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EMERGENCY PLAN PROCEDURE INDEX

PROCEDURE NUMBER	REV. NO.	TITLE	DATE SIGNED BY SUPER.	DATE OF LAST PERIODIC REVIEW
EP-101	2	Classification of Emergencies	09/27/84	
EP-102	5	Unusual Event Response	10/10/84	
EP-103	5	Alert Response	10/18/84	
EP-104	5	Site Emergency Response	10/18/84	
EP-105	5	General Emergency Response	10/05/84	
EP-106	1	Written Summary Notification	06/08/84	
EP-110	3	Personnel Assembly and Accountability	10/15/84	
EP-120	1	Site Emergency Coordinator	06/08/84	
EP-201	1	Technical Support Center (TSC) Activation	06/08/84	
EP-202	2	Operations Support Center (OSC) Activation	09/25/84	
EP-203	2	Emergency Operations Facility (EOF) Activation	09/27/84	
EP-208	3	Security Team Activation	10/05/84	
EP-210	1	Dose Assessment Team	06/08/84	
EP-220		CANCELLED		
EP-221	1	Personnel Dosimetry, Bioassay, and Respiratory Protection Group	06/08/84	
EP-222	2	Field Survey Group	07/17/84	
EP-230	3	Chemistry Sampling and Analysis Team Activation	07/20/84	
EP-231	4	Operation of Post-Accident Sampling Systems (PASS)	08/07/84	
EP-232		CANCELLED		
EP-233	3	Retrieving and Changing Sample Filters and Cartridges from the Containment Leak Detector During Emergencies	07/20/84	

EMERGENCY PLAN PROCEDURE INDEX

PROCEDURE NUMBER	REV. NO.	TITLE	DATE SIGNED BY SUPER.	DATE OF LAST PERIODIC REVIEW
EP-234	3	Obtaining Containment Gas Samples from the Containment Leak Detector During Emergencies	07/20/84	
EP-235	3	Obtaining Reactor Water Samples from Sample Sinks Following Accident Conditions	07/20/84	
EP-236	3	Obtaining Cooling Tower Blowdown Line Water Samples Following Radioactive Liquid Release after Accident Conditions	08/07/84	
EP-237	3	Obtaining the Iodine/ Particulate and/or Gas Samples from the North Vent Wide Range Gas Monitor (WRGM)	07/20/84	
EP-238	3	Obtaining Liquid Radwaste Samples from Radwaste Sample Sink Following Accident Conditions	07/20/84	
EP-240	2	Obtaining Off-Gas Samples from the Air Ejector/Holdup Pipe Discharge Sample Station	06/08/84	
EP-241	4	Sample Preparation and Handling of Highly Radioactive Liquid Samples	10/04/84	
EP-242	3	Sample Preparation and Handling of Highly Radioactive Particulate Filters and Iodine Cartridges	07/20/84	
EP-243	4	Sample Preparation and Handling of Highly Radioactive Gas Samples	08/06/84	
EP-244	0	Offsite Analysis of High Activity Samples	06/08/84	
EP-250	1	Personnel Safety Team Activation	06/08/84	
EP-251	1	Plant Survey Group	06/08/84	

EMERGENCY PLAN PROCEDURE INDEX

PROCEDURE NUMBER	REV. NO.	TITLE	DATE SIGNED BY SUPER.	DATE OF LAST PERIODIC REVIEW
EP-252	2	Search and Rescue/First Aid	07/20/84	
EP-254	1	Vehicle and Evacuee Control Group	06/08/84	
EP-255	1	Vehicle Decontamination	06/08/84	
EP-260	1	Fire and Damage Team Activation	06/08/84	
EP-261	1	Damage Repair Group	06/08/84	
EP-272	2	Philadelphia Electric Company Officials Phone List	10/17/84	
EP-273	2	Limerick Station Supervision Call List	10/04/84	
EP-275		CANCELLED		
EP-276	3	Fire and Damage Team Phone List	10/18/84	
EP-277	2	Personnel Safety Team Phone List	10/05/84	
EP-278	0	Security Team Phone List	12/27/83	
EP-279	2	Emergency Operations Facility (EOF) Group Phone List	10/05/84	
EP-280	3	Technical Support Center Phone List	10/18/84	
EP-282	2	Government and Emergency Management Agencies	10/05/84	
EP-284	2	Company Consultants and Contractors Phone List	09/27/84	
EP-287	1	Nearby Public and Industrial Users of Downstream Water	06/08/84	
EP-291	3	Staffing Augmentation	10/18/84	
EP-292	4	Chemistry Sampling and Analysis Team Phone List	10/17/84	
EP-294	3	Dose Assessment Team Phone List	10/18/84	
EP-301	0	Operating the Evacuation Alarm and River Warning System	11/11/83	

EMERGENCY PLAN PROCEDURE INDEX

PROCEDURE NUMBER	REV. NO.	TITLE	DATE SIGNED BY SUPER.	DATE OF LAST PERIODIC REVIEW
EP-303	2	Local Evacuation	04/02/84	
EP-304	2	Partial Plant Evacuation	07/09/84	
EP-305	2	Site Evacuation	09/25/84	
EP-306	0	Evacuation of the Information Center	12/27/83	
EP-307	1	Reception and Orientation of Support Personnel	06/08/84	
EP-312	0	Radioactive Liquid Release	11/30/83	
EP-313	1	Distribution of Thyroid Blocking Tablets	06/08/84	
EP-315	0	Calculation of Offsite Doses During a Radiological Emergency Using RMMS in the Manual Mode	07/17/84	
EP-316	1	Cumulative Population and Near Real-Time Emergency Dose Calculations for Airborne Releases Manual Method	07/24/84	
EP-317	1	Determination of Protective Action Recommendations	10/17/84	
EP-318	0	Liquid Release Dose Calculations Method for Drinking Water	11/30/83	
EP-319	0	Fish Ingestion Pathway Dose Calculation	11/30/83	
EP-325	1	Use of Containment Dose Rates to Estimate Release Source Term	10/17/84	
EP-330	2	Emergency Response Facility Habitability	07/20/84	
EP-401	1	Entry for Emergency Repair and Operations	06/08/84	
EP-410	1	Recovery Phase Implementation	06/08/84	
EP-500	1	Review and Revision of Emergency Plan	06/08/84	

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-103 ALERT RESPONSE

1.0 PURPOSE

The purpose of this procedure is to provide guidelines for site response to an Alert.

2.0 RESPONSIBILITIES

2.1 Shift Supervision shall assume the role of the Interim Emergency Director when an Alert occurs, unless the Emergency Director is present, and perform the necessary steps in this procedure.

2.2 The Station Superintendent or Alternate shall assume the role of the Emergency Director, report to the Technical Support Center or Control Room and relieve the Interim Emergency Director.

3.0 APPENDICES

3.1 EP-101, Classification of Emergencies, completed

3.2 EP-103-2 Emergency Exposure Guidelines

3.3 EP-103-3 Alert De-Escalation Notification Message

3.4 EP-103-4 Alert Phone List (Initial Notification)

4.0 PREREQUISITES

4.1 EP-101, Classification of Emergencies, completed

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure shall be implemented when an event occurs that is classified as an Alert per procedure EP-101 Classification of Emergencies.

8.0 PRECAUTIONS

8.1 Planned radiation exposures should be limited to the administrative guide levels in Appendix EP-103-2, Emergency Exposure Guidelines.

9.0 PROCEDURE

9.1 ACTIONS

9.1.1 (Interim) Emergency Direction shall:

9.1.1.1 Verify the Emergency Classification as determined in EP-101, Classification of Emergencies, unless determination has just been made.

9.1.1.2 Fill out Appendix EP-103-1 Alert Notification Message and give it to the communicator.

9.1.1.3 Direct the communicator to complete notification of the appropriate parties as specified in Appendix EP-103-4, Alert Phone List (Initial Notification) or Appendix EP-103-5, Alert Phone List (Escalation or De-escalation) within 15 minutes.

NOTE: The Communicator shall man the NRC RED telephone on a continuous basis until the NRC disconnects. If the communicator is required for urgent

plant operations related to the emergency, the concurrence for securing the phone should be obtained from the NRC prior to securing this telephone.

9.1.1.4 Contact the Station Superintendent and the Shift Technical Advisor, inform them of the situation.

9.1.1.5 Direct the Information Center Staff [redacted] to implement EP-306, Evacuation of The Information Center. Inform the Staff of the wind direction if there is an airborne release.

9.1.1.6 If there is a radiological release, implement EP-305, Site Evaluation.

9.1.1.7 If there has not been a radiological release,

A. Evacuate all construction personnel by contacting Bechtel Safety [redacted] Direct them to call for a "Total Project Evacuation" in accordance with Bechtel procedures. Inform them of nature of hazard.

B. Contact Yoh Construction Security [redacted] and inform them that a Total Project Evacuation of Bechtel Construction personnel is being implemented.

THIS WILL CALL FOR THE ASSEMBLY OF PERSONNEL AT THE UPPER PARKING LOT AND POST #3. IF IT IS DESIRED THAT THEY LEAVE THE SITE, INFORM BECHTEL COMMAND POSTS AT THE UPPER PARKING LOT.

C. Select the type of accountability desired for personnel in the protected area and implement the required actions below:

1. Emergency Assembly Without Accountability

-Make the following announcement:

"THIS (IS)(IS NOT) A DRILL. DESIGNATED EMERGENCY PERSONNEL REPORT TO ASSIGNED EMERGENCY RESPONSE FACILITIES. ALL OTHER PERSONNEL STAND BY FOR FURTHER ANNOUNCEMENT. THIS (IS) (IS NOT) A DRILL."

2. Emergency Assembly With Accountability

A. Contact the (Interim) Security Team Leader. Inform him of the selected exist point(s), that emergency assembly with accountability is going to be implemented, and to activate the Security Team (EP-208) and to perform personnel accountability in accordance with EP-110, Personnel Assembly and Accountability.

B. Contact Yoh Construction Security [redacted] and inform them that personnel leaving Unit 1 will be reassembling at the Personnel Processing Center (PPC).

"THIS (IS)(IS NOT) A DRILL, THIS (IS)(IS NOT) A DRILL. DESIGNATED EMERGENCY PERSONNEL REPORT TO ASSIGNED EMERGENCY RESPONSE FACILITIES. ALL OTHER UNIT ONE PERSONNEL LEAVE THE PROTECTED AREA IMMEDIATELY AND REASSEMBLE AT THE PERSONNEL PROCESSING CENTER. THIS (IS) (IS NOT) A DRILL. THIS (IS) (IS NOT) A DRILL."

9.1.1.8 For off-hours, direct the Shift Clerk to activiate the call list using EP-291, Staffing Augmentation. If Shift Clerk is not available, this function shall be assigned to any available individual.

9.1.1.9 Direct the activation of the Technical Support Center in accordance with EP-201, Technical Support Center (TSC) Activation.

9.1.1.10 If necessary, activate the Emergency Operations Facility in accordance with EP-203, Emergency Operations Facility (EOF) Activation.

9.1.1.11 Assign an Operations Support Center Coordinator (PO) to direct available personnel to report to the Operations Support Center on 269' Elev. Turbine Bldg. and to activate it in accordance with EP-202, Operations Support Center (OSC) Activation.

9.1.1.12 For samples, direct the Shift Chemistry Technician or Chemistry Sampling and Analysis Team Leader to implement EP-230, Chemistry Sampling and Analysis Team Activation.

9.1.1.13 For in-plant surveys, direct a Shift HP Technician or Personnel Safety Team Leader to implement EP-250, Personnel Safety Team Activation.

9.1.1.14 For field surveys, when a release of gaseous radioactive material has occurred or is suspected, direct the Dose Assessment Team Leader to implement EP-210, Dose Assessment Team Activation.

9.1.1.15 For a release at or greater than the Alert level in EP-101, Classification of Emergencies, direct the Dose Assesment Team Leader to implement EP-210, Dose Assessment Team Activiation.

On an interim bases, direct the Shift Technical Advisor to perform dose projections using EP-316, Cumulative Population Dose Calculations For Airborne Releases - Manual Method or EP-315 Calculations of Offsite Doses during a radiological Emergency using RMMS in the manual mode and to suggest Protective Action Recommendations per EP-317.

9.1.1.16 For fire/damage repair direct the Maintenance Shift Assistant Foreman or Fire and Damage Team Leader to implement EP-260, Fire and Damage Team Activation and/or EP-261, Damage Repair Group.

9.1.1.17 For a liquid release, implement EP-312 Radioactive Liquid Release, if required.

9.1.1.18 For Security matters, contact Security Shift Supervision and direct implementation of EP-208, Security Team Activation, unless previously done.

9.2 FOLLOW-UP

9.2.1 (Interim) Emergency Director shall:

9.2.1.1 Verify that the Technical Support Center, the Emergency Operations Facility (if necessary) and the Operations Support Center have been activated.

9.2.1.2 Periodically evaluate the event classification in accordance with EP-101, Classification of Emergencies and maintain, escalate or de-escalate the classification, as necessary.

9.2.1.3 If classification is de-escalated, fill out Appendix EP-103-3, Alert De-Escalation Notification Message and give it to the communicator and direct the communicator to perform notification of the appropriate parties listed in Appendix EP-103-5, Alert Phone List (Escalation or De-escalation).

9.2.1.4 Obtain the following information as necessary to formulate further actions:

A. Security status from Security Team Leader

B. Sample analysis from Shift Chemist or Chemistry Sampling and Analysis Team Leader

C. In-plant surveys from Shift HP Technician or Personnel Safety Team Leader

D. Field surveys from Dose Assessment Team Leader

E. Dose projections and protective action recommendations from Shift Technical Advisor or Dose Assessment Team Leader

F. Fire/damage repair status from the Maintenance Shift Assistant Foreman or Fire and Damage Team Leader

G. Notification results from Communicator

9.2.1.5 Determine which additional support personnel are necessary for emergency functions and direct the Shift Clerk or other assigned communicator in TSC to contact those personnel.

9.2.1.6 Provide site personnel with public address (PA) announcements for any major changes in plant emergency status, such as changing emergency action levels and evacuations.

9.2.1.7 Evaluate the need and order evacuation of effected areas as necessary. Refer to the following procedures: EP-303 Local Evacuation, EP-304 Partial Plant Evacuation, EP-305 Site Evacuation.

9.2.2 The Communicator shall:

9.2.2.1 Inform (Interim) Emergency Director when appropriate Notifications have been made and submit completed copy of Appendix EP-103-4 Alert Phone List (Initial Notification) or Appendix EP-103-5 Alert Phone List (Escalation or De-Escalation) for (Interim) Emergency Director's Signature.

10. REFERENCES

10.1 Limerick Generating Station Emergency Plan

10.2 NUREG 0654, Rev. 1 — Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Prepardness in Support of Nuclear Power Plant.

