

## EMERGENCY PLAN PROCEDURES INDEX

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09/07/82 \*

## PEACH BOTTOM UNITS 2 AND 3

**RECEIVED**

<u>Number</u>	<u>Title</u>	Review	Rev.	Revision
		Date	No.	Date
		SEP 9 1982		
		<b>M. L. KNAPP</b>		
EP-101	Classification of Emergencies	06/11/82	6	06/11/82
EP-102	Unusual Event Response	06/10/82	6	06/10/82
EP-103	Alert Response	06/10/82	6	06/10/82
EP-104	Site Emergency Response	06/10/82	6	06/10/82
EP-105	General Emergency Response	06/09/82	6	06/09/82
EP-110	Personnel Assembly and Accountability	04/14/82	0	04/14/82
EP-201	Technical Support Center (TSC) Activation	09/07/82	4	09/07/82 *
EP-202	Operational Support Center (OSC) Activation	09/07/82	3	09/07/82 *
EP-203	Emergency Operations Facility (EOF) Activation	09/07/82	4	09/07/82 *
EP-205	Radiation Protection Team Activation	04/08/82	3	04/08/82
EP-205A	Chemistry Sampling and Analysis Group	05/25/82	4	05/25/82
EP-205A .1	Operation of Post Accident Sampling Station	09/07/82	1	09/07/82 *
EP-205A .2	Obtaining Drywell Gas Samples from Containment Atmosphere Dilution Cabinets	05/26/82	0	05/26/82
EP-205A .3	Retrieving and Changing Sample Filters and Cartridges from the Drywell Radiation Monitor During Emergencies	05/25/82	0	05/25/82
EP-205A .4	Obtaining Drywell Gas Samples from the Drywell Radiation Monitor Sampling Station	05/25/82	0	05/25/82
EP-205A .5	Obtaining Reactor Water Samples from Sample Sinks Following Accident Conditions	05/25/82	0	05/25/82
EP-205A .6	Obtaining Canal Discharge Water Samples Following Radioactive Liquid Releases After Accident Conditions	05/25/82	0	05/25/82
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.7	Particulate Samples from the Main Stack and Roof Vents Following Accident Conditions	06/04/82	0	06/04/82
EP-205A .8	Obtaining Liquid Radwaste Samples from Radwaste Sample Sink Following Accident Conditions	05/25/82	0	05/25/82
EP-205A .9	Obtaining Samples from Condensate Sample Sink Following Accident Conditions	05/25/82	0	05/25/82
EP-205A .10	Obtaining Off-Gas Samples from the Off-Gas Hydrogen Analyzer Following Accident Conditions	05/25/82	0	05/25/82
EP-205A .11	Sample Preparation and Chemical Analysis of Highly Radioactive Liquid Samples	05/25/82	0	05/25/82
EP-205A .12	Sample Preparation and Analysis of Highly Radioactive Particulate Filters and Iodine Cartridges	05/25/82	0	05/25/82
EP-205A .13	Sample Preparation and Analysis of Highly Radioactive Gas Samples	05/25/82	0	05/25/82
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EP-205C	Personnel Dosimetry Bioassay and Respiratory Protection Group	04/08/82	2	04/08/82
EP-206	Fire and Damage Team Activation	06/04/82	5	06/04/82
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EP-207F	Vehicle Decontamination Procedure	04/14/82	0	04/14/82
EP-208	Security Team	04/01/81	0	04/01/81
EP-209	Telephone List For Emergency Use	04/26/82	4	04/26/82
EP-209 Appendix A	Immediate Notification Call List	06/08/82	5	06/04/82
EP-209 Appendix B	Philadelphia Electric Company Officials	07/23/81	1	07/23/81
EP-209 Appendix C	Peach Bottom Station Supervision	07/13/82	5	07/13/82
EP-209 Appendix D-1	On Site Emergency Team Leaders	07/13/82	4	07/13/82
EP-209 Appendix D-2	Radiation Survey Team	09/07/82	5	09/07/82 *
EP-209 Appendix D-3	Fire and Damage Team	07/13/82	4	07/13/82
EP-209 Appendix D-4	Personnel Safety Team	09/07/82	5	09/07/82 *
EP-209 Appendix D-5	Security Team	06/08/82	3	04/26/82
EP-209 Appendix D-6	Re-Entry and Recovery Team	06/08/82	2	04/26/82
EP-209 Appendix D-7	Technical Support Center Team	07/13/82	4	07/13/82
EP-209 Appendix E	Corporate Emergency Team Leaders and Support Personnel	07/13/82	5	07/13/82
EP-209 Appendix F	U. S. Government Agencies	06/08/82	2	04/08/82
EP-209 Appendix G	Emergency Management Agencies	06/08/82	2	10/16/81
EP-209 Appendix H	Company Consultants	06/08/82	2	10/16/81
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EP-209 Appendix I-2	Chemistry & Health Physics Contractor Call List	09/07/82	5	09/07/82 *
EP-209 Appendix J	Nearby Public and Industrial Users	06/08/82	1	07/23/81
EP-209 Appendix K	Miscellaneous	07/13/82	3	07/13/82
EP-209 Appendix L	Local PECO Phones	06/08/82	1	07/23/81
EP-209 Appendix M	D E L E T E D	D E L E T E D		
EP-209 Appendix N	Medical Support Groups	07/13/82	4	07/13/82
EP-209 Appendix P	Staffing Augmentation - 50 Minute Call Procedure	06/09/82	2	06/09/82
EP-301	Operating the Evacuation Alarm and Pond Page System	04/01/81	0	04/01/81
EP-303	Partial Plant Evacuation	12/22/81	1	12/22/81
EP-304	D E L E T E D			
EP-305	Site Evacuation	09/07/82	4	09/07/82 *
EP-306	Evacuation of the Information Center	05/25/82	2	05/25/82
EP-307	Reception and Orientation of Support Personnel	04/12/82	0	04/12/82
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EP-312	Radioactive Liquid Release (Emergency Director Functions)	04/01/81	0	04/01/81
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EP-317	Direct Recommendations to County			

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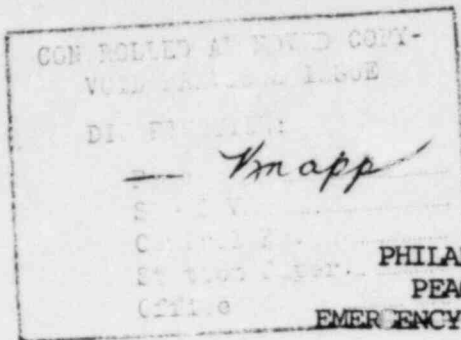
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	Emergency Management and Civil Defense Agencies	04/14/82	0	04/14/82
EP-318	Liquid Release Dose Calculation Method for Drinking Water	05/06/82	0	05/06/82
EP-319	Liquid Release Dose Calculation Method for Fish	05/06/82	0	05/06/82
EP-320	Procedure for Leaking Chlorine	03/12/82	1	03/12/82
EP-325	Use of the Containment Radiation Monitor to Estimate Release Source Term	06/09/82	0	06/09/82
EP-401	Entry for Emergency Repair, Operations, and Search and Rescue	04/08/82	3	04/08/82
EP-500	Review and Revision of Emergency Plan (FSAR Appendix 0)	04/01/81	0	04/01/81



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*M. Kline*  
9/7/82

## EP-201 TECHNICAL SUPPORT CENTER (TSC) ACTIVATION

### PURPOSE

To describe the instructions and actions required for the activation, manning, and operation of the Technical Support Center (TSC).

### References:

Peach Bottom Atomic Power Station Emergency Plan

- |            |   |
|------------|---|
| NUREG 0654 | Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants. |
| NUREG 0696 | Functional Criteria for Emergency Response Facilities   |

### APPENDICES

- EP-201-1 Equipment Activation of Technical Support Center and Emergency Operations Facility
- EP-201-2 Actions of First HP to Arrive at Technical Support Center and Emergency Operations Facility
- EP-201-3 Actions of First Test Engineer to Arrive at Technical Support Center and Emergency Operations Facility
- EP-201-4 Technical Support Center Organization and Manning
- EP-201-5 Technical Support Center Facility Layout
- EP-201-6 Plant Status Board
- EP-201-7 Event Chronology Status Board
- EP-201-8 Offsite Communications Status Board
- EP-201-9 Staff Assignment Status Board
- EP-201-10 Procedure for Operation of TSC TV Monitors
- EP-201-11 Site Radiological Status Board

EP-201-12 TSC Telephone Checkoff List

ACTION LEVEL:

Activate the TSC when an event has been classified as an alert. Site Emergency or General Emergency in accordance with EP-101, Classification of Emergencies, or at the discretion of the Emergency Director.

PRECAUTIONS:

1. Verify TSC habitability prior to or during activation.
2. Maintain accountability of personnel and staff reporting to the TSC throughout the incident.
3. Ensure TSC ventilation system is operating and that air samples are taken periodically to measure potential airborne contamination
4. Ensure that pertinent actions and notifications are logged. An official log is located in the Technical Support Center and indicated as such.

PROCEDURE:

IMMEDIATE ACTIONS:

1.0 Emergency Director shall:

- 1.1 Assign one of the on-shift I&C technicians to perform the steps outlined in Section 2.0 of these Immediate Actions.
- 1.2 Assign an individual the duties of Communicator and direct the individual to perform the steps outlined in Section 3.0 of these Immediate Actions.
- 1.3 Direct the first HP staff member that arrives at the TSC to perform the steps outlined in Section 4.0 of these Immediate Actions.
- 1.4 Direct the first Test Engineer staff member that arrives at the TSC to perform the steps outlined in Section 5.0 of these Immediate Actions.
- 1.5 Obtain continuous status updates on plant conditions from the Control Room and maintain a log of significant events and actions.

The log shall include at least the following:

- a. Date and Time

- b. Significant Event
- c. Significant Actions

- 1.6 Provide briefings on the emergency and pertinent plant conditions to appropriate TSC staff upon their arrival.
- 1.7 Inform the Control Room that the TSC is operational upon completion of steps outlined in Section 2.0 and 3.0 of these Immediate Actions.
- 1.8 Ensure that the manning and operation of the TSC is in accordance with the Follow-up Actions of this procedure.

2.0 On-Shift I&C Technician shall:

- 2.1 Go to the guardhouse, pick up the emergency radio kit and emergency key ring, and proceed to Unit 1 using one of the dedicated I&C vehicles parked in the Company Vehicle Area. Keys for these vehicles are in guardhouse.
- 2.2 Use attached Appendix EP-201-1 (posted copies of this appendix can be found on the first floor of Unit 1 by the entrance, inside door of EOF and inside door of TSC) to turn on lighting, HVAC, radiation monitors, and closed circuit TV monitors in both the EOF and TSC.
- 2.3 Inform the Emergency Director when TSC/EOF equipment set-up is complete and of any equipment problems.
- 2.4 Remain at the TSC as the Data Display Operator. Man the TV camera station in the TSC and perform any needed request from the Emergency Director. Use Appendix EP-201-10 for TV monitor operation instructions.

3.0 Emergency Director Communicator shall:

- 3.1 Using Appendix EP-201-12 (TSC Telephone Checkoff List), verify communications capability exists from the Technical Support Center.
- 3.2 Inform the Emergency Director when the communications capabilities have been verified or of any discrepancies.
- 3.3 Man communications lines as directed by the Emergency Director and maintain a Communications Log containing information received from and sent to Emergency Centers and offsite agencies.



The log shall include as a minimum the following information:

- a. Date and Time (use 24 hour time notation)
- b. Messages received or sent
- c. Name of person information was received or sent to
- d. Name and initials of person making entries

3.4 Inform the Emergency Director promptly of all information received from site groups and offsite agencies.

4.0 First HP Staff Member shall:

- 4.1 Perform the steps outlined on Appendix EP-201-2 and report completion to the Emergency Director.

Copies of Appendix EP-201-2 are posted on the first floor of Unit 1 by the entrance. Inside door of the EOF, and inside door of the TSC.

5.0 First Test Engineer shall:

- 5.1 Perform the steps outlined on Appendix EP-201-3 and, upon completion, inform the Emergency Director that TLD distribution has begun.

Copies of Appendix EP-201-3 are posted on the first floor of Unit 1 by the entrance, inside door of the EOF, and inside door of the TSC.

6.0 Personnel Safety Team Leader shall:

- 6.1 Provide necessary personnel and on-site radiation status.
- 6.2 Assign assistants as necessary to man the site Radiological Status Board.
- 6.3 Coordinate with the HP&C OSC for on-site radiation problems which develop.

FOLLOW-UP ACTIONS:

1.0 Emergency Director shall:

- 1.1 Use attached Appendix EP-201-4 and Appendix EP-201-5 to ensure that the TSC is adequately staffed.
- 1.2 Assign three individuals (test engineers

or technical assistants) as Status Board Recorders:

- a. one individual for the Plant Status Board (see Appendix EP-201-7).
  - b. one individual for the Event Chronology Status Board (see Appendix EP-201-7).
  - c. one individual for the Offsite Communications Status Board (see Appendix EP-201-8) and Staff Assignment Status Board (see Appendix EP-201-9).
- 1.3 Direct the Status Board Recorders to Perform the steps outlined in Section 2.0 of these Follow-Up Actions.
  - 1.4 Assign an individual (test engineer or technical assistant) to man the dedicated communication lines to the Control Room and Operations Support Center and direct the individual to perform the steps outlined in Section 3.0 of these Follow-up Actions.
  - 1.5 If necessary dispatch an individual (test engineer or technical assistant) to the Control Room to transmit requested Control Room parameters and information to the TSC.
  - 1.6 If necessary assign an individual (clerical staff) as a Telephone Operator to man the telephone console in the EOF and direct the individual to perform the steps outlined in section 3.0 of these follow-up actions.
  - 1.7 Ensure that two individuals (instrument/control technician) are assigned as Data Display Operators to man the TV camera station in the TSC.
  - 1.8 Brief the TSC staff periodically (normally every 30 minutes) on the status of the emergency and pertinent plant conditions.
  - 1.9 Rely on the Personnel Safety Team Leader for status as to contaminated or injured personnel, site or local evacuations, and on-site radiological problem areas.

