

NUCLEAR REGULATORY COMMISSION

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CRISIS MANAGEMENT PLAN

FOR

NUCLEAR STATIONS

McLaughlin
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DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
FOR
NUCLEAR STATIONS

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i. Introduction

A. Purpose

The Crisis Management Plan (CMP) has been developed and implemented to provide assistance to the Company's nuclear stations in assuring, maintaining or recovering acceptable levels of safety to the general public and Duke Power employees, following an emergency condition.

The CMP will augment and strengthen station emergency plans in effect at the Company's nuclear stations. The CMP is designed to assist in the mitigation, termination, and recovery from major accidents should they occur at a Company nuclear station.

The CMP will be implemented upon notification by the station manager or his designee that a Site Emergency or General Emergency exists. Activation of the CMP at the "Alert" level will be at the discretion of the Emergency Coordinator and upon discussion with the Recovery Manager. Implementation of the plan will be carried on 24 hr/day as long as needed.

The CMP activity, once implemented, will be escalated, de-escalated or terminated only by the Recovery Manager.

B. Scope

This Crisis Management Plan for Duke Power Company is established for the protection of life and property in all emergency and accident situations at the Company's nuclear stations. The plan particularly addresses response to situations where the health and safety of station personnel and the general public may be involved.

Notification by the Station Manager or his designee that an emergency has developed will be the initiating event for the corporate response described in this plan. The station Emergency Plan and procedures establish the criteria for this initial notification.

Initial notification of and response by local, State and Federal agencies is addressed in the station's Emergency Plan and procedures.

The Crisis Management Plan is a coordinated effort involving: station personnel; station emergency plans; station facilities and equipment; the emergency resources of Duke Power Company corporate organization; emergency services of various local, State, and Federal agencies having appropriate jurisdiction or concern for public health and safety, particularly radiological-emergency and disaster plans of local county civil preparedness agencies; the South Carolina Department of Health and Environmental Control and Emergency Preparedness Division, and the North Carolina Department of Crime Control and Public Safety, which are the responsible state agencies in their respective state.

C. Planning Basis

This document is formatted according to NUREG-0654, FEMA-REP-1, Rev. 1.

The planning bases for the Crisis Management Plan are 10 CFR Part 50 requirements effective November 3, 1980 and NUREG-0654, Rev. 1.

A. Assignment of Responsibility (Organizational Control)

A.1.a. Overall EPZ Response Organization

In an emergency situation at one of the Company's nuclear stations, various Local, State, and Federal Organizations become a part of the overall response effort. The Federal agencies listed may be called upon at any location, however, the State and Local agencies respond according to jurisdictional boundaries.

Federal

NRC (Nuclear Regulatory Commission)
FEMA (Federal Emergency Management Agency)
DOE (Department of Energy)

NOTE: NRC, FEMA, and DOE will coordinate response of other Federal Agencies.

State of North Carolina

N.C. Department of Crime Control and Public Safety (Division of
Emergency Management)*
N.C. Department of Human Resources (Radiation Protection Section)*

NOTE: These two departments coordinate State activities in North Carolina.

State of South Carolina

S.C. Emergency Preparedness Division*
S.C. Dept. of Health and Environmental Control*

NOTE: These two agencies are the lead agencies in S.C. and coordinate activities of other departments.

State of Georgia

The Georgia Department of Natural Resources is the lead agency in that state for response to emergencies at Oconee.

Local Government

Each station is supported by local agencies as designated in the station emergency plan Section A.

Vendors/Contractors

INPO (Institute of Nuclear Power Operations), ANI (American Nuclear Insurer's), B&W (Babcock and Wilcox), Westinghouse, Southern Bell, Southeastern Electric Exchange, EEI (Edison Electric Institute), and AIF (Atomic Industrial Forum) may all be called upon for support as appropriate.

A.1.b Crisis Management Organization-Concept of Operations; Relationship to the Total Effort

The Crisis Management Organization is, as stated in Part i.A. of this plan, designed to "augment and strengthen station emergency plans in effect at the Company's Nuclear Stations. The CMP", (and organization), "is designed to assist in the mitigation, termination, and recovery from major accidents should they occur at a Company Nuclear Station. The CMP will be implemented upon notification by the station manager or his designee that a Site Area Emergency or General Emergency exists and will be activated at the Alert level at the discretion of the Emergency Coordinator and based upon discussions with the Recovery Manager. Implementation will be carried on 24 hours/day as long as needed.