10.3	EP-303	Local Evacuation
10.4	EP-101	Classification of Emergencies
10.5	EP-304	Partial Plant Evacuation
10.6	EP-305	Site Evacuation
10.7	EP-306	Evacuation of the Information Center
10.8	A-31	Procedure for Prompt Notification
10.9	EP-201	Staffing Augmentation
10.10	EP-201	Technical Support Center (TSC) Activiation
10.11	EP-202	Operations Support Cente (OSC) Activation
10.12	EP-203	Emergency Operations Facility (EOF) Activation
10.13	EP-317	Determination of Protective Action Recommendations
10.14	EP-316	Cumulative Population Dose Calculations for Airborne Release - Manual Method
10.15	EP-110	Personnel Assembly and Accountability
10.16	EP-208	Security Team Activation
10.17	EP-210	Dose Assessment Team Activation
10.18	EP-230	Chemistry Sampling and Analysis Team Activation
10.19	EP-250	Personnel Safety Team Activation
10.20	EP-260	Fire and Damage Team Activation
10.21	EP-261	Damage Repair Group
10.22	EP-312	Radioactive Liquid Release
10.23	EP-315	Calculations of offsite doses during a Radiological Emergency using RMMS in the manual mode

APPENDIX EP-103-1

ALERT NOTIFICATION MESSAGE

MESSAGE: This *(is) (is not)* a drill. This *(is) (is not)* drill. This is Limerick Generating Station calling to report an Alert. My name is _____, telephone _____. Limerick Generating Station is reporting an Alert declared at Unit No. _____. Time and date of Alert classification are _____ (24 hr. clock time), _____ (date). The basic problem is _____. There *(has been) (has not been)* an *(airborne) (liquid)* radioactive release from the plant. The plant status is *(stable)(improving)(degrading)(not known)*. There is no protective action recommended. This *(is) (is not)* a drill. This *(is) (is not)* a drill.

APPENDIX EP-103-2
Emergency Exposure Guidelines

Function	Projected Whole Body Dose	Thyroid Dose	Authorized By
1. Life Saving and Reduction of Injury	75 REM*	375 REM	(Interim) Emergency** Director
2. Operation of Equipment to Mitigate an Emergency	25 REM*	125 REM	(Interim) Emergency** Director
3. Protection of Health and Safety of the Public	5 REM	25 REM	(Interim) Emergency** Director
4. Other Emergency Activities	10 CFR 20 limits	10 CFR 20 limits	(Interim) Emergency Director
5. Re-entry/Recovery Activities	Station Administrative Guidelines	Station Administrative Guidelines	N/A

* Reference: EPA-520/1-75-001 Table 2.1
** Such exposure shall be on a voluntary basis

APPENDIX EP-103-3

ALERT DE-ESCALATION NOTIFICATION CHECKOFF LIST

MESSAGE: *This (is) (is not)* a drill. This *(is) (is not)* a drill. This is Limerick Generating Station calling to report a change in emergency classification. The Alert has been *(de-escalated to an Unusual Event) (Terminated)*.

Time and date are _____, _____.

(24 Hr Clock Time) (Date)

The plant status is *(stable) (improving)*. My name is_____. This *(is) (is not)* a drill. This *(is) (is not)* a drill.

APPENDIX EP-103-3
ALERT PHONE LIST
(INITIAL NOTIFICATION)

Time Initiated _____

Personnel/Agency To Be Notified		Phone Number	Time	Person Responding
a. Emergency Director G. M. Leitch	Home Office			
Alternate J. F. Franz	Home Office			
b. Load Dispatcher	Office			
c. Montgomery County Emergency Management Agency				
d. Pennsylvania Emergency Management Agency				
e. Pennsylvania Bureau of Radiation Protection Harrisburg, PA				
f. Manager - Public Information Ronald Harper	Home Office			
g. Director - Emergency Preparedness Roberta Kankus	Home Office			

[redacted]

PROPRIETARY

APPENDIX EP-103-3
ALERT PHONE LIST
(INITIAL NOTIFICATION)

Time Initiated _____

Personnel/Agency To Be Notified	Phone Number	Time	Person Responding
h. NRC Operations Center* Bethesda, MD	[redacted]		
Make this call last and remain on telephone until NRC disconnects			
*Person contacting NRC must be Licensed Operator			
Agencies to be contacted after the above personnel/agencies have been notifed			
i. Berks County Emergency Management Agency			
j. Chester County Emergency Services			

Completed By: _____

Verified By: _____
(INTERIM) EMERGENCY DIRECTOR

PRELIMINARY

APPENDIX EP-103-5
ALERT PHONE LIST
(ESCALATION OR DE-ESCALATION)

Time Initiated _____

Personnel/Agency To Be Notified	Phone Number	Time	Person Responding
a. Emergency Director G. M. Leitch	Home Office		
Alternate J. F. Franz	Home Office		
b. Load Dispatcher	Office		
c. Pennsylvania Bureau of Radiation Protection Harrisburg, PA			
d. NRC Operations Center* Bethesda, MD			

[redacted]

Make this call last and remain on telephone until NRC disconnects.

*Person contacting NRC must be Licensed Operator

APPENDIX EP-103-5
ALERT PHONE LIST
(ESCALATION OR DE-ESCALATION)

Time Initiated _____

Personnel/Agency To Be Notified	Phone Number	Time	Person Responding
Agencies to be contacted after the above personnel/agencies have been notifed			
e. Montgomery County Office of Emergency Preparedness and Medical Services	[redacted]		
f. Berks County Emergency Managment Agency			
g. Chester County Emergency Services			

Completed By: _____

Verified By: _____
(INTERIM) EMERGENCY DIRECTOR

3043076500

1/18/89

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-104 SITE EMERGENCY RESPONSE

1.0 PURPOSE

The purpose of this procedure is to provide guidelines for the site response to a Site Emergency.

2.0 RESPONSIBILITIES

2.1 Shift Supervision shall assume the role of the Interim Emergency Director when a Site Emergency occurs unless the Emergency Director is present and perform the necessary steps in this procedure.

2.2 The Station Superintendent or Alternate shall assume the role of the Emergency Director, report to the Technical Support Center or control room and relieve the Interim Emergency Director.

2.3 The Site Emergency Coordinator shall report to the Emergency Operations Facility and perform the necessary steps in this procedure.

3.0 APPENDICES

3.1	EP-104-1	Site Emergency Notification Message
3.2	EP-104-2	Emergency Exposure Guidelines
3.3	EP-104-3	Site Emergency De-Escalation Notification Message
3.4	EP-104-4	Site Emergency Phone List (Initial Notification)
3.5	EP-104-5	Site Emergency Phone List (Escalation or De-escalation)

4.0 PREREQUISITES

4.1 EP-101, Classification of Emergencies, completed

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure shall be implemented when an event occurs that is classified as a Site Emergency per EP-101, Classification of Emergencies.

8.0 PRECAUTIONS

8.1 Planned radiation exposures should be limited to the administrative guide levels in Appendix EP-104-2, Emergency Exposure Guidelines.

9.0 PROCEDURE

9.1 ACTIONS

9.1.1 (Interim) Emergency Director shall:

9.1.1.1 Verify the emergency classification as determined in EP-101 Classification of Emergencies unless determination has just been made.

9.1.1.2 Fill out Appendix EP-104-1, Site Emergency Notification Message, and give it to the Communicator.

9.1.1.3 Direct the communicator to complete notification of the appropriate parties as specified in Appendix EP-104-4, Site Emergency Phone List (Initial Notification) or Appendix EP-104-5, Alert Phone List (Escalation or De-escalation) within 15 minutes.

NOTE: The Communicator shall man the NRC RED Telephone until the NRC disconnects.

9.1.1.4 Contact the Station Superintendent and the Shift Technical Advisor, inform them of the situation, if not already done.

9.1.1.5 Direct the Information Center Staff [redacted] to implement EP-306, Evacuation of the Information Center, if not already done. Inform the staff of the wind direction, if there is an airborne release.

9.1.1.6 If there is a radiological release, implement EP-305, Site Evacuation.

9.1.1.7 If there has not been a radiological release,

A. Evacuate all construction personnel by contacting Bechtel Safety [redacted] Direct them to call for a "Total Project Evacuation" in accordance with Bechtel procedures. Inform them of nature of hazard.

B. Contact Yoh Construction Security [redacted] and inform them that a Total Project Evacuation of Bechtel Construction personnel is being implemented.

THIS WILL CALL FOR THE ASSEMBLY OF PERSONNEL AT THE UPPER PARKING LOT AND POST #3. IF IT IS DESIRED THAT THEY LEAVE THE SITE, INFORM BECHTEL COMMAND POSTS AT THE UPPER PARKING LOG.

C. Select the type of accountability desired for personnel in the protected area and implement the [redacted] actions below.

1. Emergency Assembly Without Accountability

   - Make the following announcement

   "THIS (IS) (IS NOT) A DRILL. DESIGNATED EMERGENCY PERSONNEL REPORT TO ASSIGNED EMERGENCY RESPONSE FACILITIES. ALL OTHER PERSONNEL STAND BY FOR FURTHER ANNOUNCEMENT. THIS (IS) (IS NOT) A DRILL."

2. Emergency Assembly With Accountability

   a. Contact the (Interim) Security Team Leader. Inform him of the selected point(s), that emergency assembly with accountability is going to be implemented, and to activate the Security Team (EP-208) and to perform personnel accountability in accordance with EP-110 Personnel Assembly and Accountability

   b. Contact Yoh Construction Security [redacted] off-hours [redacted] and inform them that personnel leaving Unit 1 will be reassembling at the Personnel Processing Center (PPC)

      "THIS (IS) (IS NOT) A DRILL, THIS (IS) (IS NOT) A DRILL. DESIGNATED EMERGENCY PERSONNEL REPORT TO ASSIGNED EMERGENCY RESPONSE FACILITIES. ALL OTHER UNIT ONE PERSONNEL LEAVE THE PROTECTED AREA IMMEDIATELY AND REASSEMBLE AT THE PERSONNEL PROCESSING CENTER. THIS (IS) (IS NOT) A DRILL. THIS (IS) (IS NOT) A DRILL.

9.1.1.8 For off hours, if not already accomplished at the Alert stage, direct the Shift Clerk to activate the call list per EP-291, Staffing Augmentation. If Shift Clerk is not available, this function may be assigned to any available individual.

9.1.1.9 Direct the activation of the Technical Support Center in accordance with EP-201, Technical Support Center (TSC) Activation, if not already activated.

9.1.1.10 Direct the activation of the Emergency Operations Facility in accordance with EP-203, Emergency Operations Facility (EOF) Activation, if not already activated.

9.1.1.11 If the EOF has not been activated earlier, during the Alert Response procedure, direct a communicator to call EOF personnel (directing them to report to the EOF) using EP-279, EOF Group Phone List.

9.1.1.12 Assign an Operations Support Center coordinator (PO) if not already done, to direct available personnel to report to the Operations Support Center and to activate it in accordance with EP-202, Operations Support Center (OSC) Activation.

9.1.1.13 For samples, direct the Shift Chemistry Technician or Chemistry Sampling And Analysis Team Leader to implement EP-230, Chemistry Sampling And Analysis Team Activation.

9.1.1.14 For in-plant surveys, direct a Shift HP Technician or Personnel Safety Team Leader to implement EP-250, Personnel Safety Team Activation.

9.1.1.15 For field surveys, when a release of gaseous radioactive material has occurred or is suspected, direct a Shift HP Technician or Dose Assessment Team Leader to implement EP-210, Dose Assessment Team Activation.

9.1.1.16 For a release, at or greater than the Alert level in EP-101, Classification of Emergencies, or at the discretion of the Emergency Director, direct the Dose Assessment Team Leader to implement EP-210, Dose Assessment Team Activation.

On an interim basis, direct the Shift Technical Advisor to perform dose projections using EP-316, Cumulative Population Dose Calculations for Airborne Releases-Manual Method or EP-315 Calculations of Offsite Doses during a Radiological Emergency using RMMS in the Manual Mode and to suggest Protection Action Recommendations per EP-317.

9.1.1.17 For fire/damage repair direct the Maintenance Shift Assistant Foreman or Fire and Damage Team Leader to implement EP-260, Fire and Damage Team Activation and/or EP-261, Damage Repair Group.

9.1.1.18 For a liquid release, implement EP-312, Radioactive Liquid Release, if required.

9.1.1.19 For Security matters, contact Security Shift Supervision and direct implementation of EP-208, Security Team Activation, unless previously done.

9.2 FOLLOW-UP

9.2.1 (Interim) Emergency Director shall:

9.2.1.1 Verify that the Technical Support Center, Emergency Operations Facility and the Operations Support Center have been activated.

9.2.1.2 Periodically evaluate the event classification in accordance with EP-101, Classification of Emergencies and escalate or de-escalate the classification, as necessary.

9.2.1.3 If classification is de-escalated, fill out Appendix EP-104-3, Site Emergency De-Escalation Notification Message and give it to the communicator and direct the communicator to perform notification of the appropriate parties listed in Appendix EP-104-5, Site Emergency Phone List (Escalation or De-escalation).

9.2.1.4 Obtain the following information as necessary to formulate further actions:

A. Security Status from Security Team Leader

B. Sample analysis from Shift Chemistry Technician or Chemistry Sampling And Analysis Team Leader

C. In-plant surveys from Shift HP Technician or Personnel Safety Team Leader

D. Field surveys from Shift HP Technician or Dose Assessment Team Leader

E. Dose projections and protective action recommendations from Shift Technical Advisor or Dose Assessment Team Leader

F. Fire/Damage repair status from the Maintenance Shift Assistant Foreman or Fire and Damage Team Leader.

G. Notification Results from Communicator.

9.2.1.5 Discuss protective action recommendations with the Site Emergency Coordinator.

9.2.1.6 Determine which additional support personnel are necessary for emergency functions and direct the shift clerk or other assigned communicator to contact those personnel.

9.2.1.7 Provide site personnel with public addres (PA) announcements for any major changes in plant emergency status, such as changing emergency action levels and evacuations.

9.2.1.8 Evaluate the need and order evacuation of affected areas as necessary.

Refer to the following procedures:

EP-303 Local Evacuation

EP-305 Site Evacuation

9.2.1.9 Perform the following until relieved by the Site Emergency Coordinator:

A. Discuss protective action recommendations with the Dose Assessment Team Leader.

B. Provide protective action recommendations, if necessary, to the Pennsylvania Bureau of Radiation Protection.

C. Inform the various emergency response groups if the recovery phase organization is to be implemented.

9.2.2 The Communicator shall:

9.2.2.1 Inform the Emergency Director when appropriate notifications have been made and submit completed copy of Attachment EP-104-4 Site Emergency Phone List (Initial Notification) or Appendix EP-104-5, Site Emergency Phone List (Escalation or De-escalation) for Emergency Directors Signature.