2.0 Status Board Recorders shall:

2.1 Set up the assigned status board given to you.

Format and content of the status board are given in the following appendices:

- a. Appendix EP-201-6, Plant Status Board
- b. Appendix EP-201-7, Event Chronology Status Board
- c. Appendix EP-201-8, Offsite Communications Status Board
- d. Appendix EP-201-9, Staff Assignment Status Board
- e. Appendix EP-201-11, Site Radiological Status Board

2.2 Contact the following individuals for the various status board information.

- a. Data Display Operators for plant status information
- b. Communicator to Control Room for event chronology information
- c. Emergency Director or Control Room for offsite communication information.
- d. Emergency Director for staff assignment information.
- e. HP&C OSC for site radiological status.
- f. Designated site evacuation assembly area coordinator for evacuation information.

2.3 Post appropriate information on assigned status board and maintain a log record of all status board entries.

Transmit plant status information and event chronology information to appropriate Status Board Recorders at the EOF.

2.4 Review and update the status board at least every 15 minutes and as changes in plant conditions or information warrant.

2.5 Inform the Emergency Director as significant changes in status board information are noted.

3.0 Communicators shall:

- 3.1 Man assigned communication lines.
- 3.2 Maintain a Communications Log containing information received from and sent to other

emergency response facilities and other support organizations.

The log shall include as a minimum the following information:

- a. Date and time (use military time notification)
  - b. Incoming/Outgoing
  - c. Messages received or sent
  - d. Name of person information was received from or sent to
  - e. Name and initials of person making entries
- 3.3 Inform the Emergency Director promptly of all information received from or sent to members of the emergency response organization or support organizations.

APPENDIX EP-201-1 EQUIPMENT ACTIVATION OF TSC AND EOF

1. Take the radios obtained from guardhouse and go to the Emergency Operations Facility and on second floor. Enter using key B9178.
2. Go to the lighting panels located just outside the north door. On Panel P-23 turn on Breakers 2, 4, and 6. On Panel P-43 turn on Breaker 5.
3. Go to Technical Support Center door on third floor and enter the room using key PG-6. Leave the portable radios here. Plug in charger cord.
4. Go to lighting Panel P-47 located behind the status boards next to the copying machine and turn on all breakers labeled "TSC lighting."
5. Go to the Ventilation Panel at the northwest corner of the Technical Support Center. Turn on the ventilation system using the procedure posted there.
6. Turn on the Particulate-Iodine-Noble Gas Monitor (PING) located at the northeast corner of the Technical Support Center using the procedure on the PING.
7. Turn on the 4 TV monitors and the video recorder located in center of the Technical Support Center using the procedure near the monitors. Notify the Unit 2 and 3 Control Room operators to energize the cameras and remove the lens covers.
8. Go to the 1st floor, and turn on the PING inside the entrance.
9. Turn on the 2 TV monitors located in the Emergency Operations Facility using the procedure near the monitors.
10. Return to the Technical Support Center, third floor, and man the TV camera station as directed by the Emergency Director. Inform Unit 2 and 3 Shift Supervision that you have energized the Technical Support Center and the Emergency Operations Facility.

APPENDIX EP-201-2 ACTIONS OF FIRST HP TO ARRIVE AT TSC AND EOF

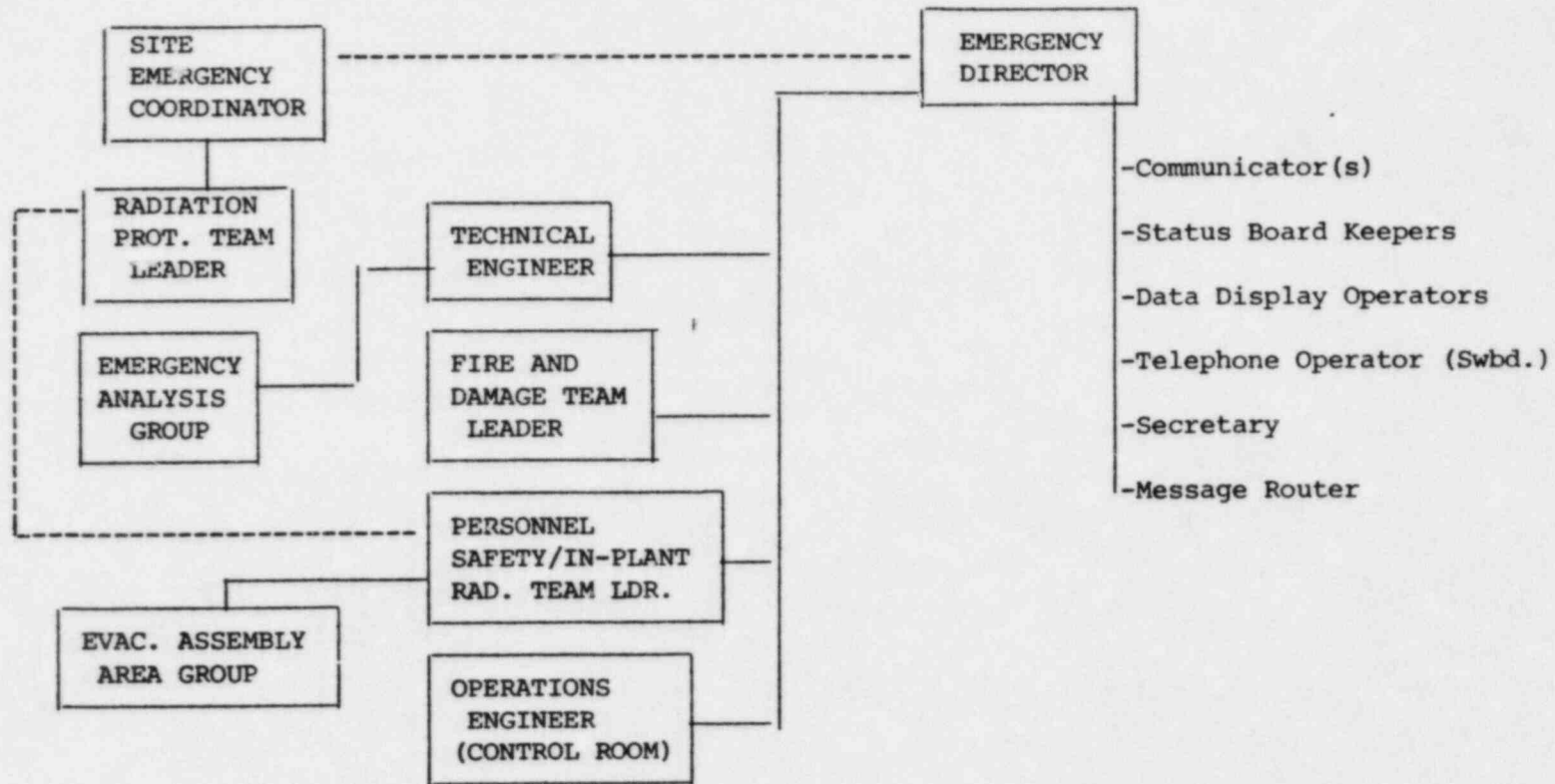
1. Go to the first floor by the Unit one entrance and inventory and prepare the Emergency Equipment Locker.
2. Obtain the radios from the I&C technician in the Technical Support Center on the third floor. Leave these radios in the Emergency Operations Facility for the Field Survey Teams
3. Prepare the emergency TLD's in the green Radiation Emergency Equipment boxes for use. These boxes are located in the hallway leading the Alternate Chem. Lab. The TLD's should be inventoried and readied for use by those who enter the Unit One Emergency Centers.

APPENDIX EP-201-3 ACTIONS OF FIRST TEST ENGINEER TO ARRIVE AT TSC AND EOF

1. Go to the first floor by Unit one entrance and get emergency TLD's from the Radiation Equipment lockers. If portable frisker is not already at Unit One entrance, get it from the Emergency Operations Facility and set it up at the desk just inside the glass door.
2. Go to the first floor entrance of Unit One. Distribute TLD to all personnel who possess emergency response roles. Log TLD Numbers versus names. This function shall be assumed by a guard as soon as he is available.

APPENDIX EP-201-4

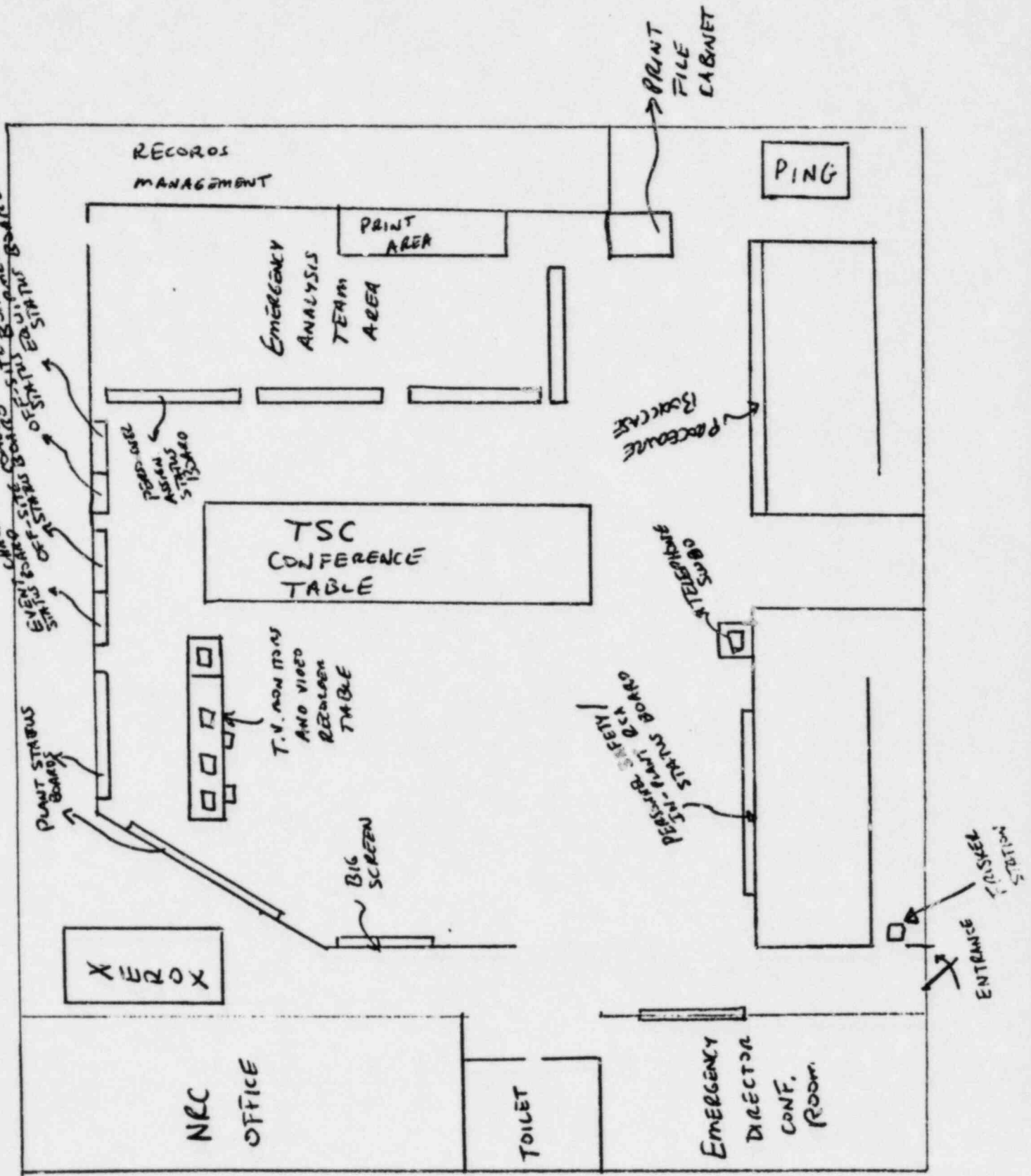
TECHNICAL SUPPORT CENTER ORGANIZATION AND MANNING





TECHNICAL SUPPORT CENTER FACILITY LAYOUT

APP-10X EP-201-5



REACTOR PARAMETERS - time \_\_\_\_\_

1. Power \_\_\_\_\_
2. Level \_\_\_\_\_ inches
3. Pressure \_\_\_\_\_ PSIG

CONTAINMENT PARAMETERS - time \_\_\_\_\_

1. Torus Temp. \_\_\_\_\_ °F
2. Drywell Temp. \_\_\_\_\_ °F
3. Drywell Press. \_\_\_\_\_ psig
4. Torus Level \_\_\_\_\_
5. Containment \_\_\_\_\_ %O<sub>2</sub> \_\_\_\_\_ %H<sub>2</sub>

RADIOLOGICAL PARAMETERS - time \_\_\_\_\_

1. Main Stack \_\_\_\_\_ cps \_\_\_\_\_ nr/hr
2. U/2 Vent Stack \_\_\_\_\_ cpm \_\_\_\_\_ nr/hr
3. U/3 Vent Stack \_\_\_\_\_ cpm \_\_\_\_\_ nr/hr
4. D/W Rad Monitor \_\_\_\_\_ R/hr
5. Refuel Flr Exh \_\_\_\_\_ nr/hr
6. Air Eject Off Gas \_\_\_\_\_ nr/hr
7. Radwaste Monitor \_\_\_\_\_ cpm
8. Main Stack Flow \_\_\_\_\_ CFM
9. U/2 Vent Stack Flow \_\_\_\_\_ CFM
10. U/3 Vent Stack Flow \_\_\_\_\_ CFM

METEOROLOGICAL PARAMETERS - time \_\_\_\_\_

1. Avg. Wind Speed \_\_\_\_\_ mph
2. Avg. Wind Direction \_\_\_\_\_ ° (from)
3. Avg. Radiation rdg \_\_\_\_\_ nr/hr
4. Avg. Ambient Temp. \_\_\_\_\_ °F
5. Precipitation \_\_\_\_\_
6. Stability Class \_\_\_\_\_
7. Avg. Wind Speed (320') \_\_\_\_\_
8. Avg. Wind Speed (75') \_\_\_\_\_

