

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos: 50-277/88-36 and 50-278/88-36
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: September 26-28, 1988

Inspectors:

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10/12/88
date

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10/12/88
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Inspection Summary: Inspection on September 26-28, 1988 (Report Nos. 50-277/88-36 and 50-278/88-36).

Areas Inspected: A routine, unannounced emergency preparedness inspection and observation of the licensee's annual full-participation emergency exercise performed on September 27, 1988. The inspection was performed by a team of six NRC Region I and headquarters personnel.

Results: No violations were identified. Emergency response actions were adequate to provide protective measures for the health and safety of the public.

DETAILS

1.0 Persons Contacted

D. Smith, Vice President, Peach Bottom Atomic Power Station
R. Kankus, Staff Engineer
J. Cotton, Superintendent Operations
E. Fogarty, Manager, Nuclear Support
F. Weigand, Director, Emergency Preparedness
W. Alden, Director, Licensing
D. Meyers, Support Manager
R. Gallagher, Site Emergency Planning Coordinator
D. LeQuia, Superintendent Plant Services
B. Clark, Superintendent Administration
W. Eckman, Nuclear Quality Assurance
C. Wike, Technical Advisor
A. Engler, Emergency Planning

Other licensee representatives, including exercise controllers and observers attended the exit meeting as well.

2.0 Emergency Exercise

The Peach Bottom Atomic Power Station full participation exercise was conducted on September 27, 1988 from 1700 to 2400. The exercise was unannounced and after normal working hours. Subsequently, the Commonwealth of Pennsylvania, the counties of York, Lancaster and Chester and 13 local towns and the State of Maryland and the counties of Cecil and Harford participated. The Federal Emergency Management Agency (FEMA) observed all off-site activities.

2.1 Pre-Exercise Activities

Prior to the emergency exercise, NRC Region I and FEMA representatives held meetings and had telephone discussions with the licensee to discuss objectives, scope and content of the exercise scenario. As a result, minor changes were made in order to clarify certain objectives, revise certain portions of the scenario and ensure that the scenario provided the opportunity for the licensee to demonstrate the stated objectives as well as those areas previously identified by NRC and FEMA as in need of corrective action.

NRC observers attended a licensee briefing on September 27, 1988, and participated in discussions of emergency response actions expected during the exercise. The licensee's

controllers were responsible for controlling exercise activities to prevent deviations from the scenario and to ensure that normal plant operations were not disrupted. The exercise scenario included the following events:

1. Air ejector discharge monitor alarm due to fuel cladding failure;
2. Damage to the condensate pumps;
3. Loss of Coolant Accident (LOCA) due to a Low Pressure Coolant Injection rupture;
4. Loss of all Emergency Core Cooling Systems resulting in major fuel damage;
5. Subsequent release to the atmosphere through the stack;
6. Declaration of Unusual Event, Alert, Site Area Emergency and General Emergency;
7. Calculation of off-site dose consequences; and
8. Recommendation of protective actions to off-site officials.

2.2 Activities observed

During the conduct of the exercise, six NRC team members made observations of the activation and augmentation of the emergency organization, activation of emergency response facilities, and actions of emergency response personnel during the operation of the emergency response facilities. The following activities were observed:

1. Detection, classification, and assessment of scenario events;
2. Direction and coordination of the emergency response;
3. Augmentation of the emergency organization and response facility activation;
4. Notification of licensee personnel and offsite agencies of pertinent plant status information;
5. Communications/information flow, and record keeping;

6. Assessment and projection of offsite radiological dose and consideration of protective actions;
7. Provisions for inplant radiation protection;
8. Performance of offsite and inplant radiological surveys;
9. Maintenance of site security and access control;
10. Performance of technical support, repair and corrective actions;
11. Fire Fighting practices;
12. Assembly, accountability and evacuation of personnel; and
13. Preparation of information for dissemination at the Emergency News Center.

