U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-333/90-24

Docket No. 50-333

License Nos. DPR-59

Licensee: New York Power Authority
Post Office Box 41
Lycoming, New York 13093

Facility Name: James A. Fitzpatrick Nuclear Power Plant

Inspection At: Lycoming, New York

Inspection Conducted: December 18-20, 1990

Team Members: Craig Z. Gordon 1/22/91
C. Z. Gordon, Regional Team Leader date

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Approved By: [signature] 1/25/91
W. J. Lazarus, Chief, Emergency Preparedness Section date

Inspection Summary: Inspection on December 18-20, 1990 (Report No. 50-333/90-24).

Areas Inspected: Routine, announced emergency preparedness (EP) inspection and observation of the licensee's partial-participation annual emergency preparedness exercise conducted on December 19, 1990. The inspection was performed by a team of four NRC Region I, Headquarters, and contractor personnel.

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

DETAILS

1.0 Persons Contacted

The following licensee representatives attended the exit meeting held on December 20, 1990.

D. M. Ackley, Training Specialist
R. E. Beedle, Vice President, Nuclear Support
W. N. Berzins, Information Officer
B. R. Bostian, Asst. Information Officer
P. W. Brozenich, General Supervisor, Waste Management
F. L. Catella, Manager, Nuclear Training
C. D. Faison, Supervisory Nuclear EP Engineer
W. Fernandez, Resident Manager
A. Grosjean, Sr. Nuclear EP Engineer
R. A. Heath, Fire Protection Supervisor
T. J. Herrmann, System Engineering Supervisor
S. M. Horvath, Nuclear EP Engineer
H. N. Keith, I&C Superintendent
R. Liseno, Superintendent of Power
R. Locy, Operations Superintendent
M. A. McMillen, Clerk
J. Moyer, Security Training Sgt.
M. H. Mozzor, Nuclear EP Engineer
J. D. Nalgy, Security Supervisor
C. F. Patrick, Director, Nuclear Policy and Information
M. Prarie, Asst. EP Coordinator
W. G. Robinson, QA Specialist
J. S. Romanowski, Manager
M. Saltzman, Manager, Broadcast Services
G. J. Vargo, Superintendent, Radiological & Environmental Services
V. M. Walz, Superintendent, Technical Services
A. H. Zaremba, Emergency Planning Coordinator
D. F. Simpson, Training Superintendent

During the conduct of the inspection, other licensee personnel were interviewed and observed in performance of emergency response duties.

2.0 Emergency Exercise

The J. A. Fitzpatrick partial-participation exercise was conducted on December 19, 1990, from 7:00 a.m. until 2:00 p.m.

2.1 Pre-exercise Activities

The exercise objectives, submitted to the NRC Region I on September 13, 1990, were reviewed and determined to be adequate to test the licensee's Emergency Plan. October 18, 1990 the licensee submitted the complete scenario package for NRC review and evaluation. Region I representatives had telephone conversations with the licensee's emergency preparedness staff to discuss the scope and content of the scenario.

In general, the NRC review of the scenario revealed the submittal to be complete in most areas. However, several areas were identified regarding a lack of detail in descriptions of activities associated with initial scenario conditions, inplant repair and corrective actions and offsite dose information. Revisions were made to the scenario and events data. Following the revisions, it was determined that the scenario would provide for adequate testing of major portions of the Emergency Plan and Implementing Procedures (EPIP) and also provide the opportunity for licensee personnel to demonstrate those areas previously identified by the NRC as in need of corrective action. NRC observers attended a licensee briefing on December 18, 1990 and participated in the discussion of response actions expected during the scenario. Suggested NRC changes to the scenario were made by the licensee and were also discussed during the briefing.

2.2 Exercise Scenario

The exercise scenario included the following events:

1. Inoperable control rod requiring plant shutdown;

2. Turbine trip caused by high vibration and reactor scram;

3. Break in main steam line piping and steam leak;

4. Hydrogen leak;

5. Explosion in Turbine Building ventilation;

6. Minor offsite release of radioactivity to the environment;

7. Declaration of Alert, Site Area Emergency, and General Emergency classifications; and

8. Recommendations of protective measures to offsite authorities.

The above events caused the activation of the licensee's onsite and offsite emergency response facilities. In addition, an NRC Region 1 Incident Response Site Team responded and participated onsite and at the EOF.

2.3 Activities Observed

During the conduct of the licensee's exercise, NRC team members made detailed observations of the activation and augmentation of the emergency response organization (ERO), 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. Notification of licensee personnel and offsite agencies;
4. Communications/information flow, and record keeping;
5. Assessment and projection of radiological dose and consideration of protective actions;
6. Provisions for inplant radiation protection;
7. Performance of offsite and inplant radiological surveys;
8. Maintenance of site security and access control;
9. Performance of technical support, repair and corrective actions;
10. Assembly and accountability of personnel;
11. Provisions for communicating information to the public; and
12. Post-exercise critique.

3.0 Classification of Exercise Findings

Emergency preparedness exercise findings are classified as follows:

3.1 Exercise Strengths

Exercise strengths are areas of the licensee's response that provide strong positive indication of their ability to cope with abnormal plant conditions and implement the Emergency Plan.

3.2 Exercise Weakness

An exercise weakness is a finding that the licensee's demonstrated level of preparedness could have precluded effective implementation of the Emergency Plan in the area observed (in the event of an actual emergency). Existence of an exercise weakness does not of itself indicate that overall response was inadequate to protect the health and safety of the public.