REACTIVITY CONTROL - time \_\_\_\_\_

1. # of rods not inserted past 06 \_\_\_\_\_

SBLC	INJ	UNAVAIL/REASON
A		
B		

3. SBLC Tank Level \_\_\_\_\_

PRESSURE CONTROL - time \_\_\_\_\_

1. # Bypass Valves Open \_\_\_\_\_

SRVS	A	B	C	D	E	F	G	H	J	K	L
OPEN											
CLOSED											

POWER SUPPLIES - time \_\_\_\_\_

SOURCE	SUPPLYING	UNAVAIL/REASON
2OFFSITE		
3OFFSITE		
E-1		
E-2		
E-3		
E-4		

BUS	POWER SUPPLY			UNAVAIL
	#20.s.	#30.s.	Diesel #	
E-1				
E-2				
E-3				
E-4				

LEVEL CONTROL - time \_\_\_\_\_

SYSTEM	INJ	UNAVAIL/REASON
F. W. A		
B		
C		
CRD A		
B		
HPCI		
RCIC		
COND A		
B		
C		
C.S. A		
B		
C		
D		
LPCI A		
B		
C		
D		
HPSW A		
B		
C		
D		
COND TRANS		
REFUEL TRANS		
SBLC		

CONTAINMENT CONTROL - time \_\_\_\_\_

RHR	TORUS COOL	TORUS SPRAY	D/W SPRAY	S/D COOL	UNAVAIL/REASON
A					
B					
C					
D					

HPSW	ON	UNAVAIL/REASON
A		
B		
C		
D		

ISOLATIONS	ISOLATED/EXCEPTIONS
GRP I	
GRP II	
GRP III	
GRP IV	
GRP V	

SBGTS	ON	UNAVAIL/REASON
FANS A		
B		
C		
TRAIN A		
B		

APPENDIX EP-201-7 EVENT CHRONOLOGY STATUS BOARD

TIME	EVENT NO.	EVENT
------	--------------	-------

APPENDIX EP-201-8 OFFSITE COMMUNICATIONS STATUS BOARD

TIME	OFFSITE COMMUNICATIONS	RESPONSE/COMMENT
------	---------------------------	------------------

APPENDIX EP-201-9 STAFF ASSIGNMENT STATUS BOARD

TITLE	NAME	LOCATION
Shift Superintendent		
Shift Supervisor		
Emergency Director		
Technical Engineer		
Personnel Safety Team Leader		
Fire/Damage Team Leader		
Site Emergency Coordinator		
Health Physics/Chemistry Coordinator		
Radiation Protection Team Leader		
Dose Assessment Group Leader		
Field Survey Group Leader		
EOF Liaison		
Procedure Support Coordinator		
Planning Coordinator		
Mechanical Engineer Liaison		
Electrical Engineer Liaison		
Emergency Support Officer		

APPENDIX EP-201-10  
PROCEDURE FOR OPERATION OF TSC/EOF TV MONITORS

1.0 PURPOSE:

The following procedure defines the required steps for the operation of the Technical Support Center and Emergency Operations Facility TV monitoring of the Main Control Room.

2.0 SCOPE:

This procedure is to be followed by all personnel who use the video-monitoring system in the Control Room.

3.0 REFERENCES:

Operating instructions, controls for motorized zoom lenses. (Vicon Industries, Inc.) X85-780  
6280-E-114-5-1

4.0 RESPONSIBILITY:

The person(s) operating this equipment shall be responsible for safe operation.

5.0 PREREQUISITES:

Person(s) operating this equipment should have a knowledge of its operation in addition to reviewing the operating instructions, and should be very familiar with the layout of instruments in the control room.

6.0 PROCEDURE:

- 6.1 In the Emergency Operations Facility (2nd floor of Unit 1) turn on both controllers, as they act as master controllers for the controllers on the third floor.
- 6.2 In the Technical Support Center (3rd floor of Unit 1), turn on the four TV monitors, and their associated controllers.
- 6.3 Push 'close' button on iris a few short times to ensure proper lighting.
- 6.4 Joystick operates camera movement.

NOTE: Pan and tilt speed are a function

of how far the joystick is moved away from the center 'rest' position.

- 6.5 Motor speed is determined by knob (on/off).

NOTE: The motor speed not on the lens controller will have to be optimized for each individual camera (for focus and zoom it will be approximately mid-pot). To get iris control, the speed pot must be fully clockwise.

NOTE 1: Fuse for all cameras is in the TRW panel in the control room, inside the right door on the left side.

NOTE 2: Control Room TV camera switches are located at the base of each TV camera. Switch is labeled "ACPower Feed On/Off".

APPENDIX EP-201-12

TSC PHONE C.O.L.

Test Ring Down Phones:

HP&C OSC (Wall)	_____
HOECC 7th Floor	_____
Control Room Data Taker (Wall)	_____
Control Room (Table)	_____
PA, MD, and 5 Counties	_____
Load Dispatcher	_____
Control Room (Wall)	_____
NRC Red Phone	_____
White - Bureau of Rad. Protection	_____
Blue - PA, MD, and 5 Risk Counties	_____

Test Dial Phones for Dial Tone:

5625	Computer Terminal	_____
4626	Emergency Analysis Team Wall Phone	_____
4627	Fire/Damage Team Leader	_____
4628	Emerg Analysis Team/Telecopier	_____
4629	Technical Engineer	_____
4630	Emerg Analysis Team	_____
4635	Emerg Director	_____
4631	Emerg Director's Table	_____
4632	Personnel Safety Team Leader	_____
4633	TSC Status Board	_____
4634	Data Display Operators	_____
4321	Data Display Operators	_____
4636	NRC Office	_____

NOTE: Inform the Personnel Safety Team Leader to test the appropriate evacuation assembly ring down phone when evacuation assembly area (PUB or North Sub Station) is manned.



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DEFINITION:  
*Thapp*

PHILADELPHIA ELECTRIC COMPANY  
Control Room PEACH BOTTOM UNITS 2 AND 3  
EMERGENCY PLAN IMPLEMENTING PROCEDURE  
Office

*M. V. V. V.*  
9/7/82

EP-202 - Operations Support Centers (OSC) Activation

PURPOSE

To define the actions required by the Operations Support Center Coordinators for activating, manning and managing the Operations Support Centers (OSC).

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
  2. Nureg 0654 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
  3. Nureg 0696 Functional Criteria for Emergency Response Facilities.
- . 10 CFR 20

APPENDIX

- EP-202-1 Operator OSC phone C.O.L.
- EP-202-2 HP&C OSC Phone C.O.L.
- EP-202-3 Operator OSC Assignment Status Board
- EP-202-4 Operator OSC Plant Status Board
- EP-202-5 HP&C OSC Assignment Status Board

ACTION LEVEL

Activate the Operations Support Centers when an event has been classified as an Alert, Site Emergency or General Emergency in accordance with EP 101, Classification of Emergencies.

PRECAUTIONS

1. Maintain an official log of pertinent actions in each of the designated Operations Support Centers. An official log is in each of the OSCs and they are indicated as such.
2. Verify habitability of Operations Support Centers in accordance with the following limits:  
  
Area Radiation Level less than or equal to 25 mR/hr

-9

Airborne Contamination level less than or equal to  $1 \times 10$  uCi/cc (as recommended in 10 CFR 20).

3. Two Operations Support Centers exist. The Shift Operators OSC is on 135', turbine building and the HP&C personnel OSC is on 116', turbine building. This prevents personnel and communications problems between shift operators and HP&C personnel. Each OSC has identical communications capabilities.
4. Personnel shall log in and out of the Operations Support Centers in order to maintain personnel accountability.
5. The Operations Support Centers shall contain controlled copies of the Emergency Procedures. No extra radiation survey or emergency equipment need be at the center.

#### IMMEDIATE ACTIONS

- 1.0 Interim Emergency Director shall:
  - 1.1 At the Alert, Site Emergency, or General Emergency level (whichever occurs first), assign a competent operator as the Operator OSC (elev. 135' turbine building) coordinator. If available, an operator with supervisory experience (SSV or Shift Supt. type) should be used or called in per Appendix P of EP-209 call list to man this position.
- 2.0 Radiation Protection Team Leader shall:
  - 2.1 Ensure that the HP&C OSC (elev. 116' turbine building) is manned and supervised with competent Health Physics personnel after the occurrence of an Alert, Site Emergency, or General Emergency (whichever occurs first). Assignment of an HP&C OSC coordinator is essential to properly handle all HP related emergency activities.
- 3.0 Operations Support Center Coordinators or designees shall:
  - 3.1 Assign an individual the duties of Operations Support Center Communicator and Status Board Keeper. Ensure that a log is available for the communicator's use.
  - 3.2 Direct the Operations Support Center Communicator and Status Board Keeper to verify operability of the communication systems as outlined in the attached Appendices. (See Appendix EP-202-2 for HP&C OSC and Appendix EP-202-1 for the Shift OSC).
  - 3.3 Notify the Control Room when their respective Operations Support Center is manned and that communications are satisfactory or unsatisfactory.

- 3.4 Procure equipment and supplies necessary to assist in mitigating the emergency.
  - 3.5 Assign an individual to verify habitability of their respective Operations Support Center (as required) adhering to the criteria designated in step 2 of the Precautions above. Report the results of this verification to the Shift Superintendent.
- 4.0 Operations Support Center Communicator and Status Board Keepers shall:
- 4.1 Verify communication capabilities exist in their respective Operations Support Centers by completing the attached phone C.O.L. appendices. Report results to OGC Coordinator.
  - 4.2 Man the status board posted by the OSC Coordinator to ensure personnel and plant status is maintained in each OSC. (See Appendices for status boards).
  - 4.3 Log all pertinent actions in the designated log book to maintain a formal record of all events pertinent to the OSC. Refer to OSC Coordinator for guidance on what to log.

FOLLOW-UP ACTIONS

- 1.0 Operations Support Center Coordinators or designees shall:
- 1.1 Remain in contact with the Control Room or the Technical Support Center in order to provide assistance as needed by formulation of Emergency Teams.
  - 1.2 Direct personnel entering and leaving their respective operations support Center to log in using the official log or the status boards.
  - 1.3 Coordinate activities of their respective OSC. The operator OSC should coordinate with the Control Room and designated maintenance personnel to ensure local permits are promptly completed to allow repair work if necessary. The HP&C OSC should coordinate with the TSC, Control Room, and all emergency team personnel to ensure proper HP support for all activities in the plant. In these cases, the HP will serve as the RWP.
  - 1.4 Upon leaving their respective Operations Support Center for any reason, delegate his duties to the remaining senior operator or technician.
  - 1.5 Maintain working knowledge of radiation exposure each member of their respective OSC is receiving in order to maintain ALARA concepts during the emergency.
- 2.0 Operations Support Center personnel shall:
- 2.1 Upon entering and leaving their respective operations support center log in and out in the designated log or on the status board.

- 2.2 Ensure proper self-monitoring of their own pocket dosimeters when performing tasks during the emergency.

APPENDIX EP-202-1  
OPERATOR OSC PHONE C.O.L.

Test Ring Down Phones

Initials

Control Room  
HP&C OSC

\_\_\_\_\_  
\_\_\_\_\_

Test Dial Phones for Dial Tone

\_\_\_\_\_  
\_\_\_\_\_

Discrepancies:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPENDIX EP-202-2  
HP&C OSC PHONE C.O.L.

Test Ring Down Phones

Initials

Technical Support Center  
Operator OSC

\_\_\_\_\_  
\_\_\_\_\_

Test Dial Phones for Dial Tone

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Discrepancies:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



APPENDIX EP-202-4  
OPERATOR OSC PLANT STATUS BOARD

UNIT \_\_\_\_\_

TIME: \_\_\_\_\_

13 KV Bus	1:	2:		HPCI:
Cond	A:	B:	C:	RCIC:
Recirc	A:	B:	SU2:	SU3:
4 KV Bus	E1:	E2:	E3:	E4:
Diesel	A:	B:	C:	D:
RHR	A:	B:	C:	D:
HPSW	A:	B:	C:	D:
Core Spray	A:	B:	C:	D:
ESW		A:	B:	ECW:
	A:			B:
SBLC	A:	B:		
SBG Fans	A:	B:	C:	A SBGT Filter B SBGT Filter



APPENDIX EP-202-5  
HP&C OSC Assignment Status Board

<u>Time</u>	<u>Job Description</u>	<u>HP's Sent</u>	<u>RCA Problems</u>	<u>Est. Return Time</u>

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PHILADELPHIA ELECTRIC COMPANY  
PEACH BOTTOM UNITS 2 AND 3  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-203  
Page 1 of 18, Rev. 4  
EGF:ljm

*M. Williams*  
9/7/82

EP-203 EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION

PURPOSE

To describe actions required for the activation, manning, and operation of the Emergency Operations Facility (EOF).

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
3. NUREG 0696 Functional Criteria for Emergency Response Facilities

APPENDICES

- EP-203-1 Emergency Operations Facility Organization and Manning
- EP-203-2 Emergency Operations Facility Layout
- EP-203-3 Plant Status Board
- EP-203-4 Event Chronology Status Board
- EP-203-5 Staff Assignment Status Board
- EP-203-6 Headquarters Support Requests Status Board
- EP-203-7 Offsite Communications Status Board
- EP-203-8 Field Monitoring Data Status Board
- EP-203-9 Dose Assessment Data Status Board
- EP-203-10 Procedure for Operation of Emergency Operations Facility TV monitors
- EP-203-11 Activation Procedure for PING in Emergency Operations Facility

ACTION LEVEL

Activate the EOF when an event has been classified as a Site Emergency or General Emergency in accordance with EP-101, Classification of Emergencies, or at the discretion of the Site Emergency Coordinator.

