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Docket Nos: 50-390  
and 50-391

Mr. H. G. Parris  
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Dear Mr. Parris:

Subject: FEMA Findings on Offsite Radiological Emergency Response Plans  
for the Watts Bar Nuclear Plant

The enclosed memorandum from Richard W. Krimm, Assistant Associate Director, Office of Natural and Technological Hazards Programs, FEMA, dated May 6, 1985, forwards the Federal Emergency Management Agency findings on the adequacy of the offsite radiological emergency plans for the Watts Bar Nuclear Plant.

Based on a review of the offsite plans relative to the planning standards of NUREG-0654 and the State's corrective actions in response to FEMA comments, FEMA finds that overall the State and local RERP for the Watts Bar facility are adequate. Based on the results of the September 1984 and December 1984 exercises, FEMA concludes that offsite emergency preparedness has been demonstrated to be adequate and there is reasonable assurance that appropriate protective measures can be implemented by offsite jurisdictions around the Watts Bar Nuclear Plant to protect the health and safety of the public in the event of a radiological emergency. A remedial drill on the public information program conducted on December 13, 1984 to correct a deficiency identified in the September 1984 exercise effectively demonstrated the resolution of this deficiency, as indicated in the enclosed Interim Findings Report.

The staff requests that you continue to coordinate emergency planning efforts with offsite authorities to ensure that corrective actions identified by FEMA as a result of its review of offsite plans and preparedness for the Watts Bar facility are completed in a timely manner.

Sincerely,

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
As stated

cc: See next page

DESIGNATED ORIGINAL

Certified By

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Watts Bar Nuclear Plant

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# Federal Emergency Management Agency

Washington, D.C. 20472

May 6, 1985

MEMORANDUM FOR: Edward L. Jordan  
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and Engineering Response  
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U.S. Nuclear Regulatory Commission

FROM: *Richard W. Krimm*  
Richard W. Krimm  
Assistant Associate Director  
Office of Natural and Technological  
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SUBJECT: Interim Findings on Offsite Radiological Emergency Response  
Plans (RERP) for the Watts Bar Nuclear Generating Station

Attached is a copy of the Federal Emergency Management Agency (FEMA) Interim Findings on the adequacy of offsite RERP for the Watts Bar Nuclear Generating Station. The Interim Findings Report, dated April 2, 1985, was prepared by FEMA Region IV.

The State of Tennessee and McMinn, Meigs, and Rhea Counties, are located in the 10-mile plume emergency planning zone (EPZ). They developed a joint offsite RERP entitled the "Tennessee Multi-Jurisdictional Radiological Emergency Response Plan for the Watts Bar Nuclear Power Facility". It was formally reviewed by the Regional Assistance Committee (RAC) in March 1984. Comments on the plan were provided to the State of Tennessee on April 18, 1984. The first joint full-participation Watts Bar exercise of the plans was conducted on September 11-12, 1984. The exercise evaluation report was provided to the State on October 15, 1984. As a result of the exercise deficiencies, a remedial drill on public information was conducted on December 13, 1984. Region IV's evaluation was forwarded to the State on December 28, 1984. The State responded with corrective actions to the plan review on July 30, 1984, and with corrective actions to the exercise reports on January 15, 1985.

FEMA Region IV and the RAC have determined that all planning standards of NUREG-0654/FEMA-REP-1, Rev. 1, have either been adequately addressed in the plans or will be adequately addressed by corrective actions currently underway. The State plan is now adequate for all planning standards. The local plans are now adequate for with the exception of standard F for Meigs County and standard H in Meigs and Rhea Counties. Corrective actions underway will be adequate to correct these deficiencies.

Based on a review of the above information, FEMA finds that overall the State and local RERP are adequate. Based on the results of the September 1984 and December 1984 exercises, offsite emergency preparedness has been demonstrated to be adequate and there is reasonable assurance that appropriate protective measures can be implemented by offsite jurisdictions around the Watts Bar Nuclear Generating Station to protect the health and safety of the public in the event of a radiological emergency.

If you have any questions on the above, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 287-0200.

Attachment  
As Stated

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1P.

