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December 17, 1982

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docket Nos. 50-352
50-353

Subject: Limerick Generating Station Units 1 and 2
Request for Additional Information from
NRC Quality Assurance Branch QAB)

Reference: Letter, A. Schwencer to E. G. Bauer, Jr.
dated July 13, 1982, transmitting subject
RAIs

Dear Mr. Schwencer:

Transmitted herewith are draft responses and FSAR page changes related to the subject RAIs. This material is provided in draft form at the request of Dr. Harvey Abelson, NRC Project Manager for Limerick, as an aid to the Quality Assurance Branch in preparing their draft safety evaluation report input. We plan to formally incorporate these responses and page changes into the FSAR following any changes which might be required as a result of meeting with your QAB to discuss their content. We suggest that such a meeting be held at your earliest convenience; please inform us of your preference in this regard.

Very truly yours,

E. J. Bradley

B001

HDH/pb/D-9

Enclosures

Copy to: See attached service list

cc: Judge Lawrence Brenner (w/o enclosure)
Judge Richard F. Cole (w/o enclosure)
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LIMERICK GENERATION STATION
UNITS 1 and 2
EMERGENCY PLAN

DRAFT

REVISION 4 PAGE CHANGES

The attached Revision 4 pages and tables are considered part of a controlled copy of the Limerick Generating Station Emergency Plan. This material should be incorporated into the EP by following the instructions below

REMOVE	INSERT
	VOLUME 1
	SECTION 4
Table 4.2, Sheets 1-14	Table 4.2, Sheets 1-17
	SECTION 5
Page 5-1 & 5-2 Page 5-5 thru 5-8	Page 5-1 & 5-2 Page 5-5 thru 5-8
	SECTION 6
Page 6-1 & 6-2 Page 6-15	Page 6-1 & 6-2 Page 6-15
	VOLUME 2
	APPENDIX G-9
Page 22 & 23	Page 22 & 23
	APPENDIX I
Page I-5 & I-6 ---	Page I-5 & I-6 Table I-1, Sheet 1-3
	RESPONSE TO NRC QUESTIONS
---	Pages 810. -1 thru 810.68-1

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5.0 ORGANIZATIONAL CONTROL OF EMERGENCIES

The organizations, agencies, teams, and individuals having emergency response functions are described in this section. The organization capable of responding includes:

a) Interim Emergency Teams, designated by function and consisting of on-shift personnel. These teams are responsible for initiating emergency action.

b) Emergency Teams, designated by function and consisting of plant staff personnel. These teams are responsible for responding to emergencies and relieving the Interim Emergency Teams.

c) PECo Corporate Support. Specific functions are assigned to management, technical, and administrative personnel at PECo headquarters and other offices to support emergency responses.

d) Local Services Support. Agreements have been reached for the provision of certain services, such as ambulance and firefighting, from local agencies.

e) Federal, State, and local government agencies having emergency preparedness responsibilities.

The resources described above are utilized through an initial response phase organization and a recovery response phase organization. Implementation of the initial response phase organization may include all of these resources.

Emergency conditions may require a longer term organization than that provided for the immediate response to the emergency. Therefore, this Plan provides for transition to a recovery response phase organization which is capable of continuous management and implementation of large-scale resources involved in planning, plant modification, and recovery/restoration. When the recovery response phase organization is implemented, certain elements of the initial response phase organization are expected to be retained.

5.1 NORMAL PLANT ORGANIZATION

The Station Organization Chart for Limerick Generating Station (Figure 5-1) shows the composition of the operating shift crew. The minimum shift complement for LGS Units 1 and 2 consists of nine operating members, a shift technical advisor who reviews plant status and provides expert advice to shift supervision, and security guards. From time to time additional personnel from the operating or maintenance organizations may be on-site during backshifts. Some normal plant staff members are assigned emergency organization positions, others are available as additional resources or continue their normal duties.

The Shift Superintendent and the operating shift crew are responsible for normal operation of the plant and for responding to emergency conditions, in which case the Shift Superintendent assumes the role of Interim Emergency Director and has the authority and responsibility to declare appropriate emergency classifications. The Shift Supervisor assumes the duties of the Shift Superintendent when necessary. On a daily basis, the Station Superintendent or his designated alternate (normally the Assistant Station Superintendent) shall be on-call. He shall respond to emergencies upon notification from the Shift Superintendent and shall activate Emergency Teams when needed.

5.2 ON-SITE EMERGENCY ORGANIZATION

Under emergency circumstances, the Shift Superintendent assumes the role of Interim Emergency Director and activates appropriate portions of the emergency organization. Figure 5-2 shows the composition of the Interim Emergency Teams and Emergency Teams to demonstrate the initial response phase capability of the on-site organization. Figure 5-3 is a diagram of the communication method to activate this organization. Figure 5-4 shows the initial response by the Corporate support organization. Figure 5-5 shows the overall emergency organization staffing. Figure 5-6 shows the Emergency Operations Facility organization. Figure 5-7 shows the Technical Support Center organization.

5.2.1 DIRECTION AND COORDINATION

Direction and coordination of the initial emergency response are provided by the Interim Emergency Director. The Emergency Director, upon arrival, and when thoroughly cognizant of the situation, relieves the Interim Emergency Director.

Direction and coordination of on-scene emergency actions under the Interim Emergency Director are the responsibilities of the Interim Emergency Team Leaders until relieved by the Emergency Team Leaders. Team Leaders shall report status and the effectiveness of corrective actions to the Control Room.

j) Determine the necessity for and timing of emergency organization evolution from the initial response phase to the longer term recovery organization in coordination with the Site Emergency Coordinator, the Emergency Support Officer, and the Federal and State Government Liaison.

k) Provide recommendations for protective actions in accordance with implementing procedures directly to County officials when warranted under emergency conditions.

The above responsibilities are not delegated to other segments of the emergency organization.

5.2.1.3 SITE EMERGENCY COORDINATOR

The Site Emergency Coordinator is the Superintendent, Generation Division - Nuclear. The alternate is the Station Superintendent of Peach Bottom Atomic Power Station. The Site Emergency Coordinator, when activated, normally goes to the Emergency Operations Facility and reports organizationally to the Emergency Support Officer. During the initial phase of an emergency, the Site Emergency Coordinator may operate from the Headquaters Emergency Support Center. The Site Emergency Coordinator is responsible for:

a) During EOF activation, determining readiness of staff to assume responsibilities assigned to the EOF.

b) Obtaining information on status of emergency conditions from TSC and when fully cognizant of the situation, inform TSC they are assuming responsibility for control of the integrated emergency response, informing the various response groups when the EOF has assumed full responsibility.

c) Maintaining awareness of plant status and off-site consequences of the emergency.

d) Coordination between the on-site organization and the off-site organization in regard to obtaining necessary additional facilities, equipment, supplies, personnel, or technical services.

e) Management and supervision of the Emergency Operations Facility.

f) Serving as the primary contact for Federal, State, and local radiological emergency response agencies.

g) Provide management direction for the development of the Emergency Support Center, if needed.

h) Provide direction for PECo emergency organization personnel who are dispatched to the plant vicinity (such as Public Information representatives and Stores Division personnel) and for foreign crews activated by Philadelphia Electric Company.

i) Keep the Emergency Support Officer and the Emergency Director apprised of actions taken and the status of off-site consequences.

j) Determine the necessity for and timing of emergency organization evolution from the initial response phase to the longer term recovery phase in coordination with the Emergency Director, Emergency Support Officer, and the Federal and State Government Liaison.

k) Informing the various emergency response groups when the recovery response phase organization is to be implemented.

