



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30303

FEB 27 1985

Report Nos.: 50-327/85-07 and 50-328/85-07

Licensee: Tennessee Valley Authority
 500A Chestnut Street
 Chattanooga, TN 37401

Docket Nos.: 50-327 and 50-328

License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah 1 and 2

Inspection Conducted: February 5-7, 1985

Inspectors: *T. R. Decker* 2/21/85
 T. R. Decker Date Signed

W. M. Sartor 2/21/85
 W. M. Sartor Date Signed

Accompanying Personnel: W. V. Thomas, R. Harty, P. J. Brown, F. N. Carlson

Approved by: *W. E. Cline* 2/25/85
 W. E. Cline, Section Chief Date Signed
 Emergency Preparedness
 Division of Radiation Safety and Safeguards

SUMMARY

Scope: This routine, announced inspection entailed 105 inspector-hours on site in the area of a full scale emergency exercise.

Results: Of the areas inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Licensee Employees Contacted

- *H. Abercrombie, Site Director
- *P. Wallace, Plant Manager
- *B. Marks, Supervisor REP Section
- *T. Youngblood, Emergency Preparedness Coordinator - SQN Site
- *C. Keyser, POTC
- *B. Lake, Shift Engineer
- *R. Butler, SQN QA Staff

Other licensee employees contacted included technicians, operators, mechanics, security force members and office personnel.

Other Organizations

- *J. Groth, INPO

NRC Resident Inspectors

- *E. Ford
- *L. Watson

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 7, 1985, with those persons indicated in paragraph 1 above. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Exercise Scenario (82301)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee, state and local emergency plans and organization as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, paragraph IV.F and specific criteria in NUREG 0654, Section II.N.

The scenario was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives on several occasions. The scenario developed for this exercise was adequate to fully exercise the onsite and offsite emergency organizations of the licensee and provided sufficient emergency information to the state and local government agencies for their full participation in the exercise. The inspector had no further questions in this area.

No violations or deviations were identified.

4. Assignment of Responsibility (82301)

This area was observed to determine that primary responsibilities for emergency response by the licensee had been specifically established and that adequate staff was available to respond to an emergency as required by 10 CFR 50.47(b)(1), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.A.

The inspectors verified that the licensee has made specific assignments to the emergency organization. The inspectors observed the activation, staffing and operation of the emergency organization in the Control Room, TSC, OSC, and Central Emergency Control Center. At each of these centers, the assignment of responsibility and staffing appeared to be consistent with the licensee's approved procedures. The inspectors had no further questions in this area.

No violations or deviations were identified.

5. Onsite Emergency Organization (82301)

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response were unambiguously defined, that adequate staffing was provided to insure initial facility accident response in key functional areas at all times, and that the interfaces were specified as required by 10 CFR 50.47(b)(2), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.B.

The inspectors determined that the licensee's onsite emergency organization was effective in dealing with the simulated emergency. Adequate staffing of the emergency response facilities was provided for the initial accident response and the interactions between the onsite organization and offsite support agencies appeared to be adequate. The inspectors had no further questions in this area.

No violations or deviations were identified.

6. Emergency Response Support and Resources (82301)

This area was observed to determine that arrangements for requesting and effectively using assistance resources had been made, that arrangements to accommodate State and local staff at the licensee's near-site Central Emergency Control Center had been made, and that other organizations capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.C.

State staff were accommodated at the near-site Central Emergency Control Center. Licensee contact with offsite organizations was prompt and assistance resources from various agencies were prepared to assist in the simulated emergency. The inspector had no further questions in this area.

No violations or deviations were identified.

7. Emergency Classification System (82301)

This area was observed to determine that a standard emergency classification and action level scheme was in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4), 10 CFR 50, Appendix E, paragraph IV.C, and specific criteria in NUREG 0654, Section II.D.

An inspector observed that the emergency classification system was in effect as stated in the Radiological Emergency Plan and in the Implementing Procedures. The system appeared to be adequate for the classification of the simulated accident and the emergency procedures provided for initial and continuing mitigating actions during the simulated emergency. The inspectors noted, however, one emergency action level (EAL) on page 24 of IPI (Steamline Break) which, under several hypothesized conditions, could indicate a loss of three fission product barriers. In the event that three barriers are lost, the proper classification is General Emergency vice Site Area Emergency as presently indicated. The issue was discussed with members of plant management and operations staff who agreed that the EAL was vague and that more information was needed to properly classify the accident. This inspector followup item will be reviewed during a subsequent inspection (50-327, 328/85-07-01).

