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NUMBER	TITLE	REVIEW DATE	REV. NO.	REVISION DATE
EP-101	CLASSIFICATION OF EMERGENCIES	05/23/82	5	05/23/82
EP-102	UNUSUAL EVENT RESPONSE	05/23/82	5	05/23/82
EP-103	ALERT RESPONSE	05/23/82	5	05/23/82
EP-104	SITE EMERGENCY RESPONSE	05/23/82	5	05/23/82
EP-105	GENERAL EMERGENCY RESPONSE	05/23/82	5	05/23/82
EP-110	PERSONNEL ASSEMBLY AND ACCOUNTABILITY	04/14/82	0	04/14/82
EP-201	TECHNICAL SUPPORT CENTER (TSC) ACTIVATION	05/11/82	3	05/11/82
EP-202	OPERATIONAL SUPPORT CENTER (OSC) ACTIVATION	04/08/82	2	04/08/82
EP-203	EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION	05/11/82	3	05/11/82
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	06/07/82	0	06/07/82
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
EP-205A	OBTAINING THE IODINE AND			

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NUMBER	TITLE	REVIEW DATE	REV. NO.	REVISION DATE
.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
EP-205B	RADIATION SURVEY GROUPS	04/08/82	2	04/08/82
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 *
EP-206A	FIRE FIGHTING GROUP	06/04/82	3	06/04/82 *
EP-206B	EMERGENCY REPAIR GROUP	05/23/82	2	05/23/82
EP-207	PERSONNEL SAFETY TEAM ACTIVATION	05/11/82	4	05/11/82
EP-207A	SEARCH AND RESCUE	04/14/82	2	04/14/82
EP-207B	PERSONNEL ACCOUNTABILITY	05/11/82	3	05/11/82
EP-207C	FIRST AID	04/14/82	2	04/14/82
EP-207D	PERSONNEL MONITORING AND DECONTAMINATION	04/08/82	2	04/08/82
EP-207E	VEHICLE AND EVACUEE CONTROL PROCEDURE	04/08/82	0	04/08/82

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NUMBER	TITLE	REVIEW DATE	REV. NO.	REVISION DATE
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	06/04/82	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	04/08/82	4	04/08/82
EP-209 APPENDIX D-1	ON SITE EMERGENCY TEAM LEADERS	04/08/82	3	04/08/82
EP-209 APPENDIX D-2	RADIATION SURVEY TEAM	04/26/82	3	04/26/82
EP-209 APPENDIX D-3	FIRE AND DAMAGE TEAM	04/26/82	3	04/26/82
EP-209 APPENDIX D-4	PERSONNEL SAFETY TEAM	04/26/82	3	04/26/82
EP-209 APPENDIX D-5	SECURITY TEAM	04/26/82	3	04/26/82
EP-209 APPENDIX D-6	RE-ENTRY AND RECOVERY TEAM	04/26/82	2	04/26/82
EP-209 APPENDIX D-7	TECHNICAL SUPPORT CENTER TEAM	04/26/82	3	04/26/82
EP-209 APPENDIX E	CORPORATE EMERGENCY TEAM LEADERS AND SUPPORT PERSONNEL	04/26/82	4	04/26/82
EP-209 APPENDIX F	U. S. GOVERNMENT AGENCIES	04/08/82	2	04/08/82
EP-209 APPENDIX G	EMERGENCY MANAGEMENT AGENCIES	10/16/81	2	10/16/81
EP-209 APPENDIX H	COMPANY CONSULTANTS	10/16/81	2	10/16/81
EP-209 APPENDIX I-1	FIELD SUPPORT PERSONNEL	04/14/82	6	04/14/82

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NUMBER	TITLE	REVIEW DATE	REV. NO.	REVISION DATE
EP-209 APPENDIX I-2	RAD SERVICES CALL LIST	05/06/82	4	05/06/82
EP-209 APPENDIX J	NEARBY PUBLIC AND INDUSTRIAL USERS	07/23/81	1	07/23/81
EP-209 APPENDIX K	MISCELLANEOUS	06/04/82	2	06/04/82 *
EP-209 APPENDIX L	LOCAL PECO PHONES	07/23/81	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	04/26/82	3	04/26/82
EP-209 APPENDIX P	STAFFING AUGMENTATION - 60 MINUTE CALL PROCEDURE	03/05/82	1	03/05/82
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	03/05/82	3	03/05/82
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
EP-311	HANDLING PERSONNEL WITH SERIOUS INJURIES, RADIOACTIVE CONTAMINATION EXPOSURE, OR EXCESSIVE RADIATION EXPOSURE EMERGENCY DIRECTOR FUNCTIONS	04/08/82	3	04/08/82
EP-312	RADIOACTIVE LIQUID RELEASE (EMERGENCY DIRECTOR FUNCTIONS)	04/01/81	0	04/01/81
EP-313	CONTROL OF THYROID BLOCKING (KI) TABLETS	04/08/82	0	04/08/82
EP-316	CUMULATIVE POPULATION DOSE CALCULATIONS	05/06/82	2	05/06/82
EP-317	DIRECT RECOMMENDATIONS TO COUNTY			

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NUMBER	TITLE	REVIEW DATE	REV. NO.	REVISION DATE
	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-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 Q)	04/01/81	0	04/01/81

JUN 4 1982

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-206 FIRE AND DAMAGE TEAM ACTIVATION

PURPOSE

TO DEFINE THE ACTIONS REQUIRED TO ACTIVATE THE FIRE AND DAMAGE TEAM AND WHEN THE TEAM IS ACTIVATED THE FUNCTIONS THEY PERFORM.

REFERENCES

1. PEACH BOTTOM ATOMIC POWER STATION EMERGENCY PLAN

SECTION	TITLE
5.2.2.2.3	FIRE AND DAMAGE TEAM

2. LP 401 — ENTRY FOR EMERGENCY REPAIR, OPERATIONS, AND SEARCH AND RESCUE.

3. NUREG 0654 — CRITERIA FOR PREPARATION AND EVALUATION OF RADIOLOGICAL EMERGENCY RESPONSE PLANS AND PREPAREDNESS IN SUPPORT OF NUCLEAR POWER PLANTS.

4. 10CFR50 APPENDIX R, SECTION K

APPENDIX

EP-206-1 EMERGENCY EXPOSURE LIMITS (EMERGENCY PLAN TABLE 6.1)

EP-206-2 AVAILABLE METHODS OF SAFE SHUTDOWN

ACTION LEVEL

THE FIRE AND DAMAGE TEAM SHALL BE ACTIVATED WHENEVER THERE IS A SITUATION ON SITE THAT THE EMERGENCY DIRECTOR DEEMS THEIR SERVICES NECESSARY.

PRECAUTIONS

1. IF TEAM MEMBERS ARE REQUIRED TO ENTER A HAZARDOUS AREA, THERE SHALL BE A MINIMUM OF TWO PEOPLE PER GROUP ENTERING.

2. TEAM MEMBER'S EXPOSURE SHOULD BE LIMITED TO THE ADMINIS-

TRATIVE GUIDE LEVELS IN APPENDIX EP 206-1. EMERGENCY EXPOSURE LIMITS. THE EMERGENCY DIRECTOR SHALL APPROVE ANY TEAM MEMBER EXCEEDING PEACH BOTTOM QUARTERLY EXPOSURE LIMITS. THE FIRE AND DAMAGE TEAM LEADER WILL ENSURE THAT TEAM MEMBERS CONTROL THEIR OWN EXPOSURE IN ACCORDANCE WITH ALARA CONCEPTS.

3. PROPER RADIOLOGICAL CONTROLS MUST BE ADHERED TO AS MUCH AS PRACTICABLE DURING FIRE AND DAMAGE REPAIR OPERATIONS. THIS ACTIVITY IS EXEMPT FROM RADIATION WORK PERMIT (RWP) REQUIREMENTS.

4. THE SHIFT SUPERVISOR IN THE CONTROL ROOM WILL SERVE AS THE INTERIM FIRE AND DAMAGE TEAM LEADER UNTIL RELIEVED BY THE FIRE AND DAMAGE TEAM LEADER FOR BOTH FIRE FIGHTING AND DAMAGE REPAIR RESPONSIBILITIES. THE ENGINEER-MAINTENANCE AND THE ASSISTANT ENGINEER-MAINTENANCE ARE QUALIFIED IN FIRE-FIGHTING TECHNIQUES WHICH ALLOWS THEM BOTH TO BE FIRE AND DAMAGE TEAM LEADERS IF REQUIRED. HOWEVER, AS A GENERAL RULE, THE SITE MAINTENANCE PERSONNEL ARE NOT FIRE-FIGHTING QUALIFIED. THESE PERSONNEL CAN ONLY ASSIST IN FIRE-FIGHTING ACTIVITIES WITH THE SHIFT OPERATORS IF REQUESTED BY THE OPERATORS DUE TO AN IN-EXTREMIS SITUATION.

IMMEDIATE ACTIONS

1.0 PERSONNEL WHO IDENTIFY FIRES SHALL:

1.1 IMMEDIATELY DETERMINE IF THE FIRE CAN BE EXTINGUISHED BY A QUICK-ACTION SUCH AS USING A NEARBY FIRE EXTINGUISHER. ATTEMPT TO QUICKLY EXTINGUISH THE FIRE, AND IN ALL INSTANCES, NOTIFY SHIFT SUPERVISION (EXT. 4220, 4221, 4222, 4223 OR P.A.) OF THE FIRE LOCATION AND TYPE AND ACTUATE THE NEAREST FIRE ALARM STATION.

WARNING: FOR A FIRE IN FUEL STORAGE AREAS, FLOODING NEW FUEL WITH WATER OR APPLYING A WATER FOG SHOULD BE AVOIDED TO PREVENT A POSSIBLE CRITICALITY IN NEW FUEL.

1.2 AFTER SOUNDING THE ALARM REMAIN CLOSE TO THE AREA, AT A SAFE DISTANCE FROM SMOKE, FUMES AND FIRE, TO PROVIDE DIRECTION TO THE FIRE LOCATION TO THE FIRE FIGHTING GROUP.

2.0 SHIFT PERSONNEL WHO RECEIVE REPORT OF FIRE SHALL:

2.1 IF A FIRE IS REPORTED TO THE CONTROL ROOM VIA PHONE OR P.A. THE INDIVIDUAL WHO RECEIVES THE REPORT SHALL ADVISE THE CHIEF OPERATOR OF THE LOCATION AND FIRE DESCRIPTION.

2.2 IF THE FIRE NOTIFICATION WAS INITIATED VIA THE FIRE ALARM ANNUNCIATOR PANEL THE CHIEF OPERATOR SHOULD OBTAIN

THE EXACT WORDS ON THE ANNUNCIATOR WINDOW, AND USE THEM IN THE ANNOUNCEMENT.