5.2.1.4 Interim Operational Support Center Coordinator

The Interim Operational Support Center Coordinator is the senior shift person (other than Control Room personnel) not responsible to be on-scene for the existing emergency condition. The Interim OSC Coordinator reports to the Shift Supervisor (unless otherwise directed) and is responsible to:

a) Activate the OSC and establish communications with the Control Room.

b) Remain in the OSC to receive operational orders (unless otherwise directed by Shift Supervision).

c) Maintain accountability of personnel reporting to the OSC.

d) Coordinate and direct the use of personnel reporting to the OSC. Implement actions directed by Shift Supervision.

e) Coordinate and ensure timely relief of non-managerial personnel (i.e. survey teams, fire teams, etc.) and keep the Control Room informed of personnel available.

f) Ensure that adequate materials (such as Anti-C's, tape, drop-lights, etc.) are available to support station personnel.

5.2.1.5 OPERATIONAL SUPPORT CENTER COORDINATOR

The Operational Support Center Coordinator is a designated Test Engineer. The alternate is a designated Test Engineer. When activated, the OSC Coordinator relieves the Interim OSC Coordinator and assumes the responsibilities given in paragraph 5.2.1.4.

5.2.2 INTERIM EMERGENCY TEAMS AND EMERGENCY TEAMS

The on-site emergency response functions are assigned to various teams. Interim Emergency teams consist of designated members of the operating shift crew. Emergency Teams consist of designated members of the plant staff.

The on-site emergency organization is based upon the philosophy that the operating shift crew is capable of responding to emergencies at all times and is directly responsible for implementing emergency action. The plant staff emergency assignments are made to ensure that the plant staff can rapidly assist or relieve the shift crew of their emergency responsibilities during normal working hours and during night shifts when the plant staff is normally away from the site. Rapid recall of the plant staff members who are assigned to emergency teams is accomplished by contact with station management or team leaders who are then responsible for activating and leading their respective teams (refer to Figure 5-3). The judgement of the Interim Emergency Director and the guidance of procedures which implement this Plan are factors which determine the extent of the plant staff recall and the degree to which the plant staff assists or relieves the operating shift crew of emergency responsibilities. The planning basis for personnel and facilities is shown in Figure 5-5.

5.2.2.1 INTERIM EMERGENCY TEAMS

Figure 5-2 lists the Interim Emergency Teams and the composition of the teams.

5.2.2.1.1 INTERIM RADIATION PROTECTION TEAM

The responsibilities of this team are:

a) Perform radiation and airborne surveys and analyze samples.

b) Establish controlled access areas to contain or limit the spread of radioactive contamination.

c) Provide radiological assistance to other Interim Emergency Teams if needed.

5.2.2.1.2 FIRE BRIGADE

The responsibilities of the Fire Brigade are:

a) Respond to fire alarms with appropriate equipment and protective clothing.

b) Advise the Interim Emergency Director or Emergency Director as to the need for assistance from the plant staff or from offsite firefighting groups.

c) Coordinate the actions of off-site firefighting groups if on-site assistance is requested.

5.2.2.1.3 INTERIM PERSONNEL SAFETY TEAM

The responsibilities of this team are:

a) Administer first-aid and advise the Interim Emergency Director or Emergency Director as to the need for assistance from off-site medical resources.

b) Assist in evacuation and personnel accountability.

c) Conduct search and rescue for missing persons at the direction of the Interim Emergency Director or Emergency Director.

d) Monitor personnel for contamination and initiate decontamination.

e) Distribute KI tablets.

5.2.2.1.4 INTERIM CHEMISTRY SAMPLING AND ANALYSIS TEAM

The responsibilities of this team are:

a) Obtain chemical samples in accordance with implementing procedures and perform appropriate analyses.

b) Provide analytical results and appropriate recommendations to the Interim Emergency Director or Emergency Director.

5.2.2.1.5 INTERIM SECURITY TEAM

The responsibilities of the Security forces are:

a) Assist in controlling personnel during evacuations.

6.0 EMERGENCY MEASURES

This section identifies the measures to be used for each type of emergency previously classifed in Section 3. Criteria and action levels are provided for guidance of operators in determining when emergency plan implementation is required. Emergency measures begin with the realization by the Shift Supervision that a situation exists with a potential or real hazard comparable to one of the classes of emergencies listed in Section 3. Shift Supervision assesses the situation and classifies the emergency. Assuming the role of Interim Emergency Director, the Shift Superintendent initiates the notification process, activates the applicable emergency organization, and directs emergency measures.

6.1 ACTIVATION OF EMERGENCY ORGANIZATION

The methods described below are used to alert or activate the required personnel for each class of emergency. Means have been established by which activation messages may be authenticated or verified. Formats for initial emergency messages are shown in Appendix F.

6.1.1 EMERGENCY ORGANIZATION ACTIVATION FOR UNUSUAL EVENTS

This class is described in Section 3.2.a. Although conditions within this classification are not serious enough to constitute an emergency, upon discovery of an Unusual Event, efforts are to be expended to correct the condition and prevent degradation of plant safety. The Shift Superintendent will most likely become aware of an Unusual Event by verbal reports, or by direct observation of instrumentation and conditions in and around the plant. Appropriate Emergency Action Levels are described in Table 4-2.

Unusual Events are normally handled by the operating shift complement and may involve activation of Interim Emergency Teams. However, the Shift Superintendent may activate Emergency Teams if needed. Interim Emergency Teams are activated via the plant Public Address (PA) system. Emergency Teams are activated by the plant PA system during normal working hours or by telephone (as shown in Figure 5-3) during non-working hours. The Shift Superintendent activates local support agencies (such as ambulance service) by telephone directly.

Unusual Events are reported to the PEMA and to Montgomery, Chester, and Berks Counties to ensure that these agencies are well informed and can address concerns of the public, government officials, and news media. The notification shall be within

about 15 minutes after classifying the event. This early notification also permits the government agency to decide on the degree of activation of its emergency resources. The notification method may be commercial telephone or the systems shown in Figure 7-2.

6.1.2 EMERGENCY ORGANIZATION ACTIVATION FOR ALERT

This class is described in Section 3.2.b. Alert Conditions meet or exceed the threshold for emergency conditions and, therefore, prompt notification is required to activate applicable portions of the emergency organization. Notification is initiated by shift supervision upon discovery and classification of the condition. Notifications will be within about 15 minutes after classification of the event. The notification sequence is shown in Table 4-2. Notification methods are shown in Figure 7-2. Interim Emergency Teams are activated via the plant PA system. Emergency Teams are activated by the plant PA system during normal working hours or by telephone (as shown in Figure 5-3) during non-working hours. These notifications result in activation of the Technical Support Center and the Operational Support Center.

The Superintendent, Generation Division - Nuclear is notified by shift supervision or the Station Superintendent. The Superintendent, Generation Division-Nuclear will notify the corporate response organization if necessary.

The Shift Superintendent assumes the role of Interim Emergency Director. The Station Superintendent assumes the role of Emergency Director when he is on-site and thoroughly cognizant of the situation, at which time the Shift Superintendent resumes his responsibilities and authority within the Control Room.

The notifications and extent of activation of PEMA and County organizations are in accordance with their emergency plans.

6.1.3 EMERGENCY ORGANIZATION ACTIVATION FOR SITE AREA EMERGENCY

This class is described in Section 3.2.c. Activation of the emergency organization is as described in Section 6.1.2. In addition, the PECo Headquarters Emergency Support Center is activated through the notifications shown in Figure 5-3. The Office of the Vice President, Electric Production Department (either the Vice President or Manager) assumes the role of Emergency Control Officer. The Emergency Operations Facility is activated and functions under the direction of the Site Emergency Coordinator.

clear instructions to the population at risk; prepare and maintain material current for dissemination through the Emergency Broadcast System; and to include provisions in the warning plan for notification of transients. In addition, Annex E provides that the Pennsylvania State Police will assist in warning the public.