10. REFERENCES

10.1 Limerick Generating Station Emergency Plan

10.2 NUREG 0654, Rev. 1 Criteria For Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

10.3 EP-101 Classification of Emergencies

10.4 A-31 Procedure for Prompt Notification

10.5 EP-291 Staffing Augmentation

10.6 EP-201 Technical Support Center (TSC) Activation

10.7 EP-202 Operations Support Center (OSC) Activation

10.8 EP-203 Emergency Operations Facility (EOF) Activation

10.9 EP-317 Determination of Protective Action Recommendations

10.10 EP-316 Cumulative Population Dose Calucations For Airborne Releases-Manual Method

10.11 EP-305 Site Evacuation

10.12 EP-306 Evacuation of the Information Center

10.13 EP-110 Personnel Assembly and Accountability

10.14 EP-208 Security Team Activation

10.15 EP-210 Dose Assessment Team Activation

10.16 EP-230 Chemistry Sampling and Analysis Team Activation

10.17 EP-250 Personnel Safety Team Activation

10.18 EP-260 Fire and Damage Team Activation

10.19 EP-261 Damage Repair Group

10.20 EP-312 Radioactive Liquid Release

10.21 EP-279 Emergency Operations Facility (EOF) Group Phone List

10.22 EP-315 Calculations of Offsite Doses During a Radiological Emergency using RMMS in the Manual Mode.

APPENDIX EP-104-1

SITE EMERGENCY NOTIFICATION MESSAGE

Message: This *(is)(is not)* a drill. This *(is)(is not)* a drill. This is Limerick Generating Station calling to report a Site Emergency. My name is _____, telephone _____. Limerick Generating Station is reporting a Site Emergency declared at Unit No. ___.

Time and date of Site Emergency classification are _____, (24 hr. clock time)

_____ (Date)

The basic problem is _____.

There *(has been) (has not been)* an *(airborne) (liquid)* radioactive release from the plant. The plant status is *(stable) (improving) (degrading) (not known).* There is no protective action recommended. This *(is) (is not)* a drill. This *(is) (is not)* a drill.

APPENDIX EP-104-2

EMERGENCY EXPOSURE GUIDELINES

Function	Projected Whole Body Dose	Thyroid Dose	Authorized By
1. Life Saving and Reduction of Injury	75 REM*	375 REM	(Interim) Emergency** Director
2. Operation of Equipment to Mitigate an Emergency	25 REM*	125 REM	(Interim) Emergency** Director
3. Protection of Health and Safety of the Public	5 REM	25 REM	(Interim) Emergency** Director
4. Other Emergency Activities	10 CFR 20 limits	10 CFR 20 limits	(Interim) Emergency Director
5. Re-Entry/ Recovery Activities	Station Administrative Guide Lines	Station Administration Guide Lines	N/A

* Reference: EPA-520/1-75-001 Table 2.1
** Such exposure shall be on a voluntary basis

APPENDIX EP-104-3

SITE EMERGENCY DE-ESCALATION NOTIFICATION MESSAGE

MESSAGE: This *(is) (is not)* a drill. This *(is) (is not)* a drill. This is Limerick Generating Station calling to report a change in emergency action level. The site emergency has been *(de-escalated to an) (Unusual Event) (Alert) (Terminated).* Time and date are

_____, _____. The plant status is *(stable) (24 Hr Clock Time) (Date) (improving).* My name is_____. This *(is) (is not)* a drill.

This *(is) (is not)* a drill.

APPENDIX EP-104-4
SITE EMERGENCY PHONE LIST
(INITIAL NOTIFICATION)

Time Initiated _____

Personnel/Agency to be notified	Phone Number	Time	Person Resp
a. Emergency Director G. M. Leitch	Home - Office -		
Alternate J. F. Franz	Home - Office -		
b. Load Dispatcher	Office -		
c. Montgomery County Office of Emerg. Preparedness and Medical Services			
d. Pennsylvania Emergency Management Agency			
e. Pennsylvania Bureau of Radiation Protection, Harrisburg, PA			
f. Manager - Public Information Ronald Harper	Home - Office - Pager		
g. Director - Emergency Preparedness Roberta Kankus	Home - Office -		

APPENDIX EP-104-4 (CONT'D)
SITE EMERGENCY PHONE LIST (CONT'D)
(INITIAL NOTIFICATION)

Personnel/Agency to be notified	Phone Number	Time Person Responding
Agencies to be contacted after the above personnel/agencies have been notified		
h. NRC Operations Center* Bethesda, MD	[redacted]	

Make this call last and remain on telephone until NRC disconnects

*Person contacting NRC must be licensed operator

i. Berks County Emergency Management Agency	[redacted]	
j. Chester County Emergency Services		

[redacted]

Completed By: _____ Time/Date _____
Verified By: _____
(Interim) Emergency Director

APPENDIX EP-104-5
SITE EMERGENCY PHONE LIST
(ESCALATION OR DE-ESCALATION)

Time Initiated _____

Personnel/Agency to be notified	Phone Number	Time Person Responding
a. Emergency Director G. M. Leitch	Home - Office -	
Alternate J. F. Franz	Home - Office -	
b. Load Dispatcher	Office -	
c. Pennsylvania Bureau of Radiation Protection, Harrisburg, PA		
d. NRC Operations Center* Bethesda, MD		

[redacted]

Make this call last and remain on telephone until NRC disconnects

*Person contacting NRC must be licensed operator

APPENDIX EP-104-5 (CONT'D)
SITE EMERGENCY PHONE LIST (CONT'D)
(ESCALATION OR DE-ESCALATION)

Personnel/Agency to be notified	Phone Number	Time Person Responding
Agencies to be contacted after the above personnel/agencies have been notified		
e. Montgomery County Office of Emergency Preparedness and Medical Services	[redacted]	
f. Berks County Emergency Management Agency		
g. Chester County Emergency Services		

Completed By: _____ Time/Date _____
Verified By: _____
(Interim) Emergency Director

3043076510

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-110 PERSONNEL ASSEMBLY AND ACCOUNTABILITY

1.0 PURPOSE

The purpose of this procedure is to provide the steps necessary for personnel assembly and accountability.

This procedure does not apply to Unit 2 Bechtel and sub-contractor personnel since they will be assembled per Bechtel procedures.

2.0 RESPONSIBILITIES

2.1 Personnel shall report to designated Emergency Assembly Areas or as otherwise directed.

2.2 Emergency Assembly Area Coordinators shall, when required, perform an accountability check of personnel at their areas. This function may be delegated to another individual.

2.3 When personnel accountability is required, Bechtel and sub-contractor personnel shall account for their personnel in accordance with Bechtel procedures and make reports to their command posts at Post #3 and the North Parking Lot.

2.4 Security shall assemble a list of unaccounted for persons, when accountability checks are required, for the (Interim) Emergency Director, Personnel Safety Team Leader, and Security Team Leader.

2.5 The (Interim) Emergency Director shall direct the Personnel Safety Team Leader to activate the First Aid/Search and Rescue Group to locate unaccounted for personnel.

3.0 APPENDICES

3.1 EP-110-1, Emergency Assembly Areas

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure should be implemented whenever an Alert, Site Emergency, General Emergency, or Site Evacuation is declared and may also be executed when an Unusual Event is declared at the discretion of the Emergency Director.

8.0 PRECAUTIONS

8.1 Only the following personnel may authorize support personnel without Limerick badges access to the site at an Alert, Site or General Emergency.

8.1.1 Site Emergency Coordinator

8.1.2 (Interim) Emergency Director

8.1.3 Security Team Leader

9.0 PROCEDURE

9.1 ACTIONS

THESE ACTIONS WILL IMMEDIATELY FOLLOW THE ASSEMBLY ANNOUNCEMENT MADE IN ACCORDANCE WITH ANY OF THE FOLLOWING:

EP-103 - Alert Response

EP-104 - Site Emergency Response

EP-105 - General Emergency Response

EP-305 - Site Evacuation

9.1.1 For assembly WITHOUT accountability check.

9.1.1.1 Designated Emergency Response personnel shall report to their assigned assembly areas (see Appendix EP-110-1).

9.1.1.2 Other personnel shall remain at their normal positions until receiving further instructions.

9.1.2 For emergency assembly WITH accountability

9.1.2.1 Unit 1 personnel shall report to their designated Emergency Assembly Facility/Area (see Appendix EP-110-1). If not assigned to an Emergency Assembly Facility/Area, exit the Protected Area, and report to the Personnel Processing Center.

9.1.2.2 Personnel escorting visitors shall:

A. Escort visitors to Administration Building Guard Station

B. Report to their Emergency Assembly Facility/Area (see Appendix EP-110-1) or, if not assigned to an emergency assembly area, exit the Protected Area, and report to the Personnel Processing Center.

9.1.3 Emergency Assembly Area Coordinators shall:

9.1.3.1 For Assembly <u>without</u> an accountability check:

A. Maintain a log of names and badge numbers of all personnel leaving and returning to assembly areas.

9.1.3.2 For Assembly with an accountability check:

A. Record names and security badge numbers of all individuals reporting to the assembly area.

Conduct a roll call (if necessary) to verify an accurate listing of personnel.

B. Report names of accounted for personnel to Security when contacted.

C. Maintain a log of names and badge numbers of all personnel leaving and returning to assembly areas.

D. If the entire group of assembled personnel are to move to a new location, perform steps A through C to ensure that accountability is maintained.

9.1.4 Plant Security Group shall:

9.1.4.1 For Assembly with Accountability:

A. Report to the appropriate personnel exit areas.

B. Ensure that personnel exiting the Protected Area follow the normal "Card-Out" procedure and utilize the portal monitors while exiting.

C. If the COMPUTER is NOT operating:

1. Obtain a copy of the Master Badge List.

2. Collect the badges of all existing personnel. Using the Master Badge List, check OFF the numbers of all the collected badges and those not in use at the time of the evacuation.

3. Give the completed Master Badge List to the Personnel Accountability Group Leader as quickly as possible.

9.1.4.2 For Site Evacuation:

A. Report to the appropriate personnel exit areas and set out buckets or other containers to collect security badges.

B. Have exiting personnel deposit their security badges and dosimetry in the appropriate containers, and utilize the portal monitors.

IF PORTAL MONITORS ALARM, PERSONNEL SHOULD BE INSTRUCTED TO REPORT TO HEALTH PHYSICS AT THE OFFSITE ASSEMBLY AREAS.

Emergency workers may be required to retain dosimetry. Prior arrangements should be made through (Interim) Security Team Leader.

C. If the Security Computer System is operable, badges will be carded out by security using the exit lane card readers.

D, If the Security Computer System is NOT operable, perform the steps detailed in 9.1.4.1 C of this procedure,

9.1.5 Personnel Accountability Group shall:

9.1.5.1 For Assembly with Accountability:

A. Report to the Administration Guard Station.

B. Contact the Emergency Assembly Area Coordinators for accountability reports utilizing Appendix EP-110-1, Emergency Assembly Areas.

C. Compile a list of personnel in the Protected Area using information received from the Emergency Assembly Area Coordinators and the Security Computer System.

IF THE SECURITY COMPUTER IS NOT OPERABLE, THE PLANT SECURITY GROUP WILL PROVIDE A MASTER BADGE LIST WITH ALL BADGES TURNED IN AND BADGES NOT IN USE CHECKED OFF.

D. Compare the list of personnel remaining in the Protected Area with the Emergency Assembly Area Coordinators accountability reports to compile a list of unaccounted for personnel.

E. Within 30 minutes from the time of the evacuation and assembly announcement, report the accountability STATUS and the names of the unaccounted for personnel to the (Interim) Security Team Leader.

F. Contact the Bechtel Command Posts at Post #3 and the North Parking Lot to determine if any Bechtel or subcontractor personnel are unaccounted for and inform the (Interim) Security Team Leader.

G. As unaccounted for personnel are located, immediately provide an update of the accountability STATUS to the (Interim) Security Team Leader.

9.1.5.2 For Site Evacuation:

A. Report to the Administration Guard Station.

B. If the Security Computer is NOT operating, obtain the Master Badge List from the Plant Security Group.

C. Complete steps 9.1.5.1 B through G of this procedure.

9.1.6 Security Team Leader shall:

9.1.6.1 Report the names of unaccounted for personnel to the (Interim) Emergency Director.

9.1.6.2 Forward a list of unaccounted for personnel to the Personnel Safety Team Leader at the following locations:

A. Operations Support Center (If Technical Support Center is not activated).

B. Technical Support Center (If Technical Support Center is activated).

9.1.6.3 As unaccounted for personnel are located, immediately provide an update of the accountability status to the Emergency Director and Personnel Safety Team Leader.

9.2 FOLLOW-UP

9.2.1 (Interim) Emergency Director shall:

9.2.1.1 Contact the Personnel Safety Team Leader to activate the Search and Rescue Group if required to locate unaccounted for personnel.

9.2.1.2 Contact the Personnel Safety Team Leader for status updates.

10.0 REFERENCES

10.1 Limerick Generating Station Emergency Plan

APPENDIX EP-110-1

EMERGENCY ASSEMBLY AREAS

GROUP	PRIMARY ASSEMBLY AREAS AND TELEPHONE NUMBERS	ALTERNATE ASSEMBLY AREAS AND TELEPHONE NUMBERS	ASSEMBLY AREA COORDINATOR(S)
Technical Support Center Staff:			Leader Personnel Safety Team Leader
HP Technicians (4)			Senior HP TA/ Technician
Plant Operators (4) Auxiliary Plant Operators			Senior Ranking P.O., A.P.O., or A.O.
Security Guards			Senior Ranking Security Person

Notes:

(1) If the OSC becomes or is uninhabitable, the OSC Coordinator, Plant Survey Group Leader and up to 5 HP Technicians and 5 Operators report to the MRF Room in the Control Room. All others report to the Maintenance Shop.

(2) If accountability is [illegible] the Protected Area. Otherwise, they will receive further instructions and directions.

(3) If the TSC becomes or is uninhabitable, the Emergency Director, Personnel Safety Team Leader, Technical Support Group Leader and up to 5 others designated by the Emergency Director report to the Control Room. All others report to the Maintenance Shop.

(4) The auxiliary OSC on Elevation 239' may be used to hold excess personnel; however, the OSC on Elevation 269' is the assembly area.

GROUP	PRIMARY ASSEMBLY AREAS AND TELEPHONE NUMBERS	ALTERNATE ASSEMBLY AREAS AND TELEPHONE NUMBERS	ASSEMBLY AREA COORDINATOR(S)
Control Operators Asst. Control Operators Shift Supervision STA			Shift Superintendent Alt: Shift Supervisor
Chemistry Technicians			Chemist
Instrument & Control Technicians & PECO Field Engineers			Senior Person Present
Escorted Plant Visitors			
Administrative Staff and Visitors			
Bechtel or Subcontractors in Restricted Area			Supervisors
Maintenance Personnel	Maintenance Shop Prod. Phone -	Personnel Processing Center,	

[redacted]

Notes:

(2) If accountability is required they will leave the Protected Area and assemble at the Personnel Processing Center. Otherwise, they will receive further instructions and directions.

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-272 PHILADELPHIA ELECTRIC COMPANY OFFICIALS PHONE LIST

1.0 PURPOSE

The purpose of this procedure is to supply information to contact Philadelphia Electric Company officials.

