



PEACH BOTTOM--THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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D. B. Miller, Jr.
Vice President

September 3, 1991

Regional Administrator
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

SUBJECT: Facility Comment on Written License Examinations Administered at
Peach Bottom Atomic Power Station, August 26, 1991.

Dear Mr. Conte:

The attachments to this letter document the complete formal comment summary of the Reactor Operator and Senior Reactor Operator License Written Examinations administered on August 26, 1991. The majority of the referenced supporting documentation, of which portions are attached, can be found in materials forwarded to your office for exam preparation.

Sincerely,

Ken Powers for
D.B. Miller Jr.

DBM/OPS/JWL:clg
DBM/OPS/JWL:clg

Attachments

- cc: R. A. Burricelli, Public Service Electric & Gas
- T. M. Gerusky, Commonwealth of Pennsylvania
- J. J. Lyash, USNRC Senior Resident Inspector
- T. T. Martin, Administrator, Region I, USNRC
- P. I. McLean, State of Maryland
- H. C. Schwemm, Atlantic Electric
- C. Sisco, NRC
- J. Urban, Delmarva Power
- U.S. NRC, Attn: Document Control Desk

REACTOR OPERATOR

QUESTION: 052 (1.00)

Which ONE of the following components of the condensate pump receives cooling from TBCCW?

- A. Journal bearing oil cooler
- B. Thrust bearing oil cooler
- C. Shaft seal oil cooler
- D. Motor seal oil cooler

ANSWER: 052 (1.00)

D.

REFERENCE:

LOT-0520, Rev. 3, obj. 3, pgs 8 & 21
NUREG-1123, NRC BWR K/A Catalog, K/A 256000, K6.05, 2.9/2.9 (p.3.2-21)

256000K605 ..(KA's)

SENIOR REACTOR OPERATOR

QUESTION: 037 (1.00)

Which ONE of the following components of the condensate pump received cooling from TBCCW?

- A. Journal bearing oil cooler
- B. Thrust bearing oil cooler
- C. Shaft seal oil cooler
- D. Motor seal oil cooler

ANSWER: 037 (1.00)

D.

REFERENCE:

LOT-0520, Rev. 3, obj. 3, pgs 8 & 21
NUREG-1123, NRC BWR K/A Catalog, K/A 256000, K6.05, 2.9/2.9 (p.3.2-21)

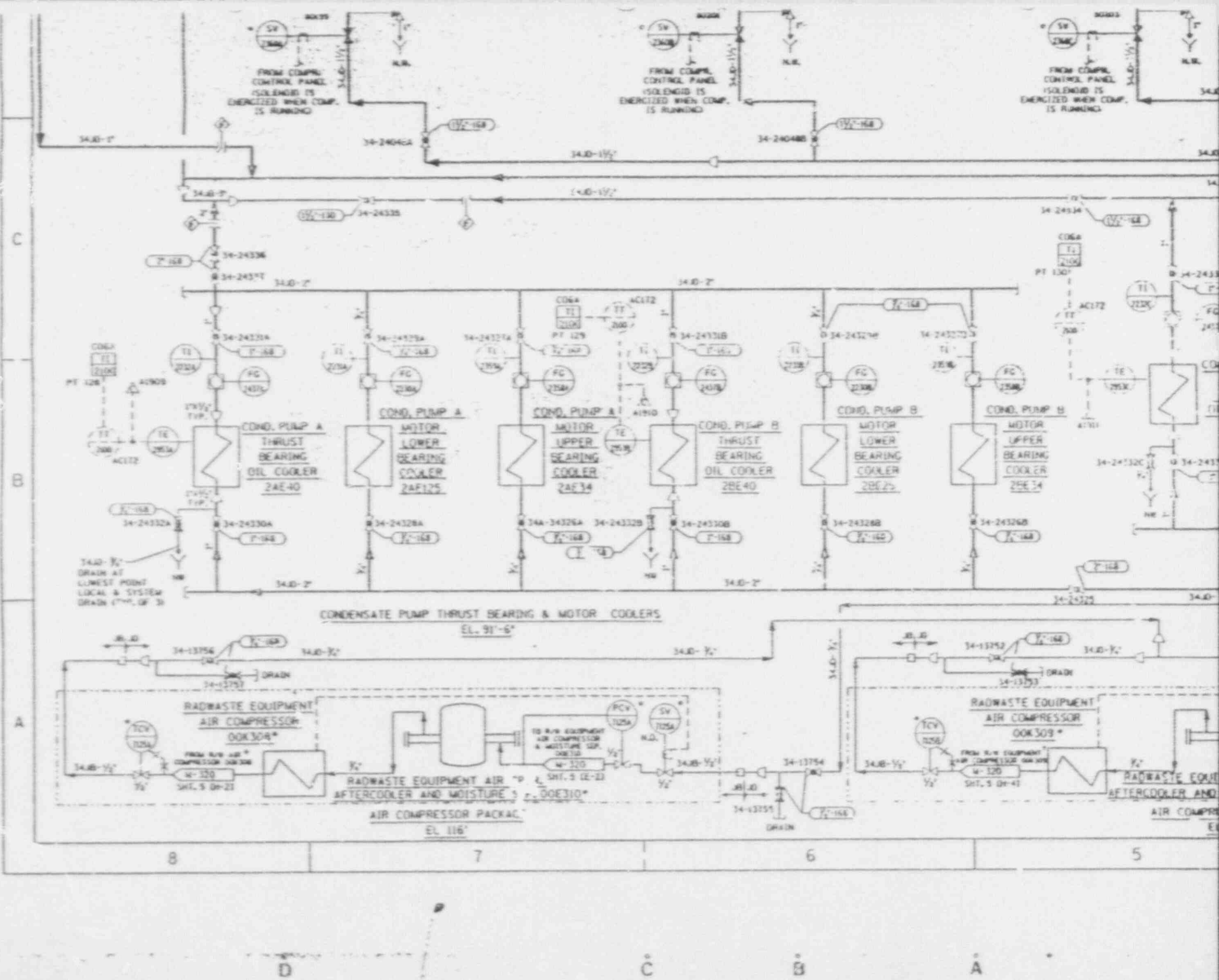
256000K605 ..(KA's)