The PEMA will notify other States within the injestion pathway EPZ should such action be necessary.

c. Protective Actions for the Public

The BRP makes recommendations to the PEMA in regard to protective actions for the public. The Interim Emergency Director, Emergency Director, and Site Emergency Coordinator will provide assessment information to the BRP. In the event that BRP is unavailable, these PECo positions would provide protective action recommendations to PEMA and the Counties. PECo will provide protective action recommendations based on the Bureau of Radiation Protection guidelines. The BRP Support Plan for Fixed Nuclear Facility Incidents and the PEMA Annex E discuss and assign responsibilities relating to protective cover, evacuation, and thyroid prophylaxis. Implementation of the protective cover option involves notification to the public and the availability of shelter. Notification is discussed in Section 6.4.1.2.b. In the general climate of Pennsylvania, the BRP considers any building which is reasonably winter worthy to be adequate for two hours protection from inhalation hazards.

The evacuation option involves notification, traffic control, security, considerations for special evacuations such as hospitals, and mass care for evacuees. Annex E of the Commonwealth of Pennsylvania Disaster Operations Plan assigns responsibilities to various State agencies and to Counties to ensure the capability to implement measures in each of these areas.

The usefulness of certain compounds containing stable iodines as agents to block thyroidal uptake of radioiodines is recognized by the State. The Pennsylvania Department of Health is responsible to develop procedures for stockpiling and distributing thyroid blocking agents and such other radiological health materials as may be required.

7.0 OPERATIONS OF THE EMERGENCY NEWS CENTER

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The Emergency News Center, located at company headquarters, 2301 Market Street, Philadelphia, will be the principal location for the release of news on the developments during an emergency at the Limerick plant, of interviews and news briefings with technical experts and of contact with local governments and residents within the ten-mile radius of the plant.

Press briefings will be held at least three times daily and news releases will be distributed at least every three hours. More frequent releases and briefings will be held as necessary.

The Emergency News Center has a designated meeting area to handle representatives and will be equipped for the use of television cameras, amplifiers and telecommunication equipment.

Other sections are designated for interview rooms and for office space for information officers of the Nuclear Regulatory Commission, other government agencies and industry associations.

News releases will be issued every three hours even when there is no significant change in the situation since the previous release. Press briefings will be held three times a day. The manager-Public Information will preside at these briefings. The principal Company spokesperson will be the Vice President of the Engineering and Research Department and will explain the technical aspects of the developments.

The staff at the Emergency News Center will maintain liaison with information officers of the NRC and the State who are on site at the center.

The staff at the Emergency News Center will maintain information contact with local officials within the ten-mile radius of the Limerick plant.

Requests for special interviews will be arranged with the media by the staff at Emergency News Center. The persons who are interviewed may be from the company, from a govenment agency or an outside expert.

The manager-Public Information is the supervisor of the Emergency News Center. The manager-Corporate Communications will be assigned to the Emergency Operations Facility and is responsible for obtaining information for news releases.

Three staff persons with the manager-Corporate Communications are assigned to the Emergency Operations Facility to insure around-the-clock staffing of the center. This staff obtains the information on developments from the technical personnel at the Emergency Operations Facility and reviews it with Company technical personnel. The information will be sent to the Company offices at the Emergency News Center where a writer under the supervision of the manager-Public Information will prepare a release. The finished release will be reviewed with a Company technical adviser assigned to the center by the Electric Production Department.

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4. (Each licensee shall establish the functional responsibilities assigned to the emergency coordinator and shall clearly specify which responsibilities may not be delegated to other elements of the emergency organization.) (Among the responsibilities which may not be delegated shall be the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures.)	1. Comply. Section 5.2.1.1 and 5.2.1.2. 2. Comply. Sections 5.2.1.1 and 5.2.1.2.
5. (Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity.) (For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site.) (These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies.") (The minimum on-shift staffing levels shall be as indicated in Table B-1.) (The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1).	1. Comply. Section 5.0 through 5.3.1.28. 2. Comply. Figure 5-2. 3. Comply. Figures 5-1 and 5-2. Table I-1 4. Comply. 5. To be determined when individual assignments to emergency positions covered by the Table B-1 augmentation requirements are made.
6. Each licensee shall specify the interfaces between and among the onsite functional areas of emergency activity, licensee	Comply. Figures 3-1, 3-2, 5-3, 5-4, 5-6 and 5-7.

headquarters support, local services support, and State and local government response organization. This shall be illustrated in a block diagram and shall include the onsite technical support center and the operational support (assembly) center and the near-site emergency operations facility.	
7. Each licensee shall specify the corporate management, administrative, and technical support personnel who will augment the plant staff as specified in the table entitled "Minimum Staffing Requirements for [illegible] Power Plant Emerg[illegible] (Table B-1) and in t[illegible] following areas:	
7.a. logistics support for emergency personnel, e.g., transportation, communications, temporary quarters, food and water, sanitary facilities in the field, and special equipment and supplies procurement;	Comply. Sections 5.3.1.2 through 5.3.1.9 and 7.1.5.
7.b. technical support for planning and reentry/ recovery operations;	Comply. Figure 5-2 and Sections 5.3.1.12 and 5.4.
7.c. management level interface with governmental authorities; and	Comply. Sections 5.2.1.3 and 5.3.1.27.
7.d. release of information to news media during an emergency (coordinated with governmental authorities).	Comply. Section 5.3.1.28 and Figure 5-4. Coporate Communications Plan.

COMPARISON OF NUREG

	MAJOR FUNCTIONAL AREA	MAJOR TASKS	POSITION, TITLE OR EXPERTISE (TABLE B-1)
1	Plant Operations and Assessment of Operational Aspects		Shift Superviso (SRO) Shift Foreman (SRO) Control Room Operators Aux. Operators
2	Emergency Direction and Control (Emergency Coordinator)***		Shift Technical Advisor Shift Superviso or Designated Facility Manage
3	Notification/ Communication ****	Notify Licensee, State, Local and Federal Personnel and Maintain Communication	
4	Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operational Facility (EOF) Director	Senior Manager
		Off-Site Dose Assessment	Senior H.P.
		Off-Site Surveys	H.P. Technician
		On-Site, Out of Plant	
		In Plant Surveys Chem/Radio Chem	Rad/Chem Tech

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LGS EP
TABLE I-1

0654 TABLE B-1 AND LGS STAFFING PLANS

NUREG 0654 TABLE B-1 ON SHIFT*	MINIMUM LGS ON SHIFT	NUREG 0654 TABLE B-1 30 MINUTE ADDITIONS	LGS***** 30 MINUTE ADDITIONS (PLANNED)	NUREG 0654 TABLE B-1 60 MINUTE ADDITIONS	LGS***** 60 MINUTE ADDITIONS (PLANNED)
1	1				
1	1				
2	2				
2	3				
1**	1				
1	1	1		2	See Emergency Plan Fig. 5-2 Rev. 2 6/82
				1	1
		1	1		See Fig. 5-2
		2		2	Rev. 2
		1		1	6/82
1	2	1		1	
1	1			1	

Rev 4 12/82

	MAJOR FUNCTIONAL AREA	MAJOR TASKS	POSITION, TITLE OR EXPERTISE (TABLE B-1)
5	Plant System Engineering, Repair and Corrective Action	Technical Support	Shift Technical Advisor Core/Thermal Hydraulics Electrical Mechanical
		Repair and Corrective Action	Mechanical Maintenance/ Radwaste Operator Electrical Maintenance/ I&C Tech
6	Protective Actions (In Plant)	Radiation Protection A-Access Control B-HP&C Coverage for Repair & Corrective Actions, Search and Rescue, First Aid & Fire Fighting C-Personnel Monitoring & Dosimetry	H.P. Technicians
7	Fire Fighting		

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0654 TABLE B-1 AND LGS STAFFING PLANS

