

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: Mr. George Lear

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

DATE OF DOCUMENT 3/31/77

DATE RECEIVED 4/4/77

LETTER [X] ORIGINAL [] COPY [] NOTORIZED [] UNCLASSIFIED [X]

PROP INPUT FORM

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DESCRIPTION: Ltr. re our 2/9/77 ltr. and their 12/10/76 ltr...trans the following: DO NOT REMOVE ACKNOWLEDGED REACTOR VESSEL OVERPRESSURIZATION DISTRIBUTION PER G. ZECH 10-21-76 (1-P) PLANT NAME: Turkey Point Units 3 & 4 RJL

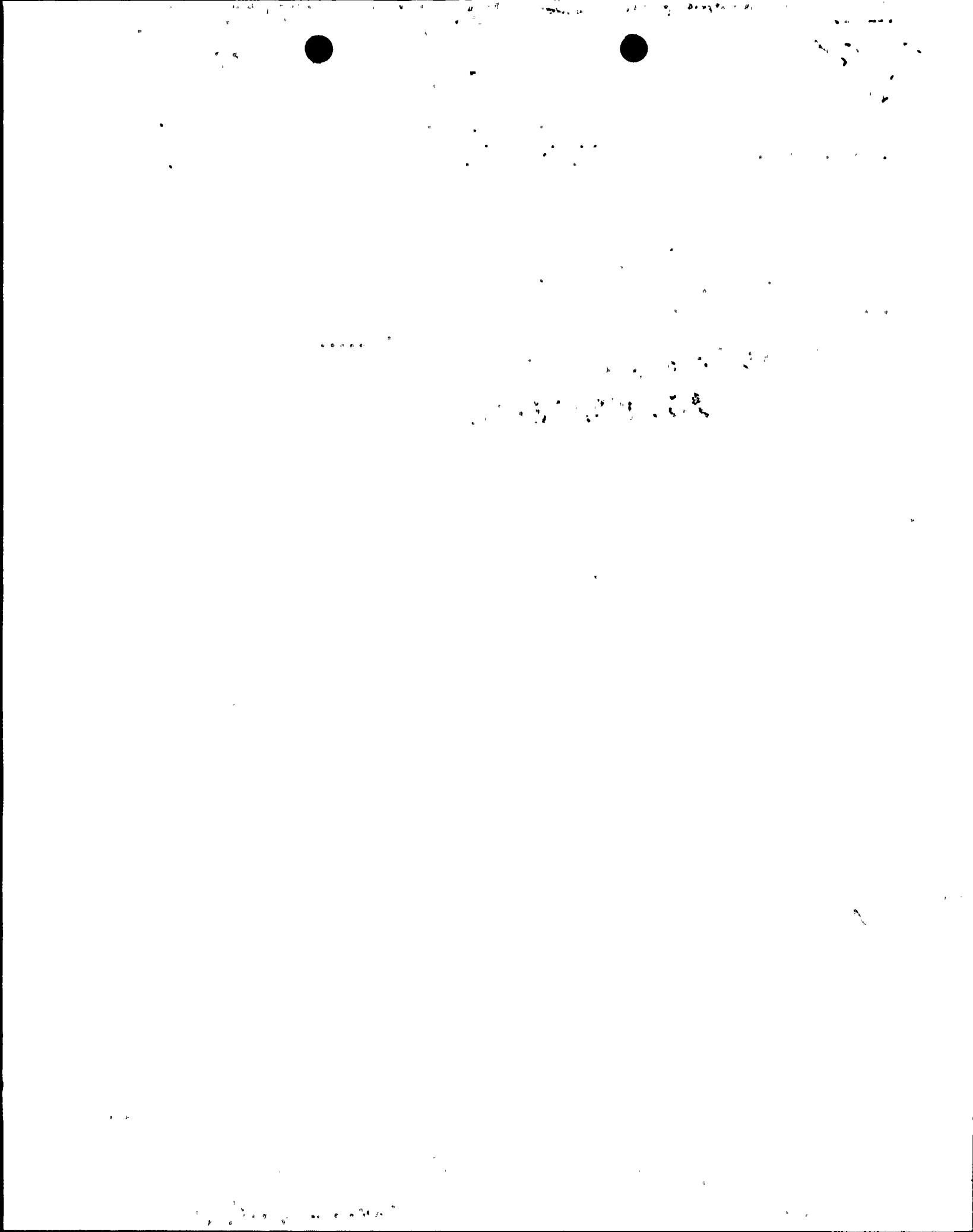
ENCLOSURE: Consists of requested additional information concerning overpressure protection..... (4-P)

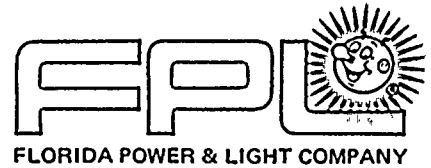
Table with columns for SAFETY and FOR ACTION/INFORMATION. Includes rows for BRANCH CHIEF (5), LIC. ASST, and PROJECT MANAGER with handwritten names: Lear, Elliott, Parrish.