2.3 IF THE FIRE LOCATION OR FIRE FIGHTING GROUP ASSEMBLY AREA IS IN DOUBT (E.G. FIRE IN THE MOISTURE SEPARATOR AREA) THE CHIEF OPERATOR SHOULD CONFER WITH SHIFT SUPERVISION TO DEFINE THE DESIRED ASSEMBLY AREA.

2.4 THE CHIEF OPERATOR SHOULD MAKE REPEATED ANNOUNCEMENTS OF THE FIRE TYPE (IF KNOWN), LOCATION, AND FIRE FIGHTING GROUP ASSEMBLY AREA. HE MAY AT THIS TIME, OR LATER, IF REQUESTED TO DO SO BY THE TEAM LEADER, ANNOUNCE AN ASSEMBLY AREA FOR GENERAL PLANT PERSONNEL. THIS ASSEMBLY AREA SHOULD BE CHOSEN BASED UPON THE ADDITIONAL NEEDS OF THE FIRE FIGHTING GROUP AS INDICATED BY THE LEADER. (E.G. MANPOWER - AT FIRE LOCATION/PORTABLE FIRE FIGHTING EQUIPMENT - PER LOCATIONS INDICATED IN APPENDIX EP-206A-5/ TURNOUT COATS, BOOTS, GLOVES, SCOTT 4.5 SCBA - CAGE LOCATED AT UNIT 3 13 KV AREA.)

3.0 EMERGENCY DIRECTOR SHALL:

3.1 CALL THE FIRE AND DAMAGE TEAM LEADER. IF THE SITUATION PERMITS, DISCUSS THE PROBLEM WITH THE FIRE AND DAMAGE TEAM LEADER SO HE CAN ASSESS THE SITUATION AND DETERMINE HOW MANY AND WHAT TYPE OF TEAM MEMBERS WILL BE NECESSARY TO CORRECT THE PROBLEM.

3.2 IF NECESSARY, DIRECT THE DESIGNATED COMMUNICATOR TO CONTACT FIRE AND DAMAGE TEAM MEMBERS; REFER TO EP 209 APPENDIX D-2 FOR TELEPHONE NUMBERS. INFORM THE TEAM MEMBERS WHERE TO ASSEMBLE.

3.3 IF NECESSARY, CONTACT OFFSITE AGENCIES FOR ASSISTANCE. THE SITE EMERGENCY COORDINATOR SHOULD BE CONSULTED IF OUTSIDE ASSISTANCE IS DESIRED BEFORE CONTACTING ANY OFFSITE AGENCIES.

4.0 SHIFT SUPERVISOR SHALL:

4.1 ASSUME THE ROLE OF INTERIM FIRE AND DAMAGE TEAM LEADER AND DIRECT THEIR RESPONSE IN ACCORDANCE WITH THE APPLICABLE PROCEDURE:

EP 206A FIRE FIGHTING GROUP

EP 206B EMERGENCY REPAIR GROUP

4.2 KEEP THE EMERGENCY DIRECTOR INFORMED OF THE STATUS OF THE SITUATION AND ADVISE HIM OF THE NEED FOR OFFSITE ASSISTANCE.

5.0 INTERIM FIRE AND DAMAGE TEAM MEMBER(S) SHALL:

5.1 REPORT TO THE INTERIM FIRE AND DAMAGE TEAM LEADER AT

THE SITE OF THE EVENT.

6.0 FIRE AND DAMAGE TEAM LEADER SHALL:

6.1 DETERMINE HOW MANY TEAM MEMBERS WILL BE NECESSARY TO CORRECT THE PROBLEM AND CONTACT THEM WITH INFORMATION ON WHERE TO REPORT.

6.2 REPORT TO THE DESIGNATED ASSEMBLY AREA. (TECHNICAL SUPPORT CENTER, NORTH SUBSTATION, OR PUB OR AS DIRECTED BY THE EMERGENCY DIRECTOR OR INTERIM EMERGENCY DIRECTOR.)

6.3 ASSEMBLE THE TEAM AND CONTACT THE INTERIM FIRE AND DAMAGE TEAM LEADER AND GET A STATUS UPDATE OF THE SITUATION.

6.4 INFORM INTERIM EMERGENCY DIRECTOR OR EMERGENCY DIRECTOR THAT HE IS ON SITE AND AWARE OF THE CURRENT SITUATION AND RECOMMEND A PROPER COURSE OF ACTION TO RECOVER FROM FIRE AND DAMAGE.

6.5 DIRECT THE TEAM TO RELIEVE OR ASSIST THE INTERIM TEAM MEMBERS, AS NECESSARY.

6.6 PERIODICALLY PROVIDE FIRE AND DAMAGE TEAM MEMBERS WITH PLANT STATUS CHANGES AND SIGNIFICANT RADIATION EXPOSURE AND RADIOACTIVE CONTAMINATION PROBLEMS WHICH MAY AFFECT THE FUNCTIONS OF THE TEAM.

7.0 FIRE AND DAMAGE TEAM MEMBERS SHALL:

7.1 REPORT TO THE AREA SPECIFIED BY THE INTERIM EMERGENCY DIRECTOR, EMERGENCY DIRECTOR, OR FIRE AND DAMAGE TEAM LEADER. "ASSEMBLY AREAS COULD BE OPERATIONAL SUPPORT CENTER, PUB, OR NORTH SUBSTATION AS SHIFT SUPERVISION OR FIRE AND DAMAGE TEAM LEADER DIRECTS."

7.2 OBTAIN EQUIPMENT (NECESSARY TO FIGHT FIRE OR CORRECT DAMAGE) FROM IN PLANT LOCATIONS SPECIFIED BY FIRE AND DAMAGE TEAM LEADER.

<u>FOLLOW-UP ACTIONS:</u>

1.0 EMERGENCY DIRECTOR SHOULD:

1.1 IN THE EVENT THAT THE FIRE HAS THE POTENTIAL TO COMPLETELY DISABLE ALL EQUIPMENT IN AND CABLING PASSING THROUGH THE FIRE AREA, REFERENCE THE "F" PROCEDURE FOR THE AREA AND APPENDIX EP-206-2 TO OBTAIN GUIDANCE IN DETERMINING THE REMAINING AVAILABLE SYSTEMS TO ACCOMPLISH SAFE SHUTDOWN OF THE AFFECTED UNIT.

APPENDIX EP 206-1
EMERGENCY EXPOSURE LIMITS

	FUNCTION	PROJECTED WHOLE BODY DOSE	THYROID DOSE	AUTHORIZED BY
1.	LIFE SAVING AND REDUCTION OF INJURY	75 REM*	375 REM	EMERGENCY DIRECTOR
2.	OPERATION OF EQUIPMENT TO MITIGATE AN EMERGENCY	25 REM*	125 REM	EMERGENCY DIRECTOR
3.	PROTECTION OF HEALTH AND SAFETY OF THE PUBLIC	5 REM	25 REM	EMERGENCY DIRECTOR
4.	OTHER EMERGENCY ACTIVITIES	10 CFR 20 LIMITS	10 CFR 20 LIMITS	EMERGENCY DIRECTOR
5.	RE-ENTRY/ RECOVERY ACTIVITIES	ADMINISTRATIVE GUIDELINES	ADMINISTRATIVE GUIDELINES	N/A

*REFERENCE: EPA-520/1-75-001 TABLE 2.1
**SUCH EXPOSURE SHALL BE ON A VOLUNTARY BASIS

AVAILABLE METHODS OF SAFE SHUTDOWN

TWENTY-FIVE METHODS OF PROVIDING REACTOR SHUTDOWN AND DECAY HEAT REMOVAL WERE UTILIZED AS THE BASIS FOR A SAFE SHUTDOWN ANALYSIS. THE INDIVIDUAL "F" PROCEDURE FOR EACH FIRE ZONE INDICATES THOSE METHODS WHICH WOULD REMAIN AVAILABLE IF THE FIRE ZONE OF INTEREST WERE TO BE SUBJECTED TO A DESIGN BASIS FIRE. A DESIGN BASIS FIRE IS ASSUMED TO DISABLE ALL EQUIPMENT LOCATED WITHIN A FIRE ZONE AND ALL EQUIPMENT ASSOCIATED WITH CABLING PASSING THROUGH THE FIRE ZONE. THIS ANALYSIS ASSUMES COMPLETE LOSS OF EQUIPMENT FUNCTION EVEN IF A COMPONENT IS NOT REQUIRED TO CHANGE ITS NORMAL LINE UP STATUS TO PERFORM SATISFACTORILY.

EACH OF THESE METHODS INCLUDES A SYSTEM BY WHICH WATER CAN BE ADDED TO THE REACTOR VESSEL, A SYSTEM BY WHICH ENERGY CAN BE REMOVED FROM THE REACTOR VESSEL, AND ANY SUPPORT SYSTEMS NEEDED TO ACCOMMODATE ENERGY REMOVAL TO AN ULTIMATE HEAT SINK OR TO RETURN WATER TO ITS SUPPLY SOURCE. ADDITIONALLY, EACH METHOD HAS SEVERAL ALTERNATIVES DERIVED FROM MULTIPLE FLOW PATHS, REDUNDANT LOOPS, OR ALTERNATE POWER SUPPLIES.

FOLLOWING IS A DESCRIPTION OF THESE 25 METHODS OF PROVIDING REACTOR SHUTDOWN.

METHODS UTILIZING THE CONDENSATE PUMPS OR CONDENSATE PUMPS AND REACTOR FEED PUMPS:

1. WATER IS SUPPLIED FROM THE CONDENSATE STORAGE TANK (CST) BY THE CONDENSATE AND REACTOR FEED PUMPS TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TURBINE BYPASS VALVES (TBV) TO THE CONDENSER AND WATER IS RETURNED TO THE CST. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THIS IS A NON-SAFETY RELATED METHOD.

2. WATER IS SUPPLIED FROM THE CST BY THE CONDENSATE AND REACTOR FEED PUMPS TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MAIN STEAM RELIEF VALVES (MSRV) TO THE TORUS. THE TORUS IS COOLED USING THE RESIDUAL HEAT REMOVAL (RHR) PUMPS AND THE HIGH PRESSURE SERVICE WATER (HPSW) PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

3. WATER IS SUPPLIED FROM THE CST BY THE CONDENSATE AND REACTOR FEED PUMPS TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA HIGH PRESSURE COOLANT INJECTION (HPCI) STEAM DRAG TO THE TORUS. THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

4. THE REACTOR IS DEPRESSURIZED TO 650 PSIG OR LESS USING THE TBV. WATER IS SUPPLIED FROM THE CST BY THE CONDENSATE PUMPS TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER AND WATER IS RETURNED TO THE CST. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THIS IS A NON-SAFETY RELATED

METHOD.