No violations or deviations were identified.

8. Notification Methods and Procedures (82301)

This area was observed to determine that procedures had been established for notification by the licensee of State and local response organizations and emergency personnel, and that the content of initial and followup messages to response organizations has been established; and means to provide early notification to the populace within the plume exposure pathway have been established as required by 10 CFR 50.47(b)(5), 10 CFR 50, Appendix E, paragraph IV.D, and specific criteria in NUREG 0654, Section II.E.

An inspector observed that notification methods and procedures had been established and were used to provide information concerning the simulated emergency conditions to Federal, State and local response organizations and to alert the licensee's augmented emergency response organization. The inspectors had no further questions in this area.

No violations or deviations were identified.

9. Emergency Communications (82301)

This area was observed to determine that provisions existed for prompt communications among principal response organizations and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.F.

Communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organizations and offsite authorities were adequate. Some radio communication problems were noted among the field monitoring teams. The

licensee evaluation also identified this problem. The licensee indicated that corrective action would be taken.

No violations or deviations were identified.

10. Public Education and Information (82301)

This area was observed to determine that information concerning the simulated emergency was made available for dissemination to the public as required by 10 CFR 50.47(b)(7), 10 CFR 50, Appendix E, paragraph IV.D, and specific criteria in NUREG 0654, Section II.G.

Information was provided to the media and the public in advance of the exercise. The information included details on how the public would be notified and what initial actions they should take in an emergency. A rumor control program was also in place. An Emergency News Center (ENC) was established and was adequately equipped and coordinated. A corporate spokesman was designated and provided periodic briefings. News releases were issued periodically. The inspectors had no further questions in this area.

No violations or deviations were identified.

11. Emergency Facilities and Equipment (82301)

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response were provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.H.

The inspectors observed the activation, staffing and operation of the emergency response facilities and evaluated equipment provided for emergency use during the exercise.

- a. Control Room - An inspector observed that control room personnel acted promptly to initiate emergency response to the simulated emergency. Emergency procedures were readily available and the response was prompt and effective. The inspectors had no further questions in this area.
- b. Technical Support Center (TSC) - The TSC was activated and staffed promptly upon notification by the Emergency Director (Shift Engineer) of the simulated emergency conditions leading to an Alert emergency classification. The TSC staff appeared to be knowledgeable concerning their emergency responsibilities and TSC operations proceeded smoothly. The TSC appeared to have adequate equipment for the support of the assigned staff. The inspectors had no further questions in this area.
- c. Operations Support Center (OSC) - The OSC was staffed promptly upon activation by the Emergency Coordinator. An inspector observed that teams were formed promptly, briefed and dispatched efficiently. The inspectors had no further questions in this area.

- d. Central Emergency Control Center - The CECC is located in Chattanooga, Tennessee. The facility appears to be adequately designed, equipped and staffed to support an emergency response. The inspector had no further questions in this area.

No violations or deviations were identified.

12. Accident Assessment (82301)

This area was observed to determine that adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, paragraph IV.B, and specific criteria in NUREG 0654, Section II.I.

The accident assessment program includes both an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the accident. During the exercise, the engineering accident assessment team functioned effectively in analyzing the plant status so as to make recommendations to the Site Emergency Director concerning mitigating actions to reduce damage to plant equipment, to prevent release of radioactive materials and to terminate the emergency condition.

Radiological assessment activities are concentrated in the CECC. Radiological effluent data was received from the TSC and calculations performed in the CECC. The results were compared with the data obtained in the CECC from the offsite monitoring groups.

The dose assessment procedure incorporated detailed meteorological parameter values which were available from the onsite meteorological instruments. Default values were available for use should there be any question concerning the reliability of the meteorological instrumentation. The inspectors had no further questions in this area.