INTERNAL DISTRIBUTION table with rows for REG FILE, NRC PDR, I & E (2), OELD, GOSSICK & STAFF, BOSNAK, PAWLICKI, NOVAK, EISENHUT, SHAO, BAER, BUTLER, ZECH.

EXTERNAL DISTRIBUTION table with rows for LPDR: Miami, Fla; TIC; NSIC; ACRS 16 CYS HOLDING/SENT TO LA AS CAT B.

CONTROL NUMBER 770950160

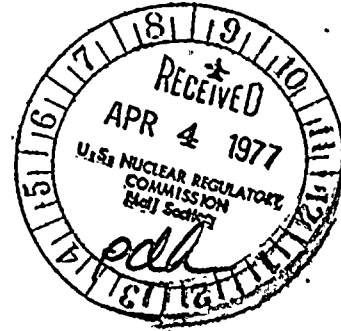




March 31, 1977
L-77-103

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

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

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ATTACHMENT A

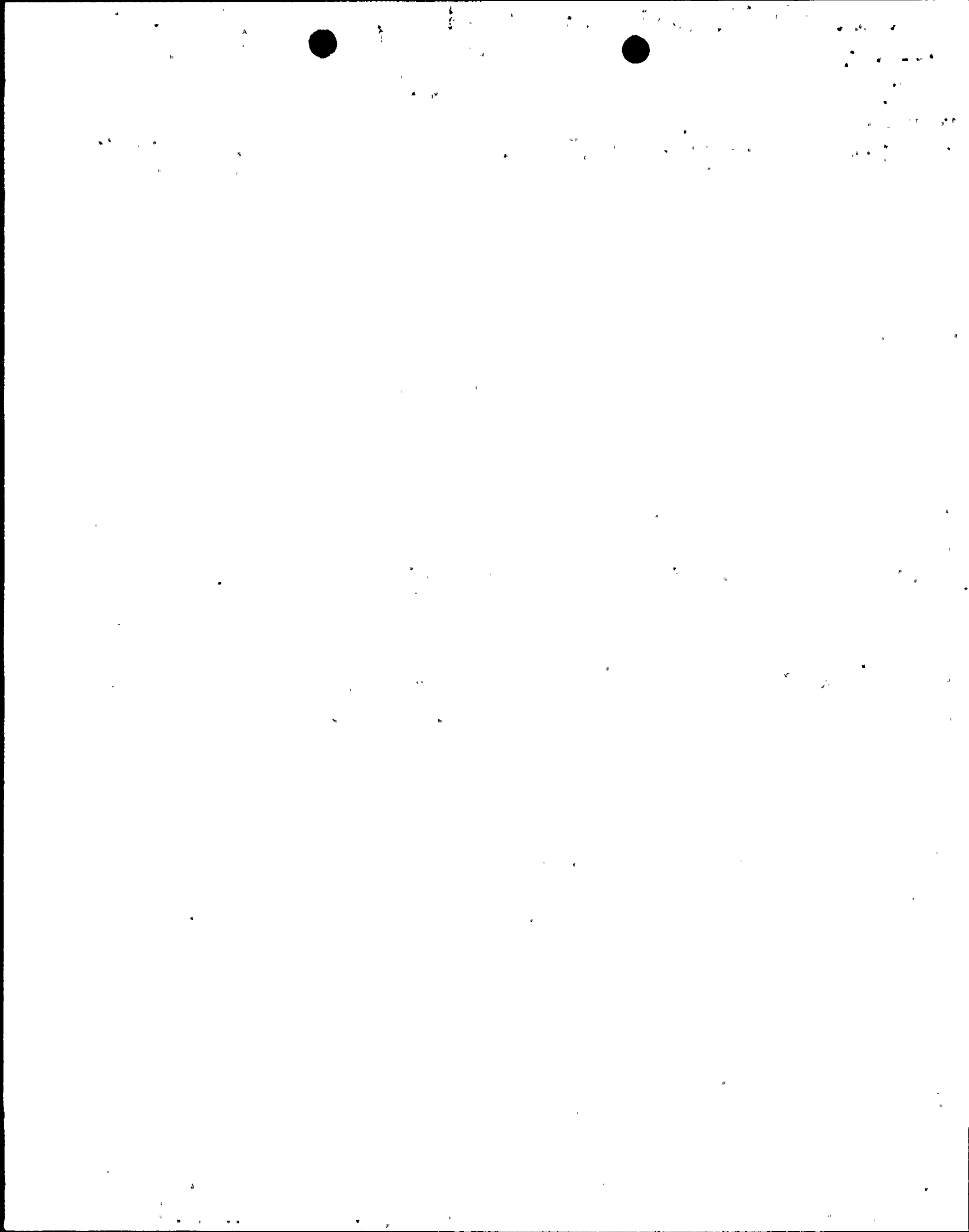
Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
Overpressure Protection