The CMP activity, once implemented, will be terminated, escalated, or deescalated only by the Recovery Manager."

Once implemented and fully operational, the Crisis Management Organization will periodically update outside agencies, the news media, and corporate management on plant status and any protective action recommendations, will work through the Recovery Manager and with their station counterparts in accident assessment, and act as a buffer to the station in handling external requests for information.

The relationship of the Crisis Management Organization to others involved in emergency response is shown in Figures B-1, B-2, and B-3. Figure B-4 describes the organizational structure of the Crisis Management Organization in block diagram form.

There are four basic functions that must be carried out at all times in an emergency by the Company. These are:

- Plant Operations
- Accident Assessment
- Emergency Management
- Protective Action Recommendations (PARs)

Prior to activation of the CMC, the Emergency Coordinator in the Control Room or TSC is responsible for the conduct of these areas. After activation of the CMC, the station is still responsible for the minute to minute Plant Operations and for the lead role in

Accident Assessment. The CMC though relieves the station of the burden of overall Emergency Management and in making PARs to offsite agencies. Further the CMC supports the station in its function of Accident Assessment and Plant Operations as directed by the Recovery Manager and Emergency Coordinator.

A.1.c. Block Diagram of Organization Interrelationships

See Figures B-1, B-2, B-3, and B-4. Section B, "Onsite Emergency Organization" describes the use of these figures.

A.1.d. Key Decisionmaking - Who Is "In Charge"?

During the course of an emergency situation at any of Duke Power Company's nuclear facilities several persons have the potential to be "in charge" or the "key decisionmakers". Prior to TSC activation the Shift Supervisor at the unit is in charge. Prior to CMC Activation, the Station Emergency Coordinator is the key decision maker. After CMC activation/operation, the Recovery Manager is responsible for management of the overall Company effort.

A.1.e. 24-Hour Emergency Response

The Crisis Management Organization is capable of responding to an emergency 24 hours per day, 7 days per week. Section E.2 describes the notification capabilities within the organization.

A.2 (This NUREG-0654 Section requires State/county response only).

A.3 Agreement Letters for Emergency Response Support

Appendix 5 is a display of agreement letters with the following organizations:

North Carolina

South Carolina

REACTS

Civil Air Patrol - North Carolina Wing

DOE - Savannah River

INPO - Fixed Nuclear Facility Voluntary Assistance Agreement

Other agreements are found in the Station Emergency Plan Appendices.

These Letters of Agreement shall be updated as necessary and at least every three (3) years to insure adequate awareness on the part of all concerned of the existence and commitment to provide agreed services or assistance.

A.4 Individual Responsible for Continuity of Resources

The Recovery Manager is the individual responsible for assuring continuity of resources within the Crisis Management Organization, in an emergency situation.

B. Onsite Emergency Organization

Planning Standard B in NUREG-0654 addresses the need for onsite and CMC Staff capable of response in a timely manner, able to be augmented as needed, and with certain specific technical and managerial expertise.

B.1/B.2/B.3 Plant Staff Under Emergency Conditions
(See Nuclear Station Emergency Plan Section B)

B.4 Protective Action Recommendations - Station Emergency Coordinator/
Recovery Manager

The Station Emergency Coordinator and Recovery Manager are the individuals responsible for making protective action recommendations to the state and county agencies. When the Crisis Management Organization is operational, the Recovery Manager has sole responsibility. Prior to operation of the CMO, the Emergency Coordinator is responsible for making protective action recommendations. This responsibility may not be delegated to other members of the CMC Staff.

B.5 Minimum Staffing Requirements For Emergencies

Table B-1 of NUREG-0654 addresses only one member of the CMC staff in its staffing and response time requirements. The Senior Manager of the EOF is listed as necessary for response in 60 minutes from declaration of the emergency. As specified in the station emergency plans, the Emergency Coordinator performs the role and function of the Recovery Manager until the CMC is activated. Thus, the ability to manage the overall response effort and make PARs is not compromised.

