

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-271/85-09

Docket No. 50-271

License No. DPR-28

Priority       

Category C

Licensee: Vermont Yankee Nuclear Power Corporation  
RD 5, Box 169, Ferry Road  
Brattleboro, Vermont 05301

Facility Name: Vermont Yankee

Inspection At: Vernon, Vermont

Inspection Conducted: February 25 - March 1, 1985

Inspectors:

James J. Hawxhurst  
James J. Hawxhurst, EP Specialist,  
Team Leader

May 2, 1985  
date

Craig Gordon  
Craig Gordon, EP Specialist

5/3/85  
date

Ray Smith  
Ray Smith, EP Specialist

5/3/85  
date

Approved by:

T. L. Harpster  
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Preparedness Section Leader

5/3/85  
date

Inspection Summary:

Inspection on February 25 - March 1, 1985 (Report No. 50-271/85-09)

Areas Inspected: Routine unannounced emergency preparedness inspection of areas described in IE Inspection Procedures: Changes to the Emergency Preparedness Program, Knowledge and Performance of Duties & Licensee Audits. Also, the present emergency response facilities and proposed EOF were visited. The inspection involved 125 inspector hours by three NRC region-based inspectors.

Results: No violations were identified. Three previously opened items were closed.

## DETAILS

### 1. Persons Contacted

- \*J. Desilets, Operations Supervisor
- \*S. J. Jefferson, Assistant to the Plant Manager
  - N. Gibson, Training Records Clerk
  - D. Golonka, QA Engineer (YNSD)
  - P. Klaski, Shift Supervisor
- \*B. N. Leach, Chemistry and Health Physics Supervisor
  - G. LeClair, Assistant Operations Supervisor
  - B. Lindquist, Shift Supervisor
  - T. Linn, Training Instructor
- \*T. McCarthy, Emergency Plan Coordinator
  - A. Parker, QA Engineer (YNSD)
  - J. Pelletier, Plant Manager
  - B. Pichette, Senior Control Room Operator
- \*S. Skibniowsky, Plant Training Supervisor
  - B. Sojka, Simulator Manager
  - A. Tatro, Training Instructor
  - D. Tuttle, Senior Control Room Operator
- \*R. J. Wanczyk, Technical Services Superintendent
  - D. Weyman, Senior Chemistry and Health Physics Engineer

\*Denotes those present at the exit interview.

### 2. Licensee Action on Previous Inspection Findings

- a. Closed (50-271/83-03-01) Review licensee evaluation of emergency response facility (EOF) radiological habitability.

The inspectors visited the licensee's current EOF (Governor Hunt Building), held discussions with licensee personnel and noted that the new primary EOF in Brattleboro, 8.75 miles from the plant site, will have a radiation protection factor of 5 and a ventilation system, equipped with HEPA filters, which can be isolated. In a letter to the licensee, dated 2/27/84, the Commission approved the new primary EOF. The planned completion date for the new EOF is September 1985.

- b. Closed (50-271/83-12-01) Provide a more specific description of prompt notification system in emergency plan.

The inspectors reviewed Appendix H (Revision 5, 10/83) in the emergency plan which provides a description of the public notification system.

- c. Closed (50-271/83-12-02) Provide specific location of sirens in the emergency plan.

The inspector reviewed Appendix H attachments 1-6 (Revision 5, 10/83) in the emergency plan which includes a map of the specific locations and a description of the types of sirens in the Vermont Yankee (VY) emergency planning zone.

### 3. Changes to the Emergency Preparedness Program

#### Review

The inspectors reviewed the licensee's records for distribution of revisions to the VY Emergency Plan and Emergency Plan Implementing Procedures (EPIPs). The inspector also reviewed VY Emergency Plan Section 8 specifically to determine if the VY emergency organization was well defined and responsibilities clearly identified through all levels of an emergency. The inspectors interviewed several licensee personnel to determine if changes have been made to the VY emergency preparedness program since the last inspection and evaluated how these changes affected the state of VY's emergency program. In addition, this area was specifically evaluated against compliance with 10 CFR 50.54(q) and the references listed below.