2.0 RESPONSIBILITIES

2.1 A communicator shall contact the required Philadelphia Electric Company officials when directed by the Emergency Director or the Site Emergency Coordinator.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

7.1 This procedure may be used when Philadelphia Electric Company officials are to be contacted.

8.0 PRECAUTIONS

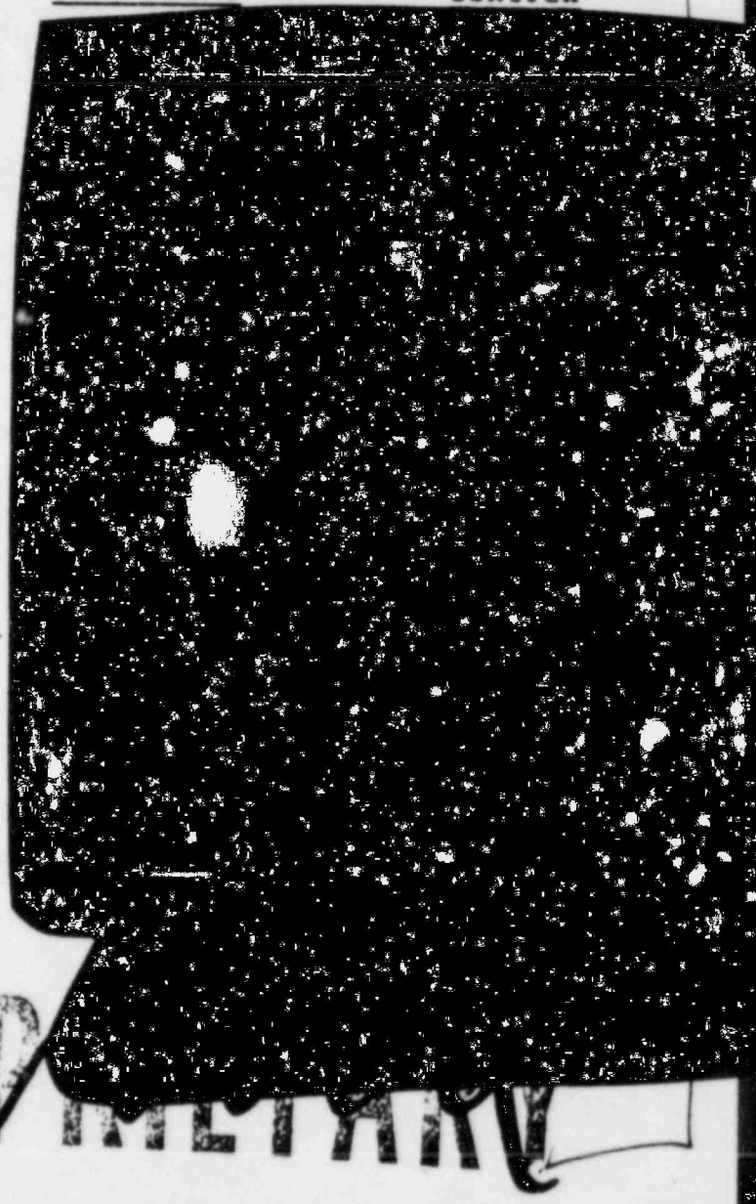
None

9.0 PROCEDURE

9.1 Actions

9.1.1 As necessary, the following people will be called by the communicator.

	Home Phone	Centrex
Sr. V. P. Nuclear		
V. S. Boyer Federal/State Government Liaison		
V. P. Corporate Communications		
C. Brenner Public Information Officer, Or Alternate Federal/State Government Liaison		
Medical Director		
W. F. Hushion, MD Emergency Medical Director		
Medical Dispensary Physician		
A. J. Cincotta, MD Alternate Emergency Medical Director		
Vice President, Elect. Production		
S. L. Daltroff Emergency Support Officer		
Manager, Electric Production-Nuclear		
M. J. Cooney Alternate Emergency Support Officer		



	Home Phone	Centrex
Superintendent - Nuclear Generation Division		
W. T. Ullrich Site Emergency Coordinator		
Superintendent - Nuclear Services		
R. H. Logue Alternate Site Emergency Coordinator		
Superintendent - Peach Bottom		
R. S. Fleischmann II Alternate Site Emergency Coordinator		
Vice-President - Engineering & Research Department		
J. S. Kemper Corporate Spokesman		
Senior Engineer - Licensing Section		
B. L. Clark Technical Advisor		
Engineer-in-Charge Nuclear Safety Section		
G. Hunger Alternate Technical Advisor		
Chief Mechanical Engineer		
E. C. Kistner Design & Construction Support Officer		

Home Phone Centrex

Chief Electrical Engineer

G. N. DeCowsky
Alternate Design Construction
Support Officer

Engineer-in-Charge
Fuel Management Section

L. F. Rubino
Core Physics Coordinator

Supervising Engineer
Fuel Management Section

M. J. Diamond
Alternate Core
Physics Coordinator

Manager, Corporate
Communications

W. R. Taylor
Alternate Public
Information Officer

Assistant Manager - Energy
Information and Ed.

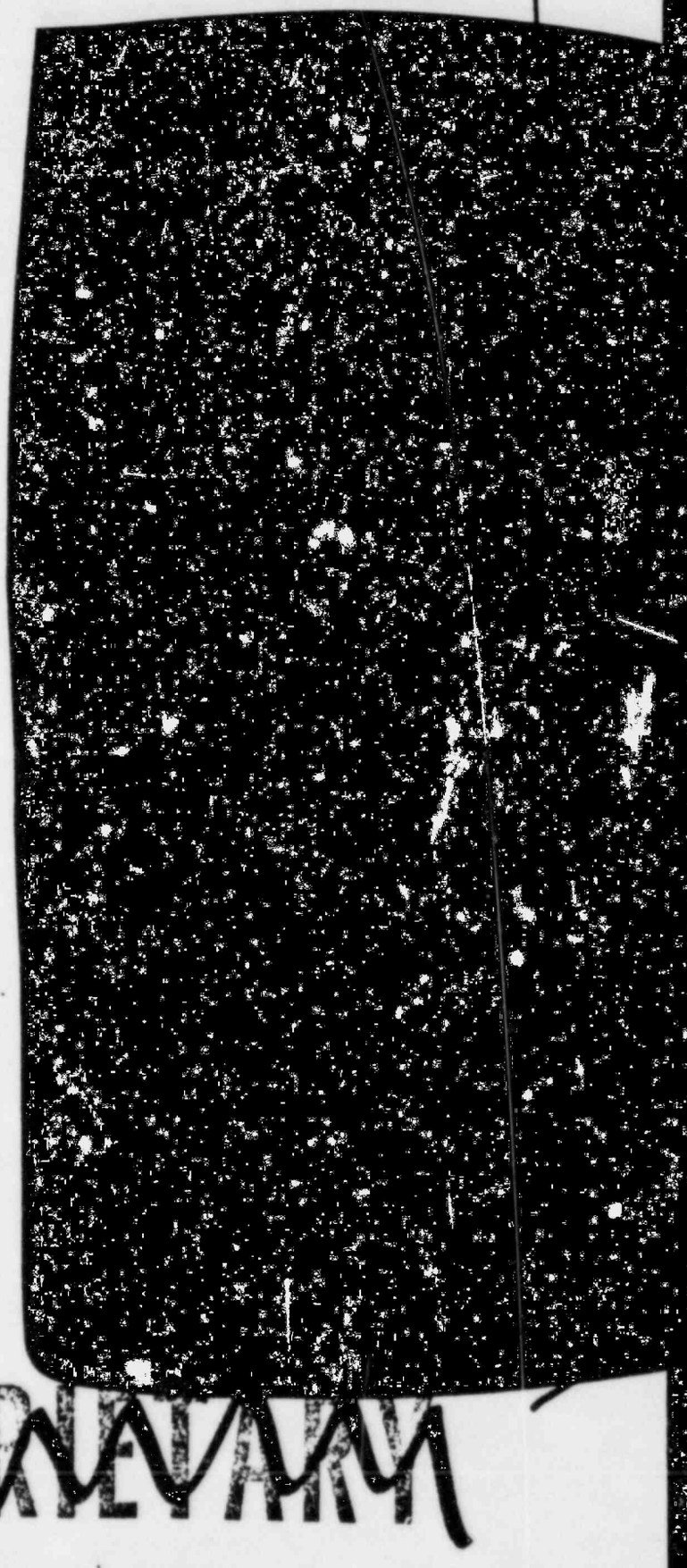
M. D. McCormick
EOF Liason - Corporate
Communications

Manager - Public Information

R. L. Harper
Emergency News Center Coordinator

Senior Representative
Public Information

C. J. McDermott
Alternate Emergency News
Center Cooridinator



	Home Phone	Centrex
<u>Manager of Claims Security</u> J. D. McGoldrick Emergency Security Officer <u>Director of Security</u> R. J. Deneen Alternate Emergency Security Officer <u>Engineer in Charge Chemistry Section</u> G. H. Assenheimer Supervising Buyer, <u>Fuel Procurement</u> G. F. Daebeler Environmental Sampling Coordinator Senior Engineer, Engineering <u>and Research Dept.</u> A. Marie Alternate Environmental Coordinator <u>General Superintendent of Maintenance</u> M. J. McCormick Maintenance Coordinator Superintendent, Mechanical Section <u>Maintenance Division</u> J. M. Madara Alternate Maintenance Coordinator	[redacted]	

	Home Phone	Centrex
Manager, Transmission & Distribution		
A. G. Mikalauskas T. & D. Support Coordinator		
Assistant to V. P. T&D		
H. J. Why Alternate T&D Support Coordinator		
Superintendent Electric Protection Quality Assurance		
R. H. Moore QA/QC Coordinator		
Engineer-In-Charge E&R QA		
P. K. Pavlides Alternate QA/QC Coordinator		
Superintendent Nuclear Training		
R. W. Bulmer Training Coordinator		
Limerick Generatin Station Training Coordinator		
E. W. Firth Alternate Training Coordinator		
Administration (Electric Production)		
G. Conover, Jr.		

Home Phone Centrex

Manager Corporate Planning
And Analysis

J. M. Friderichs
Administration and Logistics
Manager

Manager Rate Division

R. C. Williams
Alternate Administration and
Logistics Manager

Manager T&D Services

J. V. Mannion
Alternate Administration and
Logistics Manager

Manager Area Development

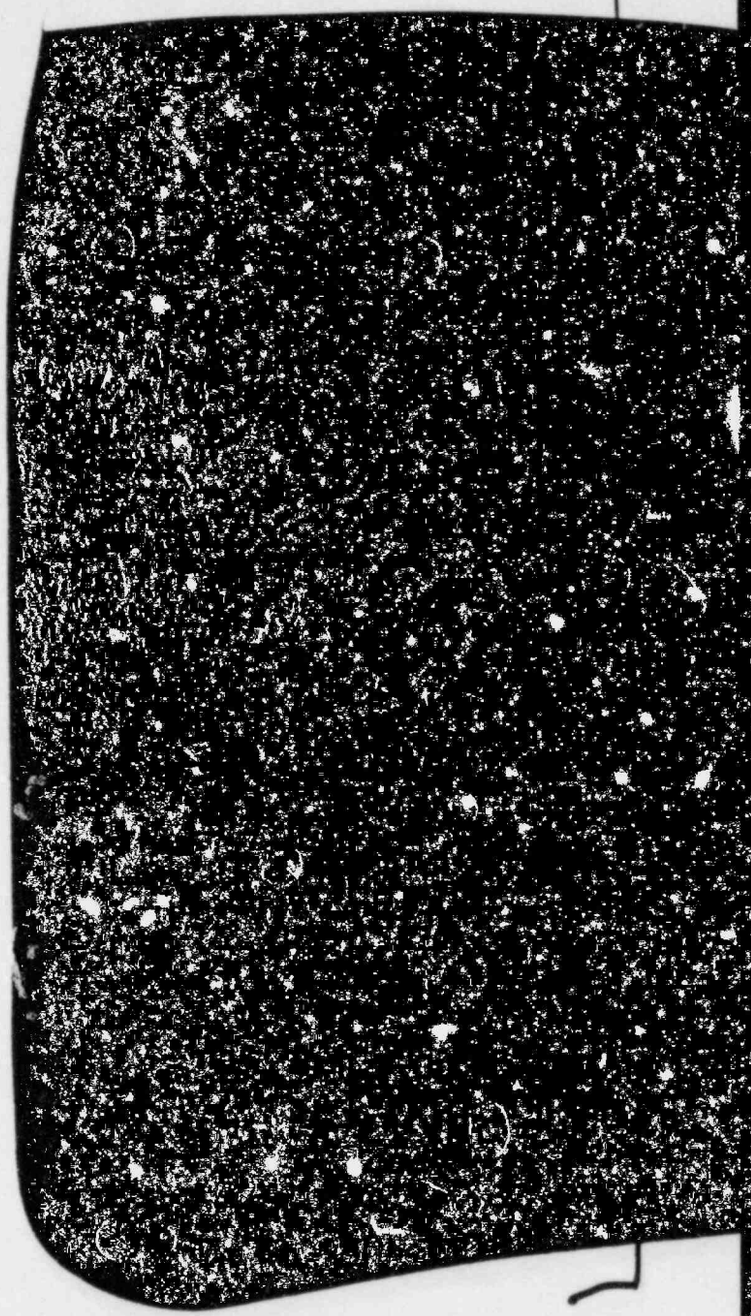
J. C. O'Brien
Support Personnel
Accomodations Coordinator

