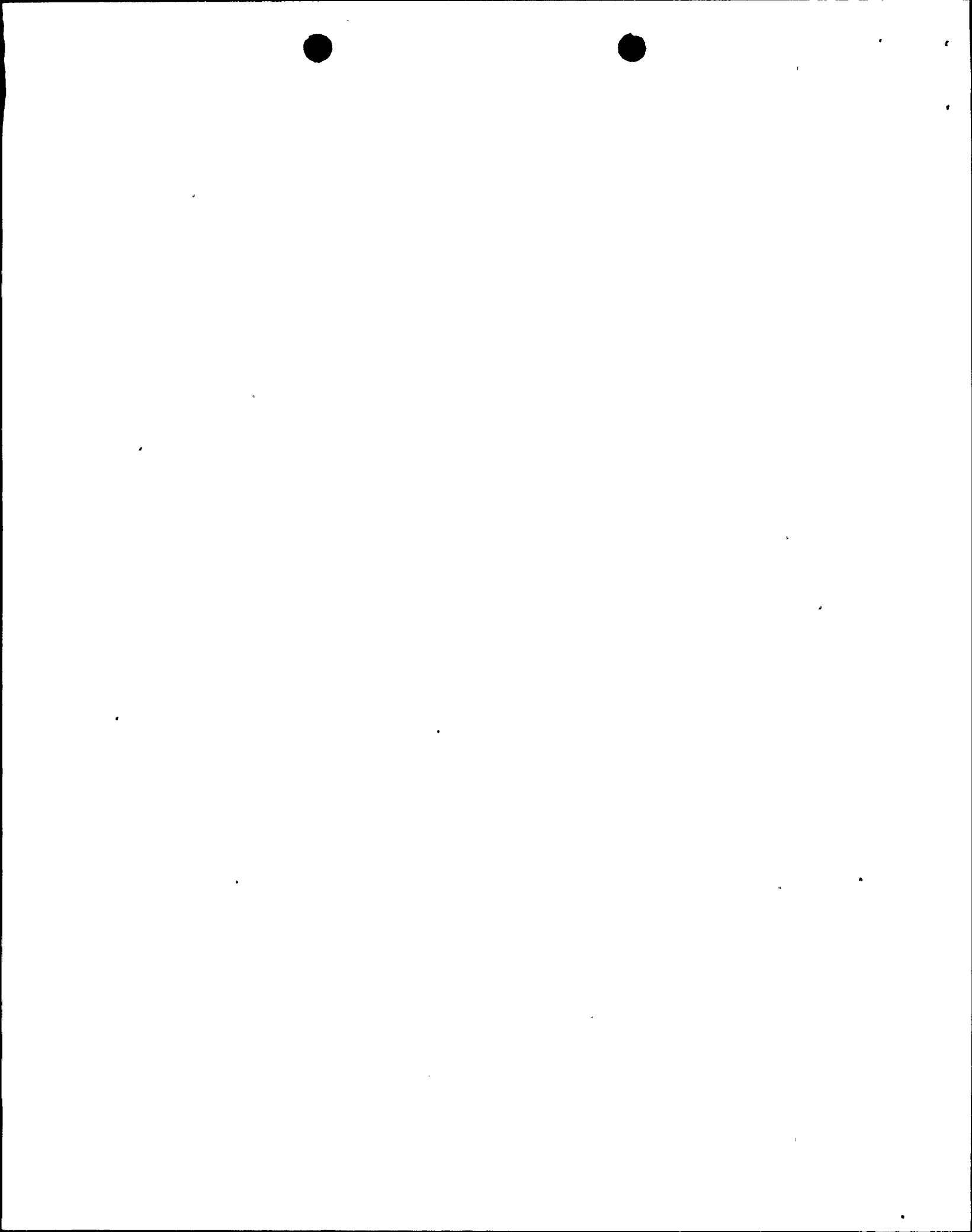
1. Refer to Sections 6.0 and 9.0 of the Turkey Point Units 3 and 4 FSAR for piping and instrumentation diagrams and for modes of system operation during solid plant conditions. Refer to Item 3 in the attachment to our March 16, 1977 letter (L-77-81) for additional information.
2. The Overpressure Mitigating System is not a safety system, therefore, a failure modes and effects analysis should not be required. However, to facilitate your review of our proposed system, we have evaluated the effects of single failures on the ability of the proposed system to perform its pressure relieving function. The results of that evaluation are presented in Attachment B.
3. Initial conditions for the analysis of the pressure transient will be described in a generic report on analytical assumptions, models, and results. We expect to be able to submit this report in May, 1977.
4. Computer codes used to model the overpressure transients will be described in the generic report planned for May, 1977.
5. Relief valve backpressure considerations will be discussed in the generic report planned for May, 1977.
6. Refer to Item 6 in the attachment to our March 16, 1977 letter (L-77-81) for a discussion of RHR relief capability.
7. a. The pressurizer power-operated relief valves have open/shut indication on the main control board.

II. Additional Information (Continued)

7. (Continued)

- b. The pressurizer safety valves and the power-operated relief valves discharge to the pressurizer relief tank. This tank has level, temperature, and pressure indication on the main control board. In addition, these three signals have a common alarm, also on the main control board. Any lifting of a relief or safety valve will be seen in the pressurizer relief tank immediately.
- c. The residual heat removal relief valves discharge to the pressurizer relief tank.

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- 8. Refer to Item 3 in the attachment to our March 16, 1977 letter (L-77-81) for a discussion of administrative control of certain valve motor operators. In general, when power is removed from a valve motor operator, the indication of valve position is no longer present. Power is removed from a valve motor operator by opening the breaker at the motor control center.



ATTACHMENT B

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
Overpressure Protection

SINGLE FAILURE ANALYSIS

Failure Mode	Resultant Effect on Operability		Comment
	PORV 1	PORV 2	
Loss of channel 1 instrument power	Not Op	Op	Note 1
Loss of channel 2 instrument power	Op	Not Op	Note 1
Loss of PORV 1 battery	Not Op	Op	
Loss of PORV 2 battery	Op	Not Op	
Loss of instrument air	OP	OP	Note 2
Loss of off-site power	Op	Op	
Loss of off-site power plus loss of either diesel	Op	Op	Note 1
Loss of letdown	Op	Op	Note 2
Isolation of RHR	Op	Op	Note 2
Closure of PORV 1 isolation valve	Not Op	Op	
Closure of PORV 2 isolation valve	Op	Not Op	
Inadvertent SI	Op	Op	Note 2
Manual starting of SIS pump	Op	Op	Note 2

Failure Mode	Resultant Effect on Operability		Comment
	PORV 1	PORV 2	
Manual starting of additional charging pump	Op	Op	Note 2
Manual starting RCP	Op	OP	Note 2
Failure to activate low pressure setpoint channel 1	Not Op	Op	Note 3
Failure to activate low pressure setpoint channel 2	Op	Not Op	Note 3
Problems with operation of pressurizer relief tank	Op	Op	

NOTES

*Not Op denotes that this valve is not operable and not capable of performing its pressure relieving function.

* Op denotes that this valve is operable and can perform its pressure relieving function.

Note 1 The power for each channel is supplied from an inverter on a station battery.

Note 2 For all possible causes of overpressurization, no failure of PORV 1 or 2 results.

Note 3 Alarm will alert the operator to this condition.