

PHILADELPHIA ELECTRIC COMPANY

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SHIELDS L. DALTROFF  
VICE PRESIDENT  
ELECTRIC PRODUCTION

(215) 841-5001

March 16, 1984

Docket Nos. 50-352  
50-353

Mr. A. Schwencer, Chief  
Licensing Branch #2  
Division of Licensing  
US Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: Limerick Generating Station Units 1 & 2  
Request for Information from NRC  
Emergency Preparedness Licensing Branch (EPLB)

- Reference:
- 1) March 6, 1984, Telecon between  
R. E. Martin, NRC and J. T. Robb, PECO
  - 2) March 8, 1984, Telecon between  
R. E. Martin (NRC PM), J. Sears (NRC/EPLB),  
and H. D. Honan, R. H. Logue,  
W. J. Knapp & R. Hamilton (PECO)

Dear Mr. Schwencer:

Enclosed are Philadelphia Electric Company's responses to requests for information from Mr. John Sears, NRC/EPLB, as conveyed to us in the reference (1) telecon and further specified in the reference (2) telecon. Where the request for information was not contained in the form of a question, we have adapted Mr. Sears' statement to an appropriate question format. Therefore, we believe the information provided is fully responsive to each question.

Where responses include draft changes to the Limerick Emergency Plan, such changes will be incorporated into the plan exactly as they appear in the enclosure in the next revision.

Very truly yours,

Enclosure

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PDR ADOCK 05000352  
F PDR

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11

Add: John Sears

cc: Judge Lawrence Brenner  
Judge Peter A. Morris  
Judge Richard P. Cole  
Troy B. Conner, Jr., Esq.  
Ann P. Hodgdon, Esq.  
Mr. Frank R. Romano  
Mr. Robert L. Anthony  
Mr. Marvin I. Lewis  
Charles W. Elliot, Esq.  
Zori G. Perkin, Esq.  
Mr. Thomas Gerusky  
Director, Penna. Emergency  
Management Agency  
Mr. Steven P. Bertley  
Angus Love, Esq.  
Mr. Joseph H. White, III  
David Werson, Esq.  
Robert J. Sugarman, Esq.  
Spence W. Perry, Esq.  
Jay M. Gutierrez, Esq.  
Atomic Safety & Licensing  
Appeal Board  
Atomic Safety & Licensing  
Board Panel  
Docket & Service Section  
Martha W. Bush, Esq.  
James Wiggins  
Phyllis Zitzer  
Timothy R. S. Campbell

## QUESTIONS 1

Provide additional information relating to emergency action levels (specifically containment radiation levels).

## RESPONSE

The Limerick EAL's for containment rad monitors were originally based on the values applied at Peach Bottom. The relationships between the containment rad monitors and percent fuel damage (see EP-325) are different for Limerick and Peach Bottom. For the same R/hr instrument reading the percent fuel damage at Limerick is greater. The Limerick EAL's have been lowered as shown in the attached draft revisions to Table 4-2.

For the General Emergency an EAL of  $10^5$  R/hr will be used; for Site,  $5 \times 10^4$  R/hr; and for Alert,  $10^4$  R/hr. Based on the EP-325 curves and EP-325-1 table, we believe the  $10^5$  R/hr satisfies the IEN 83-28 guidance relating a General Emergency to about 20% fuel damage.

March 16, 1984

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## REASON

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- (1) The classification of events is included in the training of those responsible for emergency direction to ensure a conservative approach in classifying other events as well as in analyzing events to determine potential for the situation to become worse.
- (2) PEMA notifies BRP. BRP contacts the plant for a technical status report. Counties notify county and municipal officials. BRP advises PEMA.
- (3) Actions for these events are prescribed in procedures, Tech Spec's, Alarm Response Cards, or a combination thereof.
- (4) Emergency classes and events are based upon NUREG-0654, REVISION 1.
- (5) Same as Note 2. Also, municipal, County, and State Emergency Operations Centers are activated.
- (6) Same as Note 5. Also, resources needed to support evacuation are activated.
- (7) Law enforcement agencies respond in accordance with security plan and procedures.

QUESTION 2

EP-317 should be provided to NRC.

RESPONSE

EP-317 was provided to NRC in December 1983.

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QUESTIONS 3 & 4

Describe siren system actuation and notification of public within 15 minutes.

RESPONSE

Per EP-105, notifications are made to the off-site authorities upon declaration of a General Emergency. This notification includes recommended protective actions. The off-site agencies then operate in conformance with Annex E, the Pennsylvania Emergency Management Agency-Disaster Operations Plan, to provide protective action recommendations to the Public. Annex E, Appendix 8, provides the concept of operations used by the Commonwealth for Public Alert/Notification. This concept includes determination by PEMA that the sirens should be sounded, coordination with counties to time sounding, activation of system by counties, and EBS broadcast activation. (See attached).

County Radiological Emergency Response Plan will address activation of the siren system in their next revision.

March 16, 1984

## APPENDIX 8

### PUBLIC ALERT/NOTIFICATION

#### I. REFERENCE

Commonwealth of Pennsylvania Emergency Broadcast System Plan,  
January 1981.