INTERIM FINDINGS REPORT  
on the Adequacy of  
Radiological Emergency Response Preparedness  
for  
Watts Bar Nuclear Power Plant, Tennessee

April 2, 1985

Prepared by the  
Federal Emergency Management Agency  
Region IV  
Natural and Technological Hazards Division

~~8505-130281~~  
28pp.

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## I. INTRODUCTION

### A. General Characteristics of the Watts Bar Nuclear Power Plant

The plant site, consisting of approximately 1,800 acres, is located in Rhea County in southeastern Tennessee, on the west shore of the Tennessee River, approximately 50 miles north northeast of Chattanooga, and 54 miles southwest of Knoxville.

The 10-mile Emergency Planning Zone (EPZ) for the Watts Bar Plant includes McMinn, Meigs and Rhea Counties. The 50-mile Ingestion Pathway includes all or parts of Anderson, Bledsoe, Blount, Bradley, Meigs, Cumberland, Fentress, Grundy, Hamilton, Knox, Loudon, McMinn, Monroe, Morgan, Overton, Polk, Putnam, Rhea, Roane, Scott, Sequatchie, Van Buren, Warren and White Counties.

The Watts Bar Nuclear Power Plant is owned and operated by the Tennessee Valley Authority (TVA).

### B. Emergency Response Organizations

Final authority for all off-site emergency actions in response to radiological incidents at a fixed nuclear plant rests with the Governor of the State. In Tennessee, a Tripartite Committee is available to render advice to the Governor on his decisions for response to such incidents. The Governor's Tripartite Committee consists of the following persons: The Adjutant General (Chairman), Commissioner Department of Health and Environment and Technical Advisor to the Governor.

The function of the Tennessee Emergency Management Agency (TEMA) is to provide the overall management and coordination of State, local and private organizations in response to an accident at the TVA Watts Bar Nuclear Power Plant.

Radiological Health is one of four divisions within the Bureau of Environmental Health Services in the Health Department. The function of Radiological Health is accident assessment, planning for, and direction of, all radiological monitoring teams, off-site protective response and health aspects of a radiological accident at the plant.

### C. Plans

The Basic Plan provides organizational concepts and policies and establishes the assignment of emergency responsibilities. Operational concepts and procedures are contained in a series of annexes and supporting appendices which provide specific responses for State Departments and local governments. Additional information and procedures addressing selected situations which require expanded and detailed instructions are contained in county implementing procedures, tabs and enclosures.

State of Tennessee Multi-Jurisdictional Radiological Emergency  
Response Plan for Watts Bar Nuclear Power Plant

- Annex A - Direction and Control
- Annex B - Alerting and Notification
- Annex C - Communications
- Annex D - Public Education and Information
- Annex E - Radiological Protection Measures
- Annex F - Medical and Public Health
- Annex G - Plume Exposure EPZ
- Annex H - Evacuation
  - Appendix 1 - McMinn County
  - Appendix 2 - Meigs County
  - Appendix 3 - Rhea County
  - Appendix 4 - Feeding and Sheltering
  - Appendix 5 - Evacuation Plan Brochure
- Annex J - Security
- Annex K - Ingestion Exposure Pathway EPZ
- Annex L - Recovery and Reentry
- Annex M - Emergency Response Training
- Annex N - Exercises
- Annex P - Glossary

The State and local governments in the Watts Bar area have been planning and preparing the "Tennessee Multi-Jurisdictional Radiological Emergency Response Plan for the Watts Bar Nuclear Power Facility". The first draft plan was prepared in September of 1980, and revised in 1983. It was formally reviewed by the Regional Assistance Committee (RAC) on March 20-21, 1984, and comments were provided to the State of Tennessee on April 18, 1984. The plan and its review have been based on NUREG-0654-FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants". Currently the plan is being revised to incorporate all corrections as a result of the Plan review and the September 1984 exercise.

D. Basis for Findings

The status of emergency preparedness for off-site response to possible incidents resulting from the Watts Bar Nuclear Power Plant has been determined based on the following.

1. The FEMA/RAC review of the State and local plans conducted on March 20-21, 1984. The review was forwarded to the State on April 18, 1984.
2. The first Watts Bar exercise of the plans conducted on September 11-12, 1984. The exercise evaluation report was forwarded to the State on October 15, 1984.

