



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

DEC 19 1985

Report Nos.: 50-327/85-41 and 50-328/85-41

Licensee: Tennessee Valley Authority
6N11 B Missionary Ridge Place
1101 Market Street
Chattanooga, TN 37402-2801

Docket Nos.: 50-327 and 50-328

License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah 1 and 2

Inspection Conducted: November 18 - 22, 1985

Inspector: R. R. Marston
R. R. Marston

12/16/85

Date Signed

Approved by: T. R. Decker
T. R. Decker, Section Chief
Emergency Preparedness Section
Division of Radiation Safety and Safeguards

12/16/85

Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 37 inspector-hours onsite in the areas of emergency preparedness.

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

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *P. R. Wallace, Plant Manager
- *H. L. Abercrombie, Site Director
- *C. C. Mason, Manager, Operations
- *C. R. Brimer, Manager - Site Services
- *R. W. Cantrell, Manager, Operations and Engineering
- *J. F. Murdock, Group Head
- *W. S. Wilburn, Technical Services Manager
- *B. M. Patterson, Maintenance Superintendent
- *G. S. Kirk, Compliance Supervisor
- *C. W. LaFever, Instrument Engineering Supervisor
- *J. F. Murdock, Group Head, NSRS
- *J. T. Crittenden, Chief, Public Safety
- *R. E. Garrison, Assistant Chief, Public Safety
- *B. K. Marks, Supervisor, REP Programs
- *M. A. Skarzinski, Electrical Maintenance Supervisor
- *M. R. Sedlacik, Electrical Modifications Supervisor
- *R. L. Bruce, Sector Supervisor
- *D. L. Love, Mechanical Maintenance Craft Supervisor
- *J. M. Anthony, Operations Group Supervisor
- *L. S. Bryant, Mechanical Maintenance Section Supervisor
- *J. A. Domer, Chief, Nuclear Licensing Branch
- *W. L. Elliot, EQP Commodity Group Supervisor
- *H. D. Elkins, Instrument Maintenance Group Supervisor
- *D. L. Cowart, Quality Surveillance Supervisor
- J. M. Alexander, Jr., Shift Engineer
- C. E. Dewese, Shift Engineer
- J. S. Lewis, Shift Engineer
- W. A. Drown, QA Specialist
- D. A. Bateson, Training Officer
- L. W. Smith, Health Physicist (REP)
- G. Carroll, Training Assistant Shift Engineer
- *T. H. Youngblood, Project Engineer (REP)
- *R. W. Hooper, Electrical Maintenance Engineer
- *S. W. Littrell, Project Engineer
- *A. E. Ives, Project Administrator
- *C. E. Chmielewski, Nuclear Engineer
- *R. S. Martin, Environmental Qualification Project Engineer
- *J. R. O'Bannon, Instrument Engineer
- *J. D. Smith, Regulatory Engineer

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

Other Organizations

M. McKnight, Chief, Planning Staff, Tennessee Emergency Management Agency
 M. Mobley, Director, Radiological Health, Tennessee
 J. Lasater, Director of Training and Safety, Erlanger Medical Center
 D. Allen, Director, Hamilton County Emergency Management Agency

NRC Resident Inspector

*K. H. Jenison

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 22, 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 inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

(Closed) Violation 327, 328/85-13-01, Failure to Test Sirens at Frequency Specified in Radiological Emergency Plan (REP)

TVA's letter of response dated June 3, 1985, stated that the silent tests had been resumed at the required frequency on May 15, 1985, and that no deviations will be initiated unless reflected in the REP. The inspector reviewed the licensee's copies of the Tennessee Emergency Management Agency's test documents for August 1985, and TVA's monthly inspection records. These records verified that the silent tests were being conducted at the required biweekly frequency.

(Open) Violation 327, 328/85-13-02, Failure to Provide Protective Action Recommendations Consistent with Federal Guidance

TVA's letter of response dated June 3, 1985, for this violation has been reviewed and was determined to be acceptable by Region II. The inspector held discussions with TVA personnel, conducted interviews with three Shift Engineers involving classification of emergencies and protective action decision-making, reviewed the Protective Action Flowchart attached to Implementing Procedure IP-5, General Emergency, and reviewed licensee records.