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.

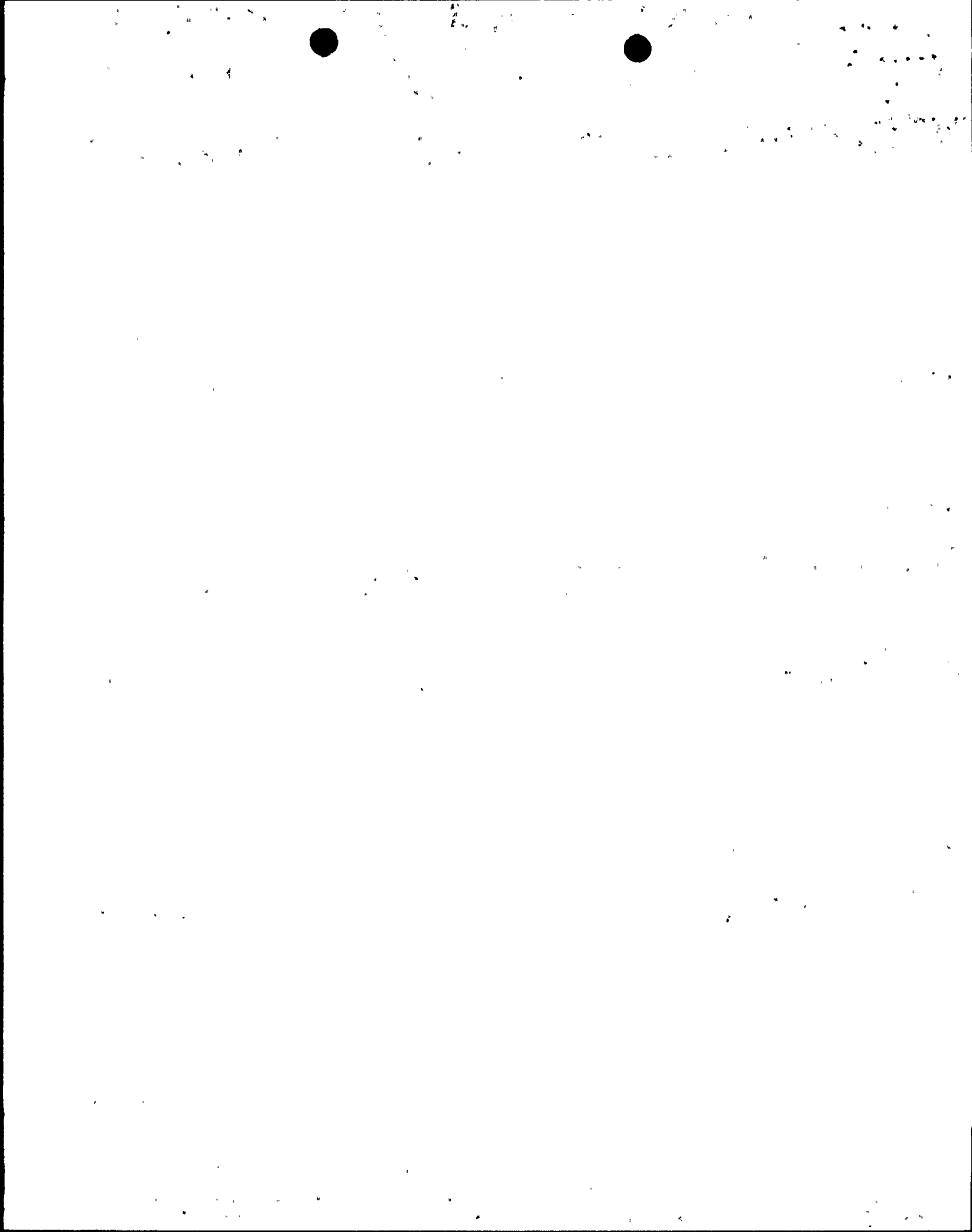


II. Additional Information (Continued)

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.