NUREG 0654 TABLE B-1 ON SHIFT*	MINIMUM LGS ON SHIFT	NUREG 0654 TABLE B-1 30 MINUTE ADDITIONS	LGS***** 30 MINUTE ADDITIONS (PLANNED)	NUREG 0654 TABLE B-1 60 MINUTE ADDITIONS	LGS***** 60 MINUTE ADDITIONS (PLANNED)
1	1				See Fig. 5-2 Rev. 2 6/82
		1	1		
				1	
				1	
1**	1			1	
1**	1	1	1	1	
2**	Per Item 4 Above	1	1	2	See Fig. 5-2 Rev. 2 6/82
Fire Brigade Per Tech. Specs.	Fire Brigade Per Tech. Specs.	Local Support	Local Support	Local Support	Local Support

	MAJOR FUNCTIONAL AREA	MAJOR TASKS	POSITION, TITL OR EXPERTISE (TABLE B-1)
8	Rescue Operations and First Aid		
9	Site Access Control and Personnel Accountability	Security Firefighting Communications Personnel Accountability	Security Personnel

NOTES:

* For each unaffected nuclear unit in operati auxiliary operator except that units sharin

** May be provided by shift personnel assigned

*** Overall direction of facility response to minute-to-minute facility operations remai

**** May be performed by engineering aide to sh

***** Augmentation will be reviewed as plant sta

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G 0654 TABLE B-1 AND LGS STAFFING PLANS

E NUREC 0654 TABLE B-1 ON SHIFT*	MINIMUM LGS ON SHIFT	NUREG 0654 TABLE B-1 30 MINUTE ADDITIONS	LGS***** 30 MINUTE ADDITIONS (PLANNED)	NUREG 0654 TABLE B-1 60 MINUTE ADDITIONS	LGS***** 60 MINUTE ADDITIONS (PLANNED)
2**	2**	Local Support	Local Support	Local Support	Local Support
All Per Security Plan	All Per Security Plan	All Per Security Plan	All Per Security Plan	All Per Security Plan	All Per Security Plan

on, maintain at least one shift foreman, one control room operator and one
g a control room may share a shift foreman if all functions are covered.

other functions.

e assumed by EOF director when all centers are fully manned. Director of
s with senior manager in technical support center or control room.

ft supervisor.

ffing assignments are made.

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QUESTION 810.4

Individuals at the State and local level responsible for making protective action recommendations should be identified and indication should be given as to 24-hour per day manning of communication links.

RESPONSE

Individuals at the State and local level responsible for making protective action recommendations will be identified when the applicable State and local plans are finalized. These plans should be finalized first quarter 1984.

QUESTION 810.5

The offsite interface for each organization and suborganization should be clearly indicated for the following:

(a) protective action decision making, (b) coordinating of monitoring results, and (c) coordinating onsite and offsite evacuation.

This should include a block diagram that shows these interfaces with onsite centers.

RESPONSE

(a) Protective action decision making rests primarily with the Pennsylvania Department of Environmental Resources - Bureau of Radiation Protection. Communication links between the Bureau office and the site emergency facilities provide the capability for data transmission to the Bureau and dialogue on appropriate protective action recommendations. As prescribed in the Pennsylvania State Plan the Bureau passes protective action recommendations on to Pennsylvania Emergency Management Agency which is responsible for directing counties to implement. The Emergency Director and Site Emergency Coordinator are the primary licensee contacts with the Bureau. This may be delegated to the Dose Assessment Team.

As the State plans are finalized first quarter 1984, the interfaces will be addressed more specifically. Figure 3.2 provides a block diagram indicating the basic interface.

(b) The licensee Field Survey Teams feed survey data to the Emergency Operations Facility. The Bureau office receives data from their own survey teams. The communication links indicated in 810.5(a) enable exchange of survey data between the Bureau and the EOF. The Field Survey Team or Dose Assessment Team participate in this exchange.

As the State plans are finalized first quarter 1984, the interfaces will be addressed more specifically. Figure 3.2 provides a block diagram indicating the interfaces.

(c) Onsite evacuation is controlled by LGS personnel. LGS personnel will inform offsite officials of plans to evacuate the site. Since offsite evacuation is controlled by other agencies, the onsite and offsite evacuations are conducted independently except for the exchange of information which would occur between utility and state representatives at the EOF.

Sections 5.2.1.1 and 5.2.1.2 address utility personnel responsible for on-site protective actions including evacuation. The State plan when finalized will address personnel responsible for off-site evacuation.

QUESTION 810.6

All of the steps required to implement protective action decisions should be clearly specified.

RESPONSE

The Bureau of Radiation Protection is responsible for recommending protective actions to the Pennsylvania Emergency Management Agency. Any emergency situation would be expected to develop gradually. The rate of escalation from class to class permits time to establish contact with the Bureau of Radiation Protection. Contact will normally be via telephone. Direct dialogue occurs when the Bureau representatives arrives on site and is party to any briefing sessions convened by the Site Emergency Coordinator. Plant status, projected doses, meteorology and other pertinent information are evaluated. Licensee recommendations are expressed. The Bureau eventually decides which protective actions are appropriate and so informs PEMA. PEMA then instructs the county EOC's to implement.

For the situation when a General Emergency is declared immediately the Emergency Director provides protective action recommendations directly to the county EOC's when the initial prompt notification is made.

Section 6.4 indicates notification, assembly and accountability of personnel in a protective action. Step by step implementation will be delineated in emergency procedures which will be available for review in the fourth quarter of 1983.

QUESTION 810.7

Copies of the final State and local plans should be provided in accordance with 10 CFR 50.47, including State plans (Md., N.J., Delaware) dealing with the ingestion pathway protective responses.

RESPONSE

Copies of the final State and local plans are expected to be available in the first quarter of 1984 and will be incorporated into the LGS plan when received.

DRAFT

QUESTION 810.8

Copies of letters of agreement with PEMA & BRP, Montgomery Co. of Emergency Preparedness, Chester Co. Dept of Emergency Services, Berks Co. Emergency Management Agency, States of Md., N.J., and Delaware, GE, and Bechtel should be provided.

RESPONSE

Letters of agreement with the various agencies and contractors will be provided as the agencies plans are finalized and agreements can be obtained. Letters of agreement with contractors will be incorporated into the Emergency Plan in the first quarter of 1984.

QUESTION 810.9

All agreements should be reviewed and certified as current.

RESPONSE

All agreements will be reviewed, made current, and incorporated into the Emergency Plan in the first quarter of 1984.

QUESTION 810.10

The relationship between the working level emergency organization and the normal plant staff should be specified.

RESPONSE

Working level emergency personnel report to the Emergency Director. The normal shift staff report through the Shift Superintendent to the Emergency Director. The Emergency Director, who is the Station Superintendent, can draw additional resources from plant staff who are not assigned specific emergency duties. Section 5.1 has been changed to reflect this.

DRAFT

QUESTION 810.11

Clarify how the TSC, OSC, and EOF are activated and who has responsibility for the function within each emergency facility.

RESPONSE

The personnel assignments and step by step method for activating the TSC, OSC, and EOF will be the subject of implementing procedures which will be provided for review in the fourth quarter of 1983.

QUESTION 810.12

Section 3.4.3 of the Plan indicates that for a Site or General Emergency the VP, Electric Production Dept. will activate the PECo HQ Emergency Control Center. Clarify who is onsite (Corporate Recovery Manager) in the EOF within 1 hr. Also specify the criteria for the transfer of overall responsibility for the direction and control of the integrated emergency response effort from the control room to the EOF and how this transfer of responsibility is indicated to all appropriate officials (onsite - offsite).

RESPONSE

Refer to Appendix I, Table I-1 for definition of who is onsite at the EOF within 1 hour.

The transfer of responsibility from the control room to the TSC is as shown in Section 5.2.1.2. The transfer of responsibility from the TSC to the EOF is shown in a revised Section 5.2.1.3.