5. THE REACTOR IS DEPRESSURIZED TO 650 PSIG OR LESS USING THE MSRV. WATER IS SUPPLIED FROM THE CST BY THE CONDENSATE PUMPS TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

METHODS UTILIZING THE RCIC PUMP:

6. WATER IS SUPPLIED FROM THE CST BY THE REACTOR CORE ISOLATION COOLING (RCIC) PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

7. WATER IS SUPPLIED FROM THE CST BY THE RCIC PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

8. WATER IS SUPPLIED FROM THE CST BY THE RCIC PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA HPCI STEAM DRAG TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

9. WATER IS SUPPLIED FROM THE TORUS BY THE RCIC PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE TORUS. THIS IS A NON-SAFETY RELATED METHOD.

10. WATER IS SUPPLIED FROM THE TORUS BY THE RCIC PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS. ALTHOUGH THE RCIC SYSTEM IS NOT CONSIDERED A SAFETY RELATED SYSTEM, IT IS DESIGNED TO SATISFY CLASS I SEISMIC CRITERIA. BECAUSE OF THIS DESIGN, THIS METHOD CAN BE CONSIDERED A SAFETY RELATED METHOD.

11. WATER IS SUPPLIED FROM THE TORUS BY THE RCIC PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA RCIC STEAM DRAG TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. ALTHOUGH THE RCIC SYSTEM IS NOT CONSIDERED A SAFETY RELATED SYSTEM. IT IS DESIGNED TO SATISFY CLASS I SEISMIC CRITERIA. BECAUSE OF THIS DEISNG. THIS METHOD CAN BE CONSIDERED A SAFETY RELATED

METHOD.

METHODS UTILIZING THE HPCI PUMP:

12. WATER IS SUPPLIED FROM THE CST BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

13. WATER IS SUPPLIED FROM THE CST BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

14. WATER IS SUPPLIED FROM THE CST BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA HPCI STEAM DRAG TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD.

15. WATER IS SUPPLIED FROM THE TORUS BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE TORUS. THIS IS A NON-SAFETY RELATED METHOD.

16. WATER IS SUPPLIED FROM THE TORUS BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. THIS IS A SAFETY RELATED METHOD.

17. WATER IS SUPPLIED FROM THE TORUS BY THE HPCI PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA HPCI STEAM DRAG TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. THIS IS A SAFETY RELATED METHOD.

METHODS APPLICABLE AFTER THE REACTOR IS DEPRESSURIZED TO 300 PSIG OR LESS:

18. THE REACTOR IS DEPRESSURIZED USING THE TBV. WATER IS SUPPLIED FROM THE TORUS BY AN RHR PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. WATER IS RETURNED TO THE TORUS. THIS IS A NON-SAFETY RELATED METHOD.

19. THE REACTOR IS DEPRESSURIZED USING THE MSRV. WATER IS SUPPLIED FROM THE TORUS BY AN RHR PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS.

THE TORUS IS COOLED USING THE RHR AND HPSW PUMPS. THIS IS A SAFETY RELATED METHOD.

METHODS APPLICABLE AFTER THE REACTOR IS DEPRESSURIZED TO 350 PSIG OR LESS:

20. THE REACTOR IS DEPRESSURIZED USING THE TBV. WATER IS SUPPLIED FROM THE CST BY A CORE SPRAY PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD. THIS METHOD IS AN ALTERNATE TO METHOD 22 BELOW. I.E. WATER IS SUPPLIED FROM THE CST IN PLACE OF THE TORUS. USE OF THIS WATER SUPPLY REQUIRES OPENING A MANUAL VALVE IN THE CORE SPRAY PUMP SUCTION LINE.

21. THE REACTOR IS DEPRESSURIZING USING THE MSRV. WATER IS SUPPLIED FROM THE CST BY A CORE SPRAY PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS AND WATER IS RETURNED TO THE CST. THIS IS A NON-SAFETY RELATED METHOD. THIS METHOD IS AN ALTERNATE TO METHOD 23 BELOW. I.E. WATER IS SUPPLIED FROM THE CST IN PLACE OF THE TORUS. USE OF THIS WATER SUPPLY REQUIRES OPENING A MANUAL VALVE IN THE CORE SPRAY PUMP SUCTION LINE.

22. THE REACTOR IS DEPRESSURIZED USING THE TBV. WATER IS SUPPLIED FROM THE TORUS BY A CORE SPRAY PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. WATER IS RETURNED TO THE TORUS. THIS IS A NON-SAFETY RELATED METHOD.

23. THE REACTOR IS DEPRESSURIZED USING THE MSRV. WATER IS SUPPLIED FROM THE TORUS BY A CORE SPRAY PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. THIS IS A SAFETY RELATED METHOD.

24. THE REACTOR IS DEPRESSURIZED USING THE TBV. WATER IS SUPPLIED FROM THE RIVER BY A HPSW PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE TBV TO THE CONDENSER. THE CONDENSER IS COOLED BY THE CIRCULATING WATER SYSTEM. WATER IS RETURNED TO THE CST WHICH OVERFLOWS TO RADWASTE. THIS IS A NON-SAFETY RELATED METHOD.

25. THE REACTOR IS DEPRESSURIZED USING THE MSRV. WATER IS SUPPLIED FROM THE RIVER BY A HPSW PUMP TO THE REACTOR VESSEL. ENERGY IS REMOVED VIA THE MSRV TO THE TORUS. THE TORUS IS COOLED BY THE RHR AND HPSW PUMPS. THIS IS A SAFETY RELATED METHOD.

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-206A FIRE FIGHTING GROUP

PURPOSE

TO DEFINE THE ACTIONS OF THE FIRE FIGHTING GROUP.

REFERENCES

1. PEACH BOTTOM ATOMIC POWER STATION EMERGENCY PLAN

SECTION	TITLE
5.2.2.2.3	FIRE AND DAMAGE TEAM

2. EP 401 — ENTRY FOR EMERGENCY REPAIR, OPERATIONS, AND SEARCH AND RESCUE.

3. NUREG 0654 — CRITERIA FOR PREPARATION AND EVALUATION OF RADIOLOGICAL EMERGENCY RESPONSE PLANS AND PREPAREDNESS IN SUPPORT OF NUCLEAR POWER PLANTS.

4. 10CFR50 APPENDIX R, SECTION K

APPENDIX

EP-206A-1	FIRE FIGHTING GROUP ORGANIZATION AND RESPONSIBILITIES BY JOB TITLE
EP-206A-2	FIRE FIGHTING GROUP STANDARD ACTIONS
EP-206A-3	AUTOMATIC FIRE PROTECTION SYSTEM INITIATION AND RESET
EP-206A-4	CLASSES OF FIRES AND TYPES OF EXTINGUISHANTS
EP-206A-5	PORTABLE FIRE FIGHTING EQUIPMENT AVAILABLE ON SITE
EP-206A-6	EMERGENCY EXPOSURE LEVELS (EMERGENCY PLAN TABLE 6.1)

ACTION LEVEL

THE FIRE FIGHTING GROUP WILL BE ACTIVATED WHENEVER THERE IS A SITUATION ONSITE THAT THE FIRE AND DAMAGE TEAM LEADER DEEMS THEIR SERVICES NECESSARY.

PRECAUTIONS

1. TEAM MEMBER'S EXPOSURE SHOULD BE LIMITED TO THE ADMINISTRATIVE GUIDE LEVELS IN APPENDIX EP 206A-6, EMERGENCY EXPOSURE LIMITS. THE EMERGENCY DIRECTOR SHALL APPROVE ANY TEAM MEMBER EXCEEDING PEACH BOTTOM QUARTERLY EXPOSURE LIMITS. THE FIRE AND DAMAGE TEAM LEADER SHOULD ENSURE THAT ALL TEAM MEMBERS ARE CONTROLLING THEIR OWN EXPOSURE IN ACCORDANCE WITH ALARA CONCEPTS.

2. THE SHIFT SUPERVISOR IN THE CONTROL ROOM WILL SERVE AS THE INTERIM FIRE AND DAMAGE TEAM LEADER UNTIL RELIEVED BY THE FIRE AND DAMAGE TEAM LEADER FOR FIRE-FIGHTING AND DAMAGE REPAIR DUTIES.

3. THE ENGINEER-MAINTENANCE AND THE ASSISTANT ENGINEER-MAINTENANCE ARE QUALIFIED IN FIRE-FIGHTING TECHNIQUES WHICH ALLOWS THEM BOTH TO BE FIRE AND DAMAGE TEAM LEADERS IF REQUIRED. HOWEVER, AS A GENERAL RULE, THE SITE MAINTENANCE PERSONNEL ARE NOT FIRE-FIGHTING QUALIFIED. THESE PERSONNEL CAN ONLY ASSIST IN FIRE-FIGHTING ACTIVITIES WITH THE SHIFT OPERATORS IF REQUESTED BY THE OPERATORS DUE TO AN IN-EXTREMIS SITUATION.

IMMEDIATE ACTIONS

1.0 INTERIM FIRE AND DAMAGE TEAM LEADER SHALL:

1.1 IF TIME PERMITS, REVIEW THE APPLICABLE "F" PROCEDURE FOR THE AFFECTED FIRE ZONE.

1.2 OBTAIN ALL NECESSARY KEYS FOR THE FIRE ZONE IN THE EVENT DOORS ARE LOCKED OR THE SECURITY KEYCARD DEVICE DOES NOT FUNCTION.

1.3 OBTAIN TWO RADIOS; ONE FOR THE LEADER AND ONE FOR THE INSPECTION TEAM LEADER.

1.4 PROCEED TO THE FIRE SCENE AND ASSEMBLE THE FIRE FIGHTING GROUP.

1.5 EXPLAIN THE SITUATION AND WHAT HAS TO BE DONE IN DETAIL TO THE FIRE FIGHTING GROUP AND, IF ASSEMBLED, GENERAL PLANT PERSONNEL.

1.6 IF ENTRY INTO A HAZARDOUS AREA IS NECESSARY, DO SO IN ACCORDANCE WITH EP 401, ENTRY FOR EMERGENCY REPAIR, OPERATIONS AND SEARCH AND RESCUE.

