



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA ST., N.W., SUITE 3100  
 ATLANTA, GEORGIA 30303

Report No. 50-327/80-23

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

Facility Name: Sequoyah Nuclear Plant 1

Docket No. 50-327

License No. DPR-77

Inspection at Sequoyah Nuclear Plant (SNP); TVA Central Emergency Command Center (CECC); and Muscle Shoals Emergency Command Center (MSCECC)

Inspectors:

*G. T. Gibson* July 11, 1980  
 G. T. Gibson Date Signed

*C. Julian for* July 14 1980  
 W. Cottle Date Signed

*C. Julian for* July 14 1980  
 S. Butler Date Signed

Approved by:

*G. R. Jenkins* 7/15/80  
 G. R. Jenkins, E&SP Section Chief, FFMS Branch Date Signed

SUMMARY

Inspection on June 16, 1980

Areas Inspected

This special, announced inspection involved 30 inspector-hours on site in observing the Sequoyah emergency exercise between TVA and offsite support organizations at the SNP, CECC, and MSCECC.

Results

Of the three areas inspected, no items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

##### MSCECC

- E. Belvin, Manager, Muscle Shoals Facility
- \*R. Maxwell, Director, MSCECC
- \*J. Ingwerson, Drill Observer, MSCECC
- \*M. Sinkule, Nuclear Safety Review Board (Knoxville)

#### Sequoyah Nuclear Plant

- C. E. Cantrell, Assistant Plant Superintendent
- W. F. Popp, Assistant Plant Superintendent
- D. J. Record, Operations Supervisor
- W. H. Kinsey, Results Supervisor
- R. J. Kitts, Health Physics Supervisor
- R. S. Kaplan, Supervisor Public Safety Services
- W. E. Webb, Jr., Radiological Emergency Planning Staff

#### Corporate CECC

- A. G. Parris, Manager of Power
- J. R. Calhoun, Director, Nuclear Power Division
- J. DeWease, Assistant Director Operations
- J. Green, Assistant Manager of Power Operations
- J. W. Hufham, Assistant to Director, Nuclear Power Division
- T. D. Knight, Chief, Reactor Engineering Branch
- K. Whit, Nuclear Safety Review Staff
- R. C. Parker, Assistant to Director, Nuclear Power Division

Other licensee employees contacted included four technicians and three officer personnel; other persons contacted included representatives from the governor staff, State of Tennessee, FEMA drill observers, and Office of Nuclear Reactor Regulation observers.

\*Attended exit interview.

### 2. Exit Interview

The inspection scope and findings for the MSCECC were summarized on June 16, 1980, with those persons indicated in Paragraph 1 above. Observations for the CECC and SNP were provided through the June 17 drill critique of TVA in Chattanooga, Tennessee.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Observation of Muscle Shoals Central Emergency Command Center (MSCECC) Exercise Activities

- a. The inspector observed the licensee's environmental assessment portion of the June 16, 1980, Sequoyah emergency exercise at the MSCECC. This facility within TVA is responsible for offsite monitoring and environmental assessment during an emergency. The MSCECC functions to provide input to the Central Emergency Command Center (CECC) on the effects of any releases from the facility and formulates protective action recommendations to the State via the CECC. During the exercise, the inspector observed the information flow between the MSCECC and various exercise participants, and the evaluation process at MSCECC on the available information.
- b. The inspector observed the MSCECC perform the following assessments: initial receipt of alert notification; dispatch of monitoring teams by helicopter to site; coordination of offsite monitoring teams; evaluation of liquid releases; evaluation of gaseous releases; formulation of protective actions/recommendations; liaison with State of Tennessee; and evaluation of postulated puff release from theoretical containment rupture.
- c. The inspector noted two substantive findings: (1) technical nuclear plant operations/accident assessment input information was not adequate for the MSCECC to base accident dose calculations, and (2) information flow between the State and MSCECC (via CECC) was not bi-directional, resulting in the State making decisions without the benefit of MSCECC expertise/input.

6. Technical Input to MSCECC

Several times during the exercise, the inspector observed instances where MSCECC was not receiving from the Radiological Emergency Plan (REP) organization adequate technical information on the severity of the incident or the effects of the event. MSCECC was not provided such information as: estimated duration of release; anticipated corrective action; magnitude-evaluation of accident on overall plant safety factors; evaluation of potential for further system deterioration. Without such information, the dose evaluations from MSCECC were overly speculative. This item will be examined further during subsequent inspections (50-327/80-23-01).