3. As a result of Watts Bar exercise deficiencies, a remedial drill in public information was necessary. This drill was conducted on December 13, 1984, and the evaluation report was forwarded to the State on December 28, 1984.
4. The State response to the plan review dated July 30, 1984, identifies corrective actions for the plan.
5. A combined State response of January 15, 1985 identifies State actions on:

TEMA follow-up to FEMA/RAC Plan Review  
TEMA response to Watts Bar Exercise Report  
TEMA response to Watts Bar Public Information  
Remedial Drill  
Corrective Action Schedule

E. Evaluation Format

In accordance with a memorandum of understanding with the Nuclear Regulatory Commission cited in 44 CFR Part 350, FEMA has agreed to furnish assessments, findings and determinations as to whether State and local emergency plans and preparedness are adequate and capable of implementation.

Guidance for the development and review of emergency plans is contained in the document "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654-FEMA-REP-1, Rev. 1, November, 1980. Each planning standard will be addressed and a discussion will include the initial FEMA/RAC evaluation of State and county emergency plans, the exercise evaluation, the remedial drill and corrective actions. The finding will be presented in the following order:

1. Initial FEMA/RAC evaluation of State and county emergency plans and exercises.
2. State and county response to FEMA/RAC evaluations for both the plan review and exercise evaluations.
3. A determination of the current adequacy of each planning standard based on the State and county response.

A. Assignment of Responsibility (Organization Control)

Planning Standard

Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

1. Many cross-references were incorrect, making it difficult to find information. The FEMA/RAC review of the plan indicated a need for letters of agreement for responsibilities designated to other counties (host) or private organizations. The radiological health identification was not consistent throughout the plan for areas of responsibilities.

During the exercise there was no Radiological Defense Officer present in the Meigs County EOC, as specified in the plan.

2. The State response to the plan review provided plan changes which have corrected many cross-reference problems. Letters of agreements between TEMA and the four host counties, Hamilton, Roane, Cumberland and McMinn, were already included in the plan. A letter of understanding between the Military Department of Tennessee, TEMA and the American Red Cross has been added. Radiological health responsibilities have been corrected.

A Radiological Defense Officer has been designated for Meigs County.

3. Deficiencies noted previously have been corrected and appropriately addressed. The planning criteria for assignment of responsibilities and organization control have been adequately addressed.

B. Onsite Emergency Organization

Planning Standard

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

Technically, this planning standard applies to the licensee, Tennessee Valley Authority (TVA). However, there are, of course, off-site implications. During the plan development stages, the State of Tennessee has worked closely with TVA to establish coordination procedures for on and off-site response.

C. Emergency Response Support and Resources

Planning Standard

Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

1. From review of the plan it is not clear how the Radiological Health staff and Director of TEMA will coordinate requests for assistance. Letters of agreement are missing from the plan for hospitals, ambulances and private sector organizations. DOE facilities have been left off the listing of fixed laboratories.

2. The plan has been amended to have Radiological Health staff request Federal assistance through the Director of TEMA. The plan is now consistent in all areas that any requests for Federal assistance will be made by the Director of TEMA. DOE facilities have been added to the laboratory listings. Letters of agreement have been requested from hospitals located in the vicinity of the Watts Bar Plant. Fifteen hospitals have returned such letters, which will be maintained on file at TEMA. All ambulance services are provided by the County EMS, therefore letters of agreement are not required.

3. The previously noted deficiencies have been corrected and the planning standard for arranging and requesting assistance has been adequately addressed.

D. Emergency Classification System

Planning Standard

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial off-site response measures.

1. In the Tennessee Watts Bar Plan four classes of emergency are established: Notification of Unusual Event; Alert; Site Area Emergency; and General Emergency. These have been adopted by the State and are designed to assure rapid and effective radiological emergency response.

During the Watts Bar Exercise the emergency classification system was used and no deficiencies were noted.

2. No State response required.

3. The planning standard has been adequately addressed in the plan and demonstrated during the exercise activity.

## E. Notification Methods and Procedures

### Planning Standard

Procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

1. Other than verification of the original TVA - CECC notification to FEMA, no other verification procedures are addressed. There is a discrepancy between Annex A and Annex E about notification of DOE. Verifications of notifications are not discussed in county procedures.