State of Tennessee personnel responsible for dose assessment indicated in a critique following the exercise that certain technical information needed for independent radiological assessment was not promptly provided by the licensee. The Sequoyah Site Director indicated that this matter would be resolved. In a telephone conversation on February 14, 1985, between representatives of the NRC Region II and TVA emergency preparedness staffs, TVA representatives indicated a meeting was tentatively scheduled with the State of Tennessee representatives in March 1985 to discuss this issue. The TVA representatives agreed to advise the NRC of the meeting date and to advise NRC of the actions to be taken resulting from meeting discussions. This item will be reviewed in a future inspection (50-327, 328/85-07-02).

No violations or deviations were identified.

13. Protective Responses (82301)

This area was observed to determine that guidelines for protective actions during the emergency, consistent with Federal guidance, were developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel, were implemented promptly as required by 10 CFR 50.47(b)(10), and specific criteria in NUREG 0654, Section II.J.

An inspector verified the licensee had and used emergency procedures for formulating protective action recommendations for offsite populations within the 10 mile EPZ. The licensee's protective action recommendations were consistent with the EPA and other criteria and notifications were made to the appropriate State and local authorities within the 15 minute criteria.

An inspector observed that protective actions were instituted for on-site emergency workers which included periodic radiation surveys in the facility, evacuation of nonessential personnel, issuance of KI to essential personnel and continued accountability of emergency response personnel. The inspectors had no further questions in this area.

No violations or deviations were identified.

14. Radiological Exposure Control (82301)

This area was observed to determine that means for controlling radiological exposures, in an emergency, were established and implemented for emergency workers and that they included exposure guidelines consistent with EPA recommendations as required by 10 CFR 50.47(b)(11), and specific criteria in NUREG 0654, Section II.K.

An inspector noted that radiological exposures were controlled throughout the exercise by performing periodic surveys in the emergency response facilities. Exposure guidelines were in place for various categories of emergency actions and adequate protective clothing and respiratory protection were available and used as appropriate. The inspector had no further questions in this area.

No violations or deviations were identified.

15. Recovery and Reentry Planning (82301)

This area was observed to determine that general plans were made for recovery and re-entry as required by 10 CFR 50.47(b)(13), 10 CFR 50, Appendix E, paragraph IV.H. and specific criteria in NUREG 0654, Section II.M.

The licensee developed general plans and procedures for re-entry and recovery which addressed both existing and potential conditions. The plant and the criteria by which the emergency would be de-escalated was coordinated with all appropriate Federal, State, and local agencies. The inspectors had no further questions in this area.

No violations or deviations were identified.

16. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine that deficiencies identified as a result of the exercise and weaknesses noted in the licensee's emergency response organization were formally presented to licensee management for corrective actions as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.N.

A formal licensee critique of the emergency exercise was held with exercise controllers, key exercise participants, licensee management and NRC personnel in attendance. Weaknesses in the emergency preparedness program, identified as a result of this exercise were presented. Followup of corrective actions taken by the licensee, on identified deficiencies and weaknesses will be accomplished through subsequent NRC inspections.

A public critique was held on February 7, 1985. Representatives from the State, FEMA and the NRC presented their preliminary findings on the exercise.

No violations or deviations were identified.

17. Federal Evaluation Team Report (82301)

The report by the Federal Evaluation Team (Regional Assistance Committee and Federal Emergency Management Agency, Region IV staff) concerning the activities of offsite agencies during the exercise will be forwarded by separate correspondence.

18. Inspector Followup (92701)

- a. (Closed) Inspector Followup Item (IFI) 50-327/81-26-04, 50-327/81-33-04: public information. Based on review of the applicable procedures and evaluation during the subject exercise, the public information program is adequate.
- b. (Closed) IFI 50-327/82-13-02, 50-328/82-13-02: improve coordination between TVA news center and State emergency center in Nashville. The coordination between the news center representatives was acceptable.
- c. (Closed) IFI 50-327/83-13-02, 50-327/83-13-02: improving communications between emergency response facilities. Communications were adequate.
- d. (Closed) IFI 50-327/84-15-01, 50-328/84-15-01: habitability surveys for the OSC. Habitability surveys were conducted.
- e. (Closed) IFI 50-327/80-34-04: insufficient telephone in the TSC. There were sufficient telephones to support the TSC function.