



Department of Energy
Washington, D.C. 20545

Docket No. 50-537
HQ:S:83:242

APR 08 1983

Dr. J. Nelson Grace, Director
CRBR Program Office
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Grace:

RESPONSE TO SAFETY EVALUATION REPORT (SER) OPEN ITEM NO. 5 - EMERGENCY
PLANNING

This letter provides additional clarification of information contained in the Preliminary Safety Analysis Report (PSAR) Section 13.3, "Emergency Planning." A working meeting on this subject was held on March 21, 1983. The enclosed resolution of the specific questions identified at the meeting should enable the staff to complete their review and close out this SER open item. The attached PSAR change pages will be included in the next scheduled PSAR amendment.

Any questions regarding the information provided can be addressed to Mr. Ken Yates (FTS 626-6097) or Mr. Wayne Hibbitts (FTS 626-6455) of the Project Office Oak Ridge staff.

Sincerely,

John R. Longenecker
Acting Director, Office of
Breeder Demonstration Projects
Office of Nuclear Energy

Enclosure

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CRBRP/NRC WORKING MEETING EMERGENCY PLANNING

MEETING LOCATION/DATE: Landow Building, Room 1111, Bethesda, Maryland,
March 21, 1983

ATTENDEES: Richard Stark, NRC
Don Perrotti, NRC
Wayne Hibbitts, CRBRP/PO
Peter Planchon, Westinghouse/OR
Eric Sliger, TVA
Lonnie Kepley, CRBRP/PO
Kenneth Yates, CRBRP/PO
Richard Baker (part time), CRBRP/PO
Pat Docherty, Westinghouse/WLLCO

The following information is provided in response to requests made by NRC staff (Don Perrotti and Richard Stark) concerning questions related to the PSAR and the CRBRP SER:

Questions/Areas of Discussion

1. The PSAR Section 13.3.3 requires additional information to address agreements to be established among emergency planning agencies.

Response: The attachment provides a revision to the PSAR Section 13.3.3 which further describes emergency planning arrangements requested in the SER Section 13.3.2.1.

2. Verify the principal agency in North Carolina responsible for coping with emergencies in North Carolina.

Response: The North Carolina Department of Crime Control and Safety is the principal agency responsible for coping with emergencies in North Carolina.

3. Identify in the PSAR the application of real-time meteorology.

Response: The attached proposed update to the PSAR Section 13.3.2, page 13.3-4, par. 6, and page 13.3-5, par. 3, confirms that real-time meteorological information will be utilized in dose assessments related to actual releases of radioactivity with readout capability in the Control Room, TSC, CECC, MSECC, and State of Tennessee Emergency Operations Center.

4. Provide a more detailed discussion of the EPZ boundary determination including known impediments to evacuation.

Response: The preliminary evacuation time estimates (PSAR Appendix 13.3A) assumed a circular 10 mile plume exposure EPZ boundary. The final EPZ boundary will be determined

by the State of Tennessee following coordination of planning efforts with local government agencies. The applicant will provide CRBRP specific information to the State to supplement, as necessary, NUREG-0396 EPZ size guidance.

This final EPZ boundary will consider also such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. No known impediments have been identified which would significantly affect effective evacuation of the assumed EPZ.

5. Does the Edgewood School present an impediment to evacuation, if so describe.

Response: No, the Edgewood School does not present an impediment to evacuation. The PSAR Section 13.3A, par. C(4)d, is modified to identify the means of evacuating the general population, schools and other institutions.

Miscellaneous Items

1. The PSAR Section 13.3A is also revised to correct an error to the evacuation time estimates for the 5 mile and 10 mile EPZ.
2. The reference attached provides a copy of a letter from Eugene P. Tanner, Director, Tennessee Emergency Management Agency, to Mr. H. J. Green, TVA, re: Responsibility for Emergency Response Plans. This letter is a new reference to PSAR Section 13.3.3.

The director of each center is responsible for directing his staff in carrying out their respective responsibilities. He is delegated the authority during emergencies to locate, direct, and dispatch the personnel and equipment necessary to carry out his staff's responsibilities.

The purpose of the CECC and associated CECC staff is to provide the facilities and manpower for evaluating, coordinating, and directing the overall activities involved in coping with a radiological emergency.