#### II. DEFINITIONS

- A. Alert - Gaining the public's attention primarily by means of a siren system supplemented as necessary by a route alert system utilizing loudspeakers and door-to-door contact.
- B. Notification - Broadcasting of an appropriate message over the Emergency Broadcast System (EBS) immediately after the sirens have been sounded.
- C. Route Alerting - This is a supplement to the siren system and is implemented, as necessary, in the event of siren failure or to alert persons or areas which may not be within the sound of the sirens. Route alerting is a municipal responsibility and is to be accomplished by pre-designated route alert teams travelling in vehicles along preassigned routes delivering the following message: "There is an emergency at the (fixed nuclear facility); please tune to your Emergency Broadcast Station."
- D. Sirens or siren system - Refers to the sirens especially installed in the plume exposure pathway EPZ (approximate ten mile radius around each nuclear power plant) for the specific purpose of gaining the attention of the people during an incident at the plant.
- E. Siren signal - A three to five minute steady blast that alerts the public to turn on a radio or television and listen to their EBS station.

#### III. PURPOSE

To establish the alert/notification system that will be implemented in response to an incident at a nuclear power plant.

#### IV. SITUATION

- A. PEMA is the lead state agency for the overall coordination of alert/notification in response to an incident.
- B. The alert siren system will be activated from the risk county emergency operations center.

## V. CONCEPT OF OPERATIONS

- A. The Bureau of Radiation Protection (BRP) provides recommendations to PEMA. PEMA will determine the necessity for activating the alert/notification system.
- B. At the direction of PEMA, sirens may be sounded: (a) when there is significant information that will reassure the public of their safety; (b) when the public is to be informed of a plant status that may lead them to implement specific actions on their own; or (c) when specific actions (to include protective actions) are to be taken by the public.
- C. PEMA will coordinate with the risk counties and involved contiguous states regarding the specific protective action, the specific times for the sounding of sirens and activation of the EBS system, and the notification message to be used.
- D. At the specific time coordinated by PEMA, each risk county will: activate the sirens; ensure that municipalities implement route alerting, if necessary; broadcast the notification message over the EBS.
- E. EBS stations commence broadcasts immediately after sirens are sounded.
- F. Immediately upon activation of the public alert/notification system, PEMA will notify the National Weather Service to broadcast a public notification message via the National Oceanic and Atmospheric Administration (NOAA) Weather Radio Station(s) for the affected area.
- G. Subsequent to the activation of the alert/notification system, PEMA will coordinate the dissemination of follow-up and continuing emergency public information as detailed in Appendix 15, "Public Education and Information."

## VI. SYSTEM DESIGN OBJECTIVES AND TESTING

- A. The minimum design objectives for coverage by the alert/notification systems are:
  - 1. Capability for providing both an alert signal (sirens) and an informational or instructional message (EBS announcement) to the population on an area-wide basis throughout the plume exposure pathway EPZ within 15 minutes.
  - 2. The initial alert/notification system will assure direct coverage of essentially 100% of the population within five miles of the site.
  - 3. Special arrangements will be made to alert the populations within the plume exposure pathway EPZ who may not have received the initial alert.

8. The minimum testing requirements for the alert/notification systems are:
1. The county siren system for the plume exposure pathway EPZ for each fixed nuclear facility will be tested as follows:
    - a. A silent test will be conducted every two weeks with appropriate log entry.
    - b. A growl test will be conducted quarterly and when preventive maintenance is performed.
    - c. A complete cycle test of the alert signal will be conducted annually and in conjunction with the annual full-scale exercise, to include broadcast of a test message over the county EBS station.
  2. Each risk county will provide PEMA with an annual statement certifying that the silent and growl tests were performed.

ATTACHMENTS:

NOAA Broadcast Messages

- A. Three Mile Island Nuclear Station
- B. Susquehanna Steam Electric Station
- C. Peach Bottom Atomic Power Station (PA)
- D. Peach Bottom Atomic Power Station (MD)
- E. Beaver Valley Power Station
- F. Limerick Generating Station



QUESTION 5

Is it possible for personnel listed in Table I-1 to arrive at LGS within the designated times as stated in NUREG-0654.

RESPONSE

Table I-1 is being reviewed. Augmentation personnel are being surveyed to ascertain transit times. This information will be provided at a later date.

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QUESTIONS 6 & 8

How are emergency response personnel notified by Shift Supervision?

RESPONSE

Notification to emergency response personnel is performed primarily by telephone thru a fan-out system. The advantages of this system are simultaneous message delivery, freeing of major personnel to accomplish other duties, verification of contact and response, transfer of vital information to response personnel.

Beepers are provided as a backup contact method. Past experience at Philadelphia Electric and a review of other utility practices, has indicated that beepers are insufficient alone. Personnel must call back to verify notification and response, thereby busying telephone lines and personnel answering phones. Incoming personnel are better prepared if informed of the situation at hand. If the information is to get to them, it must come from the plant, thus to obtain information before arriving, they tie up vital personnel by calling back to the station. To use the fan-out to provide information is more efficient.

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QUESTION 7

Provide a draft of public information brochure.

