

CAROLINA POWER & LIGHT COMPANY  
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
REVISED PLANT EMERGENCY PROCEDURES

<u>PEP NUMBER</u>	<u>TITLE</u>	<u>REVISION NUMBER</u>
4.3	Performance of Training, Exercises and Drills	3

File No. \_\_\_\_\_  
Unit No. \_\_\_\_\_  
Q+RETcd \_\_\_\_\_  
App'l \_\_\_\_\_

CAROLINA POWER & LIGHT COMPANY  
BRUNSWICK STEAM ELECTRIC PLANT

UNIT NOS. 1 & 2

PERFORMANCE OF TRAINING, EXERCISES AND DRILLS

PLANT EMERGENCY PROCEDURE: PEP-4.3

VOLUME XIII

Rev. 3

Recommended By:

J. A. Padgett

Date:

12-18-81

Approved By:

C. L. [Signature]  
Plant General Manager

Date:

12/23/81

LIST OF EFFECTIVE PAGES

PEP-4.3

<u>Page(s)</u>	<u>Revision</u>
1 - 10	3

## 1.0 Responsible Individuals and Objectives

- 1.1 The Emergency Planning Coordinator is responsible to the plant General Manager for assuring radiological emergency response training to those who may be called upon to assist in an emergency.
- 1.2 The Emergency Planning Coordinator is responsible for preparing training materials, scheduling training sessions, and maintaining training records.
- 1.3 The Training Supervisor shall assist the Emergency Planning Coordinator with training, as required.
- 1.4 Emergency organization leaders/directors and managers are responsible for the training of personnel under their direction during an emergency, and for ensuring that required skills are maintained.
- 1.5 Plant and corporate emergency personnel are responsible for becoming generally familiar with the PEPs, and proficient in carrying out PEPs that are applicable to them.
- 1.6 The Emergency Planning Coordinator is responsible for the planning, scheduling and administration of drills and exercises as described in this procedure.
- 1.7 The plant Fire Protection Specialist is responsible for fire brigade training as defined in the plant Operating Manual, Volume XIX, Fire Protection.

## 2.0 Scope and Applicability

This procedure establishes CP&L's requirements for training/retraining, drills, and exercises for all general employees, CP&L emergency response personnel and off-site support agencies.

The Emergency Planning Coordinator is responsible for ensuring that the training and retraining, drills and exercises are carried out at the frequency described in this procedure.

## 3.0 Actions and Limitations

### 3.1 Training Requirements for Emergency Preparedness

- 3.1.1 All personnel on site, other than escorted personnel, shall receive initial orientation and annual retraining from the Training Supervisor or his designee in the following areas.
  - 3.1.1.1 Basic principals of radiological safety, including: effects of radiation, theory and use of radiation detection devices, use of protective clothing, equipment and devices.
  - 3.1.1.2 Evacuation and accountability procedures.

- 3.1.2 Plant personnel who are designated as Emergency Security Team members shall receive initial and subsequent annual retraining from the Security Specialist or his designee, including, but not limited to, the following:
  - 3.1.2.1 Personnel accountability procedures
  - 3.1.2.2 Site access
  - 3.1.2.3 Deployment of Security personnel
  - 3.1.2.4 Evacuation and perimeter control
  - 3.1.2.5 Applicable communication links and minds
- 3.1.3 Plant operators shall receive initial and subsequent annual retraining from the Training Supervisor or his designee, including, but not limited to, the following:
  - 3.1.3.1 Emergency classes and emergency action levels
  - 3.1.3.2 Initial dose projections
  - 3.1.3.3 Assistance to be provided by the Technical Support Center
  - 3.1.3.4 Record keeping
- 3.1.4 Plant personnel who are designated as fire brigade members shall receive initial and subsequent annual retraining from the Fire Protection Specialist or his designee, identified in the plant Operating Manual, Volume XIX.
- 3.1.5 Personnel who will staff the Corporate Emergency Operations Center shall receive initial and subsequent annual retraining from the Director of Emergency Preparedness or his designee, including, but not limited to, the following:
  - 3.1.5.1 The Brunswick Emergency Response Plan
  - 3.1.5.2 Capabilities and services to be provided by the Corporate Emergency Operations Center and by outside support organizations and agencies.
  - 3.1.5.3 Communications system and procedures to be utilized.
  - 3.1.5.4 The Corporate Emergency Plan
- 3.1.6 Personnel who will staff the Emergency Operations Facility shall receive initial and subsequent annual retraining from the Director of Emergency Preparedness or his designee, including, but not limited to, the following:

- 3.1.6.1 The Brunswick Emergency Plan and appropriate emergency procedures.
  - 3.1.6.2 The Corporate Emergency Plan
  - 3.1.6.3 Communication systems and procedures for notification of off-site agencies and corporate headquarters.
  - 3.1.6.4 Capabilities and services to be provided by corporate and outside support organizations and agencies.
  - 3.1.6.5 Emergency classifications, emergency action levels, and protective action guides.
  - 3.1.6.6 Interface with their counterparts in the Technical Support Center.
  - 3.1.6.7 Dose assessment and environmental monitoring procedures for the respective EOF teams.
- 3.1.7 Off-site support organizations (hospital personnel, ambulance and rescue squad, police, and fire departments) shall receive initial and subsequent annual retraining from the Emergency Planning Coordinator or his qualified designee, including, but not limited to, the following:
- 3.1.7.1 Notification procedures
  - 3.1.7.2 Basic radiation protection
  - 3.1.7.3 Expected roles of each support group
  - 3.1.7.4 Support organizations who enter the site will also be trained on access procedures and identification of the on-site contact personnel.