1.7 DIRECT FIRE-FIGHTING EFFORTS IN ACCORDANCE WITH APPENDIX EP-206A-1, FIRE AND DAMAGE TEAM ORGANIZATION AND RESPONSIBILITIES, AND APPENDIX EP-206A-2, FIRE FIGHTING GROUP STANDARD ACTIONS. USE PORTABLE AND INSTALLED FIRE PROTECTION EQUIPMENT IN

ACCORDANCE WITH APPENDIX EP-206A-3, AUTOMATIC FIRE PROTECTION SYSTEM INITIATION AND RESET, APPENDIX EP-206A-4, CLASSES OF FIRES AND TYPES OF EXTINGUISHANTS, AND APPENDIX EP-206A-5, PORTABLE FIRE FIGHTING EQUIPMENT AVAILABLE ON-SITE.

1.8 ENSURE THAT PERSONNEL HAVE ADEQUATE PROTECTION TO FIGHT THE FIRE.

1.9 ADVISE THE INTERIM EMERGENCY DIRECTOR OR EMERGENCY DIRECTOR CONCERNING THE NEED FOR DE-ENERGIZING OR REMOVING EQUIPMENT OR SYSTEMS FROM SERVICE AND THE SIGNIFICANCE OF DAMAGE SUSTAINED AND THE IMPACT ON PLANT OPERATIONS AND SAFETY. REQUEST AS REQUIRED THE SHUTDOWN OF VENTILATION SYSTEM(S).

2.0 FIRE FIGHTING GROUP MEMBERS SHALL:

2.1 REPORT TO THE ASSEMBLY AREA WITH EQUIPMENT, AS ASSIGNED IN APPENDIX EP-206A-1, ASSUME THE RESPONSIBILITIES ASSIGNED IN APPENDIX EP-206A-1, AND FIGHT THE FIRE UNDER DIRECTION OF THE TEAM LEADER.

FOLLOW-UP ACTIONS

1.0 INTERIM FIRE AND DAMAGE TEAM LEADER SHALL:

1.1 PERIODICALLY UPDATE THE EMERGENCY DIRECTOR OR INTERIM EMERGENCY DIRECTOR OF THE STATUS OF THE SITUATION. REQUEST THE EMERGENCY DIRECTOR OR INTERIM EMERGENCY DIRECTOR TO ASK FOR ASSISTANCE FROM THE DELTA-CARDIFF FIRE AND AMBULANCE COMPANY, IF NECESSARY.

1.2 COORDINATE THE ACTIVITIES OF OFF-SITE FIRE FIGHTING SUPPORT GROUPS.

2.0 FIRE AND DAMAGE TEAM LEADER SHALL:

2.1 IF POSSIBLE, REPORT OR SEND THE ALT. FIRE AND DAMAGE TEAM LEADER TO THE AREA OF THE FIRE OR ANY DAMAGED AREAS WHEN NOTIFIED BY THE EMERGENCY DIRECTOR.

2.2 OBTAIN AN UPDATE OF THE SITUATION AND RELIEVE THE INTERIM FIRE AND DAMAGE TEAM LEADER.

2.3 DIRECT AND COORDINATE FIRE FIGHTING AS NECESSARY. COORDINATE WITH THE SHIFT OPERATORS AS NECESSARY TO EXPEDITE SYSTEM BLOCKS FOR REPAIR WORK ON CRITICAL EQUIPMENT DAMAGED BY THE FIRE.

FIRE FIGHTING GROUP ORGANIZATION AND RESPONSIBILITIES BY JOB TITLE

A. THE FIRE FIGHTING GROUP SHOULD REPORT TO THE ASSEMBLY AREA WITH THE FOLLOWING ASSIGNED EQUIPMENT:

SHIFT SUPERVISOR: TWO RADIOS AND NECESSARY KEYS

PLANT OPERATOR NO. 1: CO2 PORTABLE FIRE EXTINGUISHER

PLANT OPERATOR NO. 2: PURPLE K DRY CHEMICAL FIRE EXTINGUISHER

ASS'T PLANT OPERATOR: PURPLE K DRY CHEMICAL FIRE EXTINGUISHER

AUXILIARY OPERATOR: IMMEDIATELY PROCEED TO THE FIRE FIGHTING GROUP EQUIPMENT CAGE, 116' EL. UNIT 3 13 KV AREA, OBTAIN ONE SCOTT 4.5 SCBA AND PROCEED TO ASSEMBLY AREA. IMMEDIATELY OBTAIN ADDITIONAL SCBA IF REQUESTED TO DO SO BY LEADER.

B. THE FOLLOWING ARE GUIDELINES WHICH SHOULD BE USED TO ASSIGN RESPONSIBILITIES TO THE GROUP MEMBERS:

SHIFT SUPERVISOR: INTERIM FIRE AND DAMAGE TEAM LEADER

PLANT OPERATOR NO. 1:
1) INSPECTION TEAM LEADER
2) ASS'T INTERIM FIRE AND DAMAGE TEAM LEADER (I.E. SHIFT SUPERVISOR DESIGNATED ALTERNATE
3) NOZZLE MAN ON NO. 2 FIRE HOSE
4) EXTINGUISHANT WITH CO2

PLANT OPERATOR NO. 2:
1) NOZZLE MAN ON NO. 1 FIRE HOSE
2) EXTINGUISHMENT WITH PURPLE K DRY CHEMICAL
3) LIGHTING AND SMOKE REMOVAL

ASS'T PLANT OPERATOR:
1) INSPECTION TEAM (ALONG WITH P.O. NO. 1)
2) BACKUP MAN ON NO. 1 FIRE HOSE
3) EXTINGUISHMENT USING PURPLE K DRY CHEMICAL

AUXILIARY OPERATOR: (INSIDE)
1) EQUIPMENT MANAGER
2) BACKUP MAN ON NO. 2 FIRE HOSE
3) EXTINGUISHMENT USING CO2

FIRE FIGHTING GROUP STANDARD ACTIONS

CAUTION: THE PRODUCTS OF COMBUSTION OF CERTAIN MATERIALS (E.G. SOME ELECTRICAL CABLES, PLASTICS, OILS) ARE VERY TOXIC. IF HIGH TOXIC GAS LEVELS ARE SUSPECTED, IF THE OXYGEN LEVEL IS LESS THAN 19.5%, OR IF THE CARDOX SYSTEM HAS BEEN ACTIVATED, SCOTT 4.5 AIR PACKS MUST BE USED.

1. COMMUNICATIONS SHOULD BE ESTABLISHED WITH THE INTERIM EMERGENCY DIRECTOR OR EMERGENCY DIRECTOR, OR HIS DESIGNEE (VIA PHONE, P.A., OR RADIO).

2. FIRE ASSESSMENT

   A. PRIOR TO ENTRY BY THE INSPECTION TEAM, IF THE ACCESS TO THE FIRE ZONE IS UNOPENED, LOOK FOR ABNORMALITIES SUCH AS PHYSICAL DEFORMATION, DISCOLORATION, PEELING PAINT OR OTHER EVIDENCE OF HIGH TEMPERATURE IN AN ATTEMPT TO DETERMINE THE PROXIMITY OF THE FIRE TO THE ACCESS.

   B. THE FIRE FIGHTING GROUP LEADER SHOULD DIRECT THE INSPECTION TEAM TO ENTER THE AREA OF THE FIRE. THE INSPECTION TEAM SHOULD HAVE PORTABLE FIRE EXTINGUISHERS. DEPENDENT UPON THE SIZE OF THE FIRE AREA AND SMOKE CONDITIONS THE INSPECTION TEAM MAY USE A SCOTT 4.5 SCBA RADIO, LIFELINE, OR PORTABLE LIFE LINES AT THE LEADERS DISCRETION.

   C. THE INSPECTION TEAM SHOULD STAND TO THE SIDE, WHILE REMAINING LOW, AND SLOWLY CRACK OPEN, THEN OPEN THE ACCESS. (IF REQUIRED, THE SITE FORCIBLE ENTRY TOOL IS LOCATED IN THE SECURITY BUILDING, AUXILIARY SAS, UNDER THE WINDOWS OF THE NORTH WALL).

   D. IF THE FIRE IS DETERMINED, BY THE INSPECTION TEAM LEADER, TO BE OBVIOUSLY EXTINGUISHABLE, WITH THEIR PORTABLE EXTINGUISHERS, IMMEDIATE ACTION SHALL BE TAKEN TO DO SO.

   IF THE FIRE IS OF SUCH MAGNITUDE THAT IMMEDIATE EXTINGUISHMENT IS BEYOND THE CAPABILITIES OF THE INSPECTION TEAM, THE INSPECTION TEAM LEADER SHALL REPORT, TO THE FIRE FIGHTING GROUP LEADER, THE NATURE OF THE FIRE, ITS LOCATION AND SEVERITY, EQUIPMENT ADJACENT TO AND INVOLVED WITH THE FIRE HAZARDS IN THE VICINITY (E.G. OIL TANKS OR LINES, COMPRESSED GAS LINES, CYLINDERS, OR TANKS, PROPANE LINES OR TANKS), AND ANY APPARENT EFFECTS OF THE VENTILATION SYSTEM ON THE FIRE.

3. UPON THE REPORT OF THE INSPECTION TEAM, THE FIRE FIGHTING GROUP LEADER SHOULD DIRECT THE MANUAL INITIATION OF INSTALLED FIRE SUPPRESSION EQUIPMENT DESCRIBED IN APPENDIX EP-206A-3, IF APPROPRIATE, AND DIRECT FIRE FIGHTING EQUIPMENT PREPARATION AND ASSOCIATED ACTIONS.

4. AT THIS TIME AND PERIODICALLY THEREAFTER THE FIRE FIGHTING GROUP LEADER SHOULD REPORT THE FIRE SCENE SITUATION TO THE INTERIM

EMERGENCY DIRECTOR OR EMERGENCY DIRECTOR. (THE INTERIM EMERGENCY DIRECTOR OR THE EMERGENCY DIRECTOR, BASED UPON CONTROL ROOM INDICATIONS, AND REVIEW OF THE APPLICABLE "F" PROCEDURE SHOULD MAKE RECOMMENDATIONS AS DEEMED NECESSARY).

A. VENTILATION - THE "F" PROCEDURE FOR THE FIRE ZONE INDICATES NORMAL VENTILATION FLOW RATES. THIS DATA, ALONG WITH INSPECTION TEAM OBSERVATIONS SHOULD BE EVALUATED TO DETERMINE DEGREE OF IMPACT FROM THE NORMAL FIRE ZONE VENTILATION. IN GENERAL, DIRECT THE SHUTDOWN OF THE SUPPLY VENTILATION SYSTEM SERVICING THE FIRE AREA TO ISOLATE AND HELP SMOTHER THE FIRE. EXHAUST VENTILATION MAY REMAIN IN SERVICE TO EITHER AID IN INCREASING VISIBILITY (SMOKE REMOVAL), REMOVE POTENTIAL TOXIC OR EXPLOSIVE FUMES, OR TO INTRODUCE COOL AIR. OTHERWISE, SUPPLY AND EXHAUST VENTILATION SHOULD BOTH BE SHUTDOWN INITIALLY. IF VENTILATION IS COMPLETELY SHUTDOWN THE FIRE FIGHTING GROUP LEADER SHOULD DIRECT (E.G. GENERAL PLANT PERSONNEL LEADER) THAT AREAS SERVICED BY THE SAME VENTILATION SYSTEM BE SURVEILLED TO ASSURE SMOKE IS NOT MIGRATING INTO THOSE AREAS. IF SO, EXHAUST FANS SHOULD BE SEQUENCED ON PERIODICALLY TO ALLEVIATE THIS CONDITION.