RESPONSE

The Pennsylvania Emergency Management Agency is presently drafting the LGS brochure. By agreement with PEEMA, PECO distributes this brochure when made available by PEEMA for distribution. A copy of the PBAPS brochure (draft) is attached here for reference. Format and wording are consistent with PEEMA's proposed LGS draft.

March 16, 1984

# **PEACH BOTTOM ATOMIC POWER STATION**

## **EMERGENCY INFORMATION FOR CHESTER, LANCASTER & YORK COUNTIES**

**Chester County**  
Department of Emergency Services  
Hazlett Building 14 East Biddle Street  
West Chester, Pennsylvania 19380

**Lancaster County**  
Emergency Management Agency  
Court House  
Lancaster, Pennsylvania 17604

**York County**  
Emergency Management Agency  
Court House  
York, Pennsylvania 17401

# Important Emergency Information

For All or Part of the Following Communities

## Lancaster County

Drumore Twp.  
East Drumore Twp.\*  
Fulton Twp.  
Little Britain Twp.\*

Martic Twp.\*  
Providence Twp.\*  
Quarryville Borough\*\*

## Chester County

West Nottingham Twp.\*

## York County

Delta Borough  
Fawn Grove Borough\*  
Fawn Twp.\*

Lower Chanceford Twp.\*  
Peach Bottom Twp.

\*Partially located in potential evacuation area.  
\*\*Located outside the emergency planning zone.

*This information is important. Do not discard. Keep in a handy place, such as your phone book.*

Dear Resident:

The following important information and specific instructions explain what you may be asked to do should a serious accident occur at the Peach Bottom Atomic Power Station.

The protective actions described represent specific procedures developed by, and coordinated through, your state, county and municipal governments. Each level of government has prepared detailed plans to ensure a safe and coordinated public response to an emergency. It is important that you respond quickly but calmly when notified that protective actions are to be taken.

**THIS INFORMATION IS IMPORTANT.** Please read the entire section. We recommend that you underline or circle the directions for your municipality under "Where to Go" and refer to the map for the routes that will be used. This information should also be reviewed with the members of your family.

County Board of Commissioners

sounded over the siren system that has been installed within an approximate ten-mile radius of the Peach Bottom Atomic Power Station. **This signal is a steady three to five minute signal — not a wailing or warbling signal.** If the Alert Signal is sounded in your community, tune your radio or TV to one of the County Emergency Broadcast Stations. A message will be broadcast advising you what action should be taken. The sounding of the sirens will be monitored by municipal officials. Should a siren fail to activate, residents will be alerted by municipal police and firefighters using mobile public address systems or door-to-door notification.

**Don't use the telephone to try to get emergency information.** That seldom will bring results and could tie up lines urgently needed for emergency operations aimed at your protection.

### LANCASTER COUNTY EMERGENCY BROADCAST SYSTEMS

AM	FM	TV
WPDC 1600	WKRZ 106.7	WGAL CH 8
WGSA 1310	WIOV 105.1	WLYH CH 15
WLPA 1490	WDAC 94.5	
WLAN 1390	WFNM 88.7	
	WNCE 101.3	
	WLAN 96.9	
	WIXQ 91.7	
	WPTG 90.3	

### YORK COUNTY EMERGENCY BROADCAST SYSTEM

AM	FM	TV
WHVR 1280	WGCB 96.1	WPMT CH 43
WGCB 1440	WHTF 92.7	WGCB CH 49
WNOW 1250	WQXA 105.7	
WSBA 910	WSBA 103.5	
WOYK 1350	WYCR 98.5	
	WVYC 88.1	

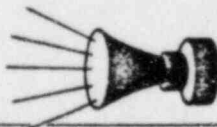
### CHESTER COUNTY EMERGENCY BROADCAST SYSTEM

AM	FM
WCOJ 1420	WLIU 88.7

## EMERGENCY PLANS

State, county and municipal emergency plans have been developed and exercised for response to an accident at the Peach Bottom Atomic Power Station. The plans were designed to coordinate and support emergency actions that may be necessary should an accident occur.

## How Will You Learn Of A Nuclear Incident?



If there is significant information that could affect your safety, or if protective actions are required to protect your health and safety, the standard "Alert Signal" will be

If you have a neighbor who is hard of hearing or visually handicapped, please check to ensure that this neighbor has received the alert and understands what to do.

This emergency information was developed by each county emergency management agency with the support of the Pennsylvania Emergency Management Agency in accordance with state law and federal regulations. This important information was placed in the telephone directory by the Philadelphia Electric Company, in cooperation with your county government.



## If You Are Told To Take Shelter



Should you be directed to take shelter (remain indoors), there will be several things you need to do:

- Close all outside doors and windows. This will help to keep out any radioactive materials which may be outdoors.
- Turn off air intakes such as fans and air conditioners.
- If you have come in from outside, wash your face and hands, particularly before you handle or eat any food. Preferably, take a shower and wash any clothes you were wearing while outside.
- Take precautions with food. Immediately cover up or put in your refrigerator any "open" foods not in covered containers. This will keep any radioactive materials which might seep into the house from contaminating foodstuffs. While anything in cans, bottles or other sealed containers will be safe to eat or drink, containers should be thoroughly washed before opening.
- Keep pets inside, and to the extent possible shelter farm animals.
- Keep your radio or TV turned on and listen for further emergency instructions.
- Don't use the telephone -- leave lines open for emergency communications.
- Persons traveling within the area in motor vehicles should roll up windows and close air vents.
- Those not at home should take the best available shelter.