During the exercise the public alerting system was activated at 10:30 a.m. with the sounding of the sirens, followed by public announcement over the radio. The public alerting system was neither implemented nor effectively simulated to advise of the first protective actions of sheltering during the Site Area Emergency in the exercise. More training is needed to better coordinate the activation of the public alerting system.

2. TEMA uses a secure closed circuit point-to-point system between TVA-CECC and the State EOC, and from the State EOC to the county's warning point or EOC. This means that no other party could enter this point-to-point closed circuit. This system was selected by TEMA to eliminate the need for cumbersome verification codes and procedures. Verification is not a requirement under this system as originating calls could only emanate from one point which is known to all in the network.

The plan has been clarified that all Federal assistance will be formally requested by TEMA. DOE - Region 2 - Oak Ridge will be requested at the Site Area Emergency classification by TEMA.

The activation deficiency for public alerting has been brought to the attention of key personnel. The correct method of activating the public alerting system is being stressed in the training sessions. Correct notification procedures will also be emphasized during training sessions that will be held for the 1985 Watts Bar Exercise.

3. The notification methods and procedures as discussed in the planning standard have been adequately addressed in the plan and demonstrated once during the exercise. This determination of adequacy has not been based on any of the Alert and Notification (A&N) Testing Standards. The expanded A&N testing guidance for certification will be implemented at a later time and will include the specific engineering aspects of the systems design. The purpose of this interim review is to determine if in fact the State and local governments have developed procedures to notify emergency response organizations as well as the public in a timely manner.

F. Emergency Communications

Planning Standard

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

1. During the FEMA/RAC review, notification of contiguous State/local governments within EPZs could not be identified.

The exercise evaluation for Meigs County identified a problem in the communication support. The operations room for the Meigs County EOC had three telephones, one for the PIO's, one for the "policy group", and one to be shared by the remainder of the staff.

2. Notification of contiguous States is addressed. The plan states that "the State Duty Officer will notify the Duty Officers of Georgia, North Carolina and other States as necessary by national NAWAS". Host county notification has been added to the Site Area and General Emergency classifications notification lists. Ingestion Pathway counties are not notified directly by TEMA but receive instructions from the Department of Agriculture via the EBS system.

TEMA agrees that the number of telephones in the Meigs County EOC needs to be increased. This deficiency was identified to TVA in the funding negotiations conducted in February 1985.

3. The planning standard for emergency communications is more than adequately addressed with the exception of the Meigs County EOC.

When improvements have been made to the communications capability in Meigs County this deficiency will be corrected. This corrective action is being reviewed by TEMA and TVA.

G. Public Education and Information

Planning Standard

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

1. There appears to be a contradiction on who is to respond to media queries and otherwise to provide public information. Details of the management and coordination of the rumor control function are not adequately explained.

At the Near Site Media Center (NSMC) during the exercise, at least one media briefing was incomplete, some technical jargon was used, and hard copy news releases from the SEOC were not available promptly for distribution to the media.

There were inaccuracies in the information provided to the public from the SEOC in Nashville. Incorrect risk counties were mentioned in hard copy news releases all during the first day of the accident scenario. State news releases were still saying there had been no unplanned radiation release two hours after the utility had said there had been a release.

Attempts to coordinate the SEOC-generated news releases among all involved principal locations, i.e., NSMC, county EOC's, utility, were not successful. In some cases, contents of news releases were not covered by the State spokesperson in the NSMC.

In the SEOC, no attempt was made to conduct briefings for media. In fact, the space designated for the media was never unlocked during the exercise.

A citizen hotline system was established in the SEOC and a toll-free number was publicized. However, no effort was observed to coordinate the nature of incoming calls with either the TEMA EOC staff, the TVA "Citizen Action Line" staff, or the public information staffs in the NSMC.

The exercise play was inadequate to effectively test the capability of the public information staffs to deal with the level of demand for information by the media and the public in an actual accident. There were virtually no injects introduced at any location with public information responsibilities, and there was little media interest, real or simulated.

In the Meigs County EOC an additional result of the limited number of phones was that the phone used by the PIO's had to be used for both the telecopier and for verbal communications. This led to conflicting demands for its use, and a decrease in the effectiveness of the work of the PIO's. An additional problem experienced by the PIO's was the lack of an operating telecopier initially. This was replaced by an operating telecopier and was actively used thereafter.

