

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-271/88-13
Docket No. 50-271
License No. DPR-28 Priority _____ Category C
Licensee: Vermont Yankee Nuclear Power Corporation
RD 5 Box 169
Brattleboro, Vermont 05302
Facility Name: Vermont Yankee Nuclear Power Station
Inspection At: Brattleboro, Vermont
Inspection Conducted: August 30 to September 1, 1988

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Inspection Summary: Inspection on August 30 to September 1, 1988 (Report
No. 50-271/88-13)

Areas Inspected: Routine announced emergency preparedness inspection and observation of the licensee's annual emergency exercise performed on August 31, 1988. The inspection was performed by a team of four 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

The following key licensee representatives attended the exit meeting held on September 1, 1988.

J. Gary Weigand, President and Chief Executive Officer
Warren Murphy, Vice President and Manager of Operations
James Pelletier, Plant Manager
Reid Smith, Vice President for External Affairs
Edward Porter, Emergency Preparedness Coordinator
Stanley Jefferson, Exercise Coordinator
William Riethle, Group Manager, Radiation Protection

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

2.0 Emergency Exercise

The Vermont Yankee Nuclear Power Station partial participation exercise was conducted on August 31, 1988 from 6:00 AM to 1:30 PM. The State of New Hampshire fully participated and the States of Vermont and Massachusetts participated at the EOF and the News Media Center. The Federal Emergency Management Agency (FEMA) did not observe the exercise.

2.1 Pre-Exercise Activities

Prior to the emergency exercise, NRC Region I and Headquarters representatives held meetings and had telephone discussions with the licensee to discuss objectives, scope and content of the exercise scenario. Minor changes were made to the scenario to make certain technical information consistent with the scenario.

NRC observers attended a licensee briefing on August 30, 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. Loss of coolant from the primary coolant system evidenced by unidentified leakage greater than 5 gallons per minute (GPM);

2. Failure of the main turbine mechanical pressure regulator resulting in reactor vessel water level swell and subsequent turbine trip;
3. Containment radiation levels exceeding 1000 R/hr indicating actual or potential significant incore fuel damage;
4. Declaration of Unusual Event, Alert and Site Area Emergency (SAE);
5. Recommendation of protective actions to state officials;
6. The licensee also performed several mini-scenarios requiring on-site assistance teams to be dispatched to investigate problems associated with plant equipment. Mock-ups of the postulated damaged equipment was available to permit plant personnel to perform corrective maintenance. Mock-ups included the electrical backseating of drywell valves in accordance with OT 3111 (High Drywell Pressure Procedure) and RHR pump inspection and breaker repair.

2.2 Activities observed

During the conduct of the exercise, four 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. Assembly, accountability and evacuation of personnel; and
12. 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. Extent of play by the States of Vermont, Massachusetts, and New Hampshire was substantial and added depth to scenario realism and provided training in state/licensee interactions;
2. Dose assessment activities were proactive and aggressively attempted to evaluate potential radiological conditions based on projected trends in plant conditions;
3. EAL's were effectively utilized and classifications were correct;
4. Emergency Response Facilities communications, interaction and overall command and control was effectively demonstrated;
5. In-plant mini-scenario mock-ups permitted the operating staff to diagnose and correct plant problems in accordance with the recommendations and intent set forth in Information Notice 87-54 (Emergency Response Exercises) regarding interactive scenarios;

6. In-plant team communications with respiratory equipment was successfully demonstrated; and
7. The relocation of the Emergency News Center to the corporate offices demonstratively improved the efficiency and effectiveness of the licensee to deal with the media and to give appropriate briefings.

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 licensee properly classified an Unusual Event (UE) at 0630 (clock time) based upon indications of loss of coolant from the primary coolant system in excess of 5 GPM unidentified leakage. During the UE, the reactor scrambled at approximately 0745. While this event does not by itself cause an escalation in the event classification requiring additional notifications, it is a significant change in the status of the UE. Under these conditions, it would be appropriate to promptly update the NRC Operations Center of such a change in plant status;
2. The Vermont and Massachusetts press releases did not include a date/time stamp which could cause some confusion as to which press release took precedence as an accurate update of plant conditions;
3. The Emergency News Center could improve its capacity to use visual aids taking into consideration lighting conditions and size of the facility; and
4. The licensee properly classified a SAE based on containment radiation levels greater than 1000 R/hr. During this classification process, the licensee properly tracked and discussed the implications of a very clear upward trend in radiation levels but elected not to declare the SAE until the EAL level of 1000 R was actually reached. In the face of clear and convincing evidence that an EAL is going to be exceeded, the licensee should consider making it's reclassification based on the trend rather than waiting until the EAL is actually exceeded.

4.0 Licensee Actions on Previously Identified Items

The following item was identified during a previous inspection (Inspection Report No. 50-271/87-22). Based upon observations made by the NRC team during the exercise, the following open item was acceptably demonstrated and is closed:

(Closed) 50-271/87-22-01: Initial notification forms do not allow for approval by the plant emergency director.

The licensee has modified the notification forms and incorporated procedural changes to assure proper approval by the plant emergency director.

5.0 Licensee Critique

The NRC Team Leader attended the licensee's post exercise critique on September 1, 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.

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.