Stay indoors until you receive official notice that it is safe to go out. Special arrangements will be made by state, county and municipal officials to take care of school children and hospital patients.

### Farm Animals

Farmers affected by a Take Shelter or Evacuation advisory should shelter their animals and contact their county USDA agricultural agent for further instructions regarding protection of livestock and foodstuffs.

## EVACUATION INFORMATION

If it is necessary to evacuate an area, you will be informed by an announcement on your EBS Station. The message will include any special instructions which might be called for by the particular situation.

Special arrangements will be made to take care of the sick and the disabled.

## If You Are Told To Evacuate



If you are advised to evacuate, follow instructions promptly and carefully. The map identifies main evacuation routes. Also see the "Where To Go" section in this brochure which describes, by municipality, where you should go for temporary accommodations and the highways to use.

School students will be relocated to identified host schools. See the "School Section" in this brochure for specific information.

When instructed to leave, secure your home as you would for a three-day trip.



## What to Take With You

You should plan to spend a minimum of three days away from home. Bring only essential items and avoid excess baggage. Take only what you need and then in small quantities.

Suggested items to take:

- Clothing appropriate for the season
- Sleeping bags or blankets
- Prescription drugs
- Personal care items
- Baby supplies

For sanitary reasons, pets will not be allowed inside mass care centers. You are responsible for their care.

## If You Need Transportation



If you are instructed to evacuate and you do not have transportation, attempt to obtain a ride with neighbors, a friend or a relative who lives nearby.

If this is not possible, transportation can be arranged by calling your municipal Emergency Management Agency. For telephone numbers see the "Where To Go" section in this brochure.

## SCHOOL INFORMATION



Parents of children attending schools within the emergency planning zone are urged NOT to call or go to the schools when protective action recommendations, such as sheltering or evacuation, have been issued. This would only add confusion and could hinder school authorities from the special provisions that have been made to protect your children.

If school is in session at the time evacuation is recommended, children attending schools located within the emergency planning zone will be transported by bus to designated host schools outside the area. They will remain there under school supervision until picked up by parents or guardians. These Student Pick-Up Points have been planned to coincide with main evacuation routes.

Students whose homes are inside but who attend school outside the emergency planning zone will not be sent home if an evacuation is advised. They will remain at the school they attend under school supervision until picked up by parents or guardians.

Specific information concerning Student Pick-Up Points will be provided to parents by school officials. If your child's school is subject to evacuation and you are not aware of the designated pick-up point, contact the school principal or school district superintendent and request this important information now. Don't wait!



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## CHESTER COUNTY — Where To Go

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### Example

#### Municipality

**Routes** (Evacuation routes controlled by police for efficient movement out of your area. Once outside the 10-mile Emergency Planning Zone, use appropriate routes to your destination. If you need a temporary place to stay, continue on the designated Evacuation Route to the identified Reception Center.)

**Reception Center** (Report to the identified Reception Center if you need a temporary place to stay. At the Reception Center you will be given directions to a Red Cross Mass Care Center nearby.)

**Transportation Assistance** (Emergency telephone numbers for those in need of transportation assistance only.)

#### West Nottingham Township

Local routes to Route 1 North to PA 896

South to PA 131 South to:

Lincoln University

(215) 932-4072

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## LANCASTER COUNTY — Where To Go

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#### Martic Township

Take local Routes to Route 324 East to Long Lane East to Route 222 South to Hands Herr Road to:

Willow Street Vo-Tech School in Willow Street

(717) 284-2167

#### Quarryville Borough

Take Route 222 North to Penn Grant Road West to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 786-2898

#### Providence Township

Take local Routes to Route 272 North to Penn Grant Road East to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 786-7596

#### Fulton Township

Take local Routes to Route 272 North to Penn Grant Road East to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 548-3514

#### Drumore Township

Take local Routes to Route 272 North to Penn Grant Road East to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 284-2948

#### Little Britain Township

Take Route 222 North to Penn Grant Road West to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 529-2323

#### East Drumore Township

Take Route 222 North to Penn Grant Road West to Sandstone Road North to:

Willow Street Vo-Tech School in Willow Street

(717) 786-4544

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## YORK COUNTY — Where To Go

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#### Delta Borough

Take Main St. south to Maryland Route 136 West to PA Route 624 North to PA Route 851 West to PA Route 616 North to:

Susquehannock High School in Glen Rock

(717) 456-7133

#### Fawn Grove Borough

Take Route 851 West to Route 616 North to:

Susquehannock High School in Glen Rock

(717) 382-4432

#### Fawn Township

Take local Routes to Route 851 West to Route 616 North to:

Susquehannock High School in Glen Rock

(717) 382-4432

#### Lower Chanceford Township

Take local Routes to Route 74 North to: Red Lion Senior High School in Red Lion

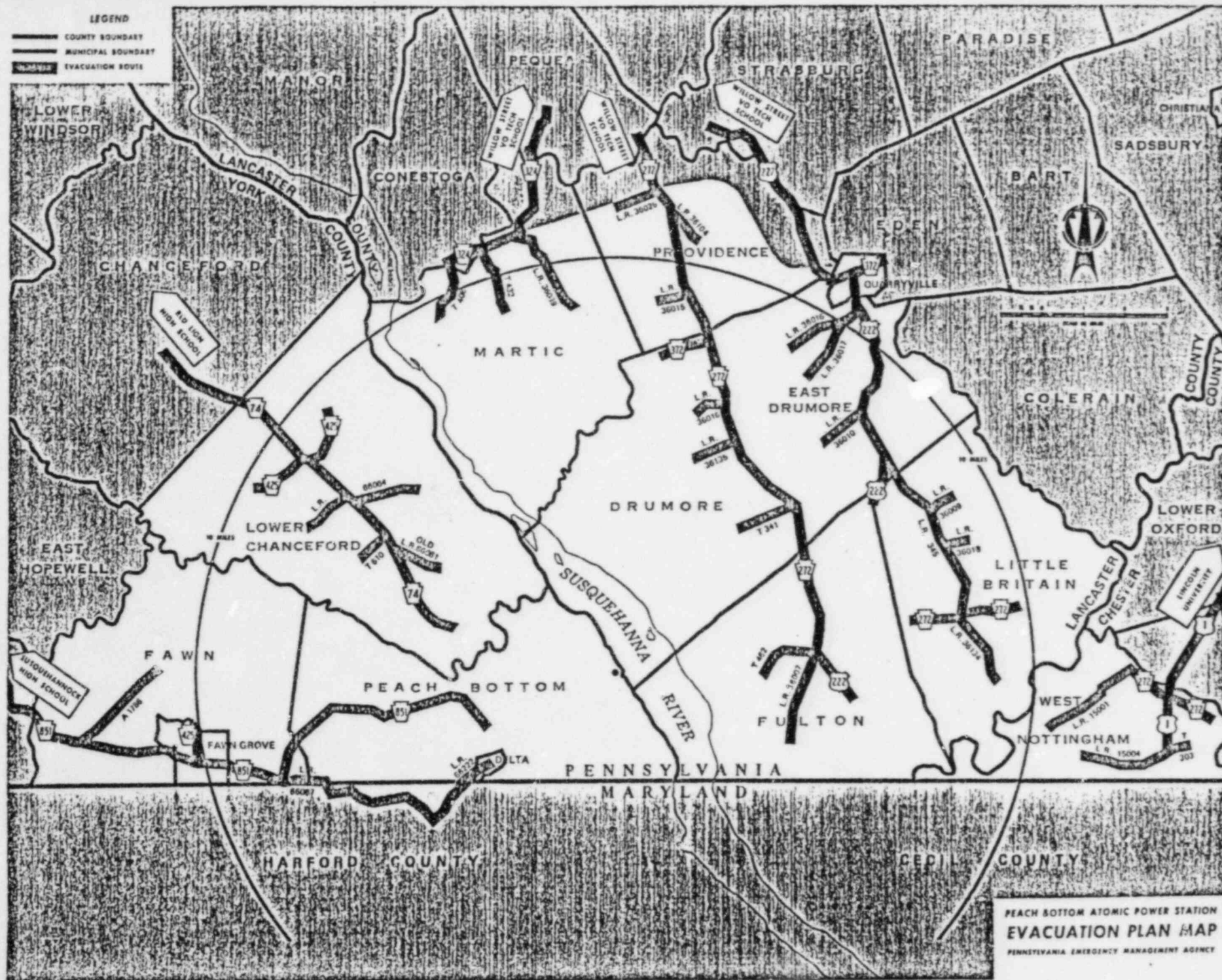
(717) 862-3806

#### Peach Bottom Township

Take local Routes to Route 851 West to Route 616 North to:

Susquehannock High School in Glen Rock

(717) 456-7133



## How Are Accidents Classified?

Should an accident occur at the Peach Bottom Atomic Power Station, there are four accident classifications you might hear reported on radio, TV or read in the newspapers. So that you will understand their meaning, they are explained in the order of their potential seriousness:

**Unusual Event** — Unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

**Alert** — Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the Protective Action Guideline exposure levels established by the Federal Environmental Protection Agency (EPA).

**Site Emergency** — Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near the plant boundary.

**General Emergency** — Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate plant area.

## RUMOR CONTROL TELEPHONE NUMBERS

CHESTER COUNTY — (215) 431-6480  
LANCASTER COUNTY — (717) 299-8378  
YORK COUNTY — (717) 854-5571

## What is Radiation?

Nuclear radiation consists of energy in the form of invisible particles or rays given off by radioactive material. Small amounts of radioactive material occur naturally and always have been part of man's environment. Radioactive materials in varying amounts are present in the earth's crust, the sun's rays, the air we breathe, the food we eat and the water we drink. As a result, every person has radioactive materials within his body. Larger amounts of radioactive materials are produced by and contained within a nuclear power plant.

Man's use of radioactive materials also results in radiation exposure. For example, doctors and scientists have utilized X-rays in medical treatment for many years.