There were three serious problems identified as a result of the evaluation of the public information activities. They were all discussed at the close of the exercise and incorporated into the critique comments.

The problems were:

Coordination of news releases among all involved principal locations was not successful.

Inaccuracies in some information provided to the public from the State Emergency Operations Center.

No effort was observed to coordinate the nature of incoming calls on the citizens toll-free line with TEMA EOC staff, the TVA "Citizens Action Line" staff, or the Public Information staffs in the Near Site Media Center.

Based on the above comments, as well as previous exercise evaluations, FEMA/RAC suggested that the State give consideration to initiating a review and evaluation of the total Public Information Program to correct these recurring problems. When necessary modifications were made, it would be appropriate to conduct a remedial drill in order to test the revised system.

2. In accordance with the FEMA/RAC suggestion, TEMA re-evaluated Annex D to the Watts Bar Multi-Jurisdictional Plan and restructured the public information process.

On December 13, 1984, the Watts Bar Public Information Remedial Drill was conducted in Nashville, Tennessee.

This drill was effective and demonstrated that the Draft Plan, Annex D, Public Information and Education, does establish a functioning public information system. Although there are several areas which need to be refined, the Joint Information Center and public information system would provide the public with accurate and timely information through the media. No NUREG deficiencies were observed.

3. The new Public Information Plan has corrected previously noted deficiencies. The remedial drill demonstrated that the plan is effective and can provide accurate and timely information to the public. The public education and information planning standard has been adequately addressed.

## H. Emergency Facilities and Equipment

### Planning Standard

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

1. The county plans specify that dosimeters may be available through TEMA; we need assurance that if this is the case that these dosimeters will be located "in the vicinity of the nuclear facility". Off-site radiological monitoring equipment is only identified for McMinn County. More discussion is needed in this area.

The following deficiencies were observed in the Watts Bar Exercise.

Meigs County - The facility housing the Meigs County EOC is new. Certain changes would be helpful to improve working conditions in the operations room and would augment its capabilities to support extended operations, if needed. The problems discussed in the following three paragraphs combined to make the EOC less effective for directing and controlling the response function and, together, constitute a deficiency which can be corrected through improved utilization of the available space and equipment, and the use of improved message handling procedures.

The noise levels in the room were excessive, to the point that staff had difficulty hearing phones or other conversation. The location of the public information function, with PIO telecopier and typewriter at the head of the room, contributed to the noise, as did the use of two-way radios by EOC personnel. The possibility of moving the PIO's into an office in the EOC should be considered.

The status boards were not utilized. These status boards have great promise, as they are large enough to contain much information and to be seen from everywhere in the EOC. Their use would have assisted personnel in keeping up with the status of activities. Apparently, the boards were not ready for use at the time of the exercises, lacking a glass cover. An alternative status board could have been improvised given this circumstance.

Given the degree of simulation, the adequacy of the message handling system was not well tested. The individual designated to answer phone calls arriving to the EOC at the emergency number in the information brochure, had not been trained and did not play. (This telephone is located in the dispatcher's office.) Instead, incoming calls were simulated by controller message, were distributed through the EOC Director, and handed to the appropriate staff member. Responses were handwritten on plain paper, and often lacked the name of the responder or the time

of the response. These were to be returned to the controller, though a couple found their way to the evaluator. No logs were maintained by the EOC staff or by the dispatcher who would have received the phone calls. Messages initiated by EOC staff were frequently written on plain paper with no date or time noted. It is recommended that message forms and logs be utilized by staff for messages and that a log of incoming calls and responses be maintained.

Related suggestions that would increase comfort in the EOC and improve its effectiveness include improving the ventilation, securing phone cords and clarifying displays.

Given the amount of smoking, the inadequacy of ventilation led to physical discomfort. In a long-term operation, the problem would be increased. It is recommended that means to improve the ventilation be seriously considered.

Due to the layout of the EOC operations room and the location of the phones, several people tripped over the phone cords before they were taped to the floor. Care should be taken to secure the telephone cords from the outset.

While existing displays were excellent, legends would clarify some of the information displayed. For quick reference, it would be useful if information regarding population in the sectors were posted.