Training for the Brunswick Technical Support Group and Radiological Emergency Teams will be conducted by a combination of study guide and walk-through. The goal is to perform the training quarterly, but not to exceed at least a semiannual walk-through. The Emergency Planning Coordinator or his designee shall prepare a scenario to give the Technical Support Group an opportunity to classify emergency action levels and exercise a portion of the emergency response plan. The scenario will be initiated in the Control Room with Shift Operating Supervisor and the emergency organization will be activated as the scenario progresses. Any erroneous actions by the participants will be corrected on the spot and, if necessary, individual or group instructions can be given as needed. The training for this group will consist of the following:

### 3.1.8 Site Emergency Coordinator

The Site Emergency Coordinator training emphasizes organization and management; that is, the command and control responsibilities of the Site Emergency Coordinator. The Site Emergency Coordinator is responsible for managing the efforts of others and therefore he must be familiar with the key functions to be performed by each element of the emergency organization. Typical topics include:

1. Basic organizational concepts of the plan.
2. Conditions requiring declaration of an emergency.
3. Emergency classifications, emergency action levels, and protective action guides.
4. Interpretation of plant and field data and how it relates to emergencies and their classification.
5. Communication systems and procedures for notification of plant personnel and off-site agencies.
6. Capabilities and services to be provided by support organizations and agencies.
7. Entries into hazardous areas and personnel exposure control.
8. Assistance to be provided by the Emergency Operations Facility.
9. The Corporate Emergency Plan.

### 3.1.9 Emergency Communicator

The Emergency Communicator training includes:

1. Use of emergency communications systems and equipment.
2. Emergency communication procedures.
3. Emergency organization.
4. Emergency team rosters and call lists.
5. Outside agencies and call lists.

### 3.1.10 Plant Operations Director

The Plant Operations Director is responsible for managing the activities of the Plant Operators, the Accident Assessment Team, and the fire brigade. His training involves indoctrination in the following:

1. Emergency classes and emergency action levels.
2. Specific functions and responsibilities of the plant operators, the Accident Assessment Team, and the fire brigade.
3. The coordination of efforts between plant operators in the Control Room and the Accident Assessment Team in the Technical Support Center.

### 3.1.11 Accident Assessment Team

Training of the Accident Assessment Team (including shift Engineer) includes:

1. Conditions requiring declaration of a radiological emergency.
2. Emergency classes and emergency action levels.
3. Assessment of accident causes and consequences and how to mitigate them.
4. Response and analysis of transients and accidents.
5. Plant design and layout including the capabilities of instrumentation and controls in the Control Room and Technical Support Center.

However, under no circumstances will lack of the above training prohibit an individual with applicable expertise from joining the Accident Assessment Team (e.g., bringing in a thermal hydraulics expert from the reactor vendor).

### 3.1.12 Logistics Support Director

Training of the Logistics Support Director includes the following:

1. Emergency site security requirements, procedures, and resources needs.

2. Familiarization with the technical, analytical, and other specialty capabilities available from corporate assets, contractors, and joint utility organizations.
3. Emergency plans and resource mobilization capabilities of state and local governments and federal authorities.

3.1.13 Radiological Control Director

Training of the Radiological Control Director includes:

1. Conditions requiring declaration of a radiological emergency.
2. Emergency classes and emergency action levels.
3. Interpretation of plant and field data and how it relates to emergencies and their classification.
4. Assessment of accident causes, their consequences, and potential radiation release effects.
5. Determination of radiation levels in sections of the plant, evaluation of prospective radiation migration paths, and measures available to prevent further radiation migration.
6. The range of radiological conditions that may be encountered.
7. Emergency radiation exposure criteria.
8. Functions and responsibilities of each Radiological Emergency Team.

3.1.14 Emergency Repair Director

The Emergency Repair Director receives training in the following areas:

1. Communication systems and procedures for notification of plant personnel and off-site agencies.
2. Emergency facilities and equipment.
3. Emergency classes and action levels.