The amount of radiation a person receives is measured in terms of radiation dose. The unit used to measure this dose is called a *millirem*.

The following table shows examples of typical radiation doses due to natural radioactive materials or man's use of radioactive materials compared to the worst estimated exposure received by an individual during the TMI-2 accident in 1979.

Source	Millirem Per Year
* Color television	1
* Airline travel (typical airline passenger who makes 10 flights per year)	3
* Natural radioactive materials within the body	20
* Medical X-rays (average patient)	20
* Cosmic rays	27
* Natural radioactive materials in the earth	46
** Maximum offsite exposure during TMI accident	70
* "The Effects on Populations of Exposure to Low Levels of Ionizing Radiation," National Academy of Science, 1980.	
** Report of the President's Commission on the accident at Three Mile Island, October 1979, Page 32.	

QUESTION 9

How will contention resolution be incorporated into the plan?

RESPONSE

As the contentions are resolved by litigation, results of the litigation will be incorporated as revisions to the plan where applicable. No plans exist for incorporating testimony into the emergency plan.

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QUESTION 10

What provisions will be made for thyroid "screening" of site personnel upon evacuation?

RESPONSE

The merits of "screening" site evacuees for thyroid uptake of radioiodine has been reviewed. It may be argued that such screening will serve to reassure the evacuees. It can be argued just as well that subjecting people to unnecessary monitoring would cause them to wonder whether a problem actually existed. Others would resent the apparent harassment and delay in "getting home".

Assuming there was a need to evacuate non-emergency site personnel, such a decision would be made and implemented long before significant levels of airborne activity were reached. Time of potential exposure would be short - an hour or so; therefore, intake of radioiodine would be low. The time for the body to metabolize iodine to the thyroid would not be rapid enough for screening to detect radioiodine in the thyroid.

Our position is that the screening is not warranted because there would be nothing to detect. The potential benefits would be very low and indeed there may be some adverse consequences.

March 16, 1984

QUESTION 11

Provide letters of agreement for technical support including Bechtel, General Electric, INPO.

RESPONSE

Philadelphia Electric is presently obtaining letters of agreement from Bechtel and General Electric. When these letters are received and reviewed, they will be available for inclusion in the plan. The letters specify notification procedures, responsibilities and authorities.

The Institute of Nuclear Power Operations agreement letter is attached for your use.

March 16, 1984





Institute of  
Nuclear Power  
Operations

1100 Circle 75 Parkway  
Suite 1500  
Atlanta, Georgia 30339  
Telephone 404 953-3600

October 19, 1983

RECEIVED

WBC  
BARK

Mr. Shields L. Daltroff  
Vice President  
Electric Production  
Philadelphia Electric Company  
P. O. Box 8699  
Philadelphia, Pennsylvania 19101

RECEIVED  
OCT 28 1983  
K. A. [illegible]

Dear Mr. Daltroff:

This letter is provided to assist those utilities committed through the regulatory process to update their emergency preparedness letters of agreement annually and to outline INPO's role in the event of an emergency at a member utility's nuclear power plant.

INPO will assist the affected utility by quickly applying the resources of the nuclear industry in meeting the needs of the emergency.

INPO, when notified of an emergency situation, will provide any resources under its authority in response to Philadelphia Electric Company's radiological emergencies, as requested. Such situations are equivalent to the "alert," "site," and "general" emergency conditions, as defined by NRC. Utility emergency response planning should include notification of INPO via the dedicated emergency call number for these situations.

INPO will be able to provide the following emergency support functions:

- a. assistance to the affected utility in locating sources of emergency manpower and equipment
- b. dissemination of information to member utilities concerning the incident applicable to their operations
- c. organization of industry experts who could advise the utility on technical matters

To support these functions, INPO shall maintain the following emergency support capabilities:

- a. dedicated emergency call number capable of reaching designated INPO staff and activating INPO support functions 24 hours per day, seven days per week

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- b. designated INPO representative(s) who can be dispatched quickly to the utility emergency response organization to coordinate INPO support activities and information flow
- c. 24-hours-a-day operation of an emergency response center at INPO

The dedicated emergency call number is (404) 953-0904, and the alternate emergency call number is (404) 953-0922. An INPO duty officer will respond to the call, and the Emergency Response Center at INPO will be activated, as necessary.

When you call the emergency number after hours, an automatic dialing system will answer and give you the message on Attachment A, or an answering service will request this information and page the duty officer.

If requested by the utility, one or more suitably qualified members of INPO's technical staff will report to the recovery manager and will assist his staff in coordinating INPO's response to the emergency as follows:

- a. staffing a single position responsible to the appropriate utility manager as liaison for all INPO matters
- b. working with the INPO duty officer in Atlanta to coordinate all requests for assistance, INPO response, and related communications
- c. assisting the utility as requested in initiating and updating entries into industry information systems (such as NOTEPAD) concerning the accident status and related information of value to other utilities
- d. ensuring that all emergency information released by the INPO liaison is cleared properly and formally through appropriate utility channels

An INPO representative normally shall be capable of being dispatched on approximately four-hour notice.