5. THE FIRE FIGHTING GROUP SHOULD THEN, UNDER THE DIRECTION OF THE FIRE AND DAMAGE TEAM LEADER, ENTER AND EXTINGUISH THE FIRE. THE GUIDELINES PRESENTED IN APPENDIX EP-206A-1 SHOULD BE USED TO AID IN COORDINATION OF THIS EFFORT. THE GUIDELINES PRESENTED IN APPENDIX EP-206A-4 SHOULD BE USED TO EMPLOY THE PROPER EXTINGUISHANT FOR THE TYPE OF FIRE WHICH IS PRESENT.

6. IF DEEMED NECESSARY, THE FIRE FIGHTING GROUP LEADER SHOULD DIRECT ADDITIONAL GENERAL PLANT PERSONNEL EITHER DIRECTLY OR VIA THE INTERIM EMERGENCY DIRECTOR OR THE EMERGENCY DIRECTOR. HE SHOULD REQUEST ADDITIONAL PORTABLE FIRE FIGHTING EQUIPMENT, AS LISTED IN APPENDIX EP-206A-5 AND ADDITIONAL PERSONNEL TO FIGHT THE FIRE.

7. UPON EXTINGUISHMENT OF THE FIRE OR AS IS NECESSARY DESIGNATED PLANT PERSONNEL SHOULD "VENTILATE" THE AREA USING GUIDANCE CONTAINED IN THE APPLICABLE "F" PROCEDURE. INSTRUCTIONS FOR USE OF THE PORTABLE SMOKE REMOVAL EQUIPMENT ARE CONTAINED IN PROCEDURE S.13.1.

8. UPON EXTINGUISHMENT OF THE FIRE, A FIRE WATCH SHALL BE ESTABLISHED, IN THE AREA, IN THE EVENT OF A REFLASH OF THE FIRE. THE DURATION OF THE FIRE WATCH SHALL BE PROPORTIONAL TO THE MAGNITUDE OF THE FIRE, BUT IN NO CASE SHALL BE LESS THAN 1/2 HOUR.

9. FIRE FIGHTING EQUIPMENT SHALL BE INVENTORIED, REPLACED AND RETURNED TO ITS PROPER STORAGE LOCATION.

10. AT SOME TIME AFTER THE FIRE PECO FORM NO. 196-64002, "REPORT OF FIRE" FORM, SHOULD BE COMPLETED AND FORWARDED TO THE SAFETY DEPARTMENT BY THE INTERIM FIRE AND DAMAGE TEAM LEADER.

AUTOMATIC FIRE PROTECTION SYSTEM INITIATION AND RESET

THOSE AREAS IN THE PLANT WHICH HAVE THEIR OWN FIRE PROTECTION SYSTEMS ARE LISTED BELOW WITH A BRIEF DESCRIPTION OF SYSTEM ACTUATION AND RESETTING. AUTO ACTUATION OF ANY OF THESE SYSTEMS WILL INITIATE A CODED SIGNAL AND A MAIN CONTROL ROOM ALARM.

1. THE FOLLOWING EQUIPMENT IS PROTECTED BY OPEN HEAD SPRINKLERS SUPPLIED BY WATER DELUGE VALVES WHICH ARE INITIATED AUTOMATICALLY UPON HEAT DETECTION OR MANUALLY BY OPENING AND PUSHING THE LEVER IN THE MANUAL STATION LOCATED AT THE DELUGE VALVE IN THE CONDENSATE PUMP ROOM. AFTER A FIRE IS OUT OR UNDER CONTROL, RESET THESE VALVES PER PROCEDURE S.13.2.1.G.

   A. MAIN TRANSFORMERS 2AX01, 2BX01, AND 2CX01 (3AX01, 3BX01 AND 3CX01)

   B. AUXILIARY TRANSFORMER 20K02 (30K02)

   C. CONDENSATE PUMP TRANSFORMERS 2AX07, 2BX07, 2CX07 (3AX07, 3BX07, 3CX07)

   D. START UP AND EMERGENCY AUXILIARY TRANSFORMER 00X03

2. THE FOLLOWING EQUIPMENT IS PROTECTED BY OPEN HEAD SPRINKLERS SUPPLIED BY WATER FLOODING VALVES WHICH ARE INITIATED AUTOMATICALLY UPON HEAT DETECTION OR MANUALLY BY OPENING AND PUSHING THE LEVER IN THE MANUAL STATION LOCATED AT THE DELUGE VALVE NEAR THE PROTECTED EQUIPMENT. AFTER A FIRE IS OUT OR UNDER CONTROL, RESET THESE VALVES PER PROCEDURE S.12.3.2.1.1:

   A. HYDROGEN SEAL OIL UNIT (UNITS 2 & 3)

   B. A AND B STANDBY GAS TREATMENT SYSTEM FILTERS

   C. A AND B RECOMBINER BUILDING VENTILATION FILTERS

3. THE TURBINE HATCH AREA (COMMON) IS PROTECTED BY A HEAT SENSITIVE CLOSED HEAD "NITROGEN-FILLED DRY SPRINKLER SYSTEM." HEAT BREAKS THE SPRINKLER HEAD(S), RELEASES THE NITROGEN PRESSURE, AND CAUSES A FIRE ALARM. THE SPRINKLER SYSTEM FOR THE TURBINE HATCH AREA MUST THEN BE MANUALLY INITIATED BY ONE OF THE FOLLOWING METHODS:

   A. PUSHING THE REMOTE PUSHBUTTON LOCATED ON PANEL 20C01 IN THE CONTROL ROOM.

   B. OPENING THE LOCAL ELECTRO-MANUAL BOX MOUNTED NEXT TO THE TURBINE BUILDING CARDOX UNIT.

   C. OPENING AND PUSHING THE LEVER IN THE MANUAL STATION LOCATED AT THE DELUGE VALVE EL. 116' NEAR TURBINE BLDG.

ELEVATOR.

D. AFTER THE FIRE IS OUT OR UNDER CONTROL, RESET THIS VALVE PER PROCEDURE S.13.2.1.G.

4. THE FOLLOWING AREAS ARE PROTECTED BY HEAT SENSITIVE CLOSED HEAD SPRINKLERS SUPPLIED SPRINKLER ALARM VALVES (SAV) WHICH INITIATE UPON ACTUATION OF THE HEAT SENSITIVE SPRINKLER HEADS. IF A HEAT SENSITIVE SPRINKLER HEAD BREAKS BUT THE SPRINKLER ALARM VALVE FAILS TO OPEN, THE LOCAL MANUAL STATION LOCATED AT THE INDIVIDUAL SAVS MAY BE USED TO OPEN THE SAV. AFTER A FIRE IS OUT OR UNDER CONTROL, RESET THESE VALVES PER PROCEDURE S.13.2.1.H:

A. TURBINE LUBE OIL RESERVOIR ROOM (UNIT 2 & 3)

B. TURBINE LUBE OIL STORAGE ROOM (UNIT 2 & 3)

C. MAIN STEAM STOP VALVE AREA (UNIT 2 & 3)

D. EAST AND WEST FEEDWATER HEATER SERVICE PLATFORMS (UNITS 2 & 3).

E. AREAS UNDER EAST AND WEST MAIN TURBINE GENERATOR PLATFORMS (UNIT 2 & 3).

F. AUXILIARY BOILER BUILDING

5. THE FOLLOWING ROOMS ARE PROTECTED BY SPRINKLER SYSTEMS WHICH, UPON ACTUATION OF A HEAT SENSITIVE SPRINKLER HEAD, GIVE A DIRECT SPRAY ON THE EQUIPMENT IN THE ROOM. AFTER A FIRE IS OUT OR UNDER CONTROL, RESET THESE SYSTEMS BY CLOSING THE CORRESPONDING MANUAL BLOCK VALVE, REPLACING THE ACTUATED SPRINKLER HEAD, AND RESTORING THE BLOCK VALVE TO AN OPEN POSITION:

A. A, B, AND C RFP TURBINE LUBE OIL RESERVOIR ROOMS (UNITS 2 & 3)

B. DIESEL FIRE PUMP ROOM (COMMON)

C. EL. 116' LUBE OIL STORAGE ROOM UNIT NO. 3 TURB. BLDG.

D. EL. 116' LUBE OIL STORAGE ROOM IN ADMIN. BLDG.

E. EL. 135' RADWASTE COMPACTION AREA

6. THE TURBINE BEARING OIL LINE BELOW THE PEDESTAL (UNITS 2 & 3) ARE PROTECTED BY A "HEAT SENSITIVE CLOSED HEAD NITROGEN-FILLED DRY SPRINKLER SYSTEM." HEAT BREAKS THE SPRINKLER HEAD(S), RELEASES THE NITROGEN PRESSURE, AND INITIATES A FIRE ALARM. THE DRY SPRINKLER SYSTEM FOR THE TURBINE BEARING OIL LINES BELOW PEDESTAL MAY THEN BE MANUALLY INITIATED BY ONE OF THE FOLLOWING

METHODS:

A. AT THE LOCAL STATIONS LOCATED AT NORTH AND SOUTH ENDS OF TURBINE.

B. OPENING AND PUSHING THE LEVER IN THE MANUAL STATION LOCATED AT THE DELUGE VALVE (165' ELEVATION NEAR GENERATOR). AFTER THE VALVE IS OUT OR UNDER CONTROL. RESET THIS VALVE PER PROCEDURE S.13.2.1.G.