Rhea County - Internal message handling needs to be improved. The system could be improved if messages were numbered in sequence and logged.

2. 120 self-reading dosimeters and 120 TLD's have been delivered to each of the three risk counties. These figures have been included in each county's "Radiological Protection" section in Annex H. Appendix 18, Annex E, "Personnel Dosimetry of Emergency Response Personnel" has also been revised to reflect the distribution and location of these monitoring instruments.

At present the Watts Bar Plan does not include procedures for radiologically screening the general public that are not registered in a mass care shelter. The off-site radiological monitoring equipment is specified for McMinn County due to its role as a host county. However, under TEMA's Radiological Defense Maintenance Program, each county has been supplied with an appropriate number of radiological screening instruments. This information has been added to each county's Radiological Protection section in the plan.

In Meigs County steps are being taken to improve the functional capability of the Meigs EOC. All maps and status boards have been covered with plexi-glass and mounted to the walls. Dean Brakebill, the Meigs County Civil Defense Director, reported that an internal message handling system had been developed prior to the exercise. Through simple oversight, the use of the forms was overlooked. The Director is aware of the importance of the message handling system and will have the system in operation during the next Watts Bar exercise.

During the course of TEMA's 1985 planning program, the layout of the Meigs EOC will be reviewed and necessary changes made to lessen noise levels and increase effectiveness.

Copies of the State EOC incoming and outgoing message forms and logs and instructions for their use were mailed to the Rhea County Emergency Management Director. The Director is in the process of perfecting his message handling system and has given April as his deadline for completion of the system.

3. All of the noted deficiencies are being corrected by State and local officials. Plan changes have been submitted and necessary corrections have been made. The corrective action schedule indicated that all deficiencies will be completed and tested in the up-coming Watts Bar Exercise. Information available indicates that this planning standard is being adequately addressed.

**I. Accident Assessment****Planning Standard**

Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

1. The FEMA/RAC plan review indicated no deficiencies in the area of accident assessment. During the exercise the State adequately demonstrated the capability to implement the plan. Although several areas for improvement were noted, these can be corrected largely through training.
2. No State response required.
3. This planning standard has been adequately addressed.

## J. Protective Response

### Planning Standard

A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

1. Means for notification of transient population is not addressed. Identification of page H-5 for fixed sirens is not adequate.

Are there institutional facilities or mobility impaired persons in the 10-mile EPZ? A listing could not be located in the plan. Has this been addressed? If roster is not in the plan, some discussion should be included to explain where these materials are kept. If there are individuals in the 10-mile EPZ, the provisions for KI distribution could not be located in Annex E. KI distribution for emergency workers as discussed on page E-36 is very general. More details about the procedures developed by State Radiological Health Office is needed.

Means for relocation not clearly addressed. Most people encouraged to use their own transportation. Bus evacuation routes are mentioned but not identified as to which special care groups are serviced, i.e., institutions, nursing homes, and hospitals.

Cross references provided are not appropriate. Information provided in the plan is scattered and located in different sections. For ease of use, all cross references should be provided which are pertinent. For example, McMinn County, page H-45.

In the Rhea County Plan the monitoring of evacuees is a responsibility designated to the director. This is not adequate information to establish how this task will be effectively accomplished. No host county procedures could be identified. Except for McMinn County, there is no consistent description of the means for monitoring evacuees in host areas. The cross references for monitoring were not adequate. Most of the cross references identified were for reception centers and registration.

During the exercise activities in the Meigs County EOC two deficiencies were noted. It is recommended that the Multi-Jurisdictional Plan and the Meigs County Implementing Procedures be reviewed for consistency and certain changes be considered. For instance, procedures for recommending school evacuation and the location to which students are to be evacuated (whether to their homes or to shelters) are unclear. Also, in this regard, four additional school buses are necessary to evacuate all school children as planned.

Another problem relating to the plan was that the number of traffic assistance teams available to clear road impediments was not clear. The Multi-Jurisdictional Plan notes that there are two, while the Meigs County Implementing Procedures specifies four. The CD Director stated that there were three. The number of teams and procedures for their utilization need to be understood by all parties and departments which will be coordinating their use.