QUESTION 810.13

Section 5.1 of the Plan indicates that the minimum shift complement per unit will consist of nine operating members. However, the applicant should clarify how this correlates with Table B-1 of NUREG-0654, elaborate on the 30-60 min augmentation capabilities, and clarify the .5-8 hr augmentation sited in Figure 5-5.

RESPONSE

Figure 5.5 is not intended as a schedule of augmentation. It is to show personnel and facilities that would be utilized within a time frame based on time for call-out and transit in unfavorable weather and traffic conditions. Refer to Appendix I, Table I.1 for comparison to Table B-1, NUREG-0654.

DRAFT

QUESTION 810.14

The Plan indicates that Federal assistance can be requested through the Site Emergency Coordinator and for the Emergency Control Officer. However, this Section should be expanded to include information requested in NUREG-0654, Criteria c.1.b, c.1.c, and c.2.b.

RESPONSE

The Emergency Plan will be changed to reflect Criteria c.1.b, c.1.c, and c.2.b in a later revision when information regarding the resources to be expected and the off-site governmental emergency operations centers are finalized. This change is expected in the first quarter of 1984.

QUESTION 810.15

The Plan should identify radiological laboratories and their general capabilities and expected availability to provide emergency radiological monitoring and analysis services.

RESPONSE

The Plan will include a description of the on-site chemical laboratories and counting room capabilities as these facilities are equipped. Contracted services for analytical analysis will be identified when determined.

This information will be incorporated into the Emergency Plan in the first quarter of 1984.

QUESTION 810.16

Additional information should be provided for the following EALs:

(a) unusual event - items 2, 3a, 5
(b) alert - items 1a, 5, 6, 15
(c) site - items 1, 10, 13a & b, 18
(d) general - items 1a & b

RESPONSE

Table 4-2 will be completed when calculations and Limerick Generating Station technical specifications are completed. In items c-18 & d-1a our initiating conditions are more conservative than NUREG-0654 and our values will be added to Table 4.2 when calculated. These changes to the Plan will be incorporated when the implementing procedures are provided for review in the fourth quarter of 1983.

QUESTION 810.17

The following areas need to be addressed.

(a) unusual event - items 4, 9, 12, 13, 14e, 15
(b) alert - items 4, 7, 8, 9, 10, 14, 16, 17b, 18d & e, 19, 20
(c) site - items 2, 9, 12, 13c, 14, 15b & c, 16, 17
(d) general - items 2, 3, BWR-sequences, 6a-d, 7

RESPONSE

a) Item 4 - Exceeding technical specifications in these areas may result in a reactor shutdown, which is an existing EAL addressed in Table 4.2.

Item 9 - Exceeding technical specifications in these areas may result in a reactor shutdown, which is an existing EAL.

Item 12 - Security threats, attempted entry or attempted sabotage are handled as per the security plan. See paragraph 2.2.1.

Item 13a - See Table 4.2, Item XIIIa.

b - Item b is not applicable as these phenomena do not constitute a plausible threat.
c - See Table 4.2, Item XIII b.
c - See Table 4.2, Item XIII d.

Item 14e - Rapid plant shutdown causes unusual event notification in accordance with entry I a of Table 4.2.

Item 15 - See category I in Table 4.2 and FSAR Section 6.7.

b) Item 4 - See item a above.

Item 7 - See item VII c in Table 4.2, which provides a more conservative approach for the loss of power event.

Item 8 - See Item VII d in Table 4.2, which provides a more conservative approach for the loss of power event.

Item 9 - See FSAR Section 15.3.3.

Item 10 - The FPER covers two independent safe shutdown methods. The only event which would disable both is a total loss of power which is covered in Table 4.2, Items VII c and VII d.

Item 14 - Loss of all or most annunciators is caused by loss of DC power which is covered in a conservative fashion in Table 4.2, Item VII d.

Item 16 - An ongoing security compromise is handled as per the security plan. See Section 2.2.1.

Item 17b - Item b is not applicable as these events do not constitute a plausible threat.

Item 18d - See revised Table 4.2, Item X c.

Item 18e - This is not included as this highly unlikely event would only initiate an alert if damage occurs which is covered by other EALs in the turbine enclosure.

Item 19 - See note 1 on Table 4.2.

Item 20 - See Item VIII a in Table 4.2.

c) Item 2 - See Item III c and IV b in Table 4.2.

Item 9 - Declaration of appropriate emergency response level will be included in the plant TRIP (Transient Response Implementation Procedure).

Item 12 - Loss of all or most annunciators is caused by a loss of DC power which is covered in Item VII d of Table 4.2.

Item 13 c - See Items II c and IV b in Table 4.2 for a more conservative response.

Item 14 - An ongoing adversary event which threatens imminent loss of physical control of the plant will be handled as per the security plan. See Section 2.2.1.

Item 15b - Item b is not applicable as these events do not constitute a plausible threat.

Item 15c - See item XIII e in revised Table 4.2.

Item 16a & b - See item Xb in Table 4.2.

Item 17 - See Note 1 on Table 4.2.

d) Item 2 - EALs chosen for General Emergency encompass these conditions. See items II d and IV d in Table 4.2.

Item 3 - An adversary event resulting in the loss of physical control of the plant will be handled as per the security plan. See Section 2.2.1.

Item 6a - Declaration of General Emergency will be included in TRIP procedure.

b - Delcaration of General Emergency will be included in TRIP procedure.

c - Declaration of General Emergency will be included in TRIP procedure.

d - Declaration of General Emergency will be included in TRIP procedure.

Item 7 - Declaration of General Emergency will be included in TRIP procedure.

QUESTION 810.18

Section 6.1 of the Limerick Plan states that the initial notification is made by the shift supervision to PEMA, the risk counties and other response agencies depending on the classification of the event. However, the time frame in which this notification is done is not specified i.e., the time frame for notifying protective action decision makers and providing them with protective action recommendations. The applicant should demonstrate that these officials will be notified within 15 minutes.

RESPONSE

Section 6.1, Paragraph 3 indicates that notification will be done within 15 minutes of the classification of the event.

QUESTION 810.19

Section 6.1 of the Plan states that emergency teams are activated by telephone after duty hours. However, the Plan does not specify how this is done - e.g., activation of call lists or a fan-out system. The applicant should elaborate on the system used and provide for an annual test of the off-duty personnel call-in system.

RESPONSE

The method of activation will be in an implementing procedure, which will be provided for NRC review in the fourth quarter of 1983. Activation and notification networks will be tested in the annual drill as described in Section 8.1.22.

DRAFT

QUESTION 810.20

Revise the sample formats for initial and followup messages to contain a section for possible protective action recommendations as per E.3. of NUREG-0654 and 50.47(5) of 10 CFR 50.

RESPONSE

Exhibit F-3 provides for making protective action recommendations in accordance with NUREG-0654, Section E-3 and 50.47(5) of 10 CFR 50.

QUESTION 810.21

Provide a complete description of the administrative and physical means for prompt alerting and notification of the public within the plume EPZ in sufficient detail to allow for evaluation against the criteria set forth in Appendix 3 of NUREG-0654.

RESPONSE

The administrative and physical means for prompt alerting and notification of the public are presently under development. Details regarding these will be provided in the first quarter of 1984.

QUESTION 810.22

Provide sample formats of written messages intended for release to the public in the event of a serious emergency. These messages should cover such items as those stated in Criterion E.7 of NUREG-0654.

RESPONSE

Written news releases of a serious emergency at the Limerick Generation Station will follow this format:

> Philadelphia Electric Company declared a general emergency at its Limerick Generating Station at _____ (time) today. A general emergency is the most serious of the four classifications of emergencies that can occur at nuclear plants.
>
> The Company has notified the proper federal, state and local authorities of the emergency. The Pennsylvania Emergency Management Agency has advised the Company that it will order the sounding of alert sirens and will broadcast instructions for protective action to the public over the Emergency Broadcast Systems.
>
> The following stations in the Limerick area will broadcast the instructions: _____ _____.
>
> Limerick Generating Station is in the Montgomery County near Pottstown, Pa.