- 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.

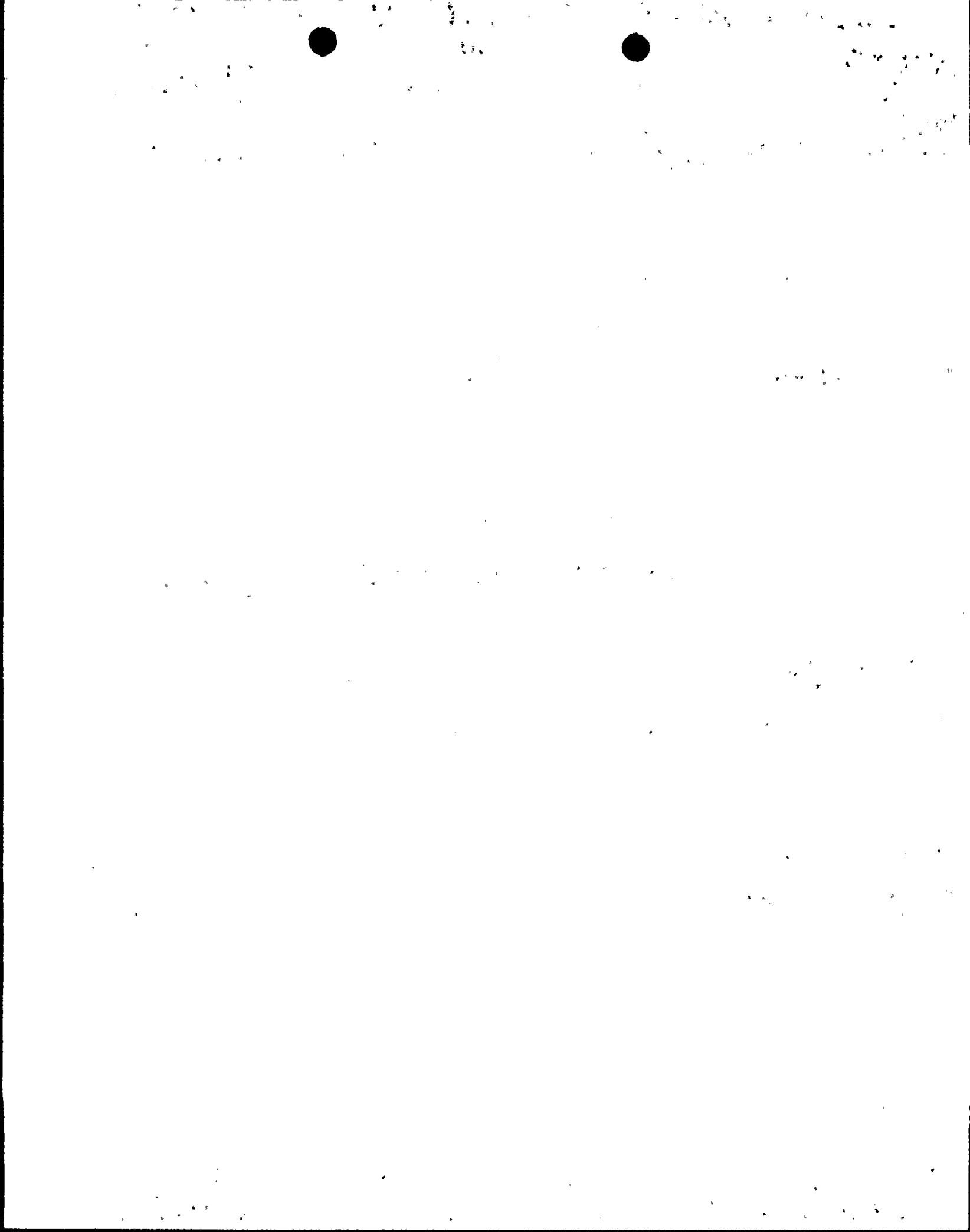


ATTACHMENT B

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.

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