7. THE DIESEL GENERATOR CARDOX SYSTEM, IF NOT DISARMED, WILL INITIATE AUTOMATICALLY UPON HEAT DETECTION IN EACH OF THE INDIVIDUAL DIESEL COMPARTMENTS. IF HEAT DETECTION INITIATION DOES NOT OCCUR, THE SYSTEM MAY BE MANUALLY INITIATED USING THE PUSHBUTTON STATION OUTSIDE EACH DIESEL COMPARTMENT DOOR. UPON FAILURE OF THE PUSHBUTTON STATION, MANUALLY INITIATE THE CARDOX SYSTEM BY BREAKING THE FRONT GLASS OF THE APPROPRIATE ELECTRO-MANUAL PILOT VALVE (LOCATED OUTSIDE OF THE BOOSTER PUMP ROOM) AND MOVE THE LEVER TO THE OPEN POSITION TO OPEN THE MASTER SELECT VALVE FOR 60 SECONDS. THEN CLOSE THE PILOT VALVE. WHEN INITIATED MANUALLY, THE ELECTRO-MANUAL PILOT VALVE LEVER MUST BE MOVED TO THE CLOSED POSITION TO STOP THE DISCHARGE OF CO2 TO THE DIESEL COMPARTMENT. AFTER INITIATION OF THE CARDOX SYSTEM, RESET THE SYSTEM PER PROCEDURE S.13.2.2.B. THE DIESEL GENERATOR CO2 TANK, LOCATED IN THE BOOSTER PUMP ROOM HOLDS 5500 LBS. OF CO2. A SINGLE SIXTY SECOND DISCHARGE TO ANY OF THE DIESEL GENERATOR ROOMS USES 2200 LBS. THEREFORE "DOUBLE SHOT" PROTECTION IS PROVIDED.

8. THE HPCI ROOM CARDOX SYSTEM CAN BE INITIATED IN ANY OF THE THREE MANNERS DESCRIBED ABOVE FOR THE DIESEL GENERATOR CARDOX SYSTEM. THE ELECTRO-MANUAL PILOT VALVE FOR THE HPCI ROOM IS LOCATED AT THE UNIT 2(3) TURBINE BLDG. CARDOX STORAGE TANK. MANUAL DISCHARGE IS PERFORMED BY MOVING THE ELECTRO-MANUAL PILOT CONTROL (EMPC) LEVER TO THE OPEN POSITION FOR 60 SECONDS, THEN CLOSING THE EMPC. RESET OF THE SYSTEM PER PROCEDURE S.13.2.2.D, SECTION A. EACH TURBINE BUILDING CO2 TANK (UNIT 2 AND UNIT 3) HOLDS 12,000 LBS. OF CO2. A SINGLE 60 SECOND DISCHARGE TO EITHER OF THE HPCI ROOMS USES 2100 LBS. THEREFORE "MULTIPLE SHOT" PROTECTION IS PROVIDED.

9. THE COMPUTER ROOM CARDOX SYSTEM IS INITIATED AT THE PUSHBUTTON STATIONS ON EITHER SIDE OF THE COMPUTER ROOM. IF PUSHBUTTON INITIATION FAILS, THE ELECTRO-MANUAL PILOT CONTROL (EMPC) LEVERS FOR THE MASTER SELECT VALVE AND THE SELECT VALVE MUST BE MOVED TO THE OPEN POSITION FOR 125 SECONDS. THE EMPC FOR THE MASTER SELECT VALVE IS LOCATED AT THE UNIT 2 TURBINE BUILDING CO2 STORAGE TANK. THE EMPC FOR THE SELECT VALVE IS LOCATED OUTSIDE THE CABLE SPREADING ROOM. WHEN INITIATED MANUALLY, BOTH THE EMPC LEVERS MUST BE RETURNED TO THE CLOSED POSITION AFTER 125 SECONDS. SYSTEM RESET PER PROCEDURE S.13.2.2.D MAY THEN BE ACCOMPLISHED.

UPON COMPUTER ROOM CO2 INJECTION, THE TIE VALVE BETWEEN THE UNIT 2 AND UNIT 3 TANKS OPENS, PROVIDING A TOTAL CO2 CAPACITY OF 24,000 LBS. A SINGLE 125 SECOND DISCHARGE TO THE COMPUTER ROOM USES 1100 LBS. OF CO2. THEREFORE "MULTIPLE SHOT" PROTECTION IS PROVIDED.

10. THE CABLE SPREADING ROOM CARDOX SYSTEM IS INITIATED AUTOMATICALLY BY ACTUATION OF BOTH CHANNELS OF A TWO CHANNEL SMOKE DETECTOR MATRIX IN THE CABLE SPREAD ROOM. IF SMOKE DETECTOR AUTOMATIC INITIATION DOES NOT OCCUR, THE SYSTEM MAY BE ACTUATED MANUALLY BY USING THE PUSHBUTTON STATIONS OUTSIDE EITHER CABLE SPREADING ROOM DOOR. IF PUSHBUTTON INITIATION FAILS, THE EMPC LEVERS FOR THE MASTER SELECT VALVE AND THE SELECT VALVE MUST BE MOVED TO THE OPEN POSITION FOR 125 SECONDS. THE EMPC FOR THE MASTER SELECT VALVE IS LOCATED AT THE UNIT 2 TURBINE BUILDING CO2 STORAGE TANK. THE EMPC FOR THE SELECT VALVE IS LOCATED OUTSIDE THE CABLE SPREADING ROOM. WHEN INITIATED MANUALLY, THE EMPC LEVERS MUST BE RETURNED TO THE CLOSED POSITION AFTER 125 SECONDS. SYSTEM RESET PER PROCEDURE S.13.2.2.D MAY THEN BE ACCOMPLISHED.

UPON CABLE SPREADING ROOM CO2 INJECTION THE TIE VALVE BETWEEN THE UNIT 2 AND UNIT 3 TANKS OPENS, PROVIDING A TOTAL CO2 CAPACITY OF 24,000 LBS. A SINGLE 125 SECOND DISCHARGE TO THE CABLE SPREADING ROOM USES 9600 LBS. OF CO2. THEREFORE "DOUBLE SHOT" PROTECTION IS PROVIDED.

11. THE MAIN CONTROL ROOM AND THE UNIT 2 AND 3 165' EL. LIFT PUMP AREAS ARE EQUIPPED WITH CO2 HOSE REELS. WHEN THE HOSE NOZZLE IS REMOVED FROM ITS HOLDER THE HOSE REEL AND HEADER AUTOMATICALLY PRESSURIZE. DISCHARGE IS ACCOMPLISHED BY DEPRESSING THE NOZZLE HAND LEVER. IF HOSE REEL HEADER FAILS TO PRESSURIZE, AT THE UNIT 2 TURBINE BLDG. CARDOX TANK, MOVE THE HOSE REEL EMPC VALVE TO THE OPEN POSITION TO PRESSURIZE. WHEN USE OF THE HOSE REEL IS COMPLETE, RETURN THE EMPC VALVE TO THE CLOSED POSITION.

12. THE BEARING CASINGS FOR TURBINE BEARINGS 1 THROUGH 8 (UNITS 2 & 3) ARE PROTECTED BY DRY CHEMICAL FURNISHED THROUGH A SERIES OF NOZZLES. IN THE EVENT OF A FIRE AT THE CASINGS:

    A. MOVE THE 350-POUND WHEELED ANSUL DRY CHEMICAL UNIT TO THE APPROPRIATE BEARING.

    B. CONNECT THE QUICK CONNECT HOSE FROM THE ANSUL UNIT TO THE QUICK CONNECT FITTING AT THE BEARING.

    C. DISCHARGE DRY CHEMICAL BY OPENING THE MANUAL VALVE TO CHARGE THE CYLINDER AND ACTUATING THE HAND LEVER FOR DISCHARGE.

13. THE MG SET ROOM (UNIT 2 & 3) AND THE MG SET LUBE OIL PUMP ROOM (UNIT 2 & 3) ARE PROTECTED BY A "HEAT SENSITIVE CLOSED SPRINKLER HEAD" NITROGEN FILLED, SMOKE DETECTOR PRESSURIZED SPRINKLER SYSTEM. SMOKE DETECTION CAUSES FIRE ALARMS AND PRESSURIZES THE SPRINKLER HEADER WITH WATER B OPENING THE FLOODING VALVE. HEAT BREAKS THE SPRINKLER HEAD, SPRAYING THE AREA OF THE FIRE. THE SYSTEM CAN BE PRESSURIZED WITH WATER MANUALLY BY OPERATION OF THE MANUAL STATION LOCATED AT THE FLOODING VALVE. THE SYSTEM IS THEN RESET PER PROCEDURE S.13.2.1.K.

14. THE NO. 6 FUEL OIL TANK AND THE AUXILIARY BOILER BUILDING ARE PROTECTED BY A MANUALLY OPERATED FOAM SYSTEM. TO APPLY FOAM INSIDE THE NO. 6 OIL TANK OPEN THE FOAM SOLUTION TANK INLET AND OUTLET VALVES. TO APPLY FOAM USING THE MANUAL HOSE REEL AND NOZZLE, UNREEL THE ENTIRE HOSE, OPEN THE FOAM SOLUTION TANK INLET VALVE, THE HOSE REEL ISOLATION VALVE, AND APPLY FOAM USING THE "PISTOL GRIP" SHUTOFF VALVE. WHEN FIRE IS OUT, CLOSE VALVES AND RESTORE THE SYSTEM PER PROCEDURE S.13.1.1.

CLASSES OF FIRES AND TYPES OF EXTINGUISHANTS

	EXTINGUISHANTS			
	HOSE STATION	PORTABLE FIRE EXTINGUISHERS		
CLASSES OF FIRES	FOG/STREAM	CO2	PURPLE K DRY CHEMICAL	PRESSURIZED WATER
CLASS A (DEFINED AS WOOD, PAPER, CLOTH, ETC.)	YES (SEE NOTE 4)	NO, EXCEPT VERY SMALL FIRES	YES (HEAT OF COMBUSTION MAY REMAIN)	YES
CLASS B (DEFINED AS FLAMMABLE LIQUIDS)	YES, FOG ONLY (SEE NOTE 1)	YES	YES	NO
CLASS C (DEFINED AS ENERGIZED ELECTRICAL EQUIPMENT)	NO (SEE NOTE 2)	YES	YES (NOTE 3)	NO (SEE NOTE 2)

NOTE 1: WHEN USING WATER TO COMBAT A CLASS B FIRE SPECIAL TECHNIQUES ARE NECESSARY. THE USE OF A DIRECT HOSE STREAM SHOULD BE AVOIDED TO MINIMIZE SPREADING THE FIRE. HOWEVER, "COOLING" MAY BE PROVIDED VIA HOSE STREAM TO HEAT SENSITIVE EQUIPMENT IN THE VICINITY OF THE FIRE. IF NECESSARY, DUE TO THE SIZE OF THE FIRE BEING BEYOND THE CAPABILITIES OF MULTIPLE PURPLE K DRY CHEMICAL EXTINGUISHERS, A WATER "FOG" APPLICATION NOT DIRECTLY APPLIED TO THE FIRE MAY BE USED FOR ADDITIONAL SUPPRESSION.