Upon request in an emergency, INPO will provide assistance to the affected utility in locating and arranging additional emergency manpower, equipment, and the services of various technical experts from industry sources.

Analysis of operational factors relating to plant incidents will be initiated as directed in an emergency by the president of INPO. On-site activities, when undertaken, will be coordinated with the on-site INPO representative.

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Page Three

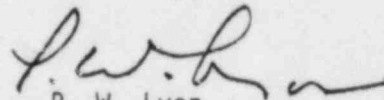
To assist the utility as indicated above, INPO requires the following action and/or information from the utility:

- a. controlled copy of the utility's emergency plan and procedures
- b. addition of INPO to your emergency notification list for actual emergencies and exercises at the "alert" and above action levels
- c. prior notification of emergency drills and exercises so INPO may send observers to the drill or exercise

This agreement shall be effective until such time as regulations of NRC/FEMA permit modification or termination.

If you have any questions or comments concerning INPO's role in an emergency, please let me know.

Sincerely,



P. W. Lyon  
Director  
Radiological Protection and  
Emergency Preparedness Division

PWL:jkc

cc: Mr. W. T. Ullrich  
INPO Board of Directors

ATTACHMENT A

THIS IS THE INPO EMERGENCY RESPONSE CENTER

THE DUTY OFFICER WILL BE PAGED AND WILL RETURN YOUR CALL AS  
SOON AS POSSIBLE. AT THE TONE PLEASE LEAVE:

- (1) YOUR NAME, TELEPHONE NUMBER, AND PLANT NAME
- (2) IS THIS AN ACTUAL EMERGENCY OR DRILL
- (3) HOW INPO CAN HELP YOU
- (4) REPEAT YOUR AREA CODE AND TELEPHONE NUMBER

THANK YOU.

QUESTION 12

What is the criteria for declaring that the emergency is over and that the plant is in the recovery stage?

RESPONSE

A draft of Limerick emergency implementing procedure EP-410 is attached.

March 16, 1984

**CONTROLLED APPROVED COPY**  
**VOID PREVIOUS ISSUE**

Philadelphia Electric Company

Peach Bottom Units 2 and 3

Limerick

1 and 2

EP-410

EP-C-320 Recovery Phase Implementation

Purpose

This procedure provides guidance for implementing a recovery effort following an emergency. For an Unusual Event or Alert only minor recovery actions should be required. However, for the emergencies with more severe consequences (Site and General Emergencies), complex recovery actions may be required.

References

- Peach Bottom Limerick
1. A Emergency Plan, Section 5.4
  2. NUREG 0654, Section M.2 and M.3
  3. EP-C-203
- Limerick Emergency Plan

Action Level

1. The Emergency Director, the Site Emergency Coordinator, Emergency Support Officer, the Senior Vice President - Nuclear Power will decide when an on-site recovery effort is required. Federal/State Government Liaisons should be appraised of the decision to enter the recovery phase.
2. The following guidelines should be used to determine when the emergency is under control and a recovery effort may be implemented:
  - a. Radiation levels are steady or decreasing with time.
  - b. Any release of radioactive materials to the environment has ceased or is controlled within technical specification limits.



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RAK:kmw  
6/10/82

- c. Fire, flooding, or similar emergency conditions no longer constitute a hazard to the plant or plant personnel.
- d. Measures have been successfully taken to correct or compensate for malfunctioning equipment.
- e. Reactor core is being adequately cooled.

#### Procedure

1. Initiate a conference call between Emergency Support Officer, Site Emergency Coordinator, Emergency Director and Senior Vice President - Nuclear Power.
2. Analyze reactor, containment, and critical system status using the attached plant status sheet. The reactor, containment, and critical systems should be analyzed for present condition and capability to perform intended functions. (Refer to Appendix A)
3. Develop a list of acceptable or unacceptable plant conditions and systems or equipment failures. Identify corrective actions to be taken. (Refer to Appendix B). Based upon the analysis of these plant conditions, decide whether entry into the recovery phase is justified. If recovery justified, proceed to the steps below.
4. Review <sup>(as appropriate)</sup> the plant status with the NRC, FEMA, <sup>and</sup> FEMA, <sup>and</sup> MEMCDA and address their concerns. The Site Emergency Coordinator should notify all parties listed in the EP-105 call list appendix of the intent to enter into the recovery phase.

*Spill out  
Emergency  
and recovery steps  
4/5.*

When the Recovery phase is formally implemented, the Recovery manager should obtain the assistance of the Site Emergency Coordinator, Emergency Director, and Senior Vice President - Nuclear Power in resolving the following recovery instructions.

- (a) Review the Recovery Acceptance Checklist (Appendix B) and determine the priority of recovery work.
- (b) Prepare an outline of major tasks and establish the organization responsible for implementation.
- (c) Obtain participation of General Electric, Bechtel, Catalytic and other firms as appropriate.