PRECAUTIONS

1. Verify EOF habitability prior to activation.
2. Maintain accounting of personnel reporting to the EOF throughout the incident.

3. Ensure EOF ventilation system is operating and that air samples are periodically taken to measure potential airborne contamination.
4. Ensure that pertinent actions and notifications are logged.

#### PROCEDURE

- 1.0 Designated Senior Engineer acting as the Interim Site Emergency Coordinator shall perform the following actions until relieved by the Site Emergency Coordinator or designated alternate.
  - 1.1 Assign at least one individual (Test Engineer, Technical Assistant, or Junior Technical Assistant) the duties of communicator and direct the individual to perform the steps outlined in section 2.0 of these immediate actions.
  - 1.2 Obtain two-way radios from the I&C Technician in the Technical Support Center for the radiation survey groups. Additional radios are available in Communications Equipment Room.
  - 1.3 Obtain continuous status updates on plant conditions from the Control Room or Technical Support Center and maintain a log of significant events and actions.
  - 1.4 Ensure that the manning and operation of the Emergency Operations Facility is in accordance with the follow-up actions of this procedure.
  - 1.5 Provide briefings on the emergency and pertinent plant conditions to the Site Emergency Coordinator and appropriate EOF staff upon their arrival.
  - 1.6 Inform the Control Room and Technical Support Center when the Emergency Operations Facility has been activated and manned.
- 2.0 Site Emergency Coordinator Communicator shall:
  - 2.1 Verify communications capability by completing the telephone C.O.L. for EOF (Appendix EP-203-12).
  - 2.2 Inform the Site Emergency Coordinator or Interim Site Emergency Coordinator when communication capabilities have been verified or of any discrepancies.
  - 2.3 Man communications lines as assigned and maintain a communications log containing information received from and sent to other facilities and organizations.

#### FOLLOW-UP ACTIONS

- 1.0 Site Emergency Coordinator or Interim Site Emergency

Coordinator shall:

- 1.1 Use attached Appendix EP-203-1 and Appendix EP-203-2 to ensure that personnel required to man the EOF are in place.
- 1.2 Assign an individual (test engineer or technical assistant) as a Status Board Recorder for the Plant Status Board (see Appendix EP-203-3), and the Event Chronology Status Board (see Appendix EP-203-5). Direct the individual to perform the steps outlined in Section 4.0 of these Follow-Up Actions.
- 1.3 Assign an individual (test engineer or technical assistant) as a Status Board Recorder for the Headquarters Support Requests Status Board (see Appendix EP-203-6) and Offsite Communications Status Board (see Appendix EP-203-7) and direct the individual to perform the steps outlined in Section 4.0 of these Follow-up Actions.
- 1.4 Assign an individual (instrument and control technician) as a Data Display Operator to man the TV camera station in the EOF. This data display operator should refer to Appendix EDP-203-10 for TV monitor operation.
- 1.5 If necessary, assign an individual (clerical staff) as a runner to route information in the EOF and other appropriate facilities.
- 1.6 If necessary, assign an individual (clerical staff) to perform, any typing and clerical work.
- 1.7 If necessary, assign two individuals (clerical staff) as telephone operators to man communications equipment in the EOF Communications Equipment Room.
- 1.8 Assign at least one individual (test engineer) as a communicator for the Site Emergency Coordinator to perform the actions specified in Section 5.0 of these Follow-Up Actions.
- 1.9 Upon completion of pertinent steps outlined in these follow-up actions, inform the Control Room and the Technical Support Center that the Emergency Operations Facility is operational and manned.
- 1.10 Brief the EOF staff periodically on the status of the emergency and pertinent plant conditions.
- 1.11 Direct the Communicator for the Site Emergency Coordinator to maintain a log of significant events and actions.

The above log shall include as a minimum the following information:

- a. Date and Time
- b. Significant Event
- c. Significant Actions Taken

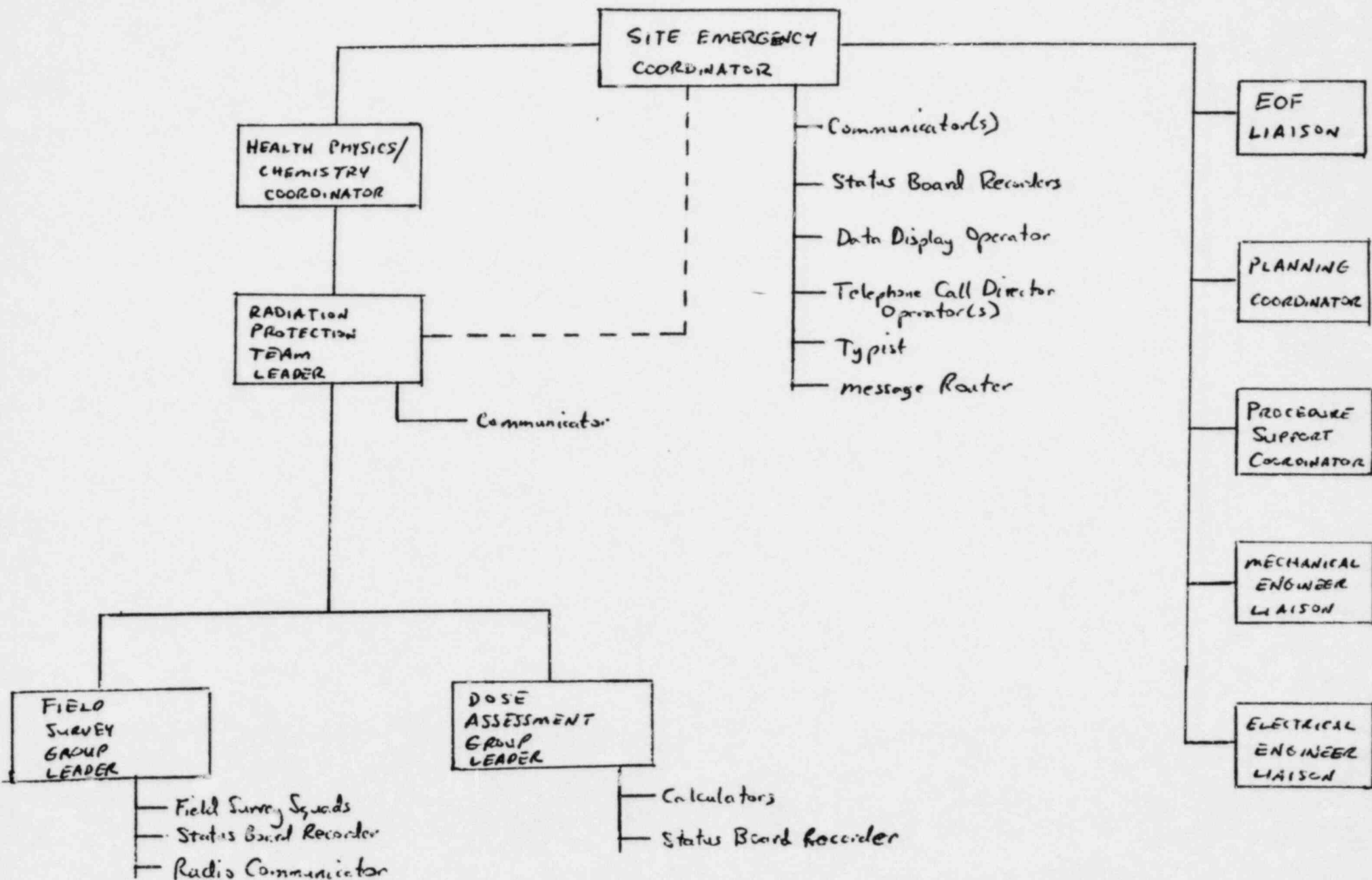
- 1.12 Direct the Communicator for the Site Emergency Coordinator to Transmit all status board information to the Headquarters Emergency Support Center Status Board Recorder.
- 2.0 Radiation Protection Team Leader shall:
    - 2.1 Assign an individual (HP Technician) as a Field Survey Group Radio Communicator to maintain radio contact with Field Survey Teams.
    - 2.2 Assign an individual (HP technician) as a Status Board Recorder for the Field Monitoring Data Status Board (see Appendix EP-203-8) and direct the individual to perform the steps outlined in Section 4.0 of these Follow-up Actions.
    - 2.3 Assign an individual (HP technician) as Telephone Communicator to man appropriate communication lines assigned to the Radiation Protection Team Leader and perform the steps outlined in Section 5.0 of these Follow-up Actions.
  - 3.0 Dose Assessment Group Leader shall:
    - 3.1 Assign two individuals to perform dose projection calculations at the EOF.
    - 3.2 Assign an individual (HP technician) as a Status Board Recorder for the Dose Assessment Data Status Board (see Appendix EP-203-9) and direct the individual to perform the steps listed in Section 4.0 of these follow-up actions.
  - 4.0 Status Board Recorders shall:
    - 4.1 Set up the assigned status board.

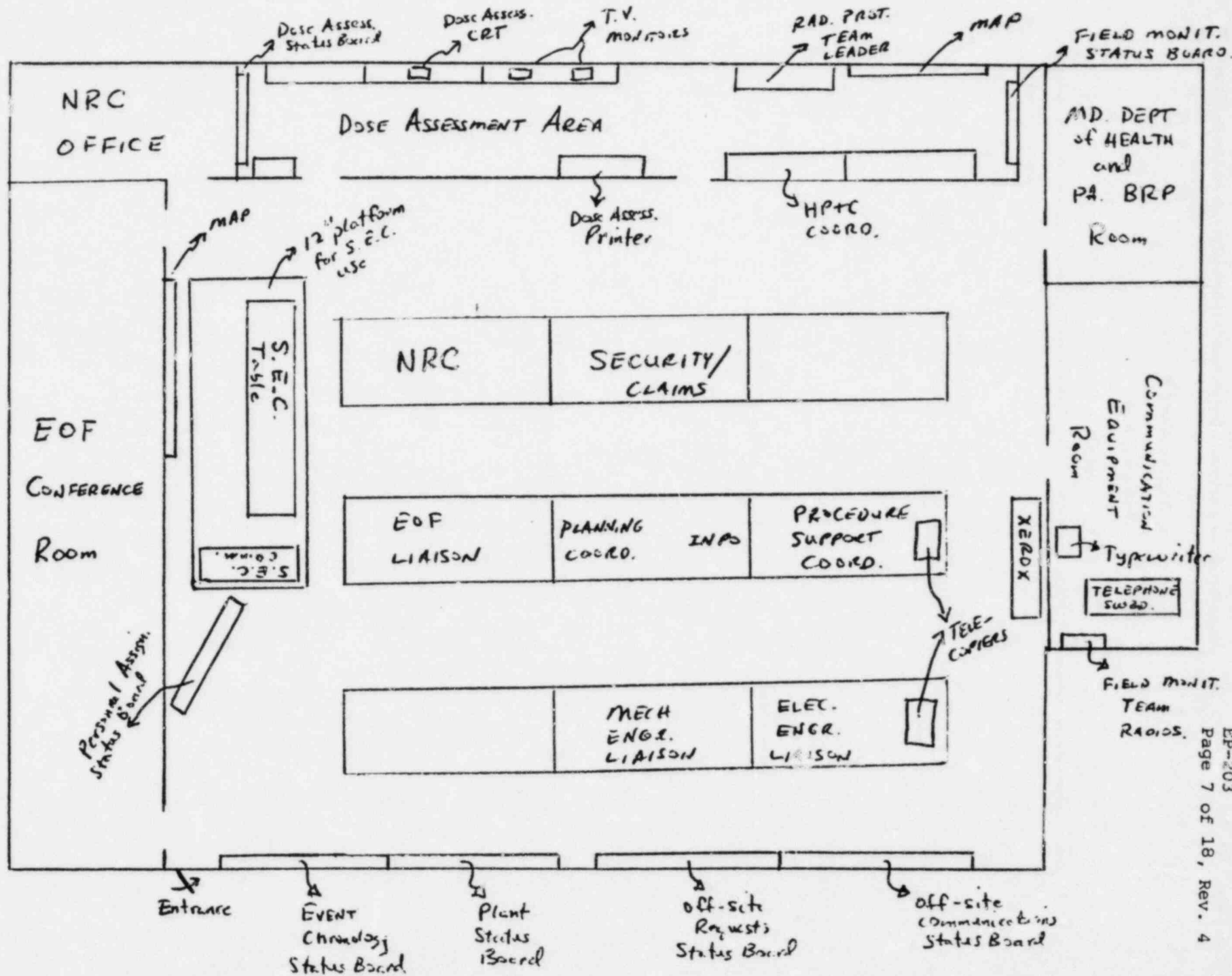
Format and content of the status boards are given in the following appendices:

      - a. Appendix EP-203-3, Plant Status Board
      - b. Appendix EP-203-4, Event Chronology Status Board
      - c. Appendix EP-203-5, Staff Assignment Status Board
      - d. Appendix EP-203-6, Headquarters Support Requests Status Board
      - e. Appendix EP-203-7, Offsite Communications Status Board
      - f. Appendix EP-203-8, Field Monitoring Data Status Board
      - g. Appendix EP-203-9, Dose Assessment Data Status Board
    - 4.2 Contact the following individuals for the various status board information.
      - a. TSC Plant Status Board Recorder for plant status information.
      - b. TSC Event Chronology Status Board Recorder for event

chronology information.

- c. Site Emergency Coordinator for staff assignment information and headquarters support requests.
  - d. Emergency Director, Site Emergency Coordinator, or Control Room for offsite communication information.
  - e. Field Survey Group Radio Communicator for field monitoring data.
  - f. Dose Assessment Group Leader for dose assessment data.
- 4.3 Post appropriate information on assigned status board and maintain a log of all status board entries.
- 4.4 Review and update the status board every 15 minutes and as changes in plant conditions or information warrant.
- 4.5 Inform the appropriate coordinator, team leader or group leader of significant changes in status board information.
- 5.0 Communicators shall:
- 5.1 Man communication lines assigned.
  - 5.2 Maintain a Communications Log containing information received from and sent to other emergency response facilities and other support organizations.
    - a. Date and time (use 24 hour time notation)
    - b. Messages received or sent
    - c. Name of person information was received from or sent to
    - d. Initials of person making entries
  - 5.3 Inform the appropriate coordinator, team leader or group leader promptly of information received from or sent to members of the emergency response organization or support organizations.