Supervisor Sales Analysis

J. J. Bevan (Tech. Services)
Alternate Support Personnel
Accomodations Coordinator

Engineer-In-Charge Licensing

W. M. Alden
Support Personnel Procurement
Coordinator

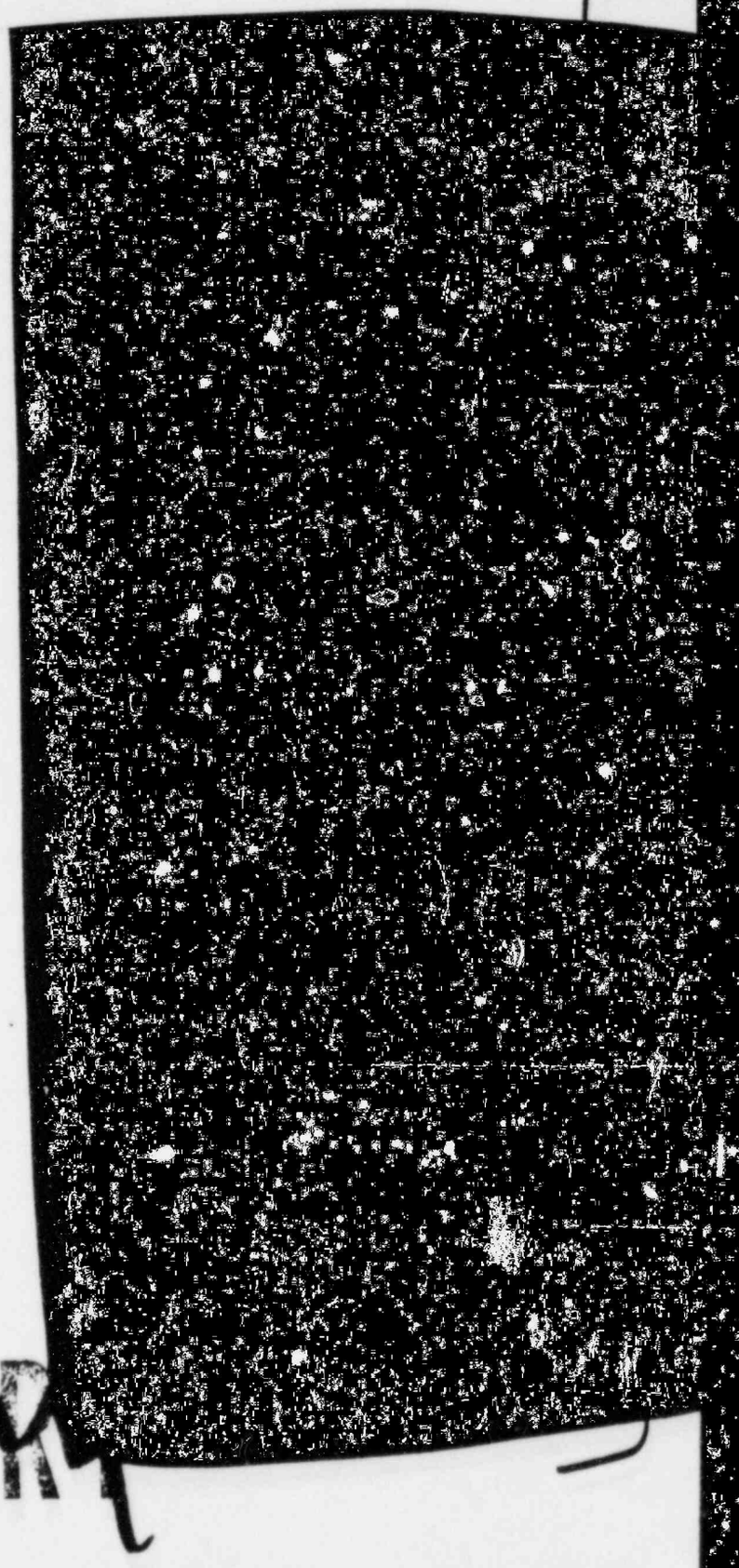


	Home Phone	Centrex
Engineer Licensing		
R. C. Brown Alternate Support Personnel Procurement Coordinator		
General Supervisor		
R. J. Kline Support Personnel Accom. Coordinator Schuylkill Division		
Business Services Representative		
J. N. Pettia Alternate Support Personnel Accom. Coordinator Schuylkill Division		
Manager Purchasing		
H. P. Winitsky Purchasing Coordinator		
Supervising Buyer		
R. A. Nones Alternate Purchasing Coordinator		
Manager Insurance Section		
W. G. Holberg Insurance Coordinator		
Supervisor Insurance Section		
A. L. Saltiel Alternate Insurance Coordinator		
General Supt. Trans. Division		
E. L. Dold Transportation Coordinator		

	Home Phone	Centrex
Supt. Trans. Division		
R. T. Melvin Alternate Transportation Coordinator		
General Supt. Office Systems and Communications		
B. C. Czarkowski Communications Equipment Coordinator		
Supt. Office Systems and Communications		
C. W. Aldred Alternate Communications Equipment Coordinator		
General Supt. Stores Division		
H. A. Connor Stores Division Coordinator		
Supt. Stores Division		
A. B. Serrill Alternate Stores Division Coordinator		
Engineer-In-Charge Power Plant Services		
S. J. Kowalski Radwaste Coordinator		
Supr. Engineer Power Plant Services		
A. C. Caprara Alternate Radwaste Coordinator		

	Home Phone	Centrex
Chief Design Engineer		
A. R. Lewis Engineering Design Coordinator		
Assistant Chief Design Engineer		
J. M. Blake Alternate Engineering Design Coordinator		
Engineer-In-Charge Civil Engineering		
D. Marano Civil Engineering Coordinator		
Supv. Engineer Struct. Branch		
H. W. Vollmer Alternate Civil Engineering Coordinator		
Supv. Engineer Power Plant Control Systems Branch		
R. T. Jones I&C Coordinator		
Engineer Power Plant Control Systems Branch		
W. W. Bowers Alternate I&C Coordinator		
Engineer-In-Charge Nuclear and Env. Section		
L. B. Pyrih Licensing Coordinator		
Supervising Engineer Nuclear Branch		
R. A. D[illegible] Alternate Licensing Coordinator		

	Home Phone	Centrex
Engineer-In-Charge Power Plant Design		
J. Moskowitz Systems Engineering Coordinator - Mechanical		
Sr. Engineer Power Plant Design		
T. E. Shannon Alternate Systems Engineering Coordinator - Mechanical		
Engineer-In-Charge Station Engineering Section		
J. J. Ferencsik Systems Engineering Coordinator - Electrical		
Supervising Engineer Station Engineering Section		
J. Lees Alternate Systems Engineering Coordinator - Electrical		
General Supt. Construction		
J. G. Weisheit Construction Coordinator		
Asst. General Supt. Construction		
T. P. Gotzis Alternate Construction Coordinator		
Engineer-In-Charge Industrial Section		
J. H. Long Environmental Coordinator		



	Home Phone	Centrex
Supervising Engineer-Building Facilities Branch		
G. M. Morley Alternate Ventilation Coordinator	[redacted]	

10.0 REFERENCES

None

[redacted]

3043076530.

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-276 FIRE AND DAMAGE TEAM PHONE LIST

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and information to call in Fire and Damage Team Members.

2.0 RESPONSIBILITIES

2.1 The Fire and Damage Team Leader shall be responsible to call in group members.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

7.1 This procedure can be used when the Fire and Damage Team is activated or when additional personnel are needed.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 Actions

9.1.1 The Fire and Damage Team Leader shall call people from the following list until appropriate group leader positions are filled.

9.1.1.1 FIRE AND DAMAGE TEAM LEADER:

	HOME	WORK
ENGINEER - MAINTENANCE		
J. B. Cotton	[redacted]	
ASSISTANT ENGINEER - MAINTENANCE		
G. Paptzun	[redacted]	
MAINTENANCE SHIFT ASSISTANT FOREMAN (Interim)		
Rotating Shift Assignment		[redacted]

Name	(24 Hour Clock Time)

9.1.1.2 FIRE FIGHTING GROUP LEADER
-(FIRE BRIGADE LEADER)
SHIFT SUPERVISOR

Contact Control Room at

9.1.1.3 DAMAGE REPAIR GROUP LEADERS:

SUPERVISING ENGINEER, MAINTENANCE

R. Costagliola [redacted]

SUPERVISOR, MAINTENANCE (Alternate)

T. O'Mara [redacted]

[redacted]

9.1.2 Fire fighting group leader shall contact fire fighting group members as follows:

FIRE FIGHTING GROUP MEMBER
- FIRE BRIGADE

For Fire Fighting Group Members, contact Shift Clerk in Control Room

9.1.3 Damage repair group leader shall contact damage repair group members from the following list until a sufficient number have been contacted (4 minimum).

DAMAGE REPAIR GROUP MEMBERS:

G. R. Benson

J. W. Berger, Jr.

R. R. Black

K. F. Borton

K. W. Bowerson

J. F. Cook

P. G. DeMauriac

S. R. Dennett

B. W. Didonato

T. C. Essex

H. F. Giovan, III

J. J. Graney

L. D. Hill

P. J. Klein

T. R. Landis

D. J. Leperson

L. G. Macen[illegible]

[illegible]

E. F. McCoy
F. J. McGowan
D. L. Moore
W. A. Paulson
J. A. Perkins
T. E. Peters
T. G. Potts, Jr
S. N. Rapone
G. J. Reed
D. P. Roller
R. A. Roller
G. F. Schweiger
R. J. Scott, Jr.
C. R. Sheak
G. K. Shipe
D. E. Smith
R. H. Trautz
E. P. Troy, Jr.
W. L. Warpole

9.1.4 FIRE PROTECTION ASSISTANT

A. Mount

10.0 REFERENCES

None

PROPRIETARY

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-280 TECHNICAL SUPPORT CENTER PHONE LIST

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and information to call in Technical Support Center (TSC) personnel.

2.0 RESPONSIBILITIES

2.1 The Emergency Director shall be responsible to have group members notified.

2.2 The Communicator shall call in TSC personnel.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

7.1 The procedure may be used when:

7.1.1 The Technical Support Center is to be activated.

7.1.2 Additional Technical Support Group people must be called in.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 ACTIONS

9.1.1 The Communicator shall call people from the following list until appropriate positions are filled.

9.1.2 EMERGENCY DIRECTOR (ONE)

	Home	Work
Station Superintendent G. M. Leitch	[redacted]	
Assistant Station Superintendent J. F. Franz		
Technical Engineer		

9.1.3 TECHNICAL SUPPORT GROUP PERSONNEL (FOUR)

	Home	Work
Technical Engineer P. J. Duca	[redacted]	
Performance Engineer L. [illegible]		
[illegible]		
I. [illegible] Engineer		

PROPRIETARY

G. Rainey

Home Work

Reactor Engineer
K. Hunt

- K. Kemper
- E. Callan
- J. Armstrong
- M. Gallagher
- R. Alejnikov
- J. Muntz
- R. Cyhan
- B. Mandik

9.1.4 PERSONNEL SAFETY TEAM LEADER (ONE)

Home Work

S.. Health
Physicist
R. W. Dubiel

Applied Health
Physicist
R. J. Titolo

9.1.5 FIRE and DAMAGE TEAM LEADER (ONE)

Home Work

Engineer - Maintenance
J. Cotton

G. Paptzun

9.1.6 SECURITY TEAM LEADER (1)

	Home	Work
Security Administrative Assistant P. Supplee	[redacted]	
Security Coordinator P. Therriault		
Site Captain - Operations Security (Protected Area) Acceeess Lt. Mark Berner		

9.1.7 DOSE ASSESSMENT TEAM LEADER (ONE)

	Home	Work
Health Physicist G. Murphy	[redacted]	
K. Taylor		
D. Rombold		

9.1.8 CHEMISTRY SAMPLING AND ANALYSIS TEAM LEADER (ONE)

	Home	Work
Sr. Chemist J. S. Wiley	[redacted]	
Supervisory Chemist J. Sabados		

9.1.9 COMMUNICATORS AND STATUS BOARD KEEPERS (FIVE MINIMUM)

PROPRIETARY

Communicators

	Home	Work
D. Feaster	[redacted]	
W. Winters		

B. Brown

M. Davis

J. Dolan

M. Eyre

G. Hutchison

J. Kanute

D. Kelsey

L. Marabella

K. Mastrangelo

T. Moore (Tim)

D. Shaner

T. Shea

J. Tyler

K. Walsh

R. Weidner

9.1.10 DATA DISPLAY OPERATOR (TWO)

Home Work

(ERFDS) E. Kabak

M. McCormick

D. Boston

10.0 REFERENCES

PROPRIETARY

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-291 STAFFING AUGMENTATION

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and information necessary to perform staff augmentation.

2.0 RESPONSIBILITIES

2.1 The shift clerk or other assigned person shall perform the following procedure.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure shall be implemented at an Alert, a Site Emergency or a General Emergency or at the discretion of the Emergency Director.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 ACTIONS

9.1.1 The Shift Clerk or other assigned person shall:

9.1.1.1 Ask the (Interim) Emergency Director if the TSC and EOF or the TSC only is to be activated so this information can be given to the Dose Assessment Team Leader and Communicators and what groups are to be activated for transmission to Team Leaders.

Event Classification _____

Facilities to be activated

TSC _____

TSC & EOF _____

Groups to be activated

Personnel Safety Team _____

Plant Survey _____

1st Aid/Search and rescue _____

Vehicle and Evacuee Control _____

Dosimetry, Bioassay & Respiratory Protection _____

Dose Assessment Team _____

Dose Assessment group _____

Field Survey _____

Security _____

Access Control _____

Personnel Accountability _____

Fire and Damage _____

Fire Fighting _____

Damage Repair _____

9.1.1.2 Contact in sequence the personnel listed in Section 9.1.2.

9.1.1.3 Inform each person contacted of the event classification, that they are to respond to their assigned location and what groups under them are to be activated. If the person is unable to respond, go to the next person on the list.

9.1.1.4 Attempt to contact personnel who have pagers, by that method if they are known to be "on the page", or the phone is busy or there is no answer.

9.1.1.5 Inform (Interim) Emergency Director of results including discrepancies.

9.1.2 Personnel to be contacted are:

9.1.2.1 SHIFT I&C TECHNICIAN

Communicator shall request that the TSC be activated. (Shift I&C Technician ext. [redacted])

I&C Technician _____ Time _____ By _____

_____ _____ _____

9.1.2.2 EMERGENCY DIRECTOR

The Station Superintendent or Assistant Station Superintendent is contacted by communicator and is one contact. Do not re-contact if he has been successfully reached.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Station Supt. G. M. Leitch Asst. Station Supt. J. F. Franz	[redacted]		

9.1.2.3 OPERATIONS ENGINEER

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Operations Eng. J. Doering J. Armstrong	[redacted]		

9.1.2.4 PERSONNEL SAFETY TEAM LEADER (ONE)

Communicator shall request that the Team Leader call in Group Leaders of groups to be activated (9.1.1.1 list) and that the Group Leaders call in their groups.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Senior Health Physicist R. W. Dubiel Applied HP R. Titolo	[redacted]		

9.1.2.5 DOSE ASSESSMENT TEAM LEADER (ONE)

Communicator shall request the Team Leader to call in team and the Field Survey Group Leader, and to report to the TSC or EOF as determined by Step 9.1.1.1.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Technical Support Health Physicist G. Murphy			
Sr. Physicist Corp. D. Rombold			

9.1.2.6 SHIFT MAINTENANCE SUB-FOREMAN

Extension [redacted] or page. Communicator shall request the Maintenance Sub-foreman to call three maintenance mechanics, preferably, one electrician and two machinists or fitters.

Sub-foreman	Time	By

9.1.2.7 TECHNICAL SUPPORT PERSONNEL (ONE)

Communicator shall request call in of Technical Support Group Members.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Performance Engineer L. A. Hopkins V. Cwietniewicz			
I&C Engineer G. R. Rainey			
Reactor Engineer K. W. Hunt			

[redacted]

9.1.2.8 COMMUNICATORS (ONE per facility)

Communicator shall request call in of members for the TSC or EOF as determined by Step 9.1.1.1.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Technical Support Center (TSC) Communicator D. Feaster			
Alternate W. Winters			
EOF Communicator K. Cenci			
Alternate W. Lewis			

9.1.2.9 CHEMISTRY SAMPLING and ANALYSIS TEAM LEADER (ONE)

Communicator shall request call in of Chemistry Sampling and Analysis Team Members by Group Leader.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Sr. Chemist J. S. Wiley			
Supv.-Chemist J. Sabados			

9.1.2.10 FIRE AND DAMAGE TEAM LEADER (ONE)

Communicator shall request the Team Leader to call the appropriate Group Leaders and have Group Leader call in Group Members.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Engineer Maintenance J. B. Cotton G. Paptzun	[redacted]		

9.1.2.11 SECURITY TEAM LEADER (ONE)

Communicator shall request the Team Leader to call appropriate Group Leaders and have Group Leaders call in personnel.

