

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-387/83-07

Docket No. 50-387

License No. NPF-14 Priority - Category C

Licensee: Pennsylvania Power and Light Company

2 North Ninth Street

Allentown, Pennsylvania 18101

Facility Name: Susquehanna Steam Electric Station

Inspection At: Berwick, Pennsylvania

Inspection Conducted: March 21 - 25, 1983

Inspectors: Raymond H. Smith

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4/8/83
date signed

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Inspection Summary:

Inspection on March 21-25, 1983 (Report No. 50-387/83-07)

Areas Inspected: Routine, announced emergency preparedness inspection and observation of the licensee's annual emergency full scale exercise performed on March 23, 1983. The inspection involved 258 inspector-hours by a team of eight NRC Region I and NRC Contractor personnel.

Results: No violations were identified. The licensee's emergency response actions for this exercise scenario were adequate to provide protective measures for the health and safety of the public.

DETAILS

1. Persons Contacted

The following licensee representatives attended the exit meeting on March 24, 1983:

- G. Boughman, Technical Scenario Writer
- S. H. Cantone, Manager, Nuclear Support
- W. B. Dyer, Assistant to Nuclear Administration Manager
- J. Fritzen, Resident Engineer
- E. A. Heckman, Supervisor of Operations Support
- P. Jaeger, Health Physicist
- C. Kalter, Assistant to Manager of Nuclear Support
- L. Kuczynski, Plant Staff
- S. Laskos, Operations Shift Supervisor
- D. R. Leddy, Health Physics Specialist
- J. M. Levitski, Senior Public Information Specialist
- C. D. Lopes, Senior Security Shift Supervisor
- F. G. Maler, Security Training Supervisor
- D. W. Miller, Radiological and Environmental Services Supervisor
- E. M. Rochester, Health Physics Specialist
- C. Roszkowski, Emergency Planning Specialist
- K. Roush, Senior Training Instructor
- P. Schock, Manager, Nuclear Information
- R. J. Shovlin, Assistant Project Director
- G. Stanley, Construction Superintendent
- H. E. Stokes, Supervisor Construction Engineering
- P. E. Taylor, Lead Shift Technical Advisor
- D. J. Thompson, Assistant Plant Superintendent
- S. R. Walter, Training Instructor
- H. L. Webb, Superintendent Maintenance Support
- L. Whittenberger, Health Physics Specialist
- L. E. Widner, Health Physics Specialist
- C. R. Wike, Emergency Planning Supervisor
- D. Zagrazoy, Resident Engineer

The team observed and interviewed several licensee emergency response personnel, referees, and observers as they performed their assigned functions during the exercise.

2. Emergency Exercise

The Susquehanna Steam Electric Station full scale exercise was conducted on March 23, 1983, from 12:00 noon until 8:30 p.m.

a. Pre-exercise Activities

Prior to the emergency exercise, NRC Region I representatives had telephone discussions with licensee representatives to review the scope and content of the exercise scenario.

In addition, NRC Team observers attended a licensee briefing for licensee referees and observers on March 22, 1983, and participated in the discussion of emergency response actions expected during the various phases of the scenario. The licensee specified the emergency response activities that would be simulated and also that referees would intercede in activities to prevent disturbing normal plant operations.

The exercise scenario included the following events:

- Fire in an office trailer;
- Inoperable turbine bypass valves;
- Catastrophic turbine failure causing a turbine casing penetration;
- Reactor core degradation
- Earthquake causing a containment penetration instrument line rupture; and
- Noble gas releases from the stack.

The above events caused the activation of the licensee's emergency facilities and also permitted the state and counties to exercise their Emergency Plans.

b. Exercise Observation

During the conduct of the licensee's exercise, NRC team members made detailed 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 the scenario events;
- (2) Direction and coordination of the emergency response;
- (3) Notification of licensee personnel and offsite agencies of pertinent information;
- (4) Assembly and accountability of personnel;
- (5) Assessment and projection of radiological (dose) data and consideration of protective actions;
- (6) Provisions for in-plant radiation protection;
- (7) Performance of offsite, onsite, and in-plant radiological surveys;
- (8) Maintenance of site security and access control;
- (9) Performance of technical support;

- (10) Performance of repair and corrective actions;
- (11) Performance of fire fighting activities;
- (12) Communications/information flow, and record keeping; and
- (13) Provisions for information flow to the public.

The NRC team noted that the licensee's activation and augmentation of the emergency organization; activation of the emergency response facilities; and actions and use of the facilities were generally consistent with their emergency response plan and implementing procedures. The team also noted the following areas where the licensee's activities were thoroughly planned and efficiently implemented:

- Emergency response personnel were knowledgeable in their assignments and the emergency procedures. Individuals were conscientious and in general, demonstrated that they were competent in performing their assigned function.
- Personnel briefings were conducted in a timely manner by the individual in command of each emergency facility.
- The observed activities performed by the emergency response organization were indicative of an active training and emergency preparedness program.
- The offsite monitoring teams were routinely informed of plant and emergency conditions.
- Accountability of assembled personnel was completed in less than 30 minutes and access controls were adequate.
- Status boards in the emergency facilities had adequate content and in general, were maintained with current information. Of particular note, was the method of tracking and accounting for in-plant emergency teams.
- The corrective measures implemented by the Emergency Director were based on consideration of plant systems and conditions that were or might be affected by scenario conditions.
- The Media Center had adequate space and was equipped with excellent visual aids and communications.
- The deficiencies noted during the March 17-18, 1982 exercise were corrected.

The NRC team findings in areas for licensee improvement were as follows (the licensee also identified several of these areas in their critique of the exercise):

- Provisions for reading TLD's during emergency conditions were lacking.
- The Public Address system was not audible at the Security Control Point and at the EOF Multi-Purpose Room.
- The TSC status board content regarding suspected and potential problems was not routinely updated with confirmed information. There was also a delay in posting radiological data following TSC activation.
- There was a 16 minute delay in notification to the TSC of the General Emergency.
- The TSC Support group in the EOF received a report of suppression pool water temperature that was actually the pool air temperature.
- The initial reactor coolant sample time from the request to delivery for analysis was two hours and 35 minutes.
- The Post Accident Sampling System (PASS) team failed to wrap the radio and survey instruments for protection from contamination. Also, a container was not provided for disposal of their protective equipment when leaving the PASS area.
- Prior to a stack release, there were no radiological dose projections calculated on plant conditions.
- There were no permanent records maintained of the radiological survey information obtained by in-plant teams for use in trending analysis.
- There were some questions at the Media Center that were not fully addressed by the individuals conducting the briefings.

c. Exercise Critique

The NRC team attended the licensee's post-exercise critique on March 24, 1983, during which key licensee referees discussed their observations of the exercise. The licensee participants highlighted areas for improvement which the licensee indicated would be evaluated and appropriate action taken.

d. Exit Meeting and NRC Critique

Following the licensee's self-critique, the NRC team met with the licensee representatives listed in Section 1. The team leader summarized the observations made during the exercise and discussed the areas described in Section 2.b.

The licensee was informed that no violations were observed and although there were areas identified for improvement, 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 that appropriate action would be taken regarding the identified improvement areas.