7. Information Flow Within the REP Organization

The inspector noted several instances where the State of Tennessee had initiated protective actions before MSCECC was aware the protective actions were being contemplated. These actions included: isolation of downstream water supplies; and evacuation of various sectors around the SMP. In as much as MSCECC had information on river flows and projected exposures to affected sectors which were not available to the State of Tennessee, the REP should assure that any State Protective Action evaluation has the benefit of all possible input. This item will be reviewed further during a subsequent inspection (50-327/80-23-02).

8. Control Room, Emergency Control Center and Technical Support Center

Activities in the Unit 1 control room, the Emergency Control Center and the onsite Technical Support Center were observed by the Resident Inspector and an observer from the Office of Nuclear Reactor Regulation. In addition, the Senior Resident Inspector was present in the control room for the first two hours of the drill. Comments on the activities observed during the period from 0815 to 1430 hours EDT are as follows:

- a. The Shift Engineer (SRO) appeared to be familiar with the notification requirements. Timely notifications were made to the Office of Power Duty Specialist, the onsite Emergency Director, and the NRC (red phone) per the Radiological Emergency Plan (REP).
- b. The Emergency Control Center was promptly manned with the Assistant Plant Superintendent assuming the role of the onsite Emergency Director. The Emergency Director took prompt action in establishing communications with offsite offices as specified in the REP.
- c. The Emergency Director and the Shift Engineer took effective measures to limit control room access and to minimize the distractions in the control room and at the Emergency Control Center.
- d. The Emergency Director appeared to be knowledgeable in the REP requirements. The state of emergency was properly classified at each level as the drill progressed. The NRC was properly notified (red phone reports) as the plant situation escalated to a general emergency.
- e. The Technical Support Center was named in accordance with the requirements.
- f. The Plant Health Physicist reported to the Emergency Control Center and provided support to the Emergency Director. Adequate references were available at the Emergency Control Center. Communications with offsite health physics personnel and technical support from offsite health physics personnel appeared to be adequate.

- g. A chronological log was not maintained at the Emergency Control Center for the first 1-½ hours of the drill. Thereafter, a clerk was utilized to assist the Emergency Director in maintaining an adequate record of events.
- h. The Emergency Director appeared to be too closely tied to the telephone in an attempt to answer the multitude of requests for information from offsite groups.
- i. Many of the information requests made to the Emergency Control Center and the Technical Support Center appeared to be trivial. It appeared that instead of maintaining a ready status in order to support the plant staff when requested, that most of the offsite groups (engineering/design, health physics, power production) were determined to demonstrate their readiness by asking questions.

9. Central Emergency Control Center and DNP Emergency Center

Activities in the Central Emergency Control Center and the Division of Nuclear Power Emergency Center, both located in the Twin Towers Building in Chattanooga, were observed by the Senior Resident Inspector during the period from 1000 to 1530 hours EDT. Comments on the functions of both centers are as follows:

- a. Access to each of the centers was controlled by security personnel.
- b. The Emergency Director in each center took adequate measures to insure that a proper working atmosphere was maintained in each center.
- c. The Emergency Director in each center appeared to maintain effective control over the personnel and resources at his disposal. Effective chains of communications and command were maintained in each center.
- d. Some communications problems were experienced, apparently due to the new telephone installations in each center. Most of the telephone calls from outside groups came into the DNP Emergency Center and had to be forwarded to the CECC or to the information center as appropriate.
- e. Some confusion existed in both emergency centers as to the actual state of emergency which existed at the plant site. This appears to have been caused by the onsite Emergency Director referring to the particular emergency implementing procedure in use at the plant rather than the actual plant emergency condition which had been declared.
- f. There was no integrated effort to maintain an up-to-date plant status indication in either center. The use of a common status board, or some other method of posting plant status information, would have eliminated some of the resulting confusion in this area.

- g. The preparation and release of information to the news media was conducted in an orderly and timely fashion. Adequate preparations had been made for the conduct of periodic briefings of media personnel in an area adjacent to, but outside the confines of, the emergency centers.
- h. The inspector witnessed the briefing provided for the State of Tennessee representative upon his arrival at the CECC. The briefing was factual and as nearly as the inspector could determine, was representative of the existing conditions both in regards to plant status and the status of the offsite monitoring effort.
- i. The inspector attempted to view the activities occurring at each center from the standpoint of determining if the activities could have been better performed, or otherwise facilitated, by the centers being located nearer the plant site. There appeared to be no activities which would have been substantially improved by relocating the emergency centers nearer to the plant site.