

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report Nos: 50-277/88-12 and 50-278/88-12  
Docket Nos: 50-277 and 50-278  
License Nos: DPR-44 and DPR-56  
Licensee: Philadelphia Electric Company  
2301 Market Street  
Philadelphia, Pennsylvania 19101  
Facility Name: Peach Bottom Atomic Power Station  
Inspection At: Delta, Pennsylvania  
Inspection Conducted: April 19-20, 1988

Inspectors: *C. Z. Gordon* for 5/5/88  
C. Z. Gordon, Emergency Preparedness  
Specialist, FRSSB, DRSS date

Approved by: *W. J. Lazarus* 5/11/88  
W. J. Lazarus, Chief, Emergency  
Preparedness Section, FRSSB, DRSS date

Inspection Summary: Inspection on April 19-20, 1988 (Report Nos. 50-277/88-12 and 50-278/88-12).

Areas Inspected: Routine announced safety inspection of the emergency preparedness training program including program establishment, implementation, and walkthroughs of emergency response personnel.

Results: No violations were identified. Deficiencies were found in the Licensee's Emergency Action Level (EAL) scheme and in response by personnel to classify emergencies and make appropriate protective action recommendations.

## DETAILS

### 1.0 Persons Contacted

D. Ahmuty, Training Instructor  
R. Andrews, Supervisor, Training Services  
R. Burnhardt, Site Training Coordinator  
G. Gellrich, Shift Manager  
K. Kanouse, Supervisor, Security Training  
D. McRoberts, Shift Manager  
B. Standbaugh, Shift Supervisor  
J. Wilson, Quality Assurance Auditor  
C. Wike, Consultant  
K. Schlecker, Site Emergency Preparedness Coordinator

### 2.0 Operational Status of the Emergency Preparedness Program

#### 2.1 Knowledge and Performance of Duties

The inspectors reviewed the licensee's program for emergency response training and noted that Table 8.1 of the Emergency Plan identifies specific initial training and annual retraining for different categories of personnel within the emergency response organization (ERO). These include Emergency Directors (ED), and team members for technical support, dose assessment, radiation surveys, inplant repair, and first aid and rescue.

Discussions were held with the Station Training Coordinator (STC) who provided training lesson plans, examination material, examination results, and attendance records of site personnel. The STC conducts introductory training for the ERO through an Emergency Response Plan Overview session. This is supplemented with specialty courses in emergency classification, facility activation, communications, technical support, PASS sampling, personnel safety team response, dose assessment team response, and other special training. Dose assessment training is provided by different instructors who have the necessary experience in these areas. The background and qualification of the STC appeared adequate to provide most emergency preparedness instruction.

Lesson plans are detailed and focus on important response elements. Table 2 to the EP Training Course Plan contains matrix that specifies lesson plans given to each representative of the ERO by emergency title.

Inspection of licensee records indicated that they were complete and up to date. At least three individuals are qualified in each key ERO position. Included are Station Management (shift supervisors) and Shift Managers qualified as ED's and upper level management qualified as Emergency Response Managers. The site vice president is the senior site official responsible for everyday direction and control activities. Since he is not ED qualified, the inspectors discussed with licensee staff the possibility of providing ED training to the site vice president. In addition, the inspectors reviewed the Peach Bottom Restart Plan, Rev. 1, dated April 8, 1988 and noted that the Plant Manager (the senior site representative after the site vice president) is committed to becoming a qualified ED. However, a record review did not list this individual as completing all necessary training for the function (50-277/88-12-01 and 50-278/88-12-01).

EP-209, " Telephone Lists For Emergency Use " were also reviewed to ensure that qualified personnel are notified during emergencies. EP-209 contains a list of 22 appendices of licensee and support personnel grouped by functional area. The inspectors identified three individuals who were not qualified to perform response functions (50-277/88-12-02 and 50-278/88-12-02). The licensee has agreed to evaluate the process of ERO personnel assignments and to formalize this process as appropriate.

Walk-throughs, focusing on knowledge and performance of emergency response duties, were conducted with shift supervisors and shift managers. All are qualified as Emergency Directors. The inspectors determined that the training received by these individuals, which included emergency classification, protective action decisionmaking and recommendations, and notifications to offsite authorities, was provided within the past year. The inspectors found that the individuals were knowledgeable in various aspects of plant operations, mitigation and use of procedures. The inspectors noted that practical training that has been provided to shift personnel doesn't allow for a full range of actions because of simulator limitations. This has resulted in the operators not being familiar with the early stages of fast breaking accidents, and the resultant actions to be accomplished. In each walk-through, Protective Action Recommendations (PAR's) were either inadequate or not made to State authorities for a fast breaking scenario that required the declaration of a General Emergency (50-277/88-12-03 and 50-278/88-12-03). The licensee agreed to evaluate this areas and upgrade training as appropriate. Also, inconsistencies were observed in responses when using emergency action levels to

classify events. The inspectors expressed concern over the level of detail and thoroughness of EAL's. Many accident conditions are not covered and would inhibit proper classification. Individuals were observed to rely on the General Condition EAL if exact parameters or initiating conditions could not be found in other event categories. Specific concerns regarding the Peach Bottom EAL's are identified Section 2.2.

## 2.2 Emergency Detection and Classification

The inspector reviewed EP-101, "Classification of Emergencies" against the guidance of NUREG-0654. This review identified many inconsistencies and/or omissions of the guidance. Specific areas include:

1. Earthquakes - no Unusual Event classification, inconsistent initiating conditions for Alert and Site Area Emergency;
2. Tornado or Hurricane - No Unusual Event classification, inconsistent initiating conditions for tornado at Alert, and no initiating conditions for tornado or hurricanes at Site Area Emergency;
3. Instrument Failure - incomplete initiating conditions at Unusual Event;
4. Hazards - no initiating conditions for Site Area Emergency;
5. Security - no initiating conditions for any classification;
6. Anticipated Transient without Scram - no initiating conditions for any classification;
7. Personnel Injury - incorrect usage of the procedures;
8. Plant Annunciators - no initiating conditions for any classification;
9. Unplanned Shutdown - incorrect usage of the procedures; and
10. ECCS initiated - no initiating conditions for Unusual Event.

During walkthroughs, the operators made extensive use of the General Condition EAL for the four emergency classifications. Review of the General Condition EAL indicates that for each

classification, initiating conditions are vague and resulted in inconsistent operator response when classifying events (See section 2.1). Additionally, this section does not identify specific components, systems, instrument readings, or quantify initiating conditions as required by 10 CFR 50 Appendix E.IV.B.

The licensee stated that the EAL's were under revision. A discussion with the individual responsible for EAL content and a review of the draft revision of the EAL's indicated that most of the above mentioned EAL's are still not properly addressed. The licensee has indicated that they will institute a complete review of the EAL's to bring them into conformance with NUREG-0654 guidance. Additional long term actions will also be undertaken including: an evaluation of symptom based EAL's; integration of the EAL's with the Emergency Operating Procedures; and the incorporation of human factors in EAL design. This is an Unresolved Item. Licensee actions and progress in this area will be reviewed in a subsequent inspection (50-277/88-12-04 and 50-278/88-12-04).

### 3.0 Exit Meeting

The inspector met with the licensee personnel denoted in Section 1 at the conclusion of the inspection to discuss the findings as presented in this report. The inspector also discussed some areas for improvement. The licensee acknowledged the findings and agreed to evaluate them and institute corrective actions as appropriate.

At no time during the inspection did the inspectors provide any written information to the licensee.