B.6 Onsite Functional Area Interfaces During An Emergency -
Description and Block Diagram

Figures B-1, and B-2, B-3 describe and specify the interfaces between and among the functional areas of emergency activity, licensee headquarters support, local services support, and state/local government response organizations. Figure B-1 is for use prior to activation of the CMC or state headquarters. Figure B-2 is for use prior to state headquarters activation but after the CMC is established. Figure B-3 is for use after activation of the CMC and state headquarters.

B.7 CORPORATE SUPPORT OF ONSITE EMERGENCY ORGANIZATION

The organization identified in this section is capable of continuous (24 hours) operations for a protracted period. The individual responsible for assuring continuity of resources is the Recovery Manager. Each group's operational plan is specified in the Crisis Management Plan Implementing Plans document with the section designation as shown.

B.7.1 Recovery Manager and Staff

The Recovery Manager and staff are shown on Figure B-4. If the primary Recovery Manager or one of his named alternates is not available in the initial phases of an emergency, the group managers will assemble their teams and support the station in its technical needs until the Recovery Manager arrives. The CMC will not become fully activated until the Recovery Manager or a designated alternate (see Figure B-12) is present.

The responsibilities of each position and the designated individual to fill each position are as follows:

RECOVERY MANAGER

This position has the overall authority for the management and recovery of nuclear station(s) emergency situations requiring activation of this plan, and when the Crisis Management organization is functioning, the responsibility to make recommendations to authorities responsible for offsite emergency measures.

In direct support of the Recovery Manager are the Emergency Response Coordinator and Administrative Assistant(s). The manning, role, and method for notification of these individuals, the Recovery Manager and alternates, and the Senior Company Official serving as a contact for the Governor and others, is described in Implementing Plan 5.3.1. The role of the Function Managers are briefly described below and more fully detailed within the plan of that group.

The Nuclear Production Department Duty Engineer supports the Recovery Manager and Crisis Management Organization in several ways. During an Unusual Event condition the Duty Engineer is contacted by the Shift Supervisor. The information transmitted during this notification (see Figure E-4) is then passed on to the Recovery Manager, his alternates, or Senior Level Duke Management and Corporate Communications. Should Corporate Communications need a "translation" of technical terms, the Duty Engineer will provide this assistance or will contact someone within the Crisis Management Organization or Station Staff who can assist. The Duty Engineer position is manned 24 hours per day seven days per week, with a paging system in use during the off normal hours.

In an Alert, Site Area Emergency, or General Emergency condition, the Duty Engineer is contacted with information as shown in Figure E-4 by the Emergency Coordinator or designee. If the condition is an Alert not requiring activation of the Crisis Management Team (CMT), the Duty Engineer makes followup calls as in the Unusual Event category. If activation is required, the Duty Engineer contacts the Recovery Manager who will give specific instructions (if appropriate) for activation of the CMT. The Duty Engineer will then use Figure E-2 as the message format in contacting one individual in each group displayed in Figure B-12. Each group is then responsible for notification of their staff and response to the appropriate facility.

CRISIS NEWS DIRECTOR

This position is responsible for collecting, verifying, and disseminating accurate and timely information to the public through the news media and by coordinating the release of that information with local, State, and Federal public information officials.

See Section B.7.2 for further definition of this position.

ADMINISTRATION AND LOGISTICS MANAGER

This position is responsible for providing administrative, logistic, communications, and related personnel support for the recovery and emergency operation.

See Section B.7.3 for further definition of this position.

ADVISORY SUPPORT

This position shall provide the input of senior representatives of NRC, NSSS supplier and any other appropriate knowledgeable groups. They shall support the Recovery Manager and his staff in an advisory function.

SCHEDULING/PLANNING MANAGER

This position has the responsibility to formulate, coordinate, and expedite plans and schedules for the Recovery Manager as well as to maintain up-to-date data displays in the Recovery Manager's office. See section B.7.4 for further definition of this position.

DESIGN AND CONSTRUCTION SUPPORT MANAGER

This position coordinates the activities of Design Engineering, and construction forces on proposed station modifications, or other design and construction support required for the recovery and emergency operation.

See Section B.7.5 for further definition of this position.

NUCLEAR TECHNICAL SERVICES MANAGER

This position provides support to the Recovery Manager in matters relating to onsite Health Physics, Radwaste and Chemistry as well as to manage the Off-site Radiological Coordinator function.

See Section B.7.6 for further definition of this position.