Information will be provided to the State to allow them to develop the messages which direct the public to take protective action.

DRAFT

QUESTION 810.23

Specify the organizational titles and alternates for both ends of the communication links which would be involved in initiating emergency response actions, and to indicate that such stations will be manned 24 hours per day and provided with the appropriate communication with backups, (i.e., delineate all the steps followed from the initial notification of PEMA to activation of the public warning system and provide public information messages on a range of protective actions).

RESPONSE

Sections 5.2.1, 5.2.1.1, 5.2.1.2 describe the titles and alternates for those personnel involved at the site in initiating emergency response actions. Information relating to State and local agency titles will be incorporated into the Emergency Plan when those local plans are finalized in the first quarter of 1984.

Steps to be followed will be described in LGS implementing procedures to be provided for NRC review in the fourth quarter of 1983.

DRAFT

QUESTION 810.24

Provide a coordinated communication link for fixed and mobile medical support facilities.

RESPONSE

Arrangements for fixed and mobile medical support facilities have not been finalized. When finalized, communication links will be developed and a description provided in the Emergency Plan. These actions are planned for the fourth quarter of 1983.

DRAFT

QUESTION 810.25

Provide communication between the EOF and local EOCs.

RESPONSE

Communications links between the EOF and local EOCs are being designed. The system design will be complete in the fourth quarter of 1983, and a description will be incorporated into the Emergency Plan at that time.

QUESTION 810.26

Provide sufficient information to demonstrate compliance with the guidance of Criterion G.1 and G.2 of NUREG-0654 (i.e., an example of the information to be transmitted annually to the public, explaining the rational for protective actions). Commit that information will be distributed on an annual basis.

RESPONSE

Section 3.2, Appendix G-9, discusses the distribution of this information.

Brochures will be prepared for the Limerick Generating Station in a cooperative effort among the Pennsylvania Emergency Management Agency, Philadelphia Electric Company and the Pennsylvania Counties of Montgomery, Berks and Chester.

These brochures will be reviewed annually by the state, the counties and the Company and will be reviewed as necessary.

The brochures will be mailed by the Company to all households in the ten mile Emergency Planning Zone.

When these brochures are available, a copy will be included in the Plan.

DRAFT

QUESTION 810.27

Elaborate on method used for annual dissemination of information to transients within the plume EPZ.

RESPONSE

Brochures will be distributed to all hotels, motels, public gathering places and camp grounds in the EPZ with the recommendation that a copy be placed in all rooms and that copies be made available for anyone visiting the area.

Advertising these instructions in telephone books is under consideration.

DRAFT

QUESTION 810.28

Indicate how the exchange of information will be coordinated between the applicant's spokespersons and the respective spokespersons for offsite organizations. Also there should be coordinated arrangements for dealing with rumors.

RESPONSE

Representatives of the states of Pennsylvania, the Nuclear Regulatory Commission and the three EPZ counties will be invited to participate in news conferences at the Company headquarters, 2301 Market Street, Philadelphia. Working space will be made available for these government representatives in the Company headquarters. These representatives will coordinate responses to rumors in these facilities.

Sections 6.5 and 7.0, and Appendix G-9, describe the operations of the emergency news center and coordination of information. Sections 8.0, 10.0, and 11.0 discuss coordination of information.

QUESTION 810.29

Indicate the site that will be used by the news media during an emergency.

RESPONSE

News Conferences will be held in Room G-1 in the basement of the Company headquarters, 2301 Market Street, Philadelphia, Pa. Section 6.5 discusses the Emergency News Center.

QUESTION 810.30

The applicant's Plan does not contain enough information to evaluate the EOF, TSC and OSC against NUREG-0696. The applicant should submit additional information on these facilities by letter for specific ERF review and the Plan should be expanded to fully describe the TSC, OSC and EOF to include a schedule for full operation of the final centers.

RESPONSE

A letter will be submitted containing additional information on these facilities.

The plan will be expanded when final information is available on these facilities. This will include a schedule for full operation.

Additional information available at this time is provided below.

1. EOF

The EOF will have facilities for: management of overall licensee emergency response, coordination of radiological and environmental assessment, determination of recommended public protective actions, and coordination of emergency response activities with Federal, State and Local agencies.

Additional information on the EOF is contained in the December 6, 1982 letter from J. S. Kemper to A. Schwencer, NRC.

a. Location

The Emergency Operations Facility (EOF) is located at Philadelphia Electric Company's Plymouth Service Building which is approximately 17 miles from the plant. The building is framed steel construction with concrete floors and metal decking. Interior walls are of masonry and dry wall construction.

b. Size

The EOF facility is of sufficient size to house 50 persons and equipment required to perform their specific functions. Space is provided for NRC personnel, State and Local officials, Company personnel, records, storage and equipment.

c. Communications

The EOF shall have reliable voice communications facilities to the TSC, the control room, NRC, and State and Local emergency operations centers.

d. Equipment

The EOF will have radiological monitoring equipment providing information for dose assessment. In addition, equipment to monitor plant conditions will be available.

e. Schedule

The EOF is scheduled to be completed in September 1983.

2. TSC

The Technical Support Center (TSC) will provide plant management and technical support to plant operations personnel during emergency conditions, relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations, prevent congestion in the control room and perform EOF functions for the Alert Emergency class and General Emergency class until the EOF is functional.

a. Location

The TSC is located in a two story building on the plant site, east of the water treatment facility. The building is framed steel construction with precast concrete exterior wall panels, concrete floors and metal decking. Interior walls are of masonry and dry wall construction.

b. Size

The TSC facility is of sufficient size to house 25 persons and equipment required to perform their specific functions. Space is provided for NRC personnel, Company personnel, records, storage, communications and kitchen area.

c. Habitability

The facility provides the same radiological habitability as the control room under accident conditions. The ventilation system includes HEPA and charcoal filters. Monitoring systems will be provided in the TSC to continuously indicate ariborne radioactivity concentration.

d. communications

The TSC shall have reliable voice communications to the control room, the OSC, the EOF and the NRC.

e. Equipment

Equipment to provide information for dose assessment and plant conditions assessment will be provided.

f. Schedule

The facility will be completed January 1983.

3. OSC

Section 7.1.4 in the LGS EP, Rev. 2 describes the Operational Support Center.

The facility should be completed by January 1984.

DRAFT

QUESTION 810.31

Specify the time required to achieve operational readiness of the emergency response facilities.

RESPONSE

The time to achieve operational readiness will be addressed when the implementing procedures are provided for NRC review in the fourth quarter of 1983.

QUESTION 810.32

The applicant's Plan does not contain enough information to evaluate onsite monitoring systems against criteria H.5.a of NUREG-0654. The monitors identified should include those used for obtaining Emergency Action Levels for the appropriate initiating conditions listed in Appendix 1 of NUREG-0654.

RESPONSE

Instruments pertinent to the particular EAL will be identified in the implementing procedure to be provided for NRC review in the fourth quarter of 1983.

DRAFT

QUESTION 810.33

Include provision for obtaining offsite information regarding geophysical phenomena as specified in criteria H.6.a of NUREG-0654.

RESPONSE

See FSAR Sections 2.3.2, 2.3.3.2.4, 2.4.3.5.1 and 3.7.4 for site and regional geophysical data.

In addition, wind speed, wind direction and temperature are continuously recorded from the site meteorology stations and the National Weather Service. Water temperature and flow are available from USGS gauging stations on the Schuylkill. Seismic monitoring is by triaxial accelerograph and response spectrum analyzer located in the plant.

DRAFT

QUESTION 810.34

Finalize plans and provide sufficient information to establish that there is offsite dosimetry and that it will meet the requirements of the NRC Radiological Assessment Branch Technical Position for the Environmental Radiological Monitoring Program.