	Time Called	Disposition-Busy, No Ans.-Contacted	Called By
Security Administrative Assistant P. Supplee Security Coordinator O. Burwell Site Captain (Protected Area) R. Therriautt	[redacted]		

10.0 REFERENCES

10.1 NUREG 0654 Rev. 1 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants

3043076560

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-292 CHEMISTRY SAMPLING AND ANALYSIS TEAM PHONE LIST

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and information for notification of the Chemistry Sampling and Analysis Team.

2.0 RESPONSIBILITIES

2.1 The Chemistry Sampling and Analysis Team Leader shall be responsible to call a group leader.

2.2 The Chemistry Sampling and Analysis Group Leader shall be responsible to call in group members.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure can be used when the Chemistry Sampling and Analysis Team is activated or when additional personnel are needed.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 ACTIONS

9.1.1 The (Interim) Chemistry Sampling and Analysis Team Leader shall call in team leader and group leader as appropriate.

9.1.1.1 Chemistry Sampling and Analysis Team Leader

	Home	Work
J. S. Wiley J. W. Sabados T. J. Yednock	[redacted]	

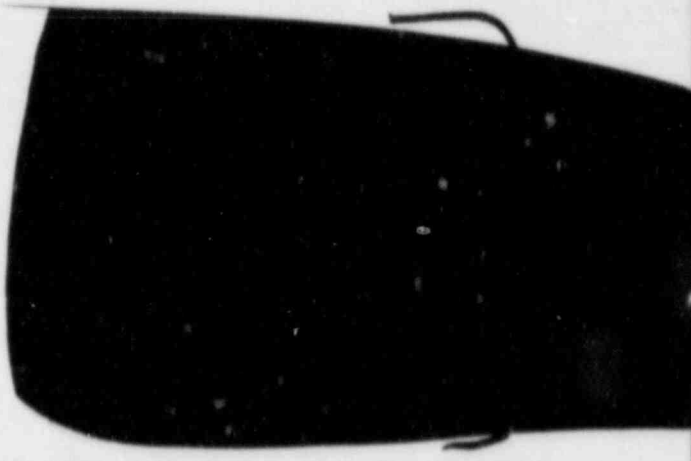
9.1.1.2 Chemistry Sampling and Analysis Group LEADER (One)

	Home	Work
D. Hahnemann J. Effinger	[redacted]	

[redacted]

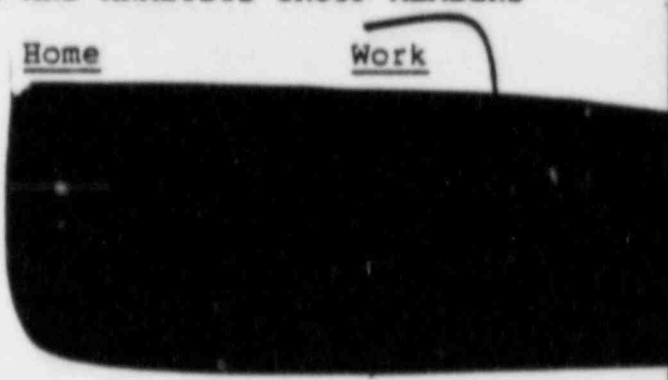
9.1.2 The Chemistry Sampling and Analysis group leader shall call in people from the following list until sufficient personnel are contacted (3 minimum).

R. Ruben
R. Duffy
N. Irwin
S. Pope
M. Pruskowski
N. Samec
L. Turner
J. Dougherty
W. Harrison
K. Lally
M. E. Paulk
R. Ulrich



9.1.2.1 CHEMISTRY SAMPLING AND ANALYSIS GROUP MEMBERS

	Home	Work
E. W. Frick		
M. Wyzalek		
M. Reller		
W. Decker		
T. Williams		
D. S. Musselman		
K. Gordon		



10.0 REFERENCES

None

3043076570

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-294 DOSE ASSESSMENT TEAM PHONE LIST

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and information to call in the Dose Assessment Team.

2.0 RESPONSIBILITIES

2.1 The Dose Assessment Team Leader shall be responsible to call in team members and field survey group leader.

2.2 The field survey group leader shall be responsible to call in group members.

3.0 APPENDICES

None

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.1 This procedure can be used when the Dose Assessment Team is to be activated or additional people are needed.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 Actions

9.1.1 The Dose Assessment Team Leader shall call people from the following list until appropriate positions are filled.

9.1.1.1 DOSE ASSESSMENT TFAM LEADER (ONE)

Name	Home Phone	Work Phone
Gary Murphy (H.P. Tech Support)		
D. M. Rombold (Physicist)		
R. Leddy		
L. Wells		

9.1.3 DOSE ASSESSMENT GROUP MEMBERS (3 MINIMUM)
9.1.3.1

Name	Home Phone	Work Phone
F. Molohon		
K. Eldridge		
M. J. McGuinn		
C. Hetrick		

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PRELIMINARY

9.1.1.3 Field Survey Group Leader (One)

Name	Home Phone	Work Phone
Steve Taylor	[redacted]	
M. Christinziano		
Robert Barclay		

9.1.2 The field survey group leader shall call people from the following list until appropriate positio are filled.

Field Survey Group Members:

A. Health Physics Personnel (4 Minimum)

Name	Home Phone	Work Phone
R. Dailey	[redacted]	
M. L. Engle		
D. Fay		
M. E. Gerry		
R. Giddings		
K. Gordon		
R. Gosnay		
J. Gruber		
R. Harcombe		
D. Hines		
J. Lightner		
B. M. Mahanes		
J. E. Muscarella		
B. G. Smith		
J. Wiecjorek		
T. Woodring		
A. Parducci		
S. Baker		

B. Drivers

Drivers (4 Minimum) Available by Calling:

Name	Home Phone	Work Phone
R. Wiegle	[redacted]	
L. Perkoski		

10.0 REFERENCES

None

[redacted]

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-317 DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS

1.0 PURPOSE

The purpose of this procedure is to provide guidelines for determining protective action recommendations to be given to the Bureau of Radiation Protection.

2.0 RESPONSIBILITIES

2.1 The Dose Assessment Team Leader or Shift Technical Advisor shall formulate protective action recommendations from dose and ground deposition projections.

2.2 The Site Emergency Coordinator, if activated, or (Interim) Emergency Director shall provide recommendations to the Bureau of Radiation Protection or directly to the counties if the state cannot be contacted.

3.0 APPENDICES

3.1 EP-317-1 Plume Exposure Pathway Protective Action Recommendations

3.2 EP-317-2 Bureau of Radiation Protection Philosophy for Protective Action Options

3.3 EP-317-3 Evacuation Time Estimates

3.4 EP-317-4 Whole Body Shielding Factors

3.5 EP-317-5 Ingestion Pathway Response Levels and Protective Actions

3.6 EP-317-6 Protective Action Recommendation under good weather conditions

3.7 EP-317-7 Protective Action Recommendations under adverse weather conditions

3.8 EP-317-8 Protective Action Recommendations Based on Plant conditions

4.0 PREREQUISITES

4.1 Dose projections or ground deposition projections from EP-316, Cumulative Population Dose Calculations for Airborne Releases are available.

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

6.1 An Alert, Site Emergency or General Emergency has been declared with an actual or potential release of radioactive gaseous material.

7.0 ACTION LEVEL

This procedure shall be implemented whenever directed by EP-103, EP-104, or EP-105.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 Actions

9.1.1 The Dose Assessment Team Leader or Shift Technical Advisor shall:

9.1.1.1 FOR PLUME EXPOSURE PATHWAY PROTECTIVE ACTION RECOMMENDATIONS

A. Obtain the information in Appendix EP-316-4 Summary Sheet.

B. Use Appendix EP-317-6 Protective Action Recommendations under good weather conditions or Appendix EP-317-7 Protective Action Recommendations under adverse weather conditions. To formulate recommendations when projected offsite doses are greater than 1 Rem whole body, 5 Rem thyroid.

C. Appendix EP-317-1 Plume Exposure Pathway Protective Action Recommendations, Appendix EP-317-2 Bureau of Radiation Protection Philosophy for Protective Action Options, Appendix EP-317-3 Evacuation Time Estimates and Appendix EP-317-4 Whole Body Shielding Factors are provided as supporting information for the flow charts.

D. Discuss and suggest protective action recommendations with the Site Emergency Coordinator, if activated, and the (Interim) Emergency Director.

9.1.1.2 FOR INGESTION EXPOSURE PATHWAY PROTECTIVE ACTION RECOMMENDATIONS

ACCIDENTS NOT REQUIRING PROTECTION AGAINST DIRECT EXPOSURE MAY STILL WARRANT CONCERN FOR THE INGESTION EXPOSURE PATHWAY THROUGH MILK.

A. Obtain projected ground deposition concentrations from EP-316 Cumulative Population Dose Calculations for Airborne Releases.

B. Compare projected deposition concentration with Appendix EP-317-5 Ingestion Pathway Response Levels and Protective Actions.

C. Discuss and suggest protective action recommendations with the Site Emergency Coordinator, if activated, and the (Interim) Emergency Director.

9.1.2 The Site Emergency Coordinator, if activated, or (Interim) Emergency Director shall:

IF AN ALERT OR SITE EMERGENCY HAS BEEN DECLARED WITHOUT PRIOR EMERGENCY CLASSIFICATION, INDICATE THAT NO PROTECTIVE ACTIONS ARE NECESSARY FOR THE IMMEDIATE NOTIFICATION IN EP-103 ALERT RESPONSE OR EP-104 SITE EMERGENCY RESPONSE.

IF A GENERAL EMERGENCY HAS BEEN DECLARED WITHOUT PRIOR EMERGENCY CLASSIFICATION AND BRP AND PEMA ARE NOT AVAILABLE, PROVIDE THE RECOMMENDATION TO SHELTER WITHIN THE 2 MILE RADIUS AND 5 MILES DOWNWIND OF THE PLANT TO THE COUNTIES BY THE NOTIFICATION CALL LIST IN EP-105 GENERAL EMERGENCY RESPONSE.

9.1.2.1 Use Appendix EP-317-8 Protective Action Recommendations Based On Plant Conditions for additional inputs in decision making.

9.1.2.2 If possible, hold a meeting with government representatives to provide background information for protective action recommendations.

9.1.2.3 Provide recommendations to the Pennsylvania Bureau of Radiation Protection.

9.2 Follow-Up

9.2.1 The Dose Assessment Team Leader shall:

9.2.1.1 Periodically re-evaluate the situation to determine if changes in suggested protective action recommendations are needed.

9.2.1.2 Periodically update the Site Emergency Coordinator or (Interim) Emergency Director.

10.0 REFERENCES

10.1 Limerick Generating Station Emergency Plan Section 6.4.1.2.C

10.2 Limerick Generating Station Evacuation Time Estimates July 1980

10.3 EP-316 Cumulative Population Dose Calculations for Airborne Releases

10.4 Pennsylvania Department of Environmental Resources Bureau of Radiation Protection for Nuclear Power Generation Stations Incidents, Section VIII

10.5 U.S. Food and Drug Administration, 21 CFR Part 1090

10.6 SAND 77-1725, Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structure

10.7 EPA-520/1-75-001 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

10.8 EP-101 Classification of Emergencies

10.9 EP-103 Alert Response

10.10 EP-104 Site Emergency Response

10.11 EP-105 General Emergency Response

APPENDIX EP-317-1
PLUME EXPOSURE PATHWAY PROTECTIVE ACTION RECOMMENDATIONS

Projected Dose (REM) to the Population	Recommended Actions(a)	Comments
Whole body <1 Thyroid <5	No planned protective actions.(b) State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole body 1 to <5 Thyroid 5 to <25	Seek shelter as a minimum. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.(c)
Whole body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access.	Seeking shelter would be an alternative if evacuation were not immediately possible.

(a) These actions are recommended for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration.

(b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable.

(c) It is intended that family units remain intact during any evacuation.

Reference: EPA-520/1-75-001

APPENDIX EP-317-2
BUREAU OF RADIATION PROTECTION
PHILOSOPHY FOR PROTECTIVE ACTION OPTIONS

The most appropriate protective action for a particular situation will depend on the magnitude of the release, duration of the release, wind speed, wind direction, time of day and transportation constraints. This discussion of options does not obligate the staff to select any one particular option. Selection of an option is a judgment dependent upon the situation.

1.0 Evacuation

This option will be considered when:

a. A core melt accident is underway, which involves or is expected to involve a loss of containment integrity by melt through or by direct release to the atmosphere; or,

b. Projected doses are expected to approach or exceed 1 Rem whole body or 5 Rem to the infant thyroid; or,

c. Release time is expected to be long (greater than 2 hours).

d. Evacuation could be well under way before plume arrival, based on wind speed and travel conditions.

e. Substantial dose savings can be made by avoiding exposure to residual radioactivity (surface deposition), and/or,

f. Evacuation appears to be the best option available.

2.0 Sheltering

This option implies that people in the potentially affected area shelter themselves in a building that can be made temporarily somewhat airtight. The structure may be one's home, a commercial building, or public building. In the general climate of the Commonwealth, any building which is reasonably winter worthy will suffice, with windows and doors tightly closed. The objective is isolation from potentially contaminated outside air. A reasonably tight buidling is adequate for 2 hours protection from inhalation hazards.

This option will be considered when:

a. Projected doses are expected to approach 1 Rem whole body or 5 Rem to the infant thyroid, but not exceed 5 Rem and 25-Rem respectively and

b. The combination of warning time, plume arrival time and release time is not long enough to effect evacuation; or,

c. Evacuation cannot be effected so as to avoid a significant fraction of expected exposure; and/or,

d. Sheltering appears to be the best option available.

3.0 Thyroid Prophylaxis

For virtually every significant accident at a nuclear power station, the release of radioiodines with the associated risk of thyroid exposure will present the greatest demand for protective action. The usefulness of certain compounds containing stable iodines as agents to block thyroidal uptake of radioiodines has been widely recognized for some time. Potassium iodide (KI) has been approved by FDA for this application.

The Department of Health is responsible for development of the Commonwealth's policy on thyroid protective drugs.

4.0 Respiratory Protection

Conventional methods of respiratory protection use half-face and full-face respirators and self-contained breathing apparatus. These methods are widely available for use by emergency workers. Their effectiveness depends not only on the type used, but also on the users understanding of correct fit and respirator limitations.

This option obviously cannot be applied to the general public.