The Implementing Procedure IP-5 appeared to be consistent with Federal guidance for protective action decision-making and a letter requiring acknowledgement had been sent to Shift Engineers and Assistant Shift Engineers describing the changes in the Implementing Procedure. The procedure changes were being reviewed during scheduled licensed operator

requalification training which was scheduled to be completed by December 31, 1985.

Since the training was not complete at the time of the inspection, this item will remain open and will be evaluated during a subsequent inspection.

4. Emergency Detection and Classification (82201)

Pursuant to 10 CFR 50.47(b)(4) and 10 CFR 50, Appendix E, Sections IV.B and IV.C, this program area was inspected to determine whether the licensee used and understood a standard emergency classification and action level scheme.

Selected emergency action levels (EALs) specified in the classification procedures were reviewed. The reviewed EALs appeared to be consistent with the initiating events specified in Appendix 1 of NUREG-0654. The inspector noted that some of the EALs were based on parameters obtainable from Control Room instrumentation.

Interviews were held with three Shift Engineers to verify that they understood the relationship between core status and such core damage indicators as inadequate-core-cooling indicator, high-range effluent monitor, fuel temperature indicator, and containment hydrogen monitor. All interviewees appeared knowledgeable of the various core damage indications and their relationship to core status.

The responsibility and authority for classification of emergency events and initiation of emergency actions were prescribed in licensee procedures and in the Emergency Plan. Interviews with selected key members of the licensee's emergency organization revealed that these personnel understood their responsibilities and authorities in relation to accident classification, notification, and protective action recommendations.

Walk-through evaluations involving accident classification problems were conducted with three Shift Engineers. All personnel interviewed properly classified the hypothetical accident situations presented to them, and appeared to be familiar with appropriate classification procedures.

No violations or deviations were identified.

5. Protective Action Decision-Making (82202)

Pursuant to 10 CFR 50.47(b)(9) and (10) and 10 CFR 50, Appendix E, Section IV.D.3, this area was inspected to determine whether the licensee had 24-hour-per-day capability to assess and analyze emergency conditions and make recommendations to protect the public and onsite workers, and whether offsite officials had the authority and capability to initiate prompt protective action for the public.

The inspector discussed responsibility and authority for protective action decision-making with licensee representatives and reviewed pertinent portions of the licensee's Emergency Plan and Implementing Procedures. The

Plan and Procedures clearly assigned responsibility and authority for accident assessment and protective action decision-making. Interviews with members of the licensee's emergency organization revealed that these personnel understood their authorities and responsibilities with respect to accident assessment and protective action decision-making.

Walk-through evaluations involving protective action decision-making were conducted with three Shift Engineers. Personnel interviewed appeared to be aware of the range of protective action recommendations appropriate to offsite protection. Personnel interviewed were aware of the need for timeliness in making initial protective action recommendations to offsite officials. Interviewees demonstrated adequate understanding of the requirement that protective action recommendations be based on core conditions and containment status even if no release is in progress.

No violations or deviations were identified.

6. Changes to the Emergency Preparedness Program (82204)

Pursuant to 10 CFR 50.47(b)(16), 10 CFR 50.54(q), and 10 CFR 50, Appendix E, Sections IV and V, this area was reviewed to determine whether changes were made to the program since the last routine inspection in March 1985, and to note how these changes affected the overall state of emergency preparedness.

The inspector discussed the licensee's program for making changes to the Emergency Plan and Implementing Procedures. The inspector reviewed the licensee's Administrative Instruction AI-14, "Plant Instructions - Document Control," Revision 49, dated May 17, 1985, governing review and approval of changes to the Plan and Procedures. The inspector verified that changes to the Plan and Procedures were reviewed and approved by management. It was also noted that all such changes were submitted to the NRC within 30 days of the effective date, as required.

Discussions were held with licensee representatives concerning recent modifications to facilities, equipment, and instrumentation. By review of selected procedures, the inspector verified that Procedure and Plan changes were made to reflect the recent transfer of emergency functions from Muscle Shoals, Knoxville, and the Department of Nuclear Power to the Central Emergency Control Center (CECC).

The organization and management of the emergency preparedness program were reviewed. The inspector verified that there had been no significant changes in the organization or assignment of responsibility for the plant and corporate emergency planning staffs since the last inspection. The inspector's discussion with licensee representatives also disclosed that there had been no significant changes in the organization and staffing of the offsite support agencies since the last inspection.