PSAPS PLANT STATUS - UNIT # \_\_\_\_\_

REACTOR PARAMETERS - time \_\_\_\_\_

1. Power \_\_\_\_\_
2. Level \_\_\_\_\_ inches
3. Pressure \_\_\_\_\_ PSIG

CONTAINMENT PARAMETERS - time \_\_\_\_\_

1. Torus Temp. \_\_\_\_\_ °F
2. Drywell Temp. \_\_\_\_\_ °F
3. Drywell Press. \_\_\_\_\_ psig
4. Torus Level \_\_\_\_\_
5. Containment %O<sub>2</sub> \_\_\_\_\_ %H<sub>2</sub> \_\_\_\_\_

RADIOLOGICAL PARAMETERS - time \_\_\_\_\_

1. Main Stack \_\_\_\_\_ cps \_\_\_\_\_ nr/hr
2. U/2 Vent Stack \_\_\_\_\_ cpm \_\_\_\_\_ nr/hr
3. U/3 Vent Stack \_\_\_\_\_ cpm \_\_\_\_\_ nr/hr
4. D/W Rad Monitor \_\_\_\_\_ R/hr
5. Refuel Flr Exh \_\_\_\_\_ nr/hr
6. Air Eject Off Gas \_\_\_\_\_ nr/hr
7. Radwaste Monitor \_\_\_\_\_ cpm
8. Main Stack Flow \_\_\_\_\_ CFM
9. U/2 Vent Stack Flow \_\_\_\_\_ CFM
10. U/3 Vent Stack Flow \_\_\_\_\_ CFM

METEOROLOGICAL PARAMETERS - time \_\_\_\_\_

1. Avg. Wind Speed \_\_\_\_\_ mph
2. Avg. Wind Direction \_\_\_\_\_ °(from)
3. Avg. Radiation rdg \_\_\_\_\_ nr/hr
4. Avg. Ambient Temp. \_\_\_\_\_ °F
5. Precipitation \_\_\_\_\_
6. Stability Class \_\_\_\_\_
7. Avg. Wind Speed(320') \_\_\_\_\_
8. Avg. Wind Speed(75') \_\_\_\_\_

REACTIVITY CONTROL - time \_\_\_\_\_

1. #of rods not inserted past 06 \_\_\_\_\_
2. 

SBLC	INJ	UNAVAIL/REASON
A		
B		
3. SBLC Tank Level \_\_\_\_\_

PRESSURE CONTROL - time \_\_\_\_\_

1. # Bypass Valves Open \_\_\_\_\_
2. 

SEVS	A	B	C	D	E	F	G	H	J	K	L
OPEN											
CLOSED											

POWER SUPPLIES - time \_\_\_\_\_

SOURCE	SUPPLYING	UNAVAIL/REASON
2OFFSITE		
3OFFSITE		
E-1		
E-2		
E-3		
E-4		

BUS	POWER SUPPLY			UNAVAIL
	#2o.s.	#3o.s.	Diesel #	
E-1				
E-2				
E-3				
E-4				

LEVEL CONTROL - time \_\_\_\_\_

SYSTEM	INJ	UNAVAIL/REASON
F. W. A		
B		
C		
CRD A		
B		
HPCI		
RCIC		
COND A		
B		
C		
C.S. A		
B		
C		
D		
LPCI A		
B		
C		
D		
HPSW A		
B		
C		
D		
COND TRANS		
REFUEL TRANS		
SBLC		

CONTAINMENT CONTROL - time \_\_\_\_\_

RHR	TORUS COOL	TORUS SPRAY	D/W SPRAY	S/D COOL	UNAVAIL/REASON
A					
B					
C					
D					

HPSW	ON	UNAVAIL/REASON
A		
B		
C		
D		

ISOLATIONS	ISOLATED/EXCEPTIONS
GRP I	
GRP II	
GRP III	
GRP IV	
GRP V	

SBGTS	ON	UNAVAIL/REASON
FANS A		
B		
C		
TRAIN A		
B		

APPENDIX EP-203-4    EVENT CHRONOLOGY STATUS BOARD

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TIME	EVENT NO.	EVENT
------	--------------	-------

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APPENDIX EP-203-5 STAFF ASSIGNMENT STATUS BOARD

<u>TITLE</u>	<u>NAME</u>	<u>LOCATION</u>
Shift Superintendent		
Shift Supervisor		
Emergency Director		
Technical Engineer		
Fire/Damage Team Ldr.		
Personnel Safety Team Ldr.		
Site Emerg. Coord.		
Health Physics/Chem. Coord.		
Radiation Protection Team Ldr.		
Dose Assessment Group Leader		
Field Survey Group Leader		
EOF Liaison		
Procedure Support Coordinator		
Planning Coordinator		
Mech. Engr. Liaison		
Elec. Engr. Liaison		
Emergency Support Officer		

APPENDIX EP-203-6 HEADQUARTERS SUPPORT REQUESTS STATUS BOARD

<u>TIME</u>	<u>SUBMITTED TO</u>	<u>ITEM</u>	<u>RESPONSE STATUS</u>
-------------	---------------------	-------------	------------------------

APPENDIX EP-203-7 OFFSITE COMMUNICATIONS STATUS BOARD

TIME	OFFSITE COMMUNICATIONS	RESPONSE/COMMENT
------	---------------------------	------------------

APPENDIX EP-203-7 OFFSITE COMMUNICATIONS STATUS BOARD

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TIME	OFFSITE COMMUNICATIONS	RESPONSE/COMMENT
------	---------------------------	------------------

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APPENDIX EP-203-8 FIELD MONITORING DATA STATUS BOARD

TIME	LOCATION	GAMMA	SAM 2	COMMENT
------	----------	-------	-------	---------

APPENDIX EP-203-8 FIELD MONITORING DATA STATUS BOARD

TIME	LOCATION	GAMMA	SAM 2	COMMENT
------	----------	-------	-------	---------



## APPENDIX EP-203-10

PROCEDURE FOR OPERATION OF TSC/EOF TV MONITORS1.0 PURPOSE:

The following procedure defines the required steps for the operation of the Technical Support Center and Emergency Operations Facility TV monitoring of the Main Control Room.

2.0 SCOPE:

This procedure is to be followed by all personnel who use the video-monitoring system in the Control Room.

3.0 REFERENCES:

Operating instructions, controls for motorized zoom lenses. (Vicon Industries, Inc.) X85-780 6280-E-114-5-1

4.0 RESPONSIBILITY:

The person(s) operating this equipment shall be responsible for safe operation.

5.0 PREREQUISITES:

Person(s) operating this equipment should have a knowledge of its operation in addition to reviewing the operating instructions, and should be very familiar with the layout of instruments in the Control Room.

6.0 PROCEDURE:

6.1 On the second floor of the Unit 1 building, turn on both controllers, as they act as master controllers for the controllers on the third floor.

6.2 On the third floor of the Unit 1 building, turn on the four TV Monitors and their associated controllers.

6.3 Push 'close' button on iris a few short times to ensure proper lighting.

6.4 Jogstick operates camera movement.

NOTE: Pan and tilt speed are a function of how far the jogstick is moved away from the center "rest" position.

6.5 Motor speed is determined by knob (ON/OFF).

NOTE: The motor speed not on the lens controller will have to be optimized for each individual camera (for focus and zoom it will be approximately mid-pot). To get iris control, the speed pot must be fully clockwise.

NOTE 1: Fuse for all cameras is in the TRW panel in the control room,

inside the right door on the left side.

NOTE 2: Control room TV camera switches are located at the base of each TV camera. Switch is labeled "AC Power Feed ON/OFF."

## APPENDIX EP-203-11

ACTIVATION OF THE EBERLINE PING-2A IN THE EMERGENCY OPERATIONS FACILITY

1. OPEN FRONT PANEL BY TURNING BLACK KNOBS COUNTERCLOCKWISE AND PULLING OUT.
2. TURN "KEYBOARD" KEY ON (CLOCKWISE).
3. ACTIVATE PUMP BY PUSHING THE FOLLOWING SEQUENCE ON THE KEYBOARD:  
PUMP, ON/+, ENTER

WHEN THE PUMP STARTS, CHECK PAPER PRINTOUT TO ENSURE THAT A STATUS CONDITION OF "NORMAL" FOR CHANNELS 1 THRU 5 EXISTS, IF THE PRINTOUT DOES NOT SHOW "NORMAL" AND TIME PERMITS, FOLLOW STEP B OF HPO/CO-140.

IF THE PUMP FAILS TO START, GO TO THE GRAY CABINET IN THE E.O.F. AND OBTAIN AN AC AIR SAMPLER AND PLUG IT INTO THE WALL RECEPTACLE BY THE PING-2A.



PA. BUR. OF RAD PROTECTION

CONFERENCE ROOM

S.E.C. WALL PHONE

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Ring Down - DO NOT TEST:

NRC RED PHONE

BLUE - MD. & 5 COUNTIES

WHITE - PA. BUR. OF RAD PROTECTION

YELLOW - MD. & 2 COUNTIES

GREEN - MD. DEPT. OF HEALTH AND PA. BRP.

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Knappp  
St. Louis Super.  
Office

EP-205A.1

Page 1

Rev. 1

MPG:lhd

*M. K. Kline*  
9/7/82

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-205A.1 OPERATION OF POST ACCIDENT SAMPLING STATION

PURPOSE

The purpose of this procedure is to provide guidelines for consideration prior to, during and after obtaining samples from the post accident sampling station following accident conditions.

REFERENCES

P&ID M37A, M372, M361, M316, M362

EQUIPMENT

Appropriate Health Physics Survey Equipment  
Air Sampler (low volume)  
Respiratory Protective Equipment  
Anti-C Clothing  
Digital Alarming Dosimetry  
Gas Vial Sample Tube  
Iodine & Particulate Sample Assembly  
14.4 Gas Vials and Caps  
Liquid Sample Bottles and Caps  
10cc Syringe with Stoplock  
Silver Zeolite Cartridges  
47mm Particulate Filters  
Small Bottle of Demin Water  
Large Volume Cask  
Small Volume Cask  
Gas Sample Cask  
Flashlight  
Mirror  
Watch with SecondHand  
Plastic Bag & Pole to Transport Cartridges

PRECAUTIONS

- A. In all steps of this procedure, an ALARA concept is mandatory. This procedure provides some philosophy in pre-planning sampling evolutions for samples during an accident. In addition to reviewing this procedure, an ALARA review of the sampling process should be performed prior to obtaining the sample. If the sample is not really needed, and lower dose methods exist to determine the gross data that the sample provides, the sample should not be obtained.

- B. At no time may NRC exposure limits (either airborne or body dose) be exceeded during the surveying for sampling or obtaining the sample. If it appears that an overexposure could reasonably occur when obtaining the sample, do NOT proceed without written NRC approval.

PROCEDURE:

1. It has been determined that a drywell atmosphere, torus atmosphere, reactor building atmosphere or primary coolant sample is needed from the post accident sampling station.
2. Two paths are recommended.
  - A. Entering the normal turbine building 116' plant entrance, up the turbine building stairs to the M-G set room.  
  
Time = Approximately 3 minutes.
  - B. Entering the roll up doors on the north end for Unit 3 or south end for Unit 2, up the turbine building stairs to the M-G set room.  
  
Time = Approximately 3 minutes.
3. Have a Health Physics Technician accompany the Chemistry Technician assigned to obtain samples in order to perform area surveys. Brief Health Physics & Chemistry personnel on the route to be taken and the time to get to the sample point.
4. Health Physics personnel shall take appropriate survey equipment and protective equipment (e.g. SCBA gear, anti-C's, etc.). Before making entry to the Power Block, ensure survey equipment is turned on and calibrated. Chemistry personnel shall make initial entry to assist with the survey and to valve in grab sample point.
5. Upon entering the Power Block, the surveyor(s) will note trends in general radiation levels enroute to the sample point. If dose rates exceed 10 R/hr gamma or 10 rad/hr beta prior to arriving at the point specified below and upon further investigation this dose rate remains stable or increases, exit immediately and report to Health Physics Supervision.
6. If the dose rate at any door that has to be opened is greater than 5 R/hr, leave the area immediately and report to Health Physics Supervision with this information. With the dose rates less than 5 R/hr, enter the area

but take careful notice of the dose rates.

7. The following are the times required to obtain samples

Drywell or Torus Atmosphere	15 Minutes
Reactor Building Atmosphere	5 Minutes
Primary Coolant Jet Pump	10 Minutes
RHR	15 Minutes

Use the appropriate appendix for the desired sample:

- Appendix A.1 14.4ml gas sample from drywell, torus or reactor building atmosphere.
- Appendix A.2 Iodine and/or particulate sample from drywell, torus or reactor building atmosphere.
- Appendix A.3 10cc sample of reactor water and/or dissolved gas sample.
- Appendix A.4 .1cc reactor water sample with 100:1 dilution.
- Appendix A.5 Flushing the liquid and dissolved gas system.
- Appendix A.6 Draining the trap, sump and collector.
8. A RWP or HP technician will be assigned for the sample collection and analysis.
9. Prior to the sample entering the hot lab, any shielding, remote tooling or other protective measure shall be in place and ready to accept the sample.
10. Upon introduction of the sample into the hot lab, the sample will be handled in a manner such that it will cause an ALARA whole body dose to personnel involved. Unnecessary personnel shall not remain in the hot lab.
11. Properly in place and shielded, the sample will be processed remotely (where and when possible). Careful handling of the sample is mandatory in preparation for analysis so contamination is not spread, airborne problems are held to a minimum, and a new sample is not required.
12. Following final analysis of the sample, results shall be reported to appropriate supervision.