NOTE 2: IN THE CASE OF HIGH VOLTAGE EQUIPMENT, THE ASSOCIATED CABLING AND CONTROL DEVICES SHALL ALWAYS BE DE-ENERGIZED PRIOR TO THE USE OF WATER AS A SUPPRESANT. HIGH DENSITY CABLE RUNS OF GENERALLY LOWER VOLTAGE ARE A SPECIFIC CONCERN AT PBAPS. WATER ONLY IN THE FORM OF A FOG MAY BE USED. WATER SHOULD BE USED ONLY IN MAXIMUM FOG FORM AT THE MAXIMUM EFFECTIVE DISTANCE (TO ELIMINATE ELECTRICAL CONDUCTION) WHEN FIGHTING A FIRE IN LOW VOLTAGE ENERGIZED CABLE. FOG SHOULD FIRST BE ESTABLISHED, NOT IN CONTACT WITH THE FIRE, AND SEPARATION DISTANCE SHOULD SLOWLY BE DECREASED. WHEN ELECTRICAL EQUIPMENT IS DE-ENERGIZED THEN, THE FIRE MAY BE CONSIDERED AS CLASS A AND MAY BE FOUGHT AS SUCH.

NOTE 3: DUE TO THE HIGHLY CORROSIVE CHARACTERISTICS OF PURPLE K DRY CHEMICAL EXTINGUISHANT USAGE ON ELECTRICAL EQUIPMENT SHOULD BE MINIMIZED.

NOTE 4: WARNING: FOR A FIRE IN FUEL STORAGE AREAS, FLOODING NEW FUEL WITH WATER OR APPLYING A WATER FOG SHOULD BE AVOIDED TO PREVENT A POSSIBLE CRITICALITY IN NEW FUEL.

PORTABLE FIRE FIGHTING EQUIPMENT AVAILABLE ON SITE

A. FIRE BRIGADE PERSONNEL EQUIPMENT CAGE (LOCATED IN TURBINE BUILDING, ELEV. 116' OPPOSITE UNIT 3 13 KV SWITCHGEAR) CONTENTS INCLUDE SCOTT 4.5 ONE HOUR SELF CONTAINED BREATHING APPARATUS, TURNOUT COATS, BOOTS, GLOVES, AND PHOENIX HARD HATS.

B. EMERGENCY FIRE CABINETS

1. CABINET NO. 1 (LOCATED AT 165' EL. ADJACENT TO UNIT 2 CONTROL ROOM SHIELD WALL). CONTENTS INCLUDE SMOKE REMOVED BLOWER, INSTRUCTION MANUAL, FLEXIBLE DUCT, AND VENT DUCT TO FLEXIBLE DUCT ADAPTER, MASKING, DUCT, AND ELECTRICAL TAPES, TOOLS AND FITTINGS, DOOR BAR BACK EQUIPMENT, EXTENSION CORD.

2. CABINET NO. 2 (SAME LOCATION AS NO. 1). CONTENTS INCLUDE HALF MILE RAYS AND CHEMOX CANISTERS.

3. CABINET NO. 3 (LOCATED AT 116' EL. ADJACENT TO PLANT ENTRANCE SHIELD WALL). CONTENTS INCLUDE TWO SMOKE REMOVED BLOWERS PLUS SAME ITEMS AS CABINET NO. 1.

C. ADDITIONAL IN-PLANT HOSE CARTS:

1. UNIT NO. 2 REACTOR BLDG:

A. HOSE CART NO. H-137 EL. 165', SOUTHEAST CORNER NEAR HATCH.
B. HOSE CART NO. H-135 EL. 195', NORTHEAST CORNER OF FIRE TOWER

2. UNIT NO. 3 REACTOR BLDG:

A. HOSE CART NO. H-138 EL. 165', NORTHEAST CORNER NEAR HATCH.
B. HOSE CART NO. H-136 EL. 195', SOUTHEAST CORNER BY FIRE TOWER

D. 350 LB. WHEELED ANSUL UNITS:

1. ELEVATION 116':

A. UNIT NO. 2 TURB. BLDG. SOUTHWEST CORNER.
B. TURB. BLDG. CENTER SWGR. AREA SOUTH.
C. TURB. BLDG. CENTER SWGR. AREA NORTH.
D. UNIT NO. 3 TURB. BLDG. NORTHWEST CORNER.

2. ELEVATION 165':

A. UNIT NO. 2 TURBINE HALL:

1. RIVERSIDE WALL NORTH
2. RIVERSIDE WALL SOUTH
3. DOWNRIVER SOUTHWEST CORNER.
4. ADJACENT TO CONTROL ROOM ENTRANCE.

B. UNIT NO. 3 TURBINE HALL:

1. RIVERSIDE WALL NORTH
2. RIVERSIDE WALL SOUTH
3. NORTHWEST CORNER
4. CENTER NEAR GENERATOR

E. PORTABLE WALL MOUNTED CO2, PURPLE K DRY CHEMICAL, PRESSURIZED WATER FIRE EXTINGUISHERS AND SELF-CONTAINED BREATHING APPARATUS.

APPENDIX EP-206A-6
EMERGENCY EXPOSURE LIMITS

	FUNCTION	PROJECTED WHOLE BODY DOSE	THYROID DOSE	AUTHORIZED BY
1.	LIFE SAVING AND REDUCTION OF INJURY	75 REM*	375 REM	EMERGENCY DIRECTOR**
2.	OPERATION OF EQUIPMENT TO MITIGATE AN EMERGENCY	25 REM*	125 REM	EMERGENCY DIRECTOR**
3.	PROTECTION OF HEALTH AND SAFETY OF THE PUBLIC	5 REM	25 REM	EMERGENCY DIRECTOR
4.	OTHER EMERGENCY ACTIVITIES	10 CFR 20 LIMITS	10 CFR 20 LIMITS	EMERGENCY DIRECTOR
5.	RE-ENTRY/RECOVERY ACTIVITIES	ADMINISTRATIVE GUIDELINES	ADMINISTRATIVE GUIDELINES	N/A

*REFERENCE: EPA-520/1-75-001 TABLE 2.1
**SUCH EXPOSURE SHALL BE ON A VOLUNTARY BASIS

MJM:kmw
6/9/82

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-325 - USE OF THE CONTAINMENT RADIATION MONITOR TO ESTIMATE RELEASE SOURCE TERM

PURPOSE:

To provide method of estimating source term from containment radiation monitors.

REFERENCES:

1. Peach Bottom Atomic Power Station Emergency Plan.
2. EP-316 - Cumulative Population Dose Calculations
3. Bechtel Emergency Planning DBA Dose Rate Curve Package - BLP - 21558.

ACTION LEVEL:

1. An alert or higher level emergency has been declared in accordance with EP-101, "Classification of Events" AND containment radiation monitor reading greater than 10 times normal reading.

OR

2. An alert or higher level emergency has been declared in accordance with EP-101, "Classification of Events" AND effluent monitor readings are unavilable.

PROCEDURE:

The Dose Assessment Team Leader shall direct one of the dose assessment team members to do the following:

1. Determine % Fuel Inventory Released:

Theoretical curves of gross gamma dose rate vs. time are given for a range of potential source terms. To determine the meaning of the measured dose rates:

1.1 Determine the Time after reactor shutdown.

1.2 Locate the Rad. Monitor Dose Rate Reading on the graph on page 3, for the containment Rad. monitor at the time after shutdown.

1.3 Determine the Percent Fuel Inventory released to the containment air corresponding to the measured dose rate by taking the ratio of the measured dose rate to the dose rate given on one of the curves for a known percent fuel inventory (i.e., interpolate, between curves)

1.4 From Table I, on page 4, relate the % fuel inventory released to the Approximate Source and Damage Estimate.

2. Determine Source Term:

Source terms (released rates) for 3 pathways are estimated based on % fuel inventory available and design basis leak rate (.5%/day).

2.1 Determine % Fuel Inventory released (Section 1.3)

2.2 Multiply decimal fraction of Fuel Inventory released by appropriate Conversion Factor, found on Table II, for one of the following pathways:

A. Primary Containment purged through Standby Gas Treatment System

A-1 Primary Containment leakage to secondary containment.

A-2 Release rate from secondary containment.

B. Secondary Containment purged through Standby Gas Treatment

C. Activity in secondary containment released through roof vents

e.g.: to determine release rates for 100% fuel inventory release pathway A.

A. Primary Containment Purged through Standby Gas Treatment System

	Decimal Fraction		CF	release rate
Noble Gas	1	X	5×10^{8}	= 5×10^{8} uCi/sec
Iodine	1	X	1.44×10^{6}	= 1.44×10^{6} uCi/sec

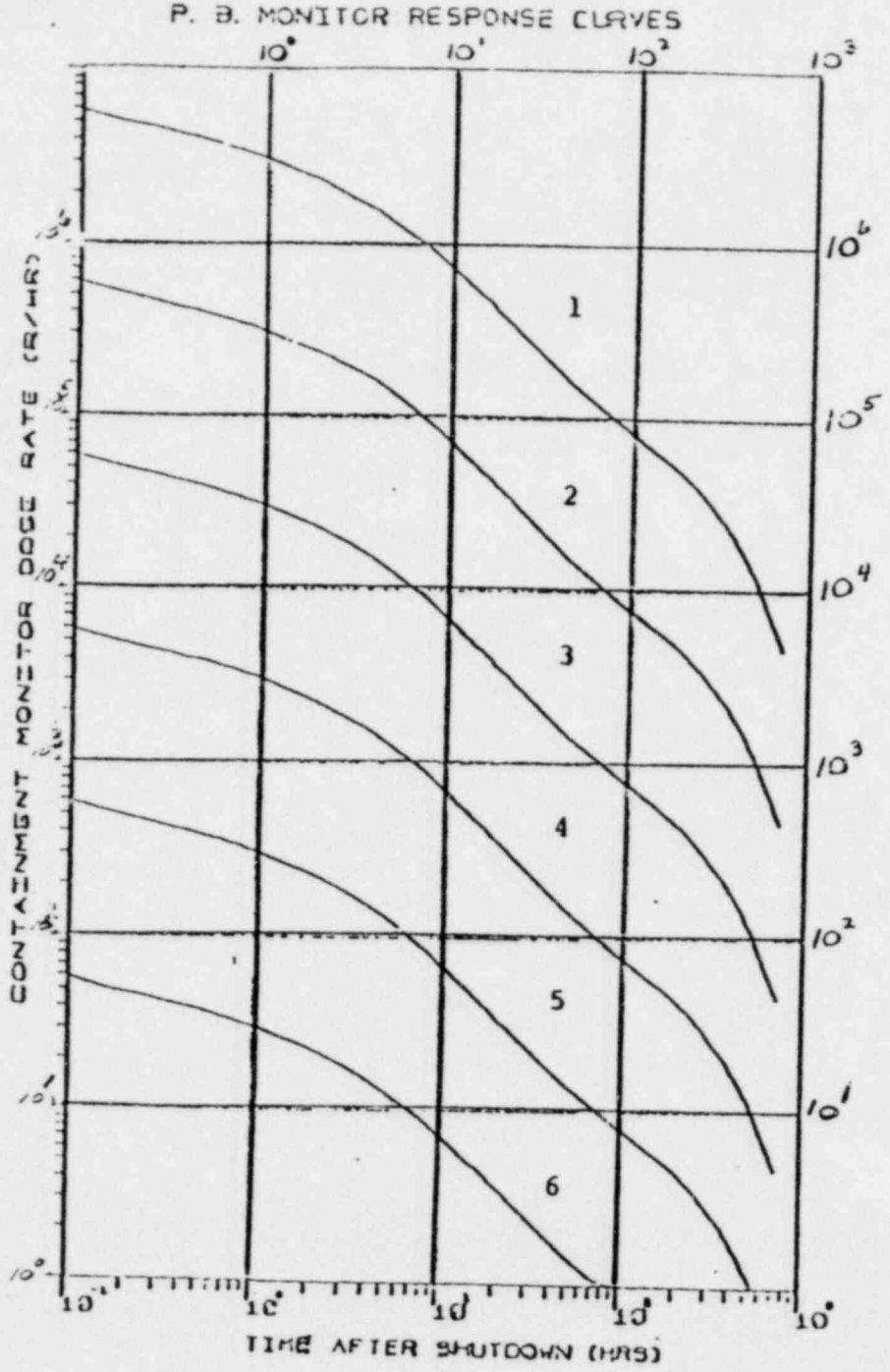
A-1 Primary Containment Leakage <u>To</u> Secondary Containment