2. Page B-4 contains the information regarding notification of transient personnel and tourists and has been added to the cross reference. This page number had been inadvertently omitted from the cross reference.

Only one institutional facility, the Meigs County Jail, exists within the 10-mile EPZ. This fact has been written in Annex H, Evacuation, on page H-9. The Meigs County Sheriff is responsible for arranging relocation of any prisoners during an emergency. This is stated on page EE-4 of the Meigs County Sheriff's Implementing Procedures. Fifty courses of KI have been allocated for the Meigs County Jail. KI distribution has been elaborated on page E-36. KI distribution to local emergency workers has also been included on pages H-32, H-56 and H-85.

The issue of special care groups is addressed. The Plan's evacuation program is based on the assumption that 50% of the affected residents will prefer to evacuate themselves over the most convenient designated evacuation route. Residents without personal transportation are encouraged to ride with a neighbor. However, if this is not possible, those residents will be instructed to proceed to an assembly area, or to the nearest school bus route for pick up. Furthermore, the yearly public information brochure stresses that if special assistance is required during an evacuation, the local civil defense office should be notified in order to make special arrangements in advance. The phone numbers of each local defense office are published in the brochure.

Appropriate cross references for monitoring have been included. These include: the statement on page H-12 that, "All potential shelters will have a radiological monitoring instrument on hand at all times for use in screening evacuees arriving at that location"; and, the McMinn County Health Department Implementing Procedures which details the monitoring duties of that agency.

The State and supporting County Procedures are under review and changes will be made to ensure consistency. The State and the Counties will coordinate the decision to evacuate. Based on emergency conditions, the students will either be evacuated to prearranged schools or home. Funds for the purchase of four additional school buses have been approved for Meigs County. The county is currently in the process of purchasing the buses.

The Plan and Implementing Procedures have been changed to reflect that there will be "at least three" Traffic Assistance Teams available.

3. The previously noted deficiencies have been corrected. Therefore, it has been determined that the capability is adequate for protective response.

**K. Radiological Exposure Control****Planning Standard:**

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Actions Guides.

1. On pages E-44 and E-45, the plan states emergency workers will read dosimeters daily. This is not felt to be adequate. The RCO should order more frequent readings. It is unclear if the means for radiological decontamination of emergency personnel are in place. Are operating procedures available?

During the Watts Bar exercise demonstrations in Rhea County it was noted that training is needed by most personnel in the use of dosimeters.

The Rhea County Sheriff and emergency response personnel had proper dosimetry. The Deputy Sheriff's dosimetry was in the glove compartment when he should have been wearing it. The county emergency people were wearing dosimeters. Personnel had not recorded the initial reading on their dosimeter. Therefore, any subsequent readings could have been misleading.

2. The plan has been changed to include:

"Self-reading dosimeter readings will be recorded at a minimum on a daily basis. Film and thermoluminescent dosimeters will be read on a monthly basis. All dosimeters will be read as directed by the RCO and the results recorded immediately on the "Temporary Personal Record of Radiation Dosage Received" card issued with the TLD, when the reading indicates an exposure of one (1) REM or higher, or when the RCO orders immediate readings taken."

The procedures for radiological decontamination for emergency workers as well as the public are under review. A task group has been formed to assist in the development of new procedures. The group includes representatives from TEMA and Division of Radiological Health. Representatives from FEMA/RAC have met with the task group to provide technical assistance. Progress has been made in correcting this deficiency.

The Rhea County Emergency Management Director has identified the personnel that did not participate in the 1984 training sessions and is making sure that they are aware of their responsibilities. They will also be included in the 1985 Watts Bar Training Session.

3. Noted deficiencies have been acknowledged by the State of Tennessee and major revisions are underway. Although many weaknesses have been pointed out; the review of current progress establishes a basic capability to meet the planning standards. Therefore, it has been determined that the capability is adequate for radiological exposure control.

L. Medical and Public Health Support

Planning Standard

Arrangements are made for medical services for contaminated injured individuals.

1. The listing of hospitals on pages F-3 through F-6 does not adequately address the NUREG element. The facilities are identified by ability to treat contaminated persons. Again, letters of agreement for each hospital are necessary to establish the service.

Cross references listed do not provide specific details as to how victims will be transported. Appropriate letters of agreement are necessary and could provide some clarification and supplement the plan.