The inspector reviewed the licensee's program for distribution of changes to the Emergency Plan and Procedures. Document control records for the period

April to November 1985, showed that appropriate personnel and organizations were sent copies of Plan and Procedure changes, as required.

No violations or deviations were identified.

7. Knowledge and Performance of Duties (Training) (82206)

Pursuant to 10 CFR 50.47(b)(15) and 10 CFR 50, Appendix E, Section IV.F, this area was inspected to determine whether emergency response personnel understood their emergency response roles and could perform their assigned functions.

The inspector reviewed the description (in the Emergency Plan) of the training program, training procedures, and selected lesson plans, and interviewed members of the instructional staff. Based on these reviews and interviews, the inspector determined that the licensee had established a formal emergency training program.

Records of training for key members of the emergency organization for the period April to November 1985, were reviewed. The training records revealed that personnel designated as alternates in the emergency organization were provided with appropriate training. According to the training records, the type, amount, and frequency of training were consistent with approved procedures.

The inspector conducted walk-through evaluations with three selected key members of the emergency organization. During these walk-throughs, individuals were given various hypothetical sets of emergency conditions and data and asked to talk through the response they would make if such an emergency actually existed. The individuals demonstrated familiarity with emergency procedures and equipment in the areas of emergency detection and classification, assessment action (to include plant conditions), and protective action decision-making.

The inspector reviewed documentation pertaining to the annual emergency exercise and periodic drills. Licensee representatives stated that certain periodic drills were included in the annual exercise; however, this could not be determined clearly from the documentation available. The inspector stated that the failure to adequately document completion of drills during the annual emergency exercise was an inspector followup item (50-327, 328/85-41-01). The licensee agreed to clarify completion of these drills in future documentation.

No violations or deviations were identified.

8. Licensee Audits (82210)

Pursuant to 10 CFR 50.47(b)(14) and (16) and 10 CFR 50.54(t), this area was inspected to determine whether the licensee had performed an independent review or audit of the emergency preparedness program.

Records of audits of the program were reviewed. The records showed that an independent audit of the program was conducted by the Quality Audit Branch during the period July 29 to August 16, 1985. This audit fulfilled the 12-month frequency requirement for such audits. The audit records showed that the State and local government interfaces were evaluated, and that findings concerning the interfaces would be made available to State and local government authorities, if applicable. Audit findings and recommendations were presented to plant and corporate management. A review of past audit reports indicated that the licensee complied with the five-year retention requirement for such reports.

Licensee Emergency Plans and Procedures required critiques following exercises and drills. Licensee documentation showed that critiques were held following periodic drills as well as the annual exercise. The records showed that deficiencies were discussed in the critiques, and recommendations for corrective action were made.

The licensee's program for follow-up action on audit, drill, and exercise findings was reviewed. Licensee procedures required follow-up on deficient areas identified during audits, drills, and exercises. The inspector reviewed licensee records dated September 1985, which indicated that corrective action was taken on identified problems, as appropriate. The licensee had established a tracking system as a management tool in following up on actions taken in deficient areas.

No violations or deviations were identified.

9. Inspector Follow-up (92701)

- a. (Closed) Inspector Follow-up Item (IFI) 85-07-01: EAL on steamline break not specific enough to classify properly. The inspector reviewed the classification table of Implementing Procedure IP-1 and verified that the EALs had been expanded and clarified.
- b. (Closed) IFI 50-328/81-21-03: Consider high-noise interference on evacuation alarms and plant public-address systems during emergencies. Licensee representatives stated that areas had been evaluated and additional sirens added or strobe lights added. Verification at full power needs to be done to verify adequacy. Accordingly, this item will be tracked as IFI 50-328/85-41-02.
- c. (Closed) IFI 50-327/81-40-06 and 50-328/81-49-06: Perform a survey to determine audibility of emergency alarms in high-noise areas. A licensee representative stated that surveys had been performed and additional alarms added. A survey would be conducted during the next period of full operation. Accordingly, this item will be tracked as IFI 50-327, 328/85-41-03.

10. IE Bulletins (92703)

IE Bulletin 79-18: Audibility of alarms in high-noise areas. Licensee representatives stated that all areas had been identified and either strobe lights or additional sirens had been installed. The licensee representatives stated that a verification of the effectiveness of these alarms would be performed during the next operating period, prior to the next Unit 2 refueling outage.