RESPONSE

Refer to ER-OL Section 6.1.5 for the requested information.

QUESTION 810.35

Provide information pertaining to meteorological capabilities addressed in the criteria set forth in Appendix 2 to NUREG-0654 by adopting the interim compensatory measures. The Plan must be revised to address the long term measures described in Appendix 2 of NUREG-0654 to include a schedule for full operational capability and how topographical influences and change in meteorological conditions will be considered.

RESPONSE

The meteorological system is under development. The design is expected to be completed in the second quarter of 1983. The Emergency Plan will be changed to provide the requested information at that time.

DRAFT

QUESTION 810.36

Make provisions to inspect, inventory and operationally check emergency equipment/instruments at least once each calendar quarter and after each use. Also, make provisions to calibrate equipment at intervals recommended by the equipment supplier(s).

RESPONSE

Section 8.3 discusses on inventories and operational checks of equipment/instruments.

Equipment will be calibrated at intervals recommended by the suppliers.

DRAFT

QUESTION 810.37

Explain how offsite monitoring results will be coordinated with offsite officials in accordance with NUREG-0654, criteria H.12.

RESPONSE

See response to Question 810.5(b).

The Emergency Operations Facility serves as the central location for coordinating response activities between site and off-site groups. Support activities, field surveys, environmental sampling and analyses, dose projection calculations and communicating with the Bureau of Radiation Protection are some of the major functions coordinated in the Emergency Operations Facility.

QUESTION 810.38

Identify and establish emergency procedures based on plant system and effluent parameter values characteristic of a spectrum of off-normal conditions and accidents and identify the plant parameter values, etc. which normally correspond to NUREG-0654, Appendix 1 example initiating conditions.

RESPONSE

Emergency procedures will be developed and submitted as required by 10CFR50, Appendix E. They will be provided for NRC review in the fourth quarter of 1983.

DRAFT

QUESTION 810.39

Delineate the method and techniques used in post-accident sampling; this additional information should encompass guidance material given in NUREG-0737, Items II.B.3, II.F.1, and III.D.3.3.

RESPONSE

The methods and techniques will be described in procedures which will be provided for NRC review in fourth quarter of 1983.

QUESTION 810.40

Provide the methods and techniques for determining the source term of radioactive material releases within plant systems and the magnitude of radioactive material releases based on plant system parameters and effluent monitors (e.g. the relationship between containment radiation monitor(s) reading(s) and radioactive material available for release from containment).

RESPONSE

This information will be provided in the first quarter of 1984.

DRAFT

QUESTION 810.41

Establish and provide the methods used to relate releases to plume center line whole body dose rates out to 10 miles under various stability classes and wind speeds.

RESPONSE

These methods will be provided in the first quarter of 1984.

QUESTION 810.42

Establish the capability of acquiring and evaluating meteorological information sufficient to meet criteria of Appendix 2 at EOF, TSC and CR. Also make suitable meterological data processing interconnections available to the State to permit independent analysis.

RESPONSE

The meterological system is presently being designed. The Emergency Plan will be changed to provide the requested information in the first quarter of 1984.

QUESTION 810.43

Provide for immediately estimating the distance from the site to which the EPA PAGs may be exceeded (not only to 10 miles) to include default release durations for integrating dose rates.

RESPONSE

This information will be provided in the first quarter of 1984 when development of the dose assessment system is complete.

QUESTION 810.44

Provide a specific means for determining release rate(s)/projected dose(s) if instrumentation used for assessment is offscale or inoperable. The plan should reference appropriate implementing and operating procedures which would give such detailed information as default release times, etc.

RESPONSE

See LGS EP section 6.2.3, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4. Procedures will be provided in the first quarter of 1984.

QUESTION 810.45

Elaborate on the capability and resource for field monitoring within the plume EPZ. This section should also provide estimates of deployment time and means of transportation to be used by personnel involved in offsite radiological assessment of liquid or gaseous releases.

RESPONSE

See Emergency Plan Section 6.2 and Figure 5.2 for PECo field survey capability. Assistance in field surveys can also be requested from RMC Corporation, the EPA, the DOE Brookhaven National Laboratory and the PA BRP within the plume EPZ. See Section 6.2 for estimates of deployment time and means of transportation.

QUESTION 810.46

Provide more detailed information concerning the methodology for detecting airborne radioiodine concentration within the plume EPZ without noble gas interference and for relating measured field radiation/contamination levels to dose rates for applicable isotopes listed in Table 3 of NUREG-0654.

RESPONSE

The plume EPZ radioiodine air sampling program involves the use of a battery operated air sampler, charcoal or silver zeolite cartridge, particular filters and the Eberline SAM-2/RD19 detector system. This system provides the capability to detect 10 uCi/cc I-131, per NUREG-0654. Silver zeolite cartridges are used to avoid significant absorption of noble gases when sampling for iodine. Further the dual channel capability of the SAM-2 is used to subtract counts attributed by energies above I-131.

QUESTION 810.47

Describe the provisions for promptly determining radioiodine release rates to include the criteria for conducting offsite monitoring and response time if the stack sampler locations are inaccessible.

RESPONSE

The computerized radiation monitoring system provides on-line input for normal range iodine releases. The high range effluent monitors are designed to provide access to the partculate and iodine sample during emergency conditions. The samples are transported to the counting lab via a dumbwaiter. After analysis, release data is manually entered into the counting lab computer which will interface with the meterological dose model.

DRAFT

QUESTION 810.48

Establish and provide the method(s) for relating the various measured parameters to dose rates for key isotopes and gross radioactivity measurments. Also, provide method(s) for estimating integrated dose from projected and actual dose rates and for comparing these estimates with EPA PAGs.

RESPONSE

This information will be provided in the first quarter of 1984 when the design of the dose assessment system is complete.

DRAFT

QUESTION 810.49

Provide plots which show high range containment radiation monitor readings vs. time for various accident conditions (e.g., 100% release of gap activity, and 1% and 10% of release of full inventory) and incorporate these into the EALs.

RESPONSE

The requested information will be provided in the first quarter of 1984.

DRAFT

QUESTION 810.50

Specify the means and time required to warn or advise onsite individuals and individuals who may be in the owner-controlled areas.

RESPONSE

See LGS EP Section 6.4.1.16.

DRAFT

QUESTION 810.51

Provide more information pertaining to the accountability process for all individuals onsite to include how the 30 minute accountability goal is addressed.

RESPONSE

See Emergency Plan Section 6.4.1.1d. The implementing procedures will be written with the goal of 30 minute accountability. The implementing procedure will be provided for NRC review in the fourth quarter of 1983.

QUESTION 810.52

Provide the information set forth in NUREG-0654, criteria J.10.a., c., d. and m.

RESPONSE

Criterion J.10.a - This data for the evacuation of the public will be developed by the State and submitted as part of their plan. The PECo. preselected radiological sampling points are being determined.

Criterion J.10.c - This area is currently being studied by the Philadelphia Electric Company.

Criterion J.10.d - This is not applicable to the licensee per NUREG-0654.

Criterion J.10.m - See revised Emergency Plan Section 6.4.1.2.c - Implementing procedures will be provided in the fourth quarter of 1983.

QUESTION 810.53

Discuss the time required to make radioiodine measurements and how it will be assured that KI and other onsite protective measures will be taken in time to be effective.

RESPONSE

An estimated time required to make radioiodine measurements is one hour. This allows for retrieval and analysis of iodine cartridges and interpretation of field survey data. When radioiodine measurements indicate an exposure of 10 rem or more to the thyroid, the Health Physics & Chemistry Coordinator and the Medical Director are responsible for initiating the administration of KI to employees and other support personnel.