FACILITY COMMENT:

RO Question 052, SRO Question 037: Answer B, "Thrust Bearing Oil Cooler" is the correct answer in lieu of Answer D. P&ID M-316, sht. 2 (attached) indicates that TBCCW cooling is provided to the thrust bearing cooler and upper and lower motor bearing cooler.

480 QUESTION 037 REFERENCE
480 QUESTION 052 REFERENCE

M-316 (111,2)



SENIOR REACTOR OPERATOR

QUESTION: 077 (2.00)

Match the responsibility in Column I with the person to whom it is assigned during an emergency in Column II. Assume that all emergency facilities are fully activated. Items in Column I have only one correct answer and items in Column II may be used once, more than once or not at all. (0.50 pts. per response)

Column I (Responsibility)	Column II (Person Assigned Task)
1. Activated emergency response organization.	A. Emergency Director
2. Directs initiation of accountability.	B. Emergency Response Director
3. Authorizes emergency exposure limits and administration of potassium iodide.	C. Emergency Support Officer
4. Serves as primary on-site contact for federal, state and local radiological response agencies.	D. Operations Support Center Coordinator
	E. Technical Support Team Leader

ANSWER: 077 (2.00)

- A
- D
- A
- B

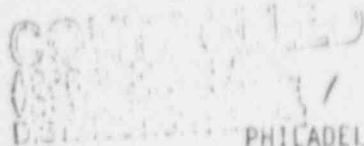
REFERENCE:

PBAPS ERP-200, pg. 1 of 31
PBAPS EPP-1100, objectives 11a. page 22 and 2d. page 21
K/A: 294001A116 2.9/4.7

294001A116 ..(KA's)

FACILITY COMMENT:

SRO Question 077: Accept Answer A for Item 2 in addition to Answer D. ERP-510, Personnel Accountability (attached), Section 6.2, Criteria for Use, states that this procedure (Personnel Accountability)...., "shall be used ... as directed by the Emergency Director (ED)." Additionally, ERP-200, Emergency Director (attached), Section 1.1.9 lists as a responsibility of the Emergency Director to "act as Accountability Coordinator for the Control Room (CR)," in accordance with ERP-510, Personnel Accountability, whereas ERP-220, Operations Support Center (OSC) Operations Personnel, Item 1.1.3 lists "Accountability Coordinator" as a responsibility of the OSC Coordinator.



PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

EMERGENCY RESPONSE PROCEDURE

W. P. ...
8/14/71ERP-510 PERSONNEL ACCOUNTABILITY1.0 RESPONSIBILITIES

- 1.1 All members of the PBAPS In-Plant Emergency Response Organization are responsible for reporting to their assigned Emergency Response Facility, carding in and/or logging in for their facility's Accountability.
- 1.2 All non-emergency and TSC/EOF Emergency Response personnel are responsible for evacuating the protected area via the Guardhouse and reporting to their designated facility or assembly area.
- 1.3 Accountability Coordinators are responsible for providing Security with an Accountability List of personnel assigned to their facility or assembly area upon request.
- 1.4 The Accountability Group Leader is responsible for:
 - 1.4.1 Directing and controlling of personnel leaving the Protected Area.
 - 1.4.2 Coordinating Accountability Group efforts.
 - 1.4.3 Providing a roster of unaccounted-for personnel to the Security Team Leader within 30 minutes of an Site Evacuation announcement.
- 1.5 The Access Control Group Leader is responsible for:
 - 1.5.1 Providing traffic control to the assembly areas.
 - 1.5.2 Ensuring notification of non-PA system covered areas.
 - 1.5.3 Providing aid to the Vehicle and Evacuee Control Group Leader.
- 1.6 The Accountability Group and Access Control Group members are responsible for:
 - 1.6.1 Providing direction and control of personnel leaving the Protected Area.
 - 1.6.2 Obtaining accountability data.
 - 1.6.3 Notifying non-PA system covered areas.

5.0 ATTACHMENTS AND APPENDICES

- 5.1 Attachment 1 - Personnel Accountability Flow Chart
- 5.2 Attachment 2 - In-Plant Muster Area Phone List
- 5.3 Attachment 3 - Accountability List

6.0 SUPPORTING INFORMATION

6.1 PURPOSE

To define the actions of the Security Team and plant personnel necessary to provide accountability of Protected Area personnel during a Site Evacuation.

6.2 CRITERIA FOR USE

This procedure shall be used when a Site Evacuation is announced, or as directed by the Emergency Director (ED).

6.3 REFERENCES

- 6.3.1 Code of Federal Regulations, Title 10, Energy, Part 50, Appendix E, Section IV, Subsection A, Organization
- 6.3.2 ERP-500, Security Team Leader (STL)
- 6.3.3 ERP-520, Security Team
- 6.3.4 NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
- 6.3.5 Peach Bottom Atomic Power Station (PBAPS) Emergency Plan
- 6.3.6 PBAPS Security Plan and Contingency Procedures

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PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM UNITS 2 AND 3
EMERGENCY RESPONSE PROCEDURE

Gray
17-22-71

ERP-200 EMERGENCY DIRECTOR (ED)

1.0 RESPONSIBILITIES

1.1 The Emergency Director is responsible to:

- 1.1.1 Verify the event conditions and determine emergency classification.
- 1.1.2 Activate and direct the emergency response organization initial response phase.
- 1.1.3 Direct accident assessment and operations technical analysis.
- 1.1.4 Coordinate accident mitigation and plant operations stabilizing actions.
- 1.1.5 Authorize emergency exposure limits and administration of Potassium Iodide (KI). When the Emergency Response Manager is not activated, authorize off-site protective actions.
- 1.1.6 Be the single source for plant operations information and data.
- 1.1.7 Inform the Emergency Response Manager of plant status and the sequences of response actions.
- 1.1.8 Provide final approval of emergency special procedures.
- 1.1.9 Act as Accountability Coordinator for the Control Room (CR) in accordance with ERP-510 personnel accountability. When the ED shifts from the CR to the Technical Support Center (TSC), Shift Management will remain as Accountability Coordinator for the Control Room.

NOTE: THE EMERGENCY DIRECTOR TITLE IS CREATED UPON THE CLASSIFICATION OF THE EMERGENCY AND IS FILLED BY SHIFT MANAGEMENT. THE PLANT MANAGER DESIGNEE ASSUMES THE DUTIES ON ARRIVAL AND WHEN KNOWLEDGEABLE OF PLANT CONDITIONS, AND SHIFT MANAGEMENT RETURNS TO CONTROL ROOM ASSIGNMENT.

NOTE: THE EMERGENCY DIRECTOR MAY ELECT TO ASSIGN A PERSON AS AN ASSISTANT. THE EMERGENCY DIRECTOR SHALL DESIGNATE THOSE FUNCTIONS FOR WHICH THE ASSISTANT IS RESPONSIBLE.

PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM UNITS 2 AND 3
EMERGENCY RESPONSE PROCEDURE

Ken Power
8/14/91

ERP-220 OPERATIONS SUPPORT CENTER (OSC) OPERATIONS PERSONNEL

1.0 RESPONSIBILITIES

1.1 Operation Support Center Coordinator

- 1.1.1 Reports to Operation Support Center (OSC).
- 1.1.2 Supports directives of Emergency Director/Shift Management.
- 1.1.3 Functions as Accountability Coordinator of personnel reporting to OSC.
- 1.1.4 Supervises emergency response functions of operations personnel in OSC.
- 1.1.5 Coordinates accident mitigation actions with Plant Survey Group Leader (PSGL)
AND Damage Repair Group Leader (DRGL).
- 1.1.6 Coordinates
AND ensures timely relief of OSC personnel.
- 1.1.7 Coordinates with supply personnel to ensure adequate provisions are available to support accident mitigation actions.

1.2 OSC Operations Personnel

- 1.2.1 Conducts investigations
AND operations actions directed by OSC Coordinator.
- 1.2.2 Responds as Fire Brigade members.

2.0 INITIAL ACTIONS

NOTE: ATTACHMENT 1, OPERATIONS SUPPORT CENTER OPERATIONS PERSONNEL FLOW CHART, MAY BE USED AS A GUIDE FOR THE FOLLOWING ACTIONS.

SENIOR REACTOR OPERATOR

QUESTION: 097 (1.00)

Unit 2 has just scrammed. The following plant conditions exist:

- Reactor Power 3%
- Reactor Water Level 17 inches
- Reactor Pressure 1057 psig
- Drywell Hydrogen Concentration 1.0%
- Torus Level 14.6 feet
- Steam Tunnel Hi Area Temperature Alarm enunciated

Which ONE of the following sets of procedures must be entered?

- RC - "RPV Control"
- PC - "Primary Containment Control"
- SC - "Secondary Containment Control"

- A. RC and PC
- B. RC and SC
- C. PC and SC
- D. RC, PC and SC

ANSWER: 097 (1.00)

D

REFERENCE:

PBAPS T-101, T-102, and T-103
PBAPS LOT-1500, objective 2.
K/A: 295032G011 4.1/4.2

295032G011 ..(KA's)

FACILITY COMMENT:

SRO Question 097: Accept Answer A in addition to Answer D since all Steam Tunnel Hi Area Temperature Alarms are not necessarily located in the Reactor Building and as such are not necessarily T-103 entry conditions. Specifically, T-102 is entered on "Rx. Bldg. Area Temperature above an alarm level" for areas listed in Table SC/T-3 (attached). For the steam tunnel, only Points 1 and 16 to TR 2(3)-13-139 bring up the "High Area Temp" alarm (see ARC 20C205L J-3 attached) whereas other Steam Tunnel High Temperature Alarms may be received which are not T-103 entry conditions due to their location outside the Reactor Building (see ARC 20C203BF A-Z).

TABLE SC/T-3
TEMPERATURE-ALARM AND ACTION LEVELS

AREA	ALARM LEVEL (*F)		ACTION LEVEL (*F)	INSTRUMENT	STATUS
	UNIT 2	UNIT 3		TR-2(3)-13-139 PT # (UNLESS SPECIFIED OTHERWISE)	
TORUS ROOM	105	105	135	PT 9,14, OR 24	
	105	115	135	PT 8,15, OR 20	
RCIC ROOM OR HPCI ROOM	105	105	135	PT 2	
A RHR ROOM OR C RHR ROOM	105	105	135	PT 3	
B RHR ROOM OR D RHR ROOM	105	105	135	PT 17	
A CS ROOM OR C CS ROOM	105	105	135	PT 29	
B CS ROOM OR D CS ROOM	105	105	135	PT 23	
A CS ROOM OR C CS ROOM	105	105	135	TI-2(3)501 PT 151	
B CS ROOM OR D CS ROOM	105	105	135	TI-2(3)501 PT 152	
B CS ROOM OR D CS ROOM	105	105	135	TI-2(3)501 PT 153	
D CS ROOM	105	105	135	TI-2(3)501 PT 154	
STEAM TUNNEL	165	175	190	PT 1	
	165	165	190	PT 16	
A ISOL VALVE ROOM (SOUTH)	165	165	190	PT 12	
B ISOL VALVE ROOM (NORTH)	165	165	190	PT 18 OR 21	
ISOL VALVE PIT 165' EL	125	125	150	PT 30	
RWCU REGEN HX ROOM OR A NON REGEN HX ROOM OR B NON REGEN HX ROOM OR A OR B RWCU FLTR DEMIN ROOM OR RWCU BACKWASH VALVE ROOM	125	130	NO ACTION LEVEL	PT 11	
	125	130		PT 28	
	125	125		PT 5	
	105	105		PT 10 OR 27	
	105	105		PT 4	
	105	105		PT 22	
GENERAL AREA 165' EL (MAY AFFECT RPV LEVEL INST)	105	105	135	PT 22	