#### Findings

The licensee has identified several changes to the VY emergency organization. For example, the TSC Coordinator or Site Recovery Manager (SRM) will relieve the Plant Emergency Director of key emergency responsibilities following initial augmentation. However, the current VY Emergency Plan does not include provisions for the delegation of overall authority to the TSC Coordinator. In the discussion of VY's Emergency Plan Section 8.2.1.1, "Site Recovery Manager", however, it is clear that the SRM will assume the responsibility of direction and control of the accident, emergency management for plant restoration to a safe condition, and coordination of accident information to provide protective measures to offsite authorities. The inspector discussed the need for more clearly defining the duties, responsibilities, and lines of authority of the TSC Coordinator and other emergency personnel, with the licensee. The licensee is reevaluating this area. The inspector will review licensee action in this area in a subsequent inspection (50-271/85-09-01).

Changes to EPIPs are made routinely by the site EPC. All changes to the EP and EPIPs are submitted annually and reviewed by the Plant Operations Review Committee (PORC) and dispatched through controlled distribution. Records are maintained on where each revision was sent and whether verification of receipt was acknowledged. Approved changes remain on file for five years. The inspectors, based on a review of major revisions, determined that changes were made in accordance with the provisions of 10 CFR 50.54(q).

## References

10 CFR 50.54(q)

IE Inspection Procedure 82204 (12/27/82)

VY Emergency Plan, Section 8 (Revision 10, 12/84), "Organization"

## 4. Knowledge and Performance of Duties (Training)

### Review

The inspectors reviewed Section 12.2, "Training", of the VY Emergency Plan and the EIPs listed under references, which also included parts of procedures used for classification, notification and protective action recommendations. The inspectors also reviewed the 22 lesson plans used for emergency training and held discussions with two of the training instructors and six operations personnel. The discussions with operations personnel, specifically those trained as Plant Emergency Directors (PED), included table-top exercises.

Training records for offsite response personnel and the licensee's emergency response personnel were reviewed for calendar year 1984 and consisted of class attendance, and/or drill records, and written tests for about 200 individuals. Several individuals participated in training for more than one emergency organization position or more than one drill. This area of the emergency program was evaluated against the references listed below, specifically to determine:

- if a training program is established and maintained in accordance with 10 CFR 50.47(b)(15);
- that the amount and type of training received by key emergency response personnel (plant emergency director) since the last inspection is appropriate; and
- that key emergency response personnel (plant emergency director) understand their emergency responsibilities and can perform their assigned duties.

### Findings

The licensee's emergency preparedness training program is conducted, scheduled, and maintained by the Training Department for both onsite and offsite personnel. The training is accomplished by classroom instruction, demonstrations, workshops, and by participating in drills. The training program appeared adequate to ensure that members of the emergency response organization maintain familiarity with their specific assigned duties. However, the inspectors noted some areas of concern which could potentially degrade overall emergency preparedness.



Three licensee personnel who may be called on to assume the PED responsibility participated in a radiological table-top discussion, all had received the required 16 hours of plant emergency director training. The table-top included discussions on: dose assessment, classification, notification and protective action decisionmaking. The inspector noted the following items of concern:

- difficulty in using the nomogram in Figure 1 of O.P. 3513;
- inoperable dose assessment equipment (T1-59 calculator-printer);
- lack of familiarity with procedures as shown in PED's inability to find the default release duration;
- use of a dose rate value in O.P. 3511 comparison to Table 1, instead of a dose commitment (one individual);
- nomogram procedure O.P. 3513(A) is an imprecise method to determine dose rates shown by three different answers - 700, 800 and 1000 MR/HR - to the same initial conditions;
- misclassification of a stability class; and
- an overall difficulty in locating information in procedures.

The inspectors noted during the debriefing discussions, that the individuals were knowledgeable in the areas discussed but lacked confidence and felt uncomfortable with the emergency procedures. The licensee will further evaluate this area to identify weaknesses and better define appropriate corrective actions. Licensee actions in this regard will be reviewed in a subsequent inspection (50-271/85-09-02).

The results of testing following classroom training showed that all personnel received a passing grade of at least 70%. In two cases of test failures, there was documentation of retraining and retesting which resulted in passing grades.

The inspectors determined that the training conducted for State and Government officials was well attended by representatives from Vermont, Massachusetts and New Hampshire and included discussions of Emergency Action Levels, Notifications, and Dose Assessment. Training sessions have been scheduled for 1985.

The Training Department in conjunction with the Emergency Planning Coordinator provides required training in the event of significant changes to procedures, equipment, or facilities. Training plans are being developed for the required training prior to using the new Emergency Operations Facility.

No violations were identified.