- 3.1.15 Instructions qualifications for the Radiological Emergency Plan and PEPs.
- 3.1.15.1 The Emergency Planning Coordinator shall be considered a qualified instructor based on continued involvement and awareness of emergency planning regulations and Radiological Emergency Plan and PEP development.
  - 3.1.15.2 The Training Supervisor shall receive his initial and subsequent annual instructions and qualification from the Emergency Planning Coordinator.
  - 3.1.15.3 Specialists and/or consultants may be approved as qualified instructors by the Emergency Planning Coordinator.
  - 3.1.15.4 Emergency team leaders/directors (e.g., Site Emergency Coordinator, Radiological Control Director, Personnel Protection and Decontamination Team Leader, and alternates) shall be designated and receive their initial and subsequent qualification from the Training Supervisor or his qualified designee.

## 3.2 Drills

- 3.2.1 Emergency drills are supervised instruction periods aimed at testing, developing, and maintaining skills in a particular operation. Brunswick Plant emergency personnel will participate in periodic drills, in addition to an annual exercise, to test their skills as follows:
- 3.2.1.1 Communication Drills: A system check to test the readiness of the communications network between the Plant and the county and state governments will be conducted quarterly. Communications with federal emergency response organizations and between the plant, state, and county Emergency Operations Centers and field assessment teams will be tested annually.
  - 3.2.1.2 Fire Drills: Fire drills will be held in accordance with the Fire Protection Procedures Plant Operating Manual, Volume XIX.
  - 3.2.1.3 Medical Emergency Drills: Medical emergency drills will be conducted annually. They will involve a simulated contaminated and injured individual. Off-site portions of these drills may be conducted as part of the annual exercise.

3.2.1.4 Radiological Monitoring Drills: Radiological drills will include plant and environmental measurement of external whole body doses and air concentrations of iodines and particulates.

3.2.1.5 In-Plant Radiation Protection Drills: Radiation protection drills, including response to and analysis of simulated elevated airborne and liquid samples and direct radiation measurements, will be conducted semi-annually.

3.2.2 The Emergency Planning Coordinator is responsible for planning and conducting all drills (except fire drills). He shall provide for the following:

3.2.2.1 The basic objectives of the drill, written in his plan.

3.2.2.2 The date, time, place, and participants.

3.2.2.3 Events to be simulated.

3.2.2.4 Time schedule of initiating events, real and simulated.

3.2.2.5 A narrative summary describing the conduct of the drill.

3.2.2.6 Qualified observer(s) to evaluate the drill.

3.2.2.7 Review of the drill evaluation and distribution of copies to affected personnel. The Training Supervisor shall be provided with a copy of all drill evaluations.

3.2.2.8 Initiate implementation of comments/changes to PEPs per PEP-4.1 "Record Keeping and Documentation."

3.2.3 The Plant Fire Protection Specialist is responsible for planning and conducting fire drills as described in the FP-1, "Plant Fire Brigade," Volume XIX, Plant Operating Manual.

### 3.3 Exercises

3.3.1 An exercise is an event that tests the integrated capability of major response organizations. An emergency exercise will be conducted annually and will be based on a scenario which ultimately is declared at least as a Site Emergency. The scenario will be varied from year to year such that all elements of the plant, county and state plans and emergency

organizations are tested within a five year period. Over a six-year period, provision should be made for one exercise to take place between 6:00 pm and midnight and another between midnight and 6:00 a.m. Every fifth year the exercise will be expanded to involve the federal response organizations in addition to the state and local organizations. Advance knowledge of the scenarios and the times of the exercises will be kept to a minimum to ensure a realistic participation by those involved.

- 3.3.2 The Emergency Planning Coordinator is responsible for planning and conducting all exercises. He shall provide for the following:
- 3.3.2.1 The basic objectives of the exercise, written in his plan.
  - 3.3.2.2 The date, time, place and participants.
  - 3.3.2.3 Events to be simulated.
  - 3.3.2.4 Time schedule of initiating events, real and simulated.
  - 3.3.2.5 A narrative summary (scenario) describing the conduct of the exercise.
  - 3.3.2.6 Approval from responsible corporate authorities not significantly involved in the exercise.
  - 3.3.2.7 Coordination with outside agencies (e.g., local, State, federal organizations) to ensure participation by appropriate support groups.
  - 3.3.2.8 Providing for qualified observer(s) to evaluate the exercise.
  - 3.3.2.9 Review of exercise evaluation and distribution of copies to affected personnel. The Training Supervisor shall be provided with a copy of all drill evaluations.
  - 3.3.2.10 Initiate implementation of comments/changes to PEPs per PEP-4.1 "Record Keeping and Documentation."
- 3.3.3 Each annual exercise scenario will include a list of performance objectives and a description of the expected responses. Specific tasks to be evaluated are:

- 3.3.3.1 Condition recognition and reporting.
- 3.3.3.2 Assessment.
- 3.3.3.3 Off-site notification, including CP&L off-site personnel and protective action determination.
- 3.3.3.4 Off-site response.
- 3.3.3.5 Site response coordination, including communications, logistics, center manning, information gathering and analysis, and coordination with off-site agencies.
- 3.3.3.6 Corrective actions.
- 3.3.3.7 Protective actions.
- 3.3.3.8 Record keeping.
- 3.3.3.9 Monitoring.