NUCLEAR ENGINEERING SERVICES MANAGER

This position provides support to the Recovery Manager in matters relating to licensing, core analysis, and system analysis support including procedure development.

See Section B.7.7 for further definition of this position.

OFF-SITE RADIOLOGICAL COORDINATOR

This position is responsible through the Radiological Support Manager for coordination of radiological and environmental assessments. Interface with State and County Agencies is provided by this position. In addition, this position makes recommendations to the Recovery Manager concerning the public protection from radiological hazards.

See Section B.7.6 for further definition of this position.

CORPORATE HEADQUARTERS

A senior company officer will be designated to be in contact with the Governor or his designee. This contact will be made as an initial "courtesy call" in which the company officer makes himself/herself available for followup calls on an as-needed, informal basis. The Governor will be kept up to date on the situation by his/her staff.

Further, this senior company officer will serve as the contact for other senior level management and the Duke Power Company Board of Directors. Corporate policy input will be provided from this individual to the Recovery Manager.

Plant status and other appropriate information will be provided to the senior company officer by the scheduling coordinator of the the Scheduling/Planning group.

Initial notification of the primary or alternate company officer designated for this position will be from the Recovery Manager. Followup information will be provided as described above.

The role and function of the Senior company officer is in group plan 5.3.1 "Recovery Manager and Immediate staff."

8.7.2 Crisis News Director and Staff

The Crisis News Director and staff are shown on Figure B-5. Implementing Plan 5.3.2 describes the workings of this group in more detail. The responsibilities of each position and the designated individual(s) to fill each position are as follows:

1. CRISIS NEWS DIRECTOR

This position is responsible for collecting, verifying and disseminating accurate and timely information to the public through the news media and by coordinating the release of that information with local, State and Federal public information officials.

2. PUBLIC INFORMATION SPOKESMAN

This individual functions as the official spokesman to the media 2-3 times per day. He gains first-hand information in the Recovery Manager's meetings and provides the public perspective to the Recovery Manager. He provides information to the Technical Briefer as necessary.

3. INTERNAL COMMUNICATION COORDINATOR

Typo
This position summarizes and transmits crisis information to the corporate headquarters 2-3 times per day where the information is then transmitted to all company employees. This individual also assists the media registration coordinator as necessary ~~and assists the media registration coordinator as necessary.~~

4. INDUSTRY/AGENCY COORDINATOR

This position assists representatives from utility industry, trade associations, local, State and Federal public information representatives with crisis information and provides the Crisis News Director with feedback on what they report.

5. GOVERNMENTS COORDINATOR

This position provides a personal contact with local elected officials to keep them informed of the crisis. He also notifies the State Government Liaison and Federal Government Liaison of the crisis and keeps them informed of progress being made.

6. TECHNICAL BRIEFER

This position interprets technical information for media representatives, local government officials and Crisis News Center personnel in periodic briefings.

7. MEDIA REGISTRATION COORDINATOR

This position registers and provides identification for news media personnel upon arrival and assists them with housing, meals and transportation.

8. AUDIO/VISUAL TECHNICIAN

This position maintains all news center audio and visual equipment, records and files by date/time all news briefings during the crisis and assists media personnel with their equipment if time permits.

9. NOTIFICATION COORDINATOR

This position makes the initial telephone notification of the Crisis News Director's staff and assists the Director as necessary.

10. STATE GOVERNMENT LIAISON

This position contacts the state legislative delegation from the counties near the station and informs them of the nature of the crisis and the actions being taken to resolve it. He makes periodic calls to them even if the situation remains unchanged.

11. FEDERAL GOVERNMENT LIAISON

This position contacts elected federal officials representing the affected area and informs them of the nature of the crisis and the actions being taken to resolve it. He makes periodic calls to them even if the situation remains unchanged.

12. MONITOR

This function takes a position in the Recovery Manager's Office and keeps abreast of the situation. When the Crisis News Director and/or Public Spokesman return they are updated by the monitor.

13. ASSISTANT CRISIS NEWS DIRECTOR (ACND)

The ACND supports the CND, coordinates activities of the State Command Post Liaison (SCPL), and develops responses to rumors generated/located at the State/County center.