APPENDIX A.1 14.4 ML GAS SAMPLE

PREREQUISITES:

1. System lined up in accordance with C.O.L. S.19.1.
2. Have shift line up CAD system for desired sample.

<u>Sample</u>	<u>Unit.2</u>	<u>Unit 3</u>	<u>Position</u>
Torus		5960A	Open
		5961A	Closed
		5966A	Open
		9101	Open
		5951B	Open
Torus	4960D		Open
	4961D		Closed
	4966D		Open
	8101		Open
	4951B		Open
Upper Drywell		5960B	Open
		5961B	Closed
		5966B	Open
		9101	Open
		5951B	Open
Lower Drywell	4960C		Open
	4961C		Closed
	4966C		Open
	8101		Open
	4951B		Open

3. Have shift place control room switch for the sampling station in the local position.
4. Obtain the key to the control panel power from Shift Supervision.
5. If heat trace is desired for the CAD sample lines or common gas line, press the heat trace reset button on the control panel in the M-G set room. This will turn on the heat trace system, however to turn the system off, the breaker OY64 in the reactor building must be turned off then on again. Use the heat trace only when absolutely necessary.  
If heat trace is used wait until the system reaches operating temperature before taking a sample.

PROCEDURE:

1. Drain the system per Appendix A.6.
2. With the sump drain system switch in the off position

place switch HC-700 (liquid/gas selector) in the gas position. Open N2 bottle valve and regulate to approximately 100 psig. Make sure the gas chiller E-703 is on.

3. Install the gas filter drawer into position. If a particulate/iodine sample will be obtained later, make sure that the desired filter cartridges are properly installed in the cartridge retainer.
4. Turn switch HC723 (gas sample selector switch) to position 3 if a reactor building atmosphere sample is desired. If a torus or drywell atmosphere sample is desired, turn to position 1 and open the common gas line isolation valve.

Unit 2

Unit 3

SV8108

SV9108

5. Place a standard 14.4 milliliter off gas vial into the gas vial positioner, slide the positioner into the gas port. Observe that the bottle status light changes from red to green.
6. Turn the 10 ML gas sample switch HC-705 to position 2 and circulate gas for a period long enough to assure that the sample lines are flushed out with gas being sampled. The minimum time required is 5 minutes.

Be sure that the flow as read by the rotameter thru the sample enclosure window is in the expected range of 25 to 35 SCFM. Record flow and flush duration on data sheet.

7. Turn HC-705 to position 3 and evacuate the off gas vial. Record pressure of the evacuated vial PI-708 on the data sheet. Make sure the vacuum in the gas vial reaches a stable minimum reading.
8. Turn HC-705 to position 4, "Take sample". Make sure that PI-708 does not change. (If pressure changes significantly, it may indicate a system leak.)
9. Press the HC-720 button to obtain the sample. Keep button depressed until a steady pressure is reached. (Approximately 5 seconds.) Record pressure from PI-708 on data sheet. This pressure should correspond to actual pressure of sample being obtained. Record sample temperature TI-724 on data sheet.
10. Turn HC-705 to position 5 "flush system" and flush for approximately 1 minute.

11. Turn HC-705 to position 6, 7, and 8 then straight up to off.
12. Remove gas vial keeping it a maximum distance from the individual. Insert vial into gas vial cask. Close and latch vial cask.
13. Take the sample to the appropriate lab for further dilution and counting.
14. Calculate sample volume at the sample pressure as recorded in step 8.

$$V_s = \frac{(14.7)(14.4)(T_F + 460)}{(530)(P \text{ PSIA})}$$

15. Perform the drain of trap, sump and collector per Appendix A.6
16. If this is the last sample required, turn all switches to the upright and "off" position before turning "off" power. Return system valves to normal position. Return key to Shift Supervision.

14.4 ML Gas Sample

1. Sample Source \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_
2. Sample Flow \_\_\_\_\_ FI-725 (scfh)
3. Flush Duration \_\_\_\_\_ (Min.)
4. Absolute Pressure of Vial \_\_\_\_\_ PI-708
5. Final Sample Pressure \_\_\_\_\_ PI-708
6. Sample Temperature \_\_\_\_\_ TI-724 ( F)
7. Calculated Sample Volume \_\_\_\_\_

$$V = \frac{(14.7)(14.4)(T F + 460)}{(530)(P \text{ PSIA})}$$

Note: Pressure gauge PI-708 on Unit 2 are in psig while those in Unit 3 are psia.

APPENDIX A.2 IODINE/PARTICULATE SAMPLEPREREQUISITES:

Same as Appendix A.1

PROCEDURE:

1. Drain the system per Appendix A.6.
2. With the sump drain system switch in the off position place switch HC-700 (liquid/gas selector) in the gas position.
3. Put the desired filter cartridge(s) into the cartridge retainer. Put the cartridge retainer into the gas filter drawer. Then put the drawer into the sample station and verify drawer position light is green.
4. Decide whether a timed or non-timed sample is desired. If a high activity condition exists, a timed sample should be taken.
5. Open N2 bottle valve and regulate to approximately 100 psig. Make sure the gas chiller E-703 is on.
6. Turn gas sample selector switch HC-723 to desired sample source.
7. Open common gas line isolation valve, if a torus or drywell atmosphere sample is desired.

Unit 2      Unit 3

SV8108      SV9108

8. Turn the iodine cartridge sample switch HC-712 to position 2 and circulate gas for a period long enough to assure that sample lines are flushed out with gas being sampled. Minimum flush time is approximately 5 minutes.
9. Be sure flow as read by rotometer is in the range of 25 to 35 SCFM.
10. Record the flow FI-725, pressure PI-727, PI-726 (located at sample station) and temperature TI-724 (located on control panel) on data sheet.
11. Turn HC-712 to position 3. The sample gas will start to flow thru filter cartridge. On data sheet

record PI-727, PI-726, FI-725 and sample duration in seconds.

12. To take a timed sample, turn HC-704 to yes position and set timer KC-712 between 0 to 30 seconds. Make sure time is short enough that the activity on the filter will not be unnecessarily high. Observe RI-704 reading to determine if there is a rapid activity buildup. This reading will also include non-absorbing gases. Note whether sampled was timed or untimed on data sheet. Also note timer setting if timed.
13. After appropriate time has elapsed for either timed or untimed, turn HC-712 to position 4. A vacuum will be quickly drawn on the system.
14. After approximately 10 seconds, turn HC-712 to position 5 which will purge the system with air or nitrogen. Purge for at least 20 seconds or until RI-704 is stable. Record RI-704 on data sheet.
15. Rotate HC-712 to up and off position. Turn other switches off. Remove filter cartridge and put the retainer in a plastic bag. Tape bag closed. Put drawer back into sample enclosure. Use a pole or rope to increase distance while transporting.
16. Perform drain of trap, sump and collector following Appendix A.6.
17. If this is the last sample required, turn all switches to the upright and "off" position before turning "off" power. Return all system valves to the normal position. Return key to Shift Supervision.

Iodine/Particulate Sample

1. Sample Source \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_
2. Orifice Size 3.0
3. Flush Time in Minutes \_\_\_\_\_ Minutes
4. Sample Flow \_\_\_\_\_ FI-725 (Not thru Cartridge) (scfh)
5. Temperature \_\_\_\_\_ TI-724 ( F)
6. Pressure \_\_\_\_\_ PI-726
7. Pressure \_\_\_\_\_ PI-727
8. Pressure \_\_\_\_\_ PI-726 (Critical flow thru cartridge)
9. Pressure \_\_\_\_\_ FI-727
10. Flow \_\_\_\_\_ FI-725 scfh
11. Timed Sample - Yes or No \_\_\_\_\_
12. Flow Duration \_\_\_\_\_ Seconds
13. Radiation Levels \_\_\_\_\_ RI-704

Note: When critical flow is obtained through the cartridge assembly, a flow of 3.0 liters per minute + 15% is achieved. This is true as long as PI-727 is at a minimum of 12 inches mercury vacuum.

APPENDIX A.3 LARGE LIQUID SAMPLE AND/OR A  
DISSOLVED GAS SAMPLE

PREREQUISITES:

1. System lined up in accordance with C.O.L. S.20.1.
2. Obtain the key to the control panel power from Shift Supervision.

PROCEDURE:

1. If the RHR line is to be used. Have the shift open the RHR sample line valves.

<u>Unit 2</u>	<u>Unit 3</u>	
AO 8098A	AO 9098A	A Line
AO 8099A	AO 9099A	
AO 8098B	AO 9098B	B Line
AO 8099B	AO 9099B	

2. Perform the drain and blow out operation per Appendix A.6.
3. Open the N2 bottle valve and regulate to approximately 100 psig.
4. Check that the demin water tank is full. Open the demin water discharge valve and the nitrogen inlet valve. Verify that the demin water tank is at approximately 100 psig.
5. Open the Krypton gas bottle valve and regulate to 2-3 psig. Record pressure.
6. Slide the lead shield drawer out so that the needles under the sample station enclosed are exposed. Inspect the needle with a mirror and a flashlight. The liquid sample needles will penetrate the aluminum retainer without damage. (The longest part of the needle shall be positioned toward the center of the sample vial).
7. Remove lead stopper from large volume cask and put a 15 ML sample bottle with an outer aluminum retainer ring and a neoprene cap into the large cask. Note sample bottle must fit snugly in the holder and be vertically aligned. If necessary, place small pad under sample vial. With cask in fully lowered position, roll cask into position under the sample station.



8. Using the hydraulic pump start raising the cask checking for proper alignment. Stop pumping when top cask ring is inside and the large volume cask is just touching the bottom of the sample station (if cask is not aligned properly, lower and reposition). Maintain the forks in the same direction as was used during the initial cask positioning. Place the gas vial in the holder and insert into the dissolved gas sample point.
9. Check that the control panel is on. Turn HC-700 switch to liquid mode. Turn HC-626 to position 2 (jet pump line) or position 4 (RHR).
10. Push the plunger down that causes the sample bottle to be raised out of the cask and up onto the two needles. Note that the bottle in light will change from red to green. Note also that the dissolved gas sample light is green.
11. Turn the liquid sample source selector switch HC-626 to position 1 for jet pump bypass line sample or 5 for RHR sample.

If RHR sample is desired, close the sample line valves to feedwater sample sink.

<u>Unit 2</u>	<u>Unit 3</u>
AO 8110A	AO 9110A
AO 8110B	AO 9110B

12. Turn HC-616-1 small volume sample switch to off. (position 2)
13. FI-664 on control panel should be approximately 1 gpm. PI-661, TI-660, CI-663, and RI-665 should start to have meaningful values.
14. Adjust PCV-627 so that the flow on FI-664 is at least 1 gpm. Continue this flow for a long enough period to be assured that the sample lines are flushed out with liquid being sampled.

Note: Record the flow from FI-664 and flush time on data sheet.

15. When flush is completed, turn HC-626 sample source selector switch to position 2, if the reactor valves were previously positioned for a jet pump sample or position 4 if valves were positioned for a RHR sample. Adjust valve FCV-627 for a flow of .3 gpm (to adjust

FCV-627 use PCV-627).

16. Turn the dissolved gas and liquid sample system switch HC-601 to position 1 and observe that P-701 starts and valve CV-622 rotates.
17. Turn switch HC-601 to position 2. Observe that P-601 starts.
18. Record the following on the data sheet:

Flow FI-664  
Pressure PI-661  
Temperature TI-660  
Conductivity CI-663  
Radiation RI-665

19. Turn switch HC-601 to position 3 to isolate the sample and start the dissolved gas separator. Leave in this position for approximately 10 seconds.
20. Turn HC-601 to position 4 to inject tracer gas into valve CV-615. When the valve is rotated during the next step the tracer trapped in the passage of the ball valve will be inserted in the sample flow loop. Leave in this position for approximately 10 seconds. Read and record the tracer gas supply system pressure so tracer gas can be accurately calculated. The flow of tracer gas should be very small so that pressure drops in the line and valves will be insignificant.
21. Note: If it is not desirable to introduce tracer gas, turn HC-601 to position 5 quickly and valve will not rotate.

Turn HC-601 to position 5. Let some of the dissolved gas separate from the liquid.

22. Read and record initial pressure PI-662.
23. Turn HC-601 to position 6\*. Pump P-601 stops and CV-653 opens relieving liquid loop pressure.

\*Note: Do not leave HC-601 in position 6 for more than 5 seconds.

24. Turn HC-601 to position 7. This will bring the rest of dissolved gas into V-610. Leave in position for 10 seconds.
25. Read and record PI-662 on P-1. This will be the approximate pressure of the liquid loop.

26. Turn HC-601 to position 8 and again open CV-653 (for no more than 5 seconds). Dissolved gas will rise to hold up cylinder V-610 and then into collection chamber V-662.
27. Turn HC-601 to position 9 to get ready to take the dissolved gas sample or to relieve the collect chamber pressure. Pump P-601 will stop so that if the relieve pressure option is next exercised record PI-662 as P2 on data sheet as this is the pressure of the liquid sample loop.
28. To take the dissolved gas sample switch HC-652, will be used. When HC-652 is turned clockwise to gas sample, the pressure as indicated by PI-662 will decrease while the dissolved gas is drawn into sample bottle. Turn HC-652 to gas sample and hold for at least 10 seconds until PI-662 is very steady. Then release HC-652 and it will spring back to center position. Turn HC-652 again to gas sample. Verify equalized pressure and read PI-662. Record the steady pressure as P3 reading on the data sheet.
29. As an alternate to step 27, when a dissolved gas sample is not desired, it is only necessary to relieve the gas pressure back to the suppression pool by rotating switch HC-652 counter clockwise to the relieve pressure position and hold it while watching PI-662. The pressure will equalize rapidly.
30. If a large volume liquid sample is desired, turn HC-601 to position 10. (If large volume liquid sample is not desired, turn HC-601 to off position very quickly). HC-629-1 must be pushed and held for 10 seconds or more for liquid to be drawn into sample bottle. If a liquid sample was not desired, turn the switch HC-601 to the off position very quickly and the valve CV-620 will not rotate and no hot solution will be in the line ahead of CV-629.
31. Turn HC-601 to off.
32. Lower liquid sample bottle into large cask by pulling up on the plunger handle. Note: Do not turn or twist bottle while it is on the needles because the needles will bend.
33. Lower the cask on the cart by relieving hydraulic oil pressure with the small petcock handle on the hydraulic cylinder.
34. Slide the lead shield drawer back into the

enclosure to cover opening for the needles.