2. Hospitals located within the vicinity of the Watts Bar and Sequoyah Nuclear Power Plants were requested to submit letters of agreement to TEMA. Fifteen hospitals have returned the letters, which will be maintained on file at TEMA.

Ambulance services within all three risk counties are county funded and therefore do not require letters of agreements.

3. The planning standards for medical and public health support have been adequately addressed.

M. Recovery and Reentry Planning and Postaccident Operations

Planning Standard

General plans for recovery and reentry are developed.

1. On pages L-2 and E-44 the plan states that population exposure will be determined but does not identify the method.
2. Additional information will be added to the plan which will specifically identify the method of estimating population exposure.
3. This planning standard has been adequately addressed.

N. Exercises and Drills

Planning Standard

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

1. The plan establishes that drills, tests and exercises will be conducted in accordance with FEMA guidelines. Annex N discusses scheduling, scenario development, evaluation and critiques.

The Watts Bar exercise was beneficial as a training opportunity. The scenario was adequate to test the integrated capability and major portions of the emergency response plan.

2. No State response required.

3. The planning standards for exercises and drills have been adequately addressed.

0. Radiological Emergency Response Training

Planning Standard

Radiological emergency response training is provided to those who may be called on to assist in an emergency.

1. The State has been asked to clarify mutual aid districts training.

In general, for all training programs a mechanism for qualifying the personnel is not identified in the plan.

Personnel responsible for transmission of emergency information and instructions have been left out.

During the exercise the capability to evaluate field samples was not fully demonstrated by the State. Additional training was also needed by the Meigs County Civil Defense Director. In Rhea County most personnel need additional training on shelter locations, use of dosimeters and KI. Roane County staff need training in radiological monitoring.

2. The intent in Tennessee under the Multi-Jurisdictional Radiological Response Plan is for the Risk/Host counties to meet the needs of a radiological emergency with county resources. When the county requires additional resources, these requirements are identified to the State. The State then provides additional support from State assets. Mutual aid resources from other counties of the Risk/Host counties does not enter into Tennessee's Multi-Jurisdictional approach. Mutual aid between Risk/Host counties does exist. However, if a mutual aid response were required by one of the risk counties, it would be to meet a civil emergency other than a radiological emergency.

TEMA is greatly enhancing its overall training program for 1985, with much of the emphasis being directed toward the Watts Bar and Sequoyah Emergency Response Plans. An Emergency Management Training Specialist is now on staff with TEMA and is working full time with TEMA's Radiological Emergency Preparedness (REP) Program. The training specialist will coordinate all training sessions, maintain a documentation file, and make certain that all NUREG training requirements are being met.

Another position in the area of training that is being developed for FY 86 is that of an Exercise Training Officer. This person will concentrate on coordinating and conducting topic specific training exercises on the local level. (This position will involve other emergency management programs in addition to the Watts Bar and Sequoyah Plans.)

Two TEMA District Coordinators will also be utilized to a higher degree in local training efforts and will have more of their work schedule allotted to working directly with the risk and host counties.

The Division of Radiological Health will continue to train their personnel with proper sample techniques. Emphasis in this area was included in the Health Physics drill conducted January 24-25, 1985.

The Meigs County Civil Defense Director attended the "Managing Emergency Operations" course that was conducted February 11-15, 1985. The Director will be participating in other courses as available.

Training will be provided to the personnel in Rhea and Roane Counties and will focus on the areas of noted weaknesses.

3. The planning standard for radiological response training has been adequately addressed.

P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

Planning Standard

Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

1. Cross references were incomplete and inadequate. The effective use of a plan is dependent on the cross reference. The cross references must be revised to identify the NUREG elements as well as all appropriate pages in the plan which relate to an area.

No up-dating information on personnel notification lists could be found.

2. The Plan cross references have been revised to include all corrections.

For notification lists the plan states on page B-4, "All agencies listed in Appendix 5, will confirm the primary contact for their agencies on a quarterly basis. Changes will be submitted immediately upon the change of the designated contact individual." Added to the cross reference are the pages that state the agencies, position title, and phone numbers that comprise the personnel notification list.

3. The planning standard for development, periodic review and distribution of emergency plans has been adequately addressed.