APPENDIX EP-317-3
EVACUATION TIME ESTIMATES

SECTOR	GOOD WEATHER(hrs)	ADVERSE WEATHER(hrs)
0-2 Mile Radius		
Montgomery Co.	2	2 1/2
Chester Co.	2	2 1/2
2-5 Mile Radius		
NNW	6	7 1/2
E	6	7 1/2
S	6	7 1/2
WSW	6	7 1/2
5-10 Mile Radius		
NNW	9	11 1/4
E	9	11 1/4
S	9	11 1/4
WSW	8	10

APPENDIX EP-317-4
WHOLE BODY SHIELDING FACTORS

Structure of Location	Shielding Factor (a)
Outside	1.0
Vehicles	1.0
Wood-frame house (b) (no basement)	0.9
Basement of wood house	0.6
Masonry House (no basement)	0.6
Basement of masonry house	0.4
Large office or industrial building	0.2

(a) The ratio of the dose received inside the structure to the dose that would be received outside the structure.

(b) A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.

(c) The shielding factor depends on where the personnel are located within the building (e.g., the basement or an inside room).

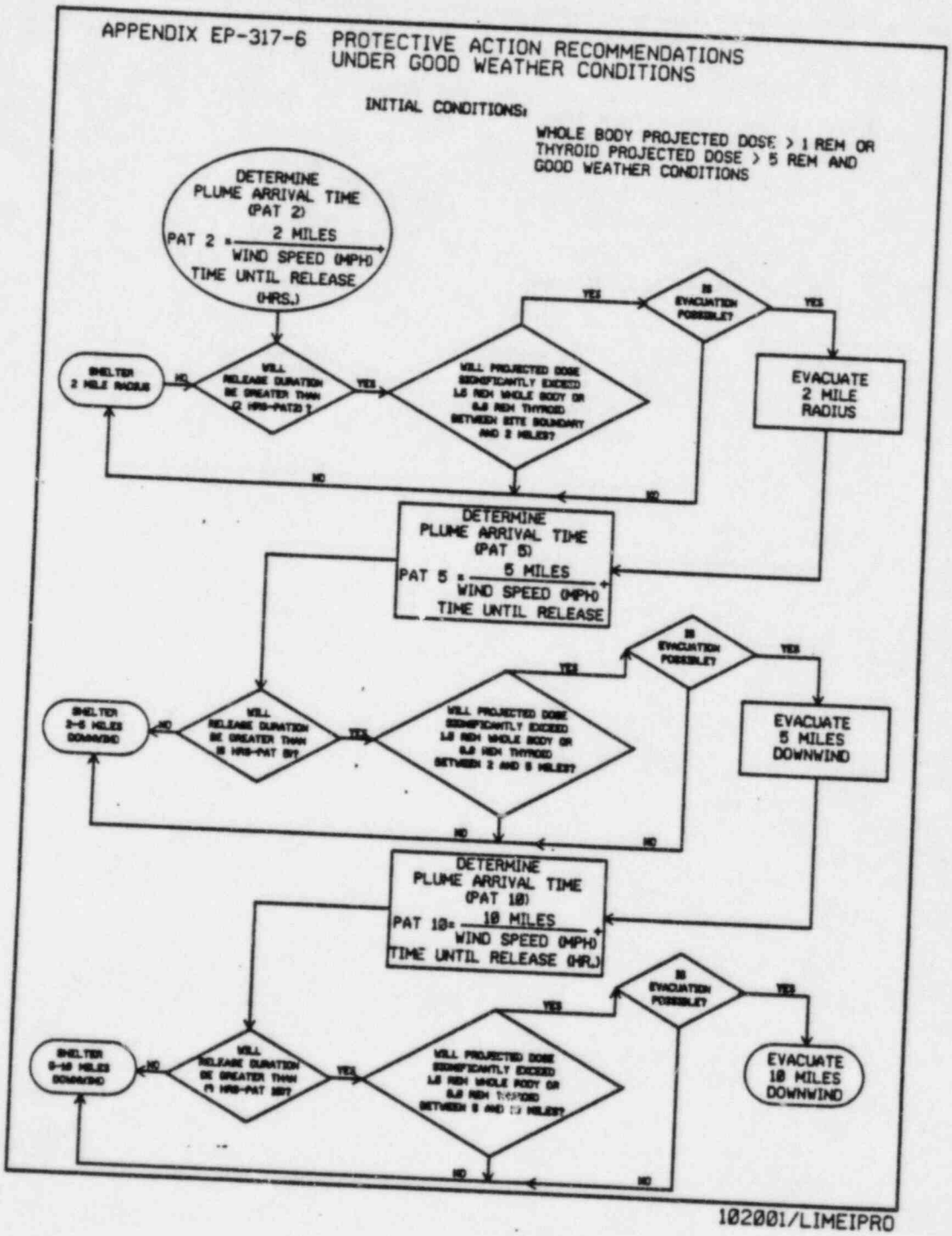
Reference: SAND 77-1725 (Unlimited Release)

APPENDIX EP-317-5
INGESTION PATHWAY RESPONSE LEVELS AND PROTECTIVE ACTIONS

Preventive PAG Response Levels		Protective Actions
Area Deposition (uCi/m^2)		For Pasture:
I-131	.13	1. Remove all lactating dairy cows and substitute uncontaminated stored feed and water.
Cs-137	3.0	For Fruits/Vegetables:
		1. Wash to remove surface contamination.
Peak Milk Activity (uCi/l)		For Milk:
I-131	0.15	1. Withold contaminated milk from market to allow for radioactive decay.
		2. Divert fluid milk to production of milk products.

Emergency PAG Response Level*		Protective Actions:
Area Deposition (uCi/m^2)		1. Isolate the contaminated food and prevent introduction to commerce.
I-131	1.3/18	2. Determine whether condemnation or other disposition is appropriate after consideration of the item in question.
Cs-137	30/50	
Peak Milk Activity (uCi/l)		
I-131	1.5/20	

* levels presented are infant/adult


APPENDIX EP-317-6 PROTECTIVE ACTION RECOMMENDATIONS UNDER GOOD WEATHER CONDITIONS
INITIAL CONDITIONS:
WHOLE BODY PROJECTED DOSE > 1 REM OR THYROID PROJECTED DOSE > 5 REM AND GOOD WEATHER CONDITIONS
DETERMINE PLUME ARRIVAL TIME (PAT 2)
PAT 2 = 2 MILES / WIND SPEED (MPH) + TIME UNTIL RELEASE (HRS.)
IS EVACUATION POSSIBLE?
YES
NO
EVACUATE 2 MILE RADIUS
SHELTER 2 MILE RADIUS
WILL RELEASE DURATION BE GREATER THAN (2 MIS-PAT2)?
WILL PROJECTED DOSE SIGNIFICANTLY EXCEED 1.5 REM WHOLE BODY OR 7.5 REM THYROID BETWEEN SITE BOUNDARY AND 2 MILES?
DETERMINE PLUME ARRIVAL TIME (PAT 5)
PAT 5 = 5 MILES / WIND SPEED (MPH) + TIME UNTIL RELEASE
EVACUATE 5 MILES DOWNWIND
SHELTER 2-5 MILES DOWNWIND
WILL RELEASE DURATION BE GREATER THAN (5 MIS-PAT 5)?
WILL PROJECTED DOSE SIGNIFICANTLY EXCEED 1.5 REM WHOLE BODY OR 7.5 REM THYROID BETWEEN 2 AND 5 MILES?
DETERMINE PLUME ARRIVAL TIME (PAT 10)
PAT 10 = 10 MILES / WIND SPEED (MPH) + TIME UNTIL RELEASE (HRS.)
EVACUATE 10 MILES DOWNWIND
SHELTER 5-10 MILES DOWNWIND
WILL RELEASE DURATION BE GREATER THAN (10 MIS-PAT 10)?
WILL PROJECTED DOSE SIGNIFICANTLY EXCEED 1.5 REM WHOLE BODY OR 7.5 REM THYROID BETWEEN 5 AND 10 MILES?
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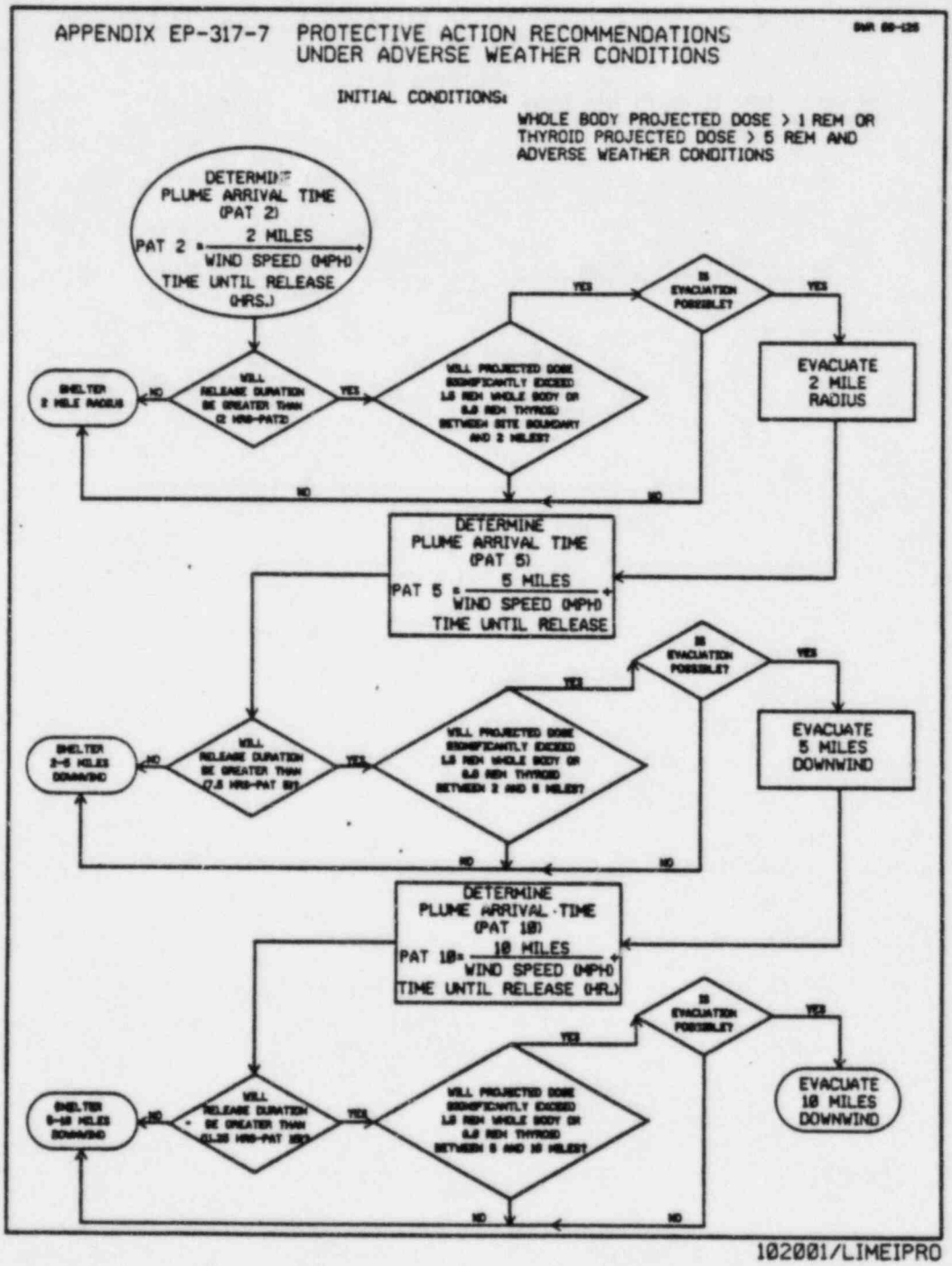

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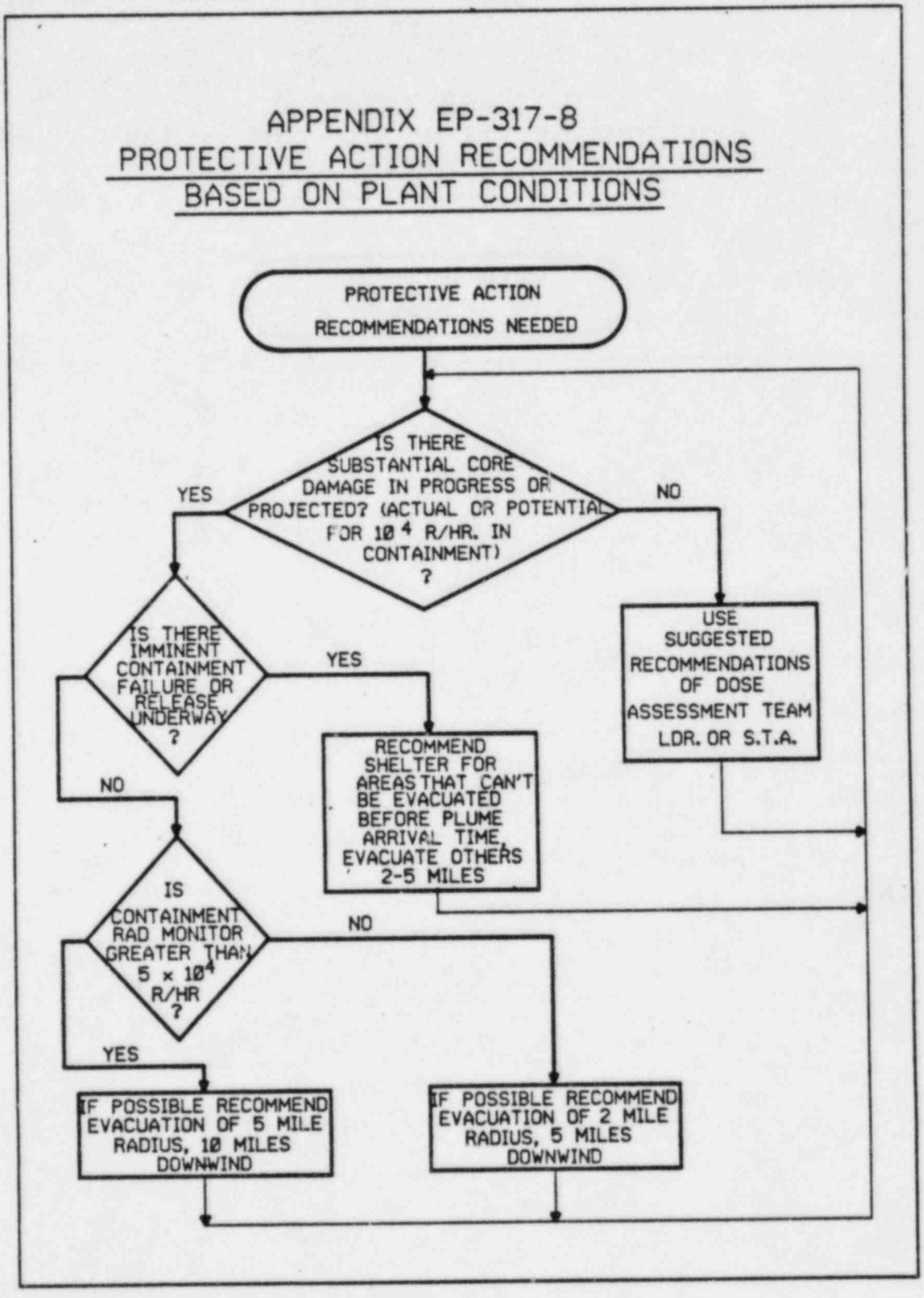
APPENDIX EP-317-8
PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS



PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-325 USE OF CONTAINMENT DOSE RATES TO ESTIMATE RELEASE SOURCE TERM

1.0 PURPOSE

The purpose of this procedure is to estimate the activity in the containment following a LOCA, and then to determine release rates into the environment via leakage or purging.

