



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

AUG 14 1984

Report Nos.: 50-327/84-15 and 50-328/84-15

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 Dates: July 18-20, 1984

Inspection at Sequoyah site near Chattanooga, Tennessee

Inspectors:	<u><i>J. Decker</i></u>	<u><i>8/8/84</i></u>
	T. Decker	Date Signed
	<u><i>J. Decker for</i></u>	<u><i>8/8/84</i></u>
	A. Cunningham	Date Signed
	<u><i>J. Decker for</i></u>	<u><i>8/8/84</i></u>
	C. Banks	Date Signed
Approved by:	<u><i>Douglas M. Collins</i></u>	<u><i>8/9/84</i></u>
	for W. E. Oline, Section Chief	Date Signed

SUMMARY

Areas Inspected

This routine announced inspection involved 124 inspector-hours on site in the areas of an emergency exercise.

Results

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

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *P. R. Wallace, Plant Manager
- *J. P. Darling, Manager Nuclear Power
- *C. C. Mason, Site Director
- *R. E. Alsup, Compliance Supervisor
- *D. E. Crawley, H. P. Supervisor
- *E. K. Sliger, Supervisor REP Section
- *J. W. Hufham, Chief, Emergency Preparedness Branch
- *H. L. Abercrombie, Division of Nuclear Power

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

NRC Resident Inspector

- *E. J. Ford

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 20, 1984, with those persons indicated in paragraph 1 above.

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 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. The scenario developed for this exercise was adequate to fully exercise the onsite emergency organizations of the licensee and provided sufficient emergency information to the state and local government agencies for their limited 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 have been specifically established and that adequate staff is 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 observed that specific emergency assignments had been made for the licensee's emergency response organization and that there were adequate staff available to respond to the simulated emergency. The initial response organization was augmented by designated licensee representatives; however, due to the scenario conditions, long term or continuous staffing of the emergency response organization was not demonstrated. Discussions with licensee representatives indicated that sufficient technical staff was available to provide for continuous staffing of the augmented emergency organization if needed. The inspectors had no 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 interfaces 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 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 emergency action level scheme was used to properly identify and classify the emergency and escalate to more severe emergency classes as the simulated emergency progressed. Licensee actions in this area were considered adequate and the inspector had no further questions.

No violations or deviations were identified.

7. Notification Methods and Procedures (82301)

This area was observed to determine that procedures have 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 have been established; and means to provide early notification to the populace within the plume exposure pathway has 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 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.

8. Emergency Communications (82301)

This area was observed to determine that provisions exist for prompt communications among principal response organization 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.

Communication among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and offsite authorities was good. No communications related problems were identified during this exercise.

No violations or deviations were identified.

9. 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.

An inspector evaluated the operation of the licensee's near site media center. Exercise information was sent to the TVA news desk in Knoxville and press releases were returned via facsimile in a timely manner. Media briefings were observed to be well done and good use was made of technical briefers. The inspector had no more questions in this area.

No violations or deviations were identified.

10. 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 inspector 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 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 Director. An inspector observed that teams were formed promptly, briefed, and dispatched efficiently. The inspector had no further questions in this area.
- d. Central Emergency Control Center - The CECC is located in Chattanooga, Tennessee. The facility appears to adequately equipped and staffed to support an emergency response. The inspector had no further questions in this area.

No violations or deviations were identified.

11. 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.

The dose assessment procedure incorporated detailed meteorological parameters which are available from the onsite meteorological instruments. Default values are available for use should there be any question concerning the reliability of the meteorological instrumentation. The majority of the dose calculations are typically performed at the MSEC facility. Due to the limited nature of this exercise no evaluation was performed at Muscle Shoals. The inspector had no further questions in this area.

No violations or deviations were identified.

12. Protective Responses (82301)

This area was observed to determine that guidelines for protective actions during this 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 appropriate State and local authorities within the 15 minute criteria. The inspector had no further questions in this area.

No violations or deviations were identified.

13. Radiological Exposure Control

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.

The inspector observed that damage control teams were briefed by health physics personnel on radiation safety procedures and the in-plant radiation environment. It appeared that members of the onsite emergency monitoring teams were adequately trained and knowledgeable of radiological equipment and sampling techniques, demonstrated good compliance with appropriate procedures, observed good radiological practices and performed emergency actions quickly and efficiently. The health physics personnel failed, however, to conduct routine habitability surveys for airborne and surface contamination in the OSC areas. This inspector followup item (50-327, 328/84-15) will be reviewed during a future exercise.

No violations or deviations were identified.

14. Recovery and Reentry Planning (82301)

This area was observed to determine that general plans are 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 plan and the criteria by which the emergency would be de-escalated was coordinated with all appropriate groups. The inspector had no further questions in this area.

No violations or deviations were identified.

15. 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 attending. The licensee discussed areas of the exercise in which items for possible improvement were identified. The inspectors determined that the critique was comprehensive and adequately addressed weaknesses identified in the licensee's emergency response program during this exercise.

No violations or deviations were identified.

16. Inspector Followup (92701)

- a. (Closed) Inspector Followup Item (IFI) 327, 328/83-13-01: Improving coordination between offsite teams. The inspector observed that offsite monitoring team communications were acceptable.
- b. (Closed) IFI 327, 328/83-13-03: Clarifying shift in command from Control Room to TSC. An inspector noted that the shift in command from the Control Room to the TSC was performed in a timely and effective manner and that the transfer of command was clear to all personnel in both facilities.
- c. (Closed) IFI 327, 328/83-13-04: Putting lights on TSC telephones. An inspector noted that lights had been attached to TSC telephones.
- d. (Closed) IFI 327, 328/83-13-05: Improving coordination by OSC. An inspector noted that teams dispatched from the OSC, were well briefed on plant conditions, and tracked to establish their location at all times.
- e. (Closed) Deficiency (DEF) 327, 328/83-13-06: Improving decisional/visual aids. An inspector noted that status board content, size, and trending was adequate.
- f. (Closed) IFI 327, 328/83-13-07: Improving dose assessment support. An inspector observed that information from the local meteorological tower was used for this exercise. Sample times versus message times were adequate and there was not a noted overreliance on source term estimates.
- g. (Open) DEF 327, 328/83-13-08: Improving coordination of offsite monitoring teams. During their critique the licensee identified that problems still existed as to who controlled the near-site monitoring teams at particular points in time.
- h. (Closed) IFI 327, 328/83-13-10: Improving the TVA critique of the exercise. An inspector observed that the licensee's critique of their exercise was acceptable.

- i. (Closed) IFI 327/81-26-07, 328/81-33-07: Decisional/visual aids. See 17e above.
- j. (Closed) IFI 327, 328/82-13-08: Improve information flow and data display in the CECC. See 17e above.
- k. (Closed) IFI 327, 328/82-13-09: Provide additional training to offsite monitoring team. An inspector noted that the performance of the offsite monitoring teams with respect to the IFI was acceptable.