35. Roll the cask out from under the sample station and quickly plug cask. Use the cask to transport the sample if greater than 100 mr/hr.
36. Open and place gas vial carrying cask near sample station. Remove gas vial positioner from sample enclosure. Keep the vial at maximum distance from the individual and insert sample bottle into the gas vial cask. Close and latch the gas vial cask.
37. Perform a flush of the liquid system with switch HC-628-1 per Appendix A.5.
38. If this is the last sample desired, turn all switches to the upright and off position before turning power out and return valves to their normal position. Return key to Shift Supervision.
39. Take the samples to the appropriate lab for analysis. Have the dissolved gases analyzed for volume of H<sub>2</sub>, O<sub>2</sub> and Kr. Calculate % of H<sub>2</sub> and O<sub>2</sub> on the data sheet.

Large Volume Liquid Sample and/or Dissolve Gas Sample

1. Sample Source \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_
- 1a. Krypton Gas Pressure \_\_\_\_\_ PSIG
2. Bypass Flow \_\_\_\_\_ FI-664 GPM
3. Flush Time \_\_\_\_\_ Minutes
4. Sample Flow \_\_\_\_\_ FI-664 GPM
5. Pressure \_\_\_\_\_ PI-661 PSIG
6. Temperature \_\_\_\_\_ TI-660
7. Conductivity Meter \_\_\_\_\_ Scale \_\_\_\_\_ CI-663
8. Radiation \_\_\_\_\_ RI-665
9. Initial Pressure Po \_\_\_\_\_ PI-662
10. Pressure P-1 \_\_\_\_\_ PI-662
11. Stabilized Pressure P2 \_\_\_\_\_ PI-662
12. Sample Pressure P3 \_\_\_\_\_ PI-662
13. V1 H2 (From GC) \_\_\_\_\_ ml
14. V2 O2 (from GC) \_\_\_\_\_ ml
15. V2 KR (from GC) \_\_\_\_\_ ml
16. Vol % O2 \_\_\_\_\_ %

$$\text{Vol \% O2} = \frac{V2 \text{ O2} - .2P}{17317} \times \frac{P + 14.7}{V2 \text{ Kr}}$$

17. Vol % H2 \_\_\_\_\_ %

$$\text{Vol \% H2} = \frac{V1 \text{ H2}}{17317} \times \frac{P + 14.7}{V2 \text{ Kr}}$$

Note: Dissolved gas pressure FI-662 is in psig for Unit 2 and psia for Unit 3.

APPENDIX A.4 SMALL VOLUME LIQUID SAMPLE

PREREQUISITES:

1. System lined up in accordance with C.O.L. S.20.1.
2. Obtain the key to the control panel power from Shift Supervision.

PROCEDURE:

1. If the RHR line is to be used, have the shift open the RHR sample line valves.

<u>Unit 2</u>	<u>Unit 3</u>	
AO 8098A	AO 9098A	A Line
AO 8099A	AO 9099A	
AO 8098B	AO 9098B	B Line
AO 8099B	AO 9099B	

2. Perform the drain and blow out operation per Appendix A.6
3. Open the N2 bottle valve and regulate to approximately 100 psig.
4. Check that the demin water tank is full. Open the demin water discharge valve and the nitrogen inlet valve. Verify that the demin water tank is at approximately 100 psig.
5. Load the syringe with 10cc of demin water. Place stopcock on the syringe and load the assembly onto the injection port.
6. Check that the small volume cask positioner is hanging on hooks below the sample station and latched.
7. Put the small volume cask into the cask positioner while the positioner is hanging from hooks on the sample station.
8. Remove stopper and carrying handle from the small cask by unscrewing it and lifting it out. Leave stopper near by.
9. Put a 15 ML sample bottle with an outer aluminum retainer ring and neoprene cap into a small volume cask. Check that the bottle lifting lever is free to move up and down. The bottle must fit snugly in the holder and

- be vertically aligned. If the bottle does not fit snugly, use a small pad of rubber or felt thick enough to hold vial against the upper yoke of the vial holder.
10. Slide the lead shielding drawer out so that the needles under the sample station enclosed are exposed.
  11. Check needle point to be sure they are slightly dulled. Check needle with mirror to be sure it is not bent.
  12. Check that longest part of needle is toward the center of the sample vial.
  13. Swing the cask into position under the sample station and lock the arms of the cask holder so the cask and bottle will remain in position.
  14. Check that the control panel power is on. It should be as a carryover from the drain and blow operation. All other switches should be in the up and off position.
  15. Raise the sample bottle into position on the needles by moving the lever on the side of the cask.
  16. Screw the lift rod in to hold the sample bottle in the engaged position. Note: if the vial doesn't clear the entry hole, lower the vial and rotate the small volume cask about 1/8" in either direction. If it still doesn't fit either the liquid vial positioner fixture or liquid tray positioner need adjustment.
  17. Turn HC-700 to the liquid position. Turn liquid sample selector switch HC-626 to position 1 for a sample from the jet pump line or to position 5 for a sample from the RHR line. Turn HC-616-1 small volume sample switch to the up and off position.
  18. Adjust PCV-627 so that the flow thru FCV-627 is 1 GPM.  
Continue this flow thru bypass valve CV-626 for a long enough period to be assured that the sample lines are flushed. The minimum time required to do this is 5 minutes. Record the flow and flush time on the data sheet.

19. After flush is completed, turn liquid sample source selector switch HC-626 to position 2 if the reactor valves were set for jet pump sample or position 4 if the reactor system valves were set for RHR sample. Note that the flow per indicator FI-664 is greatly reduced. Using PCV-627, adjust valve FCV-627 for a flow of .3 GPM. Note that the green light for the small volume sample is on.
20. Record the following on the data sheet: Flow/FI-664, Pressure/PI-661, Temperature/TI-660, Conductivity/CI-663 and Radiation/RI-665.
21. Turn small volume liquid selector HC-616-1 to "Take Sample" position. Valve CV-616 will rotate and carry the sample into alignment with the line to the sample bottle.
22. Connect the syringe onto the line provided for it on the front of the sample station. open the stopcock and inject 10 cc of water into the line. Close the syringe and line valves. Remove the syringe and fill it with air. Reattach the syringe, open the valves and inject the air, then close the valves and remove the syringe.
23. Remove the sample and if greater than 100 mr/hr use the lead pig to carry the sample to the chem lab.
24. Turn the switch HC-616-1 to the flush position. Flush for 5 minutes and/or until RI-665 reaches a minimum.
25. When the flush is finished, turn switch HC-616-1 back to off.
26. Perform the drain trap, sump, and collector following Appendix A.6.
27. Turn all switches to their 'off' position. Return all system valves to their normal position. Return key to Shift Supervision.



Small Volume Liquid Sample

1. Sample Source \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_
2. Bypass Flow \_\_\_\_\_ FI-664 (gpm)
3. Flush Time \_\_\_\_\_ Minutes
4. Sample Flow \_\_\_\_\_ FI-664 (gpm)
5. Pressure \_\_\_\_\_ PI-661 (psig)
6. Temperature \_\_\_\_\_ TI-660 ( F)
7. Conductivity Meter \_\_\_\_\_ Scale \_\_\_\_\_ CI-663
8. Radiation \_\_\_\_\_ RE-665

APPENDIX A.5 FLUSHING THE LIQUID AND DISSOLVED  
GAS SYSTEM

PREREQUISITES:

1. System lined up in accordance with C.O.L. S.20.1.
2. Obtain the key to the control panel power from Shift Supervision.

PROCEDURE:

1. Open the N2 Bottle Valve and regulate to approximately 100 psig.
2. Check that the demin water tank is full. Open the demin water discharge valve and the nitrogen inlet valve. Verify that the demin water tank is at approximately 100 psig.
3. Switch HC-626 must be in position 2 (jet pump) or 4 (RHR) and HC-700 must be in the liquid position.
4. Turn the flush system switch HC-628-1 to position 2 which will close the inlet sample lines and start the flush with demineralized water from V-501. Observe that there is a flow per FI-664.
5. After RI-665 shows radiation has decreased significantly, or after 5 minutes, turn switch HC-628-1 to position 3 to flush the V-610 loop. Watch RI-665.
6. After a few minutes, turn switch HC-628-1 to position 4 and flush the P-601 loop. Watch RI-665.
7. After a few minutes, turn switch HC-628-1 to position 5 and flush valve CV-615. Watch RI-665.
8. After a few minutes, turn switch HC-628-1 to position 6 and flush the piping station flush for 3 minutes.
9. Turn switch HC-628-1 to position 7 for another flush of the CV-622 loop. Watch RI-665.
10. If RI-665 did not indicate an acceptable radiation level at any step of the operation, go back and repeat steps 4 thru 8.

11. Perform the drain of trap, sump and collection following procedure listed in Appendix A.6.

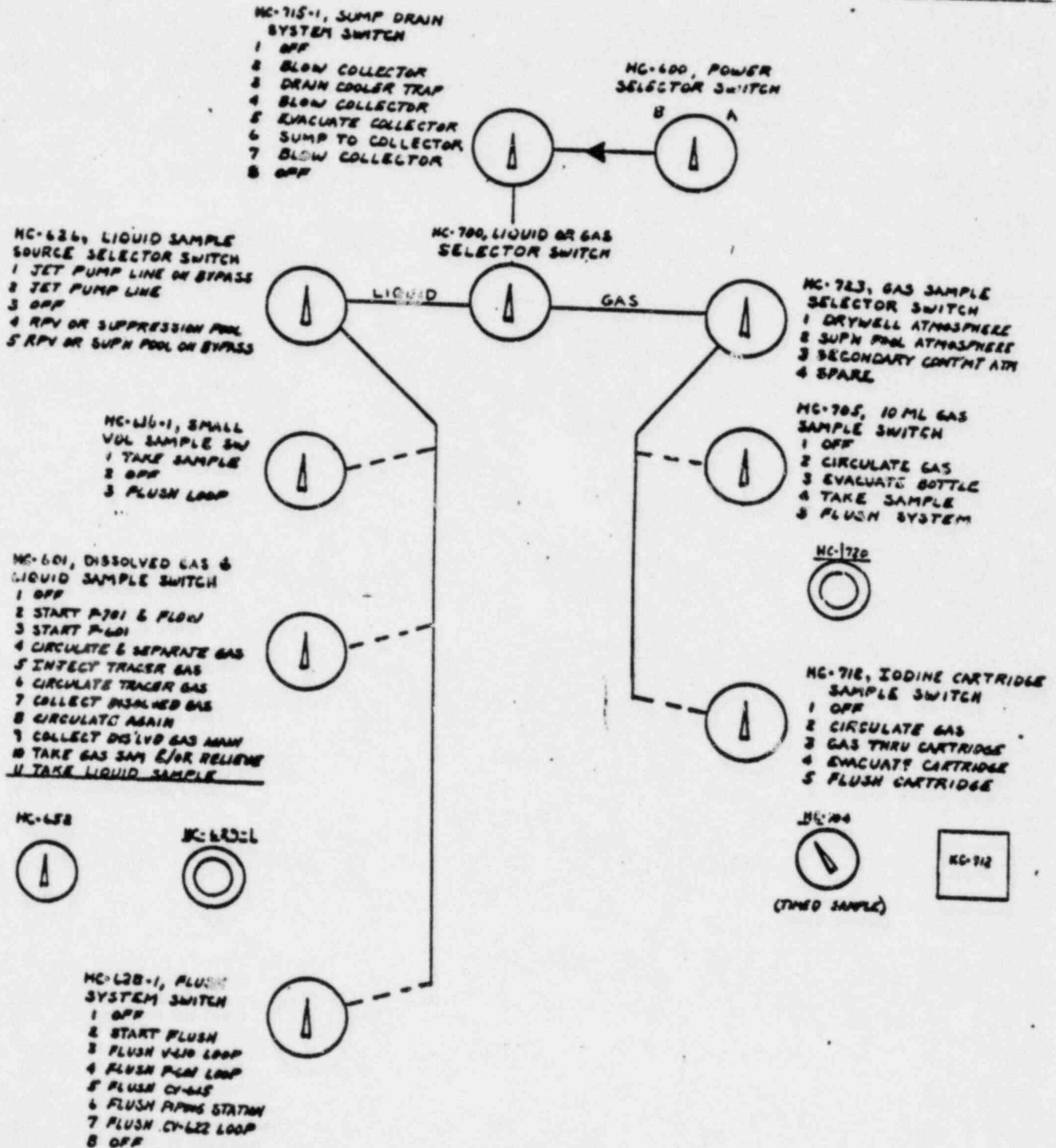
APPENDIX A.6 DRAINING TRAP, SUMP AND COLLECTORPREREQUISITES:

1. System lined up in accordance with C.O.L. S.20.1.
2. Obtain the key to the control panel power from Shift Supervision.