14. STATE COMMAND POST LIAISON (SCPL)

The SCPL serves as a conduit between the News Center and the State, making sure the State has all the necessary information for its own news releases. In addition the SCPL keeps the News Center informed of any public announcements or news conferences scheduled by the State. At this time the SCPL is used only in N.C., as a joint media center is used in S.C.

15. GENERAL OFFICE STAFF

The Corporate Communications Department will function at the G.O. throughout the emergency. It will serve as the interim news center until the Crisis News Center (CNC) is established. Once the CNC is established, the G.O. Staff will perform routine daily functions and will update senior management. If the CNC must be relocated, the G.O. Staff will distribute information to the media during that time.

B.7.3 Administration and Logistics Manager and Staff

The Administration and Logistics Manager and his staff are shown on Figure B-6. Implementing Plan 5.3.3 describes the workings of this group in more detail. The responsibilities of each position and the designated individuals to fill each position are as follows:

1. ADMINISTRATION AND LOGISTICS MANAGER

This position is responsible for providing administrative, logistic, communications, and related personnel support for the recovery operation. It is responsible for a processing center where registration of all arriving recovery personnel is conducted. TLD registration and general personnel training is rendered at this center also. The center also will maintain personnel lists giving names and locations of all recovery personnel.

2. ADMINISTRATION DIRECTOR

This position provides the general office support functions including typing, reproduction, office supplies, and office furniture. Special items like photography services and facility/area maps are also provided by this organization.

3. ACCOMMODATIONS DIRECTOR

This position handles the arrangements for motel, airline, and trailer arrangements. It staffs the processing center and performs the functions of registration and general employee training.

4. COMMUNICATIONS DIRECTOR

This position provides the telephone requirements of the overall recovery organization and provides special radio requirements such as mobile units and radio pages. This group also maintains the recovery organization.

5. PURCHASING DIRECTOR

This position functions as the recovery organization purchasing agent with responsibility for contract negotiation/administration and material control.

6. FINANCE DIRECTOR

This position administers the petty cash fund and expense accounts and provides for handling of payroll matters.

7. COMMISSARY DIRECTOR

This position provides for food deliveries, operation of the field kitchen and for trash disposal.

8. HUMAN RESOURCES DIRECTOR

This position provides for the manpower needs of the recovery organization both in the technical and craft disciplines. It insures that clerical support is available and provides labor relations assistance as required.

9. TRANSPORTATION DIRECTOR

This function staffs the motor pool facility and provides vehicles for the recovery organization. It maintains shuttle services between surrounding motels and airports. It supplies special transportation (helicopters, buses) as required.

10. INSURANCE DIRECTOR

This function will be the liason between Duke Power Company and the insurance companies, will assist insurance companies in data gathering, and will assist insurance companies in setting up and operating a claims office for the public.

11. SECURITY DIRECTOR

The Security Director coordinates law enforcement activities at the site, coordinates contact with the North Carolina and South Carolina Emergency Operations Facilities, and establishes/maintains security checkpoints.

B.7.4 Scheduling/Planning Manager and Staff

The Scheduling/Planning Manager and staff are shown on Figure B-7. Implementing Procedure 5.3.4 describes the workings of this group in more detail. The responsibilities of each position and the designated individuals to fill each position are as follows:

1. SCHEDULING/PLANNING MANAGER

This position has the responsibility to formulate, coordinate, and expedite plans and schedules for the Recovery Manager.

2. PLANNING COORDINATOR

This position serves as the focus for information from all recovery forces and formulates this information into a logical recovery plan. This position also maintains records and prepares progress reports about the crisis and recovery operations. This position prepares the agenda for and keeps minutes of progress review meetings held periodically by the Recovery Manager. In the emergency phase of the incident, this position is responsible for notifying and updating INPO and NRC on plant status and to maintain up-to-date plant status information in the Recovery Manager's office.

3. SCHEDULING COORDINATOR

This position works with the planning coordination function to reduce recovery activities planning into a clear, straightforward schedule for presentation to the Recovery Manager. Schedules will be presented using graphic techniques in such a manner that they can be revised as required. This position is responsible for providing periodic plant status updates to senior level management and is the Recovery Manager's "right hand" in summarizing the data displays and present conditions of the plant to a reasonable amount of information. This position provides updates to the Recovery Manager every 30 minutes or as needed.