2.0 RESPONSIBILITIES

None

3.0 APPENDICES

3.1 EP-325-1 Percent of Fuel Inventory Airborne in the Containment Vs. Approximate Source and Damage Estimates

3.2 EP-325-2 Primary Containment Source Term Leakage

3.3 EP-325-3 Release Rate Due to Drywell Purge Calculation

4.0 PREREQUISITES

None

5.0 SPECIAL EQUIPMENT

None

6.0 SYMPTOMS

None

7.0 ACTION LEVEL

This procedure shall be implemented by the Dose Assessment Team when containment activity and release rates are to be estimated following an accident and a containment atmosphere sample is not available.

8.0 PRECAUTIONS

None

9.0 PROCEDURE

9.1 Determine the estimated fuel damage by the following procedure:

9.1.1 Obtain the Containment Post Loca Monitor readings from RR-26-191A, B, C, D (291A, B, C, D) on Panel 10C600(20C600) in the main control room or from the Radiation Meteorological Monitoring System (RMMS), or the Containment Area Radiation Monitor reading from Channel 14 on the ARM recorder in the main control room.

9.1.2 If the above instrumentation is not available, obtain a portable survey meter reading approximately four inches above the floor at the drywell equipment hatch 253 elevation area 11, and perform the following calculation to estimate containment dose rate.

$$\text{Containment Dose Rate (R/hR)} = \frac{\text{Survey (mR/hr) Reading} \times A}{1000}$$

A(Hatch shield door closed) = 1.9P6

A(Hatch shield door open) = 50

9.1.3 Obtain the time after shutdown in hours and then use Appendix EP-325-1 Percent of Fuel Inventory Airborne in the Containment vs. Approximate Source and Damage Estimates to determine the percent of fuel inventory released to the containment.

9.2 To determine leakage from primary containment to the reactor enclosure then through SGTS:

9.2.1 Multiply the estimated fraction of fuel inventory released to the containment by the release rate of radioiodines and noble gases for the appropriate time after shutdown in Appendix EP-325-2 Primary Containment Source Term Leakage.

9.2.2 Use the above estimated release rate for EP-316 Cumulative Population Dose Calculations for Airborne Releases or RMMS Computer to determine offsite projected doses.

9.3 To determine release rate due to drywell purging:

9.3.1 Enter the necessary information on Appendix EP-325-3 Release Rate Due to Drywell Purge Calculation and complete the calculation in that Appendix.

9.3.2 Use the above estimated release rate for EP-316 Cumulative Population Dose Calculations for Airborne Releases or RMMS Computer to determine offsite projected doses.

10.0 REFERENCES

10.1 Limerick Generating Station Emergency Plan, Section 6.2.3.1 Containment Monitors

10.2 BLP-28640 Containment Radiation Monitors Post Loca Dose Rates vs. Time Curves

10.3 FSAR Table 15.6-14 Loss of Coolant Accident: Activity Airborne in Primary Containment

10.4 EP-316 Cumulative Population Dose Calculations For Airborne Releases

10.5 Letter E. C. Kistner to G. M. Leitch dated September 17, 1984 on Emergency Preparedness Action Item 50-352/ 84-18-49.8

APPENDIX EP-325-1

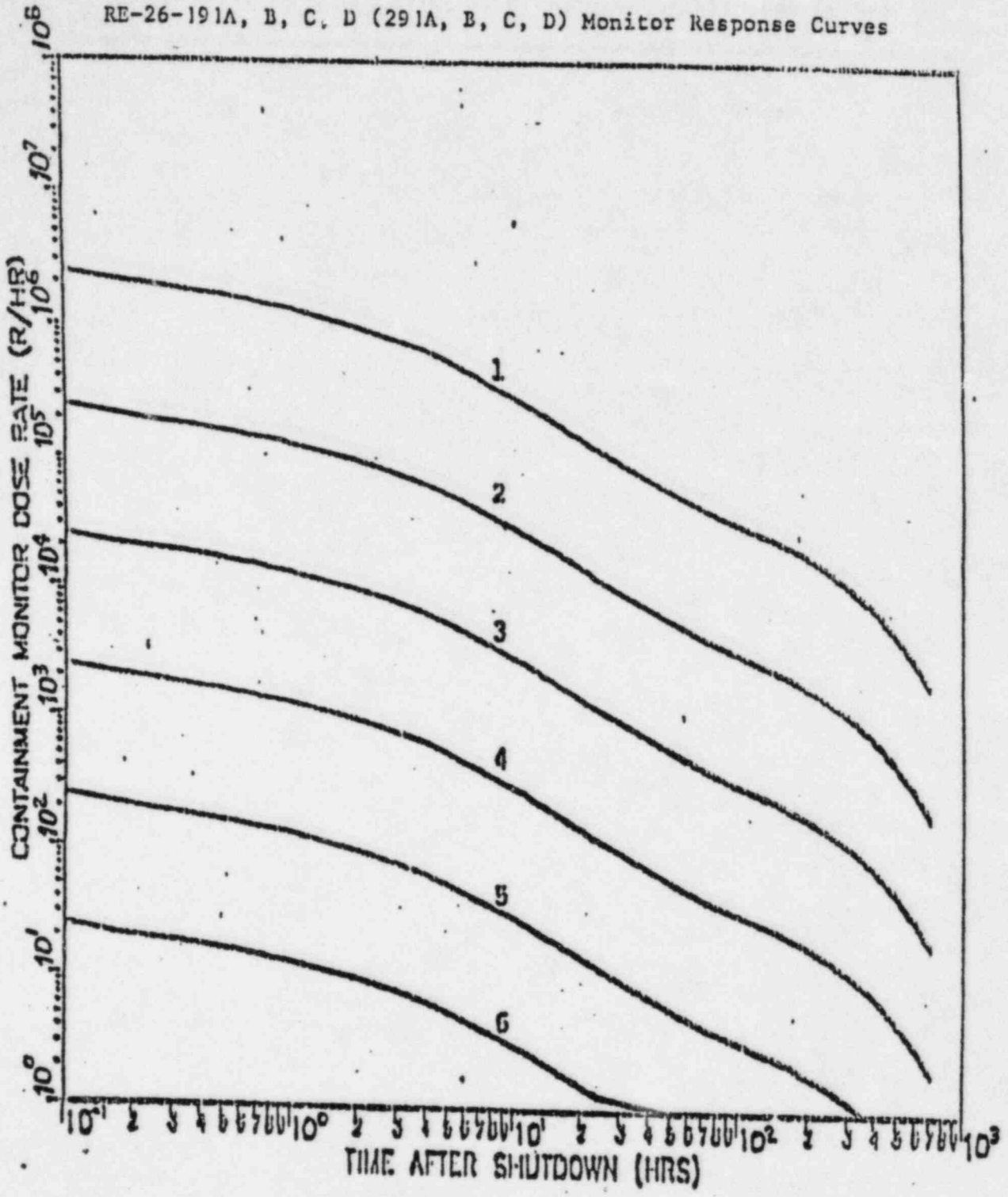
PERCENT OF FUEL INVENTORY AIRBORNE IN THE CONTAINMENT VS. APPROXIMATE SOURCE AND DAMAGE ESTIMATE

Curve No.	% Fuel* Inventory Released	Approximate Source and Damage Estimate
1	100.	100% TID-14844, 100% fuel damage, potential core melt.
	50.	50% TID noble gases, TMI source
2	10.	10% TID, 100% NRC gas 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, 1% 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	1.0N3	.01% NRC gap, clad failure of a few rods.
	1.0N4	100% coolant release with spiking.
7	5.0N6	100% coolant inventory release.
	1.0N6	Upper range of normal airborne noble gas activity in containment.

*100% Fuel Inventory = 100% Noble Gases + 25% Iodines + 1% Particulates

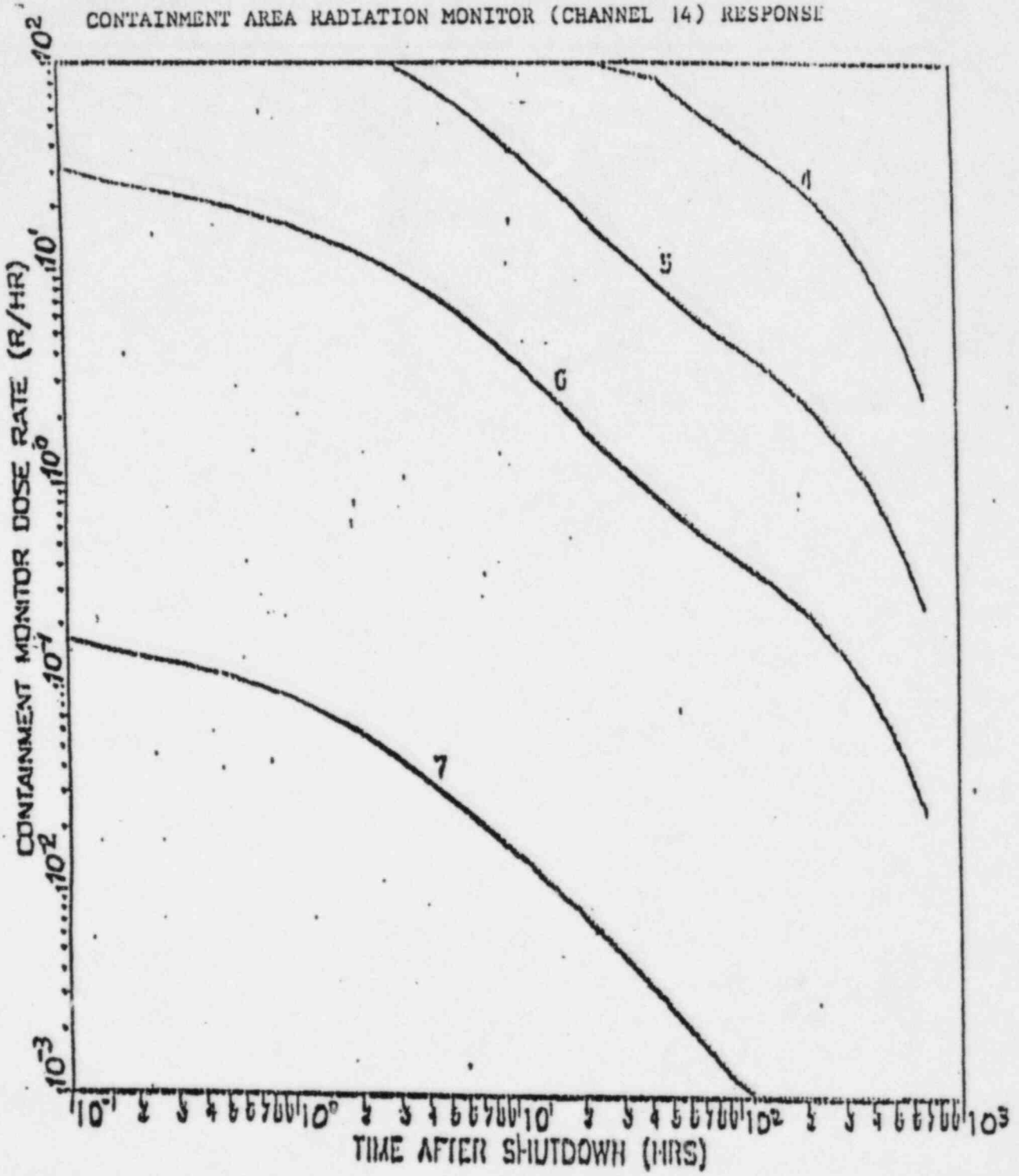
TID = Total Isotopic Distribution

RE-26-191A, B, C, D (291A, B, C, D) Monitor Response Curves



1 - 100% TID
2 - 10% TID
3 - 1.0% TID
4 - 0.1% TID
5 - 0.01% TID
6 - 0.001% TID

CONTAINMENT AREA RADIATION MONITOR (CHANNEL 14) RESPONSE



1 = 0.1% TID
5 = 0.01% TID
6 = 0.001% TID
7 = 100% REACTOR COOLANT

APPENDIX EP-325-2
PRIMARY CONTAINMENT SOURCE TERM LEAKAGE

	Time After Shutdown				
uCi/s Release Rate of Radioiodines	2 hrs	8 hrs	1 day	4 days	30 days
	150.5	93.6	52.4	19.5	1.5
uCi/s Release Rate of Noble Gases	1.16P6	2.86P6	4.67P6	5.71P6	1.91P5

$$\text{Release Rate Radioiodines}\left(\frac{uCi}{s}\right) \times \text{Fuel inventory Fraction} = \text{Release Rates Radioiodines}\left(\frac{uCi}{s}\right)$$

$$\text{Release Rate Noble Gas}\left(\frac{uCi}{s}\right) \times \text{Fuel inventory Fraction} = \text{Release Rates Noble Gas}\left(\frac{uCi}{s}\right)$$

Assumptions:

1) Primary Containment Leakage is .5% per day
2) Perfect mixing in primary and secondary containment
3) Reactor enclosure recirculation fans on at 60,000 cfm
4) Reactor enclosure recirculation filters 95% efficient for iodine removal
5) Standby gas treatment system fans on at 625 cfm
6) Standby gas treatment system filters 99% efficient for iodine removal
7) Secondary containment free volume is 1,800,000 cubic feet
8) Loss of coolant accident drywell source term
9) No drywell purging

APPENDIX EP-325-3
RELEASE RATE DUE TO DRYWELL PURGE CALCULATION

	Time After Shutdown				
Curies Radioiodines in drywell	2 hrs 2.5P7	8 hrs 1.5P7	1 day 8.4P6	4 days 3.1P6	30 days 2.4P5
Curies Noble Gas in drywell	4.9P8	3.2P8	2.1P8	1.1P8	3.3P6

$$\text{Fuel Failure} \times \text{Fraction} \times \left[\text{Curies In Drywell At Time After Shutdown}\right] \times e^{-(1.53N4 \times \text{Purge Flow Rate (cfm)} \times \text{hours of Purge})} \times \frac{\text{Purge Flow Rate (cfm)}}{\text{Reduction* Factor}} \times 4.26N2 = \text{Release Rate } \frac{uCi}{s}$$

*Reduction Factor
Iodine = 100
Noble Gases = 1.0

$$\_\_\_\_\_ \times \_\_\_\_\_ \times e^{\_\_\_\_\_} \times \_\_\_\_\_ \times 4.26N2 = \_\_\_\_\_$$

Assumptions:

1) Perfect Mixing in primary containment

2) Primary Containment volume is 391,250 cubic feet

3) Standby gas treatment filters 99% efficient for iodine removal

4) Loss of coolant accident drywell source term