During an emergency, the CECC Director and his staff will review the response to the emergency by TVA and the appropriate State agencies to ensure that an effective and cooperative effort is being made. The CECC Director, after consultation with the Office of Health and Safety CECC representative, is responsible for providing TVA's recommended protective actions to the appropriate State officials.

The CECC staff will coordinate with all other TVA emergency centers to ensure an effective TVA effort in response to an accident situation. The CECC staff will also provide an accurate description of the emergency situation for TVA management and public information. In addition, the CECC will coordinate with offsite Federal agencies, such as the Nuclear Regulatory Commission (NRC) and Department of Energy (DOE), to ensure availability of additional outside resources to TVA.

The DNPEC staff provides support services during a radiological emergency to the affected plant. Support services may be provided by utilizing any necessary manpower and equipment under the direct control of the Division of Nuclear Power. If the division is unable to provide adequate services or support, requests will be made for additional support to other TVA divisions, local agencies, or government installations as may be required.

The Muscle Shoals Emergency Control Center (MSECC) supports the CECC by performing environmental radiological monitoring and dose assessments and by recommending protective actions for the public to the CECC. In performing these functions, the MSECC assists the Tennessee Department of Public Health in evaluating the population exposures resulting from radiological emergencies. The MSECC staff directs offsite environmental monitoring for the Tennessee Department of Public Health and continues monitoring activities until a State Field Coordination Center is established to coordinate the offsite environmental monitoring effort. The MSECC will continue to evaluate the need for monitoring assistance to the Tennessee Department of Public Health. The State may request assistance from the appropriate DOE Operations Office in accordance with Interagency Radiological Assistance Plan (IRAP) for additional support. The MSECC will monitor the radiation protection problems in the plant during emergencies to provide guidance, manpower, and equipment to the Plant Health Physicist as required to control and mitigate these problems.

The Knoxville Emergency Control Center (KECC) serves as the focal point for all essential support activities involving TVA Knoxville offices. The TVA Office of Engineering Design and Construction (OEDC), Division of Engineering Design (EN DES), has been delegated overall responsibility for the KECC and for providing technical support during and following a radiological emergency.

Real-time meteorological data will be used in dose assessment related to actual and potential releases of radioactivity.

Real-time meteorological data will be available in the Control Room, Technical Support Center, CECC, MSECC, and State of Tennessee Emergency Operations Center.

This section addresses the EN DES responsibilities for technical support during emergency conditions.

The KECC also serves as the communication center for other essential TVA offices such as the TVA Board of Directors, the General Manager, the Nuclear Safety Review Staff, and the Information Office.

The radiological emergency communications network will consist of a combination of commercial telephone circuits, radio, and microwave circuits. South Central Bell Telephone Company lines will be used as the primary means of communications during radiological emergency situations between plant, CECC, DNPEC, MSECC, KECC, and appropriate Federal and State agencies. This system will be augmented by the TVA Private Automatic Exchange (PAX). Hard copy data transmission will be accomplished by Panafax from the CRBRP to the DNPEC, the CECC, and the MSEC. The hard copy transmission is then followed up and verified by redundant telephone communications. TVA will provide the necessary interfaces to the CRBRP Safety Parameter Display System (SPDS) for transmission of SPDS data to TVA emergency centers, as appropriate.

The primary means of notification of plant and offsite personnel is the commercial telephone circuits. Additionally, pocket pagers are provided to certain key individuals in the emergency organization.

Figure 13.3-1 illustrates the relationship between the TVA emergency centers and depicts the interface among TVA, Federal, State, and local agencies.

13.3.3 Coordination With Offsite Groups

TVA will have agreements with other Federal agencies to assist in the evaluation and control of any radiological emergency. These agreements will include such agencies as the Department of Energy (DOE), Oak Ridge Operations Office, and the National Aeronautics and Space Administration (NASA), Marshall Space Flight Center. The CECC staff may request assistance from these outside agencies as required. The Site Emergency Director will be responsible for notification of NRC's regional office of Inspection and Enforcement.

See Insert →
Agreements will be made with the State of Tennessee, Tennessee Emergency Management Agency, to provide planning for emergencies at TVA nuclear facilities. This planning includes evacuation arrangements, traffic control, and support from other state agencies as required. The Clinch River Breeder Reactor Plant Radiological Emergency Plan will utilize the liaisons already established in developing the Browns Ferry, Sequoyah, Watts Bar, and Bellefonte Radiological Plans with the States of Alabama and Tennessee. The Tennessee Emergency Management Agency will notify the State of North Carolina and surrounding states and coordinate assistance from the various state agencies.