4. PERFORMANCE MONITOR

This position monitors the execution of the recovery schedule and provides feedback information to the planning/scheduling functions.

During the emergency phase of an incident this position is responsible for maintaining up-to-date plant status information in the Recovery Manager's office and in WC-1680. This work is done in conjunction with the Planning Coordinator.

5. OPERATIONS SUPPORT COORDINATOR

This position coordinates the effective utilization of support personnel assigned to the station operations group and de elops out-of-normal operating and emergency procedures for station personnel.

B.7.5 Design and Construction Support Manager and Staff

The Design and Construction Support Manager and staff are shown on Figure B-8. Implementing Procedure 5.3.5 describes the workings of this group in more detail. The responsibilities of each position and the designated individuals to fill each position are as follows:

1. DESIGN AND CONSTRUCTION SUPPORT MANAGER

This position coordinates the activities of Design Engineering, and Construction forces on proposed station modification, or other design and construction support required for the recovery operation.

2. STAFF ADMINISTRATOR

This position assists the Design and Construction Support Manager in all areas of his responsibility and performs other tasks that the Manager may direct to meet requirements of the recovery operation.

3. ENGINEERING DIRECTOR

This position is responsible for directing and assisting the engineering staff and performing engineering tasks and design tasks that the Design and Construction Support Manager may direct to meet the requirements of the recovery operation.

4. DIRECTOR OF CONSTRUCTION

This position is responsible for directing and administratively controlling the Construction forces, including any subcontractors, and performing such construction tasks that the Design and Construction Support Manager may direct to meet the requirements of the recovery operation.

5. DIRECTOR OF QUALITY CONTROL

This position is responsible for directing and administratively controlling the Quality Control staff and executing the quality control program for such construction tasks as the Design and Construction Support Manager may direct to meet the requirements of recovery operation.

6. MANAGER - MECHANICAL/NUCLEAR DIVISION

This position provides the mechanical and nuclear design response to meet the requirements of the recovery operation.

7. MANAGER - ELECTRICAL DIVISION

This position provides the electrical design response to meet the requirements of the recovery operation.

8. MANAGER - CIVIL/ENVIRONMENTAL DIVISION

This position provides the civil/environmental design response to meet the requirements of the recovery operation.

9. MANAGER - GENERAL SERVICES DIVISION

This position provides document retrieval assistance for the recovery operation.

10. NSSS SUPPLIER

This position is responsible for directing and administratively controlling the NSSS Supplier's Staff and for performing such engineering and design tasks that the Design and Construction Support Manager may direct to meet the requirements of the recovery operation.

B.7.6 Radiological Support Manager and Staff

The Radiological Support Manager and staff are shown on Figure B-9. Implementing Procedure 5.3.6 describes the workings of this group in more detail. The responsibilities of each position and the designated individuals to fill each position are as follows:

1. RADIOLOGICAL SUPPORT MANAGER

This position provides support to the Recovery Manager in matters relating to onsite health physics, radwaste, chemistry, and as to offsite radiological conditions.

2. RESOURCE COORDINATOR

This position assists the Radiological Support Manager in all areas of his responsibility and assures that HP, chemistry and radwaste activities are adequately staffed and equipped.

3. HEALTH PHYSICS DIRECTOR

This position directs the technical support and assistance to the station staff concerning radiation protection aspects of recovery operations.

4. RADWASTE DIRECTOR

This position develops plans and procedures to quantify off-site effluent releases and to minimize off-site releases through liquid, gaseous, and solid waste processing. It also defines design requirements for modifications and additional equipment necessary to facilitate waste processing in support of the recovery operation.

5. CHEMISTRY DIRECTOR

This position develops plans and procedures to monitor core damage, to determine the fission product and hydrogen levels in the containment and to determine the reactor coolant chemical condition (dissolved gases, boron, pH).

6. OFF-SITE RADIOLOGICAL COORDINATOR *TYPE*

This position is responsible for environmental liaison with local, State and Federal agencies, and is responsible for off-site monitoring and dose projection. In addition, this position makes recommendations to the Recovery Manager concerning the public protection from radiological hazards.

7. FIELD MONITORING COORDINATOR

This position is responsible for directing and coordinating all environmental monitoring/sampling performed by the company. He assigns areas to be monitored as directed by the Off-Site Radiological Coordinator, compiles