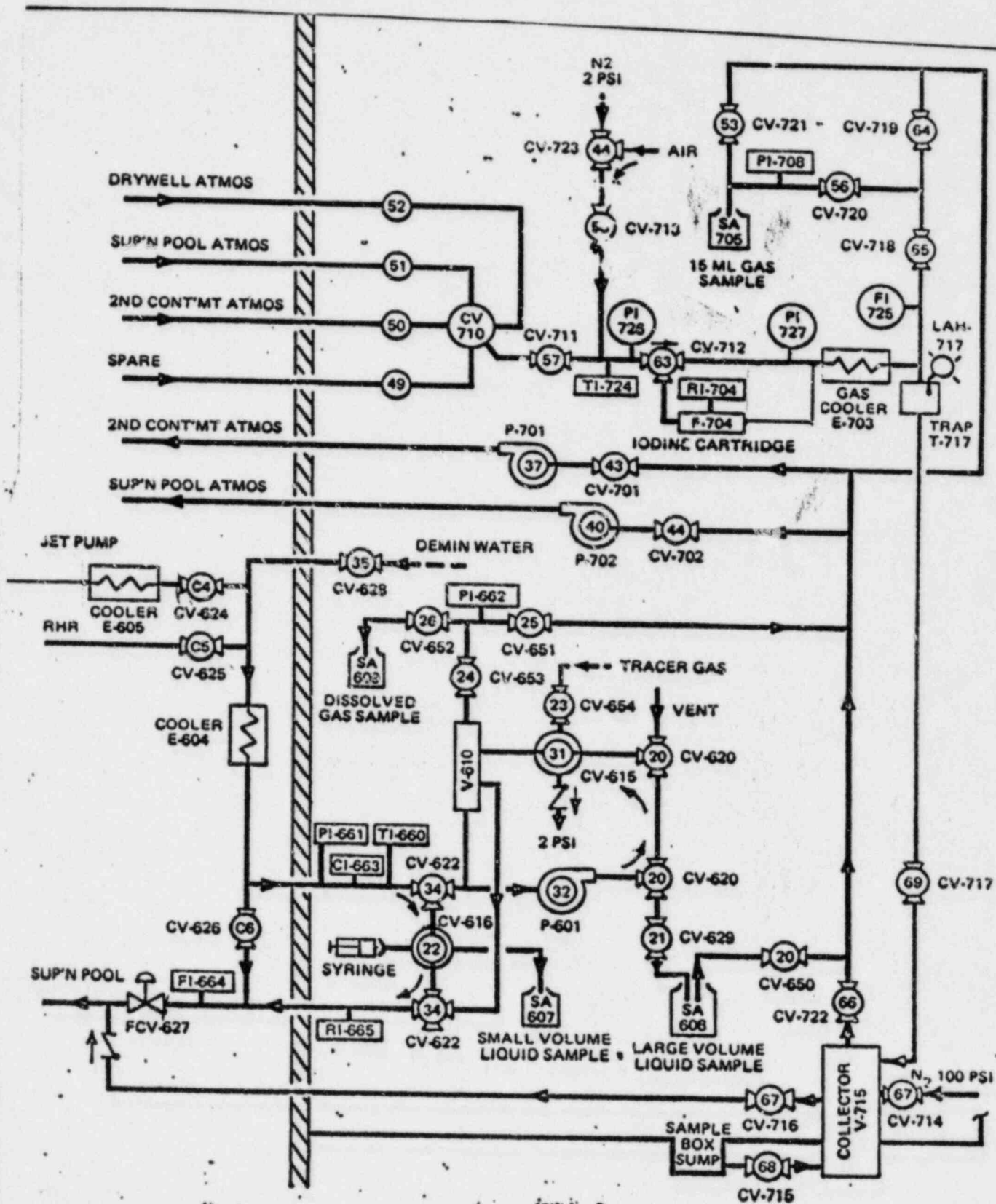
PROCEDURE:

1. Check that the nitrogen supply valves are open and that pressure is set at 100 psig.
2. Check that the demineralized flush water tank V-501 is full and is pressurized at 100 psig and that the valves are open to the sample station.
3. Check that FCV-627 is open. If not open, use the knob adjacent to PCV-627 on the control panel to have a 15 psi reading on the gauge.
4. Turn all control panel switches up and off and then turn the control panel power selector switch to "A" or "B".
5. Drain the collecting tank and sump by turning switch HC-715-1 clockwise through its eight positions. Pause approximately 5 seconds at each position.
6. Turn all switches to their 'off' position.

APPENDIX A.7 POST ACCIDENT SAMPLING STATION  
CONTROL SWITCHES



APPENDIX A.8 SCHEMATIC OF POST-ACCIDENT SAMPLE STATION



*W. Knapp*

*J. McMichael*

*9/7/82*

EP-209 APPENDIX D-2 RADIATION SURVEY TEAM

Station Super. ....
Office .....

Radiation Survey Team Leader

Home Phone

Centrex

J. Valinski

Alternate Radiation Survey Team Leader

M. Dedrich

Those members with (\*) have emergency plan training and may be directed by shift supervision to serve as leader. Personnel who are trained in HP practices but not in the emergency serve as augmentation forces, working under the direction of trained team leaders.

Interim Radiation Survey Team Leaders (\*) & Members

- \* A. Beward
- \* M. Dedrich
- \* S. Grosh
- \* W. Downey
- \* J. Moyer
- \* E. Preston
- M. Head
- G. Faden
- T. Hoopes
- S. Malin
- L. Hewell



RADIATION SURVEY TEAM - CHEMISTRY SECTION GROUP

Engineer - Chemistry      Home Phone      Centrex

Harry Watson

Alternate

G. Barley

Group Members

E. Traverso

B. Wargo

C. Hoffmaster

D. Chase

R. Ullrich

G. Scone

D. Musselman

M. Fry

Supplemental Forces are available from Rad Services Inc. Appendix I-2.



T. Stone  
T. Albright  
R. Moore  
S. Taylor  
J. Volz  
M. Henry  
C. Smith  
G. Menard  
W. Hoopes  
S. King  
J. Gruber  
G. Smith



Supplemental Forces are available from Bartlett Nuclear Appendix.

CONTROLLED AREA - ONLY -  
 THIS AREA IS ISSUED  
 DISPOSITION:  
 Thrapp  
 Station Super.

*J. M. White*  
 9/7/82

EP-209 APPENDIX D-4 PERSONNEL SAFETY TEAM

Personnel Safety Team Leader

Home Phone

Centrex

R. W. MacAllester

Alternate Personnel Safety Team Leaders

T. J. Mscisz

Interim Personnel Safety Team Leaders and Team Members

- S. I. Cohn
- L. R. Rhodes
- W. A. Bradley
- W. T. Gleaves
- D. W. Duane
- D. C. McRoberts
- N. D. Yost
- P. B. Cromwell
- D. E. Kauffman
- J. A. Barbour
- J. M. Weaver
- J. W. Ballantyne
- J. S. Deni

The following people are team members but not Interim Team Leaders

- W. M. Eagles, III
- R. C. Proctor

L. D. Givler  
B. E. Saxman  
T. A. Megashko  
D. G. Falcone  
W. C. Watson  
R. E. Rogers  
G. W. Tharpe  
L. E. MacEntee, III  
W. F. Johnson, Jr.  
R. F. Truax

USE 4 PEOPLE FROM THE FOLLOWING LIST TO FORM THE Personnel  
ACCOUNTABILITY GROUP.

C. P. Lauletta  
J. L. Clupp  
J. T. Budzynski  
K. W. Hunt  
T. J. Niessen  
M. J. Manski  
J. M. Armstrong  
S. J. Mannix  
D. P. Helker  
R. M. Sware, Jr.  
C. E. Koppenhaver  
J. J. Yacyshyn  
R. H. Wright  
W. L. Bloss  
J. G. Hufnagel

P. L. Bushek

M. S. Meckley

D. L. Helock

C. N. Swenson

G. A. John

E. G. Firth

T. J. Cabrey

J. E. Hessler

F. J. Mascitelli

D. B. Warfel

A. J. Wasong



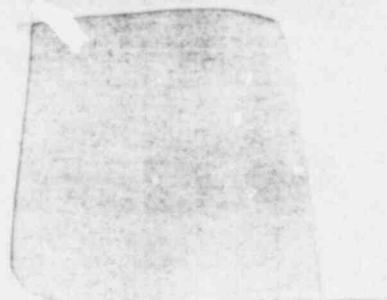
CONTROLLED APPROVED COPY -  
VOID PREVIOUS EDITIONS  
DESTRUCTION  
*Knapp*  
Station Super.  
Office

*9-7-82*  
*9/7/82*

EP-209 APPENDIX I-2 - CHEMISTRY AND HEALTH PHYSICS CONTRACTOR CALL LIST

Chemistry (Rad Services, Inc.)

- Blanciak, M.
- Casey, J.
- Chase, D.
- Gasper, J.
- Lata, C.
- Leone, B.
- Miller, T.
- Suess, T.



Pittsburgh, PA Office  
Rad Services

500 Penn Center Blvd.  
Pittsburgh, PA 15235

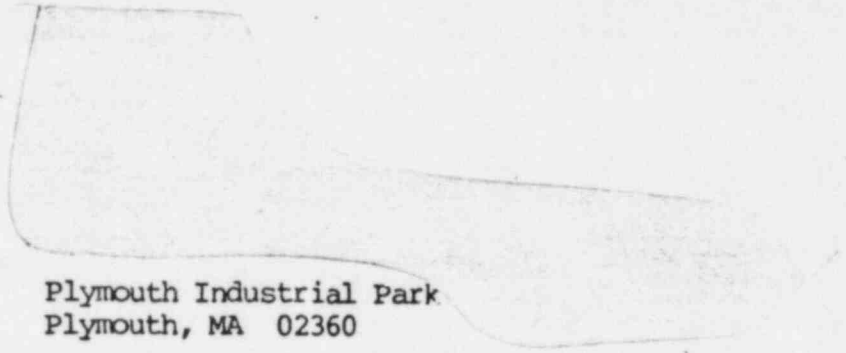
Rad Services, Inc.  
Instrument Calibration  
and Repair Services

Whiskey Bottom Rd.  
Laurel, MD 20810



Health Physics (Bartlett Nuclear, Inc.)

- Anderson, V.
- Colwell, R.
- Cotton, T.
- Ipoletta, D.
- Kiman, B.
- Smidga, R.
- Troja, M.



Plymouth MA Office

Plymouth Industrial Park  
Plymouth, MA 02360

CONTROLLED AREA -  
VOID PREVIOUS EDITIONS  
DISTRIBUTION:  
*Thn app*  
SE - SIV  
Control Bn.  
Station  
Office  
PHILADELPHIA ELECTRIC COMPANY  
PEACH BOTTOM UNITS 2 AND 3  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-305  
Page 1  
Rev. 4  
EF:lhá

*M. Ullrich*  
9/7/82

EP-305 SITE EVACUATION

PURPOSE

To define the actions to be performed if a site evacuation is required due to unexpected or uncontrolled hazards involving the main plant and extensive site areas outside the plant.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
3. EP 207A Search and Rescue
4. EP 207B Personnel Accountability
5. EP 207C First Aid
6. EP 207D Personnel Monitoring and Decontamination
7. EP 301 Operating the Evacuation Alarm and Pond Page System
8. EP 306 Evacuation of the Information Center
9. PP 11 Security Force Actions During a Site Evacuation
10. 10 CFR 20

APPENDICES

EP 305-1 Disposition of Evacuees

ACTION LEVEL

1. Evacuate all non-essential personnel from the site when one or more of the following conditions exist:
  - a. A Site Emergency or General Emergency has been declared,
  - b. Multiple Continuous Air Monitors throughout the plant are at high alarm,
  - c. Multiple area radiation monitors throughout the plant are at high alarm,
  - d. Conditions such as smoke, fire, uncontrolled toxic materials, or flooding, preclude habitation of large portions of the site,
  - e. Airborne radioactivity outside the plant but within the security fence is greater than  $1 \times 10^{-9}$  uc/cc unidentified,
  - f. Any condition which in the opinion of the Emergency Director makes it desirable to remove unnecessary personnel.

PRECAUTIONS

None

IMMEDIATE ACTIONS

1.0 Emergency Director shall:

- 1.1 Determine which assembly area will be used. If the wind is from the north at greater than 3 miles per hour, designate the North Substation as the assembly area. Otherwise, designate the President's Utility Building (PUB). The alternate location is the Delta Service Building.
- 1.2 Notify the senior ranking security officer on shift that a site evacuation is imminent and tell him to carry out applicable emergency security procedures.
- 1.3 Announce a site evacuation over the public address system as follows: (Announcements should be clear and distinct)

THIS IS A SITE EVACUATION. ALL PERSONNEL EVACUATE TO THE (state designated assembly area). ON-SHIFT OPERATIONS PERSONNEL REPORT TO THE OPERATIONS SUPPORT CENTER OR THE CONTROL ROOM; PERSONNEL SAFETY TEAM, REPORT TO THE HP OPERATIONS SUPPORT CENTER. OTHER EMERGENCY TEAMS REPORT TO THE UNIT 1 AREA AND AWAIT FURTHER INSTRUCTIONS.

- 1.4 Repeat the announcement.

- 1.5 Sound the evacuation sirens, including the Pond Page System, in accordance with EP 301, Operating the Evacuation Sirens and Pond Page System.
  - 1.6 After the sirens have stopped, repeat the announcement and sound the evacuation sirens and the Pond Page System again.
  - 1.7 Direct the evacuation of the Information Center in accordance with EP 306, Evacuation of the Information Center.
  - 1.8 Initiate accountability of personnel in accordance with EP 207B, Personnel Accountability.
- 2.0 Plant Personnel (except designated emergency team members) shall:
- 2.1 Evacuate the site and report to the announced assembly area. If the area is inaccessible, you will be directed to an alternate assembly area.
3. Shift Personnel shall:
- 3.1 Report to the Operations Support Center or the Control Room.
- 4.0 Emergency Team Members having emergency response roles shall:
- 4.1 Report to the Unit 1 Area and await further instructions.



APPENDIX EP 305-1  
 APPENDIX EP 305-1 DISPOSITION OF EVACUEES

NEUTRON  
 EXP. 5 CONTAMINATION 4  
 CHECK LEVEL/LOCATION

3  
 HAWSHAW BADGE NO.

P.E.  
 1 NO. DISP. 2 EMPL NAME  
 OR ADDRESS

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

PREPARED BY \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ FORWARD TO \_\_\_\_\_ FOR RETENTION

NOTES 1 DISPOSITION D-DETAINED 2 P.E. EMPLOYEE 3 ADDRESS IF 4 CONTAMINATION LEVEL 5 ENTER:  
 R-RELEASED CHECK IF YES NOT SITE EMPLOYEE WITH UNITS POS  
 NEG