Noble Gas	1	X	4.86×10^{7}	= 4.86×10^{7} uCi/sec
Iodine	1	X	1.39×10^{7}	= 1.39×10^{7} uCi/sec

A-2 Release rate <u>From</u> Secondary Containment

Noble Gas	1	X	9.30×10^{7}	= 9.30×10^{7} uCi/sec
Iodine	1	X	2.67×10^{7}	= 2.67×10^{7} uCi/sec

2.3 Release rates for Cases A & B are treated as Main Stack releases, release rates from Case A-2 and C are treated as Roof Vent releases, see EP-316, Cumulative Population Dose Calculations, for off-site dose calculations.



Peach Bottom Monitor Response Curves

for

Primary Containment Radiation Monitor

Curve Index

1. 100% Fuel Inventory (100% TID 14844)
2. 10% Fuel Inventory (100% Gap Activity/R.G. 1.25)
3. 1% Fuel Inventory (10% NRC Gap - Clad Failure)
4. .1% Fuel Inventory
5. .01% Fuel Inventory
6. .001% Fuel Inventory

TABLE I

Percent of Fuel Inventory Airborne in the Containment vs. Approximate Source and Damage Estimate

Curve No.	% Fuel* Inventory Released	Approximate Source and Damage Estimate
1	100.	100% TID-14844, 100% Fuel damage, potential core melt
	50.	50% TID-14844 noble gases, TMI source
2	10.	10% TID, 100% NRC gap activity, total clad failure, partial core uncovered
	3.	3% TID, 100% WASH-1400 gap activity, major clad failure
3	1.	1% TID, 10% NRC gap, Max. 10% clad failure
4	.1	.1% TID, 10% NRC gap, 1% clad failure, local heating of 5-10 fuel assemblies
5	.01	.01% TID, .1% NRC gap, clad failure of 3/4 fuel element (36 rods)
6	10^{-3}	.01% NRC gap, clad failure of a few rods
	10^{-4}	100% coolant release with spiking
	$5X10^{-6}$	100% coolant inventory release
	10^{-6}	Upper range of normal airborne noble gas activity in containment

* 100% Fuel Inventory = 100% Noble Gases + 25% Iodine

TABLE II

Conversion Factors

	A	A-1	A-2	B	C
Noble Gas	5.00×10^{8}	4.86×10^{7}	9.30×10^{7}	1.44×10^{3}	4.86×10^{7}
Iodine	1.44×10^{6}	1.39×10^{7}	2.67×10^{7}	4.13×10^{0}	1.39×10^{7}

NOTE: (1) The curves account for the finite containment volume and shield walls seen by the detector but do not account for any monitor physical or shielding characteristics or calibration uncertainties.

(2) The curves assume that both airborne noble gases and iodines are significant. Sprays (if used) would make the iodine and particulate contribution (presently about 50%) insignificant. However, particulate plateout on the monitor casing and direct shine doses from components may make the readings unreliable.

(3) Curve uncertainties are on the order of a factor of 5 to 10.

(4) Source term in conversion factor is derived from PBAPS FSAR, Section 14-6.3.4; 100% of the Noble Gas and 25% of the Iodine equilibrium fission product activity which is:

8.4×10^{8} Ci Noble Gas
9.5×10^{8} Ci Iodine

DERIVATION OF CONVERSION FACTORS

Assumptions

.5%/day	-	design basis leak rate from primary containment of 49.1 psig
2.78×10^5 ft^3	-	primary containment volume, including torus air space
1.59×10^5 ft^3	-	primary containment volume, not including torus air space
3.77×10^6 ft^3	-	secondary containment volume
6000 SCFM	-	flow rate/train when purging secondary containment through SGTS
10 SCFM	-	flow rate/train when purging primary containment through SGTS
8.4×10^{11} uCi	-	Noble Gas Acitivity available for release from primary containment, (100% equilibrium fission product activity for Noble Gases)
2.4×10^{11} uCi	-	Iodine Activity available for release from primary containment (25% equilibrium fission product activity for iodines)

Assume mixing with 90% of secondary containment volume for Case B.

Assume Decontamination Factor of 1/100 for iodines processed through standby gas treatment system.

Calculations

A: Primary Containment purged through Standby Gas Treatment System

Noble Gas

$$\frac{8.4\times10^{14}\ \mu Ci}{2.78\times10^{5}\ ft^3} \times \frac{10\ ft^3}{min} \times \frac{1\ min}{60\ sec} = 5.00 \times 10^{8} \frac{\mu Ci}{sec}$$

Iodine

$$\frac{2.4\times10^{14}\ \mu Ci}{2.78\times10^{5}\ ft^3} \times \frac{10\ ft^3}{min} \times \frac{1\ min}{60\ sec} \times \frac{1}{100} = 1.44 \times 10^{6} \frac{\mu Ci}{sec}$$

A-1: Primary Containment leakage to Secondary Containment

Noble Gas

$$8.4\times10^{14}\ \mu Ci \times \frac{.5\%}{day} \times \frac{day}{8.64\times10^{4}\ sec} = 4.86\times10^{7} \frac{\mu Ci}{sec}$$

Iodine

$$2.4\times10^{14} \times \frac{.5\%}{day} \times \frac{day}{8.64\times10^{4}\ sec} = 1.39\times10^{7} \frac{\mu Ci}{sec}$$

A-2: Release rate from secondary containment. Assume time (1 day) for diffusion of primary containment leakage into secondary containment.

Noble Gas

$$4.2\times10^{12} \frac{\mu Ci}{day} \times \frac{1}{3.77\times10^{6}\ ft^3} \times \frac{5000\ ft^3}{min} \times \frac{1\ min}{60\ sec} = 9.30\times10^{7} \frac{\mu Ci}{sec}$$

Iodine

$$1.2\times10^{12} \frac{\mu Ci}{day} \times \frac{1}{3.77\times10^{6}\ ft^3} \times \frac{5000\ ft^3}{min} \times \frac{1\ min}{60\ sec} = 2.67\times10^{7} \frac{\mu Ci}{sec}$$

B: Secondary Containment Purged Through Standby Gas Treatment System

Noble Gas

$$8.4 \times 10^{14}\ \text{uCi} \times \frac{.5\%/\text{day}}{8.64 \times 10^{4}\ \text{sec/day}} \times \frac{6000\ \text{ft}^3/\text{min}}{.9 \times 3.74 \times 10^{6}\ \text{ft}^3} \times \frac{1\ \text{min}}{60\ \text{sec}} \times 1\ \text{sec} = 1.44 \times 10^{3}\ \frac{\text{uCi}}{\text{sec}}$$

Iodine

$$2.4 \times 10^{14}\ \text{uCi} \times \frac{.5\%/\text{day}}{8.64 \times 10^{4}\ \text{sec/day}} \times \frac{6000\ \text{ft}^3/\text{min}}{.9 \times 3.74 \times 10^{6}\ \text{ft}^3} \times \frac{1\ \text{min}}{60\ \text{sec}} \times 1\ \text{sec} \times \frac{1}{100} = 4.13 \times 10^{0}\ \frac{\text{uC}}{\text{sc}}$$

C: Activity in Secondary Containment Released Through Roof Vents

Noble Gas

$$8.4 \times 10^{14}\ \text{uCi} \times \frac{.5\%/\text{day}}{8.64 \times 10^{4}\ \text{sec/day}} = 4.86 \times 10^{7}\ \frac{\text{uCi}}{\text{sec}}$$

Iodine

$$2.4 \times 10^{14}\ \text{uCi} \times \frac{.5\%/\text{day}}{8.64 \times 10^{4}\ \text{sec/day}} = 1.39 \times 10^{7}\ \frac{\text{uCi}}{\text{sec}}$$

Assuming leakage from primary to secondary goes out roof vents.

Estimation of source term from containment monitor.

WORKSHEET

1. Time after shutdown = _____hrs

2. Containment monitor dose rate = _____R/hr at _____time

3. % Fuel inventory released = _____%

   Decimal Fraction = _____

4. Check pathway for release (as defined in Section 2.2) and use appropriate conversion factor in step 5

		A _____	A-1 _____	A-2 _____	B _____	C _____
4.1	Noble Gas	5.00×10^{8}	4.86×10^{7}	9.30×10^{7}	1.44×10^{3}	4.86×10^{7}
4.2	Iodine	1.44×10^{6}	1.39×10^{7}	2.67×10^{7}	4.13×10^{0}	1.39×10^{7}

5. Decimal Fraction X CF = release rate uCi/sec

   Noble Gas _____ (item 3) X _____ (item 4.1) = _____ uCi/sec Noble Gas

   Iodine _____ (item 3) X _____ (item 4.2) = _____ uCi/sec Iodine

See EP 316 for calculation of off-site doses.

NAME: _____
DATE: _____
TIME: _____