## References

10 CFR 50.47(b)(15)  
 IE Inspection Procedure 82206 (12/27/82)  
 NUREG-0654 (Revision 1, 11/80), "Radiological Emergency Response Training"  
 VY Emergency Plan, Section 12.2 (Revision 10, 12/84), "Training"  
 VY Emergency Procedure No. O.P. 3712 (Revision 8, 2/85), "Emergency Plan Training"  
 VY Emergency Procedure No. O.P. 3513 (Revision 8, 11/84), "Evaluation of Offsite Radiological Conditions"  
 VY Emergency Procedure No. O.P. 3511 (Revision 0, 9/82), "Offsite Protective Action Recommendations"

## 5. Licensee Audits

### Review

The inspector reviewed Section 12.1.9, "Emergency Plan Audit", (Revision 5, 8/84) and Yankee Nuclear Service Division (YNSD) audits conducted November 1983, 1984. The inspectors held discussions with two YNSD auditors and the emergency preparedness coordinator. This area of the emergency program was evaluated against the references listed below, specifically to determine:

- that an independent review is conducted every 12 months in accordance with 10 CFR 50.54(t);
- recommendations made by the independent review group were duly considered; and
- the licensee has a program for (a) identifying deficiencies and weaknesses discovered during licensee drills and exercises, (b) tracking these items, and (c) providing appropriate corrective actions in a timely manner for the items determined to decrease the effectiveness of the program.

### Findings

Annually, personnel from the YNSD group conduct an audit of the emergency preparedness program referred to as an Emergency Plan Audit. Two audits were reviewed by the inspectors. The following finding related to the content of the audit reports.

The 1983 audit used an interrogative method to assess compliance with 10 CFR 50, Appendix E, 10 CFR 20 and a select group of procedures. The finding to each interrogatory included under 'Comments' in the checklist used by the YNSD auditors, generally did not contain enough detail to fully support the conclusion. For example, on page 4 of 12 in the YNSD checklist, 'per training records [were] reviewed,' (Did not state how many records.); 'results of past drills [were reviewed]' (Did not state which

ones.); and the revision of the procedures reviewed were not stated. Although in a few cases, a detailed procedure description was included under 'Reference'.

The 1984 audit scope included verifying implementation of the emergency plan and procedures and determining the effectiveness of the program. Four areas were reviewed: Emergency Plan, Emergency Procedures, Emergency Equipment, and Training and Drills. The YNSD auditor presented the findings in a short discussion, little supporting evidence was included with the auditor's comments. After further review and discussion with the auditors, the inspector noted the supporting documentation was available in handwritten form at YAEC/OQA Framingham. The inspector also noted, after a discussion on report format with the auditors, that YNSD management had changed in 1983, and more detailed reports were planned for future audits. This will be evaluated during the next inspection of this area.  
(50-271/85-09-03)

No violations were identified.

#### References

10 CFR 50.54(t)  
IE Inspection Procedure 82210 (12/27/82)  
NUREG-0654 (Revision 1, 11/80), "Responsibility for the Planning Effort"  
VY Emergency Plan (Revision 5, 8/84), Section 12.1.9, "Emergency Plan Audit"  
VY Audit Report No. 84-14, "Emergency Plan"  
VY Audit Report No. 83-14, "Emergency Plan"

#### 6. Emergency Response Facility (ERF) Schedule

The inspectors visited the licensee's emergency response facilities, held discussions with licensee personnel and noted that the new EOF will be completed in September 1985. Also, the SPDS design reviews, equipment installation, testing and validation, the last part of the ERF package will be completed, tentatively, November 1988.

No violations identified.

#### References

Letter VYNPC to USNRC, dated February 1, 1985, "Safety Parameter Display System"  
Letter VYNPC to USNRC, dated October 30, 1984, "NUREG-0737, Supp. 1, Reg. Guide 1.97"  
Letter VYNPC to USNRC, dated June 12, 1984, "NUREG-0737, Supp. 1 ... Emergency Response Facilities"  
Letter VYNPC to USNRC dated March 1, 1985, "Communications Requirements ... EOF Location"

7. Exit Meeting

On March 1, 1985, the inspectors met with the individuals listed in Paragraph 1 and summarized the scope and findings of the inspection. The licensee was requested to further investigate the specialized training provided to emergency response personnel, specifically Plant Emergency Directors. The licensee agreed to evaluate and attempt to resolve the problems identified, prior to the exercise scheduled for April 17, 1985. At no time during the inspection was written material provided to the licensee.