3.0 Exercise Observations

3.1 Exercise Strengths

The NRC team noted that the licensee's activation and augmentation of the emergency organization, activation of the emergency response facilities, and use of the facilities were generally consistent with their emergency response plan and implementing procedures. The team also noted the following actions that provided strong positive indication of their ability to cope with abnormal plant conditions:

1. Very good command and control of all emergency response facilities (ERF's) was demonstrated;
2. Classification was timely and conservative;
3. Staff notification and augmentation, and subsequent ERF activation was timely;
4. Protective Action Recommendations (PAR's) were prompt and conservative. Plume arrival times and plant conditions were effectively utilized in determining the PAR's;
5. The Dose Assessment staff demonstrated a very good utilization of field monitoring teams, including compensating for a team taken out of service due to a real time problem not associated with the exercise; and

6. The engineering staff employed good engineering solutions in response to the scenario.

3.2 Exercise Weaknesses

The NRC identified the following exercise weaknesses which need to be evaluated and corrected by the licensee. The licensee conducted an adequate self critique of the exercise that also identified these areas.

1. The Shift Manager should utilize his staff in a manner to ensure that he is not over burdened. Several times the Shift Manager was tied up with PECO management and NRC briefings, as well as being on the Emergency Notification System (ENS);
2. Personnel manning the ENS, as well as the Health Physics Network (HPN), were not always able to supply and/or discuss technical issues in the detail requested, and
3. During the activation of the EOF, and subsequent operation, three individuals assumed the role of the Emergency Response Manager. Although there was no impact on EOF operations, it was not clear who was in charge of the EOF prior to activation, or that a turnover had taken place during operation.

4.0 Licensee Actions on Previously Identified Items

The following items were identified during previous inspections (Inspection Report Nos. 50-277/87-36, 50-278/87-36, 50-277/88-08 and 50-278/88-08). Based upon observations made by the NRC team during the exercise, the following open items were acceptably demonstrated and are closed:

(Closed) 50-277/87-36-01 and 50-278/87-36-01: Notifications to off-site authorities were delayed and not in accordance with the implementing procedures;

(CLOSED) 50-277/87-36-02 and 50-278/87-36-02: Concerns regarding the classification of emergencies;

(CLOSED) 50-277/87-36-03 and 50-278/87-36-03: Deficiencies observed in direction, control and communications to inplant teams following turnover in the OSC from the OSC Manager; and

(CLOSED) 50-277/88-09-02 and 50-278/88-09-02: Emergency action level review with the Commonwealth is inadequate.

FRP- 101, Revision 1, Classification of Emergencies, was submitted to Bureau of Radiation Protection for review and comment. Documentation was provided at the time of the inspection that shows the Commonwealth did review and comment on ERP-101.

5.0 Licensee Critique

The NRC Team Leader attended the licensee's post exercise critique on September 28 1988, during which the key licensee controllers discussed observations of the exercise. The licensee indicated these observations would be evaluated and appropriate corrective actions taken.

Exit Meeting and NRC Critique

The NRC team Leader met with the licensee representatives listed in the appendix of this report at the end of the inspection. The Team Leader discussed the observations made during the exercise.

The licensee informed that previously identified items were corrected and no violations were observed. Although there were no corrective actions taken, the NRC team determined that due to the limitations of the scenario, the licensee's Emergency Plan procedures they could implement their Emergency Plan procedures in a manner which would ensure the health and safety of the public.

The licensee and indicated they would make changes where

licensees provide any written

(CLOSED) 50-277/88-09-02 and 50-278/88-09-02: Emergency action level review with the Commonwealth is inadequate.

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6.0 Exit Meeting and NRC Critique

The NRC team Leader met with the licensee representatives listed in Section 1 of this report at the end of the inspection. The Team Leader summarized the observations made during the exercise.

The licensee was informed that previously identified items were adequately addressed and no violations were observed. Although there were areas identified for corrective action, the NRC team determined that within the scope and limitations of the scenario, the licensee's performance demonstrated that they could implement their Emergency Plan and Emergency Plan Implementing Procedures in a manner which would adequately provide protective measures for the health and safety of the public.

Licensee management acknowledged the findings and indicated they would evaluate the NRC comments and observations and make changes where appropriate.

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