- (d) Establish a schedule for monitoring plant parameters, such as reactor coolant, drywell atmosphere, liquid and gaseous effluents, etc.
- (e) Verify personnel radiation exposures received during accident conditions.
- (f) Review and assess plant accident events, data logs, etc. to develop a comprehensive accident report and a recovery plan summary for submittal to regulatory agencies.
- (g) Consider available manpower sources and arrange through headquarters or the Planning Coordinator necessary personnel. (Work through INPO as necessary).
- (h) Review emergency and plant supplies as well as warehouse stock levels to ensure inventories are returned to pre-emergency levels.
- (i) Establish what activities will require procedures and develop them accordingly.
- (j) Determine the number of personnel needed to continue maintaining the plant.
- (k) Establish an Environmental monitoring schedule.

## Appendix B

## UNIT #\_\_ RECOVERY ACCEPTANCE CHECKLIST

## A. Reactor Parameters

	Acceptable	Unacceptable	Remarks
1. Power			
2. Level			
3. Pressure			

## B. Containment Parameters

	Acceptable	Unacceptable	Remarks
1. Drywell Press			
2. Drywell Temperature			
3. <del>Torus</del> Level ( <i>Suppression Pool</i> )			
4. <del>Torus</del> Temperature ( <i>Suppression Pool</i> )			
5. Cont. Oxygen			
6. Cont. Hydrogen			

## C. Reactivity Control

	Acceptable	Unacceptable	Remarks
1. Control Rods			
2. SBLC			

## D. Pressure Control

	Acceptable	Unacceptable	Remarks
1. Bypass valves			
2. SRV's			

## E. Level Control and Heat Removal

	Acceptable	Unacceptable	Remarks
1. Feedwater			
2. CRD			
3. HPCI			
4. RCIC			
5. Condensate			
6. Core Spray			
7. RHR S/D Cooling			
8. LPCI			
9. HPSW			
10. Cond. Transfer			
11. Refuel Transfer			
12. ESW			
13. SBLC			

## F. Tank Levels

	Acceptable	Unacceptable	Remarks
1. CST			
2. RST			
3. <del>Torus</del> Dewater Tank			
4. Main Condenser			
5. Emerg. Cool. Tower			

## G. Containment Control

Acceptable	Unacceptable	Remarks
------------	--------------	---------

- Suppression Pool*  
1. ~~GRUS~~ Cooling  
*Suppression Pool*  
2. ~~GRUS~~ Spray  
3. D/W Spray  
4. SBTGS

## H. Containment Isolations

	Acceptable	Unacceptable	Remarks
1. GRP I			
2. GRP II			
3. GRP III			
4. GRP IV			
5. GRP V			

## I. Power Supplies

	Acceptable	Unacceptable	Remarks
1. Offsite #2			
2. Offsite #3			
3. E1 Diesel			
4. E2 Diesel			
5. E3 Diesel			
6. E4 Diesel			
7. E1 Bus			
8. E2 Bus			
9. E3 Bus			
10. E4 Bus			



J. Radiological Parameters

	Acceptable	Unacceptable	Remarks
1. <sup>North</sup> <del>Main</del> Stack Release			
2. <sup>South</sup> <del>Vent</del> Stack Releases			
3. D/W Rad. Monitor Level			
4. Refuel Floor Exhaust			
5. Radwaste Exhaust			
6. Air Ejector/Off Gas Release			
7. Main Stack Flow			
8. Vent Stack Flow			

K. Meteorological Parameters

	Acceptable	Unacceptable	Remarks
1. Wind speed			
2. Wind direction			
3. Precipitation			
4. Stability Class			

L. Regulatory Contact

	Acceptable	Unacceptable	Remarks
1. NRC			
2. PEMA			
3. FEMA			
<del>4. MEMCO</del>			

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

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

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

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

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

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

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

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

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

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

2. SBIC	INJ	UNAVAIL/REASON
A		
B		

3. SBIC Tank Level \_\_\_\_\_ %

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

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

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

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

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

## POWER SUPPLY

BUS	#20.s.	#30.s.	DIESEL#	UNAVAIL
E-1				
E-2				
E-3				

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

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

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

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

## HPSW ON UNAVAIL/REASON

HPSW	ON	UNAVAIL/REASON
A		
B		
C		
D		

## ISOLATIONS ISOLATED/EXCEPTIONS

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

## SBGTS ON UNAVAIL/REASON

FANS A	ON	UNAVAIL/REASON
B		
C		
TRAIN A		
B		

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QUESTION 13

Describe locations of pre-selected offsite sampling points.

RESPONSE

Proposed sampling sites are being developed. A map indicating prospective sampling locations will be provided at a later date. These maps will be provided to personnel responsible for off-site sampling. The Commonwealth Plan commits Bureau of Radiation Protection to sample the Ingestion Exposure EPZ.

March 16, 1984

QUESTION 14

Provide an updated evacuation time study for NRC review.

RESPONSE

This evacuation time study is underway with completion expected in about 4 weeks. Copies will be provided when available.

March 16, 1984

QUESTION 15

Describe dispatch of fire companies.

RESPONSE

As presently stated in the procedures, Linfield Fire Company is called by Shift Supervision in the event of a fire. The fire company recently switched to county dispatch. LGS procedures will be modified to reflect this. An agreement letter has also been obtained with Limerick Fire Company. Thus in the event of a fire at LGS, County dispatch would then send Linfield or Limerick Fire Companies or both to the site.

March 16, 1984