-101
RC-1

126

-112
EB-1

PBAPS ALARM RESPONSE CARD

WINDOW LOCATION

ALARM WORDING

Page 1 of 2

	A	B	C	D	E	F	G	H	J
1									
2									
3									X
4									
5									

HIGH AREA
TEMP

AUTOMATIC ACTIONS:
NONE

OPERATOR ACTIONS:

1. Read the alarming points temperature on TRS-2-13-139 by opening the panel to the Recorder and pressing the "Print Data" push button. These points printed in Red on the chart are in Alarm. The description for these points are given on the plate below the recorder.
2. Dispatch Operator to sensor location to determine the cause of the alarm.
3. IF any of the asterisked points on the following page is alarming, THEN enter T-103 Secondary Containment Control.
4. Verify that SW OR ESW is available to the operating room coolers, that cooler valve alignment is proper and the fans started.

NOTES:

The Standby Cooler and Fan in each of the ECCS rooms has been isolated due to low flow on the ESW system. DO NOT start the Standby Cooler and Fan in any of the ECCS rooms, this would put the ESW and ECCS systems in an untested configuration.

CAUSE:

1. Steam Leak
2. Fire
3. Loss of area cooling
4. Loss of ventilation

ALARM SETPOINT:

See next page.

ALARM RESET:

MANUAL

ACTUATING DEVICE(S):

TRS-2-13-139

REFERENCES:

- M-351 Sh 1 & 2 E-242 Sh 2
M-1-S-32 Sh 1 & 2 M-354 Sh 1

1. Limerick LER 1-89-47

ARC NUMBER: 210
20C205L J-3

John Cotton
Rev. 3 4/19/90

ALARM SETPOINT:

CHANNEL NO.	THERMOCOUPLE	SET POINT DEGREES F
* 1.	TE-2-02-126A	165
* 2.	TE-2-13-077A	105
* 3.	TE-2-23-105A	105
* 4.	TE-2-12-117B	105
* 5.	TE-2-12-117G	125
* 6.	TE-2-10-098D	105
7.	TE-2-02-126B	160
* 8.	TE-2-13-077B	105
* 9.	TE-2-23-105B	105
* 10.	TE-2-12-117C	105
* 11.	TE-2-12-117H	125
* 12.	TE-2-10-098E	165
13.	TE-2-02-126C	160
* 14.	TE-2-13-077C	105
* 15.	TE-2-23-105C	105
* 16.	TE-2-12-117D	165
* 17.	TE-2-10-098A	105
* 18.	TE-2-10-098F	165
19.	TE-2-02-126D	160
* 20.	TE-2-13-077D	105
* 21.	TE-2-23-105D	165
* 22.	TE-2-12-117E	105
* 23.	TE-2-10-098B	105
* 24.	TE-2-10-098G	105
25.	NONE	
26.	NONE	
* 27.	TE-2-12-117A	105
* 28.	TE-2-12-117F	125
* 29.	TE-2-10-098C	105
* 30.	TE-2-10-098H	125

* T-103 Entry Condition

PBAPS ALARM RESPONSE CARD

WINDOW LOCATION

ALARM WORDING

	A	B	C	D	E
1					
2	X				
3					
4					
5					

SYSTEM II
STEAM
TUNNEL
HI TEMP

AUTOMATIC ACTIONS:

1. Group I Isolation if in conjunction with System I Steam Tunnel High Temp.

OPERATIONAL ACTIONS:

1. Check corresponding System I alarm to see Group I isolation condition exists.
2. Notify Shift Management.
3. IF Group I Isolation has NOT occurred, THEN confirm at Panel 20C017.
 - a. By indication light #16A-DS257B/D NOT illuminated which "CHANNEL" brought up alarm (B OR D).
 - b. By continuity check:
 - o Fuse NOT blown (16A-F2B/D)
 - o Relay Coil NOT defective (16A-K2B/D)
 - c. Compare temperature indication for consistency on 2AC270 OR 2BC270 in Control Room.

CAUSE:
Steam leak

ALARM SETPOINT:
192.5 F increasing

ALARM RESET:

MANUAL

ACTUATING DEVICE(S):
TS-4931B & D, 4932B & D, 4933B & D, 4934B & D

REFERENCES:
E-238
M-351
M-1-S-23

ARC NUMBER: 228
20C203BB A-2
Rev. 2

Handwritten signature and date
4/11/91