TVA will maintain liaison with the Tennessee Emergency Management Agency, particularly with respect to the availability of emergency services. The Tennessee Emergency Management Agency will inform these agencies of actions to be taken under their respective statutory authority and assist them in

~~ATTACHMENT 1~~

PSAR Section 13.3.3, paragraph 2 (INSERT)

Agreement has been made with the State of Tennessee, Tennessee Emergency Management Agency (TEMA), to provide for planning and conduct of emergency operations for emergencies at CRBRP (Reference 1). TEMA is responsible for coordination of the efforts of all state agencies and local governments in the development of response plans that have an impact beyond the capability of a single agency or local government to control. The actual agreements and arrangements involved with such state agency and local government will be specifically defined in the State of Tennessee CRBRP Radiological Emergency Response Plan which will be provided in the CRBRP FSAR. The TVA CRBRP Radiological Emergency Plan will utilize the liaisons already established in developing the Sequoyah ^{and} Watts Bar ~~and~~ Radiological Emergency Plans with the State of Tennessee, ~~and Alabama~~. TEMA will notify the ~~State~~ of North Carolina, Department of Crime Control and Safety, and coordinate assistance from the various ~~Tennessee~~ state agencies.

surrounding states as necessary and

1. Letter, Tanner, E.P., Director, Tennessee Emergency Management Agency, to Green, H.G., TVA, July 6, 1982.

C. Estimated Reaction and Response Times

1. The time required for the initial accident assessment of the most serious design basis accident may require 15 minutes. This time is an estimate based on the operation of the reactor instrumentation used to follow the course of accidents. Based on TVA's experience, the time required to perform an initial dose projection and notify offsite authorities can be accomplished in 15 minutes.

For the most serious design basis accident, the projected two-hour doses at the exclusion area boundary do not reach the protective action guide level for evacuation.

2. The time required to warn all resident and transient persons in any evacuation sector will conform to the requirements of 10 CFR 50, Appendix E-1982.
3. The estimated elapsed time, after the initial warning, to evacuate the 2-mile emergency planning zone (EPZ) is 4 hours. The estimated evacuation time for the 5-mile EPZ is 5 hours, 20 minutes. The estimated evacuation time of the 10-mile EPZ is 7 hours 15 minutes. Each estimate contains a 1-hour 50-minute preparation time factor. 6 hours
35
8

4. These evacuation time estimates were prepared by the Traffic Management Division of the Tennessee Department of Transportation.
 - a. Figures 13.3A-5 and 13.3A-6 are maps showing all roads within 10 miles of the Clinch River Project. Also indicated are the 2-, 5-, and 10-mile EPZ.
 - b. Table 13.3A-1 shows the transient and resident populations in the 16 directional sectors within 10 miles of the Clinch River Project. This table uses 1980 census data.
 - c. Table 13.3A-2 shows the estimated transient and resident populations in the 16 directional sectors within 10 miles of the Clinch River Project. This table uses the projected population figures for year 2020. The projected population figures come from a report prepared by the Firm of Dames and Moore dated June 16, 1981.
 - d. Private automobiles will be the primary means for evacuating the population. Buses may be used to evacuate the Edgewood School. ~~The problem~~ will be specifically addressed in the CRBRP-REP. are expected to schools and other institutions
This procedure
5. Table 13.3-1 gives the agencies involved in the CRBRP emergency plan.

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L00 820709 240

Dear Mr. Green:

TEMA is responsible for the coordination of the efforts of all State agencies and local government in the development of response plans that have an impact beyond the capabilities of a single agency or local government to control, i.e. plans such as the Tennessee Multi-Jurisdictional Response Plan for TVA's Sequoyah Nuclear Facility.

The preparation of a response plan for the Clinch River Breeder Reactor would definitely be in the category of those things that TEMA is charged to do. TEMA as the lead State agency will coordinate the State agency planning. Since an accident at this nuclear facility would involve more than one local government and be beyond their capability to respond to and control, TEMA would also coordinate the local planning and response.

Sincerely,

Eugene P. Tanne
State Director

EPT/EU/m