DRAFT

QUESTION 810.54

Commit to recommend protective measures (shelter or evacuation) to the offsite officials with the authority and responsibility to make protective action decisions based on:

(a) the distance from the plant at which the EPA PAGs are exceeded,

(b) Plant core conditions - under core melt conditions (existing or projected) recommend evacuation of 2 miles around the site and 5 miles down wind,

(c) use of key-hole approach (not just in a down wind direction) and,

(d) offsite factors such as evacuation time or special facilities that may effect the effectiveness of action recommended. Commit to review this methodology with offsite officials annually.

RESPONSE

Recommend protective actions to reduce whole body and thyroid dose from exposure to a gaseous plume or based on the following projected doses to the population:

Projected Dose (Rem) to the Population	Recommended Actions	Comments
Whole body 1 Thyroid 45	No planned protective actions. State may issue an advisory to seek shelter and await further instuction. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole body 1 to 5	Seek shelter as a minimum. Consider evac-	If constraints exist, special con-

Thyroid 5 to 25	uation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	sideration should be given for evacuation of children and pregnant women.
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.

Protective action decisions at the time of the incident must take existing onsite and offsite conditions into consideration. Officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low or reasonably achievable. A commitment to define guidelines for determining plume exposure protective action recommendations for local emergency management and civil defense agencies is provided in Section 6.5.1.2c. These recommendations are based on the distance from the plant at which the EPA PAGs are exceeded, plant core conditions and other offsite factors such as evacuation time, prevailing weather conditions and whole body and thyroid dose. Methodology will be reviewed with offsite officials annually.

DRAFT

QUESTION 810.55

Include the emergency exposure guidelines for individuals involved in personnel decontamination, ambulance service, and medical treatment.

RESPONSE

The emergency exposure guidelines are as follows:

Projected Dose (Rem) to the Population	Recommended Actions	Comments
Whole body 25 Thyroid 125	Control exposure of emergency team members to these levels except for lifesaving missions. (Appropriate controls for emergency workers, include time limitations, respirators, and stable iodine.)	Although respirators and stable iodine should be used where effective to control dose to emergency team workers, thyroid dose may not be a limiting factor for lifesaving missions.
Whole body 75	Control exposure of emergency team members performing lifesaving missions to this level. (Control of time of exposure will be most effective.)	

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

These guidelines will be incorporated into the Emergency Plan and implementing procedures where appropriate.

DRAFT

QUESTION 810.56

The applicant should elaborate on the emergency radiation protection program to include distinctions from their normal radiation protection program, how it is initiated and implemented.

RESPONSE

The major distinction between the normal and the emergency radiation protection programs is in the organization. The emergency organization arranges qualified individuals into small groups with highly specialized functions. Additional training is required to develop proficiency in these specialized area. Organization is discussed in Section 5 and training is discussed in Section 8.
Certain distinctions are made between the normal Health Physics staffing and the Emergency Health Physics staffing. The Emergency Health Physics program is initiated and implemented through emergency procedures which will be prepared for Limerick shortly before fuel loading.

DRAFT

QUESTION 810.57

Include specific action levels used in determining the need for decontamination and the means of decontaminating personnel wounds, supplies, instruments, and equipment.

RESPONSE

In an emergency situation, standard good practices in decontamination will be followed. Procedures similar to Peach Bottom Atomic Power Station HPO/CO's specific for decontamination will be developed and applied in emergency situations. For personnel surveys showing 100 cpm, or greater, above background (using an HP-210 or HP-260 probe) decontamination will be initiated. The materials required will be readily available at the appropriate locations and listed with other supplies. Wound decontamination is discussed in Peach Bottom procedures and equipment and tools are addressed as well. The necessary references and information will be included in the LGS Emergency Plan and procedures when the procedures are finalized shortly before fuel loading.

DRAFT

QUESTION 810.58

Provide more information concerning onsite contamination control measures and address the criteria for permitting return of areas and items to normal use.

RESPONSE

Standard good health physics practices shall be used in an emergency to prevent the spread of contamination until it is determined that personnel must evacuate an area.

An area may be returned to "normal" use only when area surface and airborne surveys indicate that this is possible. Until then, health physics supervision shall determine what protective actions must be taken by persons entering contaminated areas for justifiable reasons.

Additional information will be included in the implementing procedures which will be provided in the first quarter of 1984.

DRAFT

QUESTION 810.59

Discuss the provisions for decontaminants suitable for the contamination expected - giving particular attention to radioiodine contamination of the skin.

RESPONSE

Personnel decontamination kits will be available in several predetermined places. These kits are designed to provide materials for all general types of skin and wound contamination clean-up. It is not within good ALARA practices to do an isotopic determination before personnel decontamination efforts are initiated. When an individual exceeds the 100 cpm above backgroup guideline, decontamination will begin as soon as possible. The decontamination supplies chosen have been shown to be effective when used for all expected isotopic contaminations. In cases where it is necessary, follow up actions will include an isotopic determination. More information will be provided in the Emergency Plan when the implementing procedures are completed. Procedures and related Emergency Plan changes will be provided shortly before fuel loading.

DRAFT

QUESTION 810.60

Provide the following:

(a) general plans and procedures for reentry and recovery and the means by which decisions are reached to relax protective measures,

(b) means for informing members of the response organizations that a recovery operation is to be initiated, and

(c) a method for periodically estimating total population exposure.

RESPONSE

(a) See Emergency Plan Sections 6.4.1.1g and 6.5.3.1.9

(b) Recovery plans and operations will be reviewed with the appropriate recovery organizations prior to implementation. Also see Emergency Plan Section 9.0.

(c) This information will be provided when the implementing procedures are completed shortly before fuel loading.

DRAFT

QUESTION 810.61

Indicate that the training for offsite response organizations who may enter the site will include site access procedures.

RESPONSE

This information will be provided in the implementing procedures which will be provided in the fourth quarter of 1983.

DRAFT

QUESTIONS 810.62

Specify the organization that trains first aid personnel in Red Cross Multi-Media techniques.

RESPONSE

The Nuclear Training Section of Philadelphia Electric will provide this training for on-site personnel.

QUESTION 810.63

Describe the provisions for training offsite police, local civil defense emergency service personnel, and personnel responsible for communications.

RESPONSE

Offsite personnel are trained by the Pennsylvania Emergency Management Agency in those functions required by the State and local plans.

Offsite personnel will be trained by PECo in functions required by the LGS on-site plan. This includes use of communications equipment, monitoring equipment, dose assessment activities. The procedures for training these personnel will be developed as the training needs are identified. These needs will be identified as equipment and procedures are developed.

QUESTION 810.64

Provide training to the offsite officials with authority and responsibility for protective action decision making on the basis on which applicant recommendations will be made.

RESPONSE

Personnel responsible for protective action decision making will be trained in procedures and equipment on which protective action recommendations will be made. This training will be conducted after the procedures and equipment are available in the first quarter of 1984.

DRAFT

QUESTION 810.65

Provide the supporting plans - i.e. Appendix G.

RESPONSE

The supporting plans will be provided in the first quarter of 1984.

DRAFT

QUESTION 810.66

The listing of implementing procedures should reference the corresponding section(s) of the plan to be implemented.

RESPONSE

The requested cross-reference will be provided in the fourth quarter of 1983.

DRAFT

QUESTION 810.67

Provide information indicating that appropriate independent annual audits of the emergency preparedness program will be conducted.

RESPONSE

Procedures will be developed to indicate that an annual independent audit of the emergency preparedness will be conducted. These procedures will be provided for NRC review by the third quarter of 1984 in conjunction with completion of quality assurance plans and procedures.

DRAFT

QUESTION 810.68

Provide information indicating that the results of the independent annual EP audits, along with recommendations for improvements, will be documented, reported to appropriate licensee corporate and plant management, and involved Federal, State, and local organizations and retained for a period of five years.

RESPONSE

Procedures to distribute and retain results of annual EP audits will be completed and provided for NRC review in the third quarter of 1984 in conjunction with completion of the quality assurance plans and procedures.