3.3 Areas for Improvement

An area for improvement is a finding which did not have a significant negative impact on overall performance during the exercise, but should be evaluated to determine whether corrective action could improve any programmatic or performance area.

4.0 Exercise Observations

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. Exercise observations were identified in each of the emergency response facilities.

4.1 Control Room

The following exercise strength was identified.

1. Good focus by operations staff in investigating and taking steps to correct the inoperable control rod.

No exercise weaknesses were identified.

The following areas for improvement were identified.

1. Information described in the Event Notification Worksheets for notifications to the NRC Operations Center did not receive Emergency Director approval in accordance with EAP-1.1, "Offsite Notifications". The licensee must ensure that information provided to the NRC regarding accident conditions receives proper management review prior to transmittal.

2. Following a break in main steam line piping, operators were slow in recognizing the steam release.

3. Staging the control room portion of the exercise in a tabletop format away from the panel and display area detracted from realism and hindered response actions of operations staff with regard to recognition of other degrading plant conditions. Consideration should be given to use of the simulator for exercises so that operators have the opportunity to carry out their emergency response roles more realistically.

4.2 Technical Support Center (TSC)

The following strengths were identified.

1. During the loss of power event, response actions demonstrated by TSC staff were not compromised despite loss of normal lighting and reliance on emergency lighting.

2. Good security and control of personnel entering and exiting the facility was maintained.

3. Positive interface was observed between licensee personnel and NRC Incident Response personnel.

No exercise weaknesses were identified.

The following areas for improvement were identified.

1. Core damage assessment staff were unable to determine the relationship between the percentage of fuel damage and projected release rate.

2. The emergency action level relating to each emergency classification is not identified in transmissions to offsite authorities via the Radiological Emergency Communications System (RECS).

3. The TSC Manager did not schedule formal briefings with key TSC staff to obtain current updates of information from each engineering and support group.

4.3 Operational Support Center (OSC)

The following exercise strengths were identified.

1. Due to loss of power to card readers, accountability had to be performed manually and was completed within 30 minutes.

2. Inplant repair and corrective action teams demonstrated good response actions which included following dress-out procedures and use of SCBA's.

3. Emergency lighting was adequate to allow personnel to carry out functions effectively.

No exercise weaknesses were identified.

The following areas for improvement were identified.

1. Debriefings of inplant teams, when conducted, were very informal. Key information such as radiation levels and potentially hazardous areas encountered within the plant were not discussed upon the return of each team.

2. A record of the following information associated with each team was not maintained: team members, task assignment, time of dispatch, time of return, whether mission completed, and team designation.

3. The Radiation Protection Supervisor position appeared to be overburdened with responsibilities which include establishing radiation levels, determining dosimetry, protective clothing, and respiratory protection, obtaining dose extensions, and determining routes for repair teams.

4.4 Emergency Operations Facility (EOF)

The following exercise strengths were identified.

1. The layout, equipment, and supplies in the EOF provided response staff with the necessary capability to perform effectively.

2. In determining protective action recommendations, the Emergency Director was careful not to be led by actions already considered by the State.

3. Dose assessment calculations were performed continuously and were based upon plant conditions. Updates on radiological conditions were discussed with State representatives at regular intervals.

4. A thorough review of press releases was performed by technical staff before information was issued to the media.

5. Discussion of recovery efforts between the licensee's recovery organization and the NRC team were comprehensive and included a high level of detail for expected short term and long term actions.

No exercise weaknesses were identified.

The following areas for improvement were identified.

1. There appeared to be an unusual amount of Emergency Director discretion exercised in carrying out the response, particularly early activation of emergency response facilities and over-classification of events. Although license considered this approach to be conservative, it resulted in some confusion of off-site response organizations who did not understand the basis for some of the actions, particularly the declaration of a General Emergency. The licensee should adhere to established emergency classification levels and emergency plan implementing procedures.

2. Technical staff were slow in restoring Turbine Building ventilation after power was returned and did not have a good estimate on the amount of time needed to maintain shutdown cooling.

3. It was not clear whether information on the status of protective actions taken offsite was transmitted to personnel in the control room, TSC and OSC.

4.5 Exercise Planning Issues

During the inspection, the NRC team identified non-performance related items which the licensee should address for possible corrective action.

The scenario submittal did not consider success-oriented pathways. As a result, data and information were not always adequate when unexpected response actions were taken by licensee personnel. Additional actions taken for which no scenario

information was provided included a fire brigade response, classification of an Unusual Event and General Emergency, and recommendations of protective actions. Future scenario submittals must cover all expected response actions and the concerns identified in section 2.1 of this report.

5.0 Licensee Action on Previously Identified Items

Based upon discussions with licensee representatives, examination of procedures and records, and observations made by the NRC team during the exercise, areas for improvement identified during the previous emergency exercise (Inspection Report No. 50-333/89-15) were acceptably demonstrated and not repeated.

6.0 Licensee Critique

The NRC team attended the licensee's exercise critique on December 20, 1990 during which the licensee's lead controllers summarized observations from the exercise. The critique was thorough and documented deficient areas in need of corrective action. The licensee indicated that critique items would be tracked in their internal open item tracking system.

7.0 Exit Meeting

Following the licensee's self-critique, the NRC team met with the licensee representatives listed in Section 1 of this report. Team observations made during the exercise were summarized.

The licensee was informed that previously identified items were adequately addressed and that no violations were observed. 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 that would provide adequate protective measures for the health and safety of the public.

Licensee management acknowledged the findings and indicated that they would evaluate and take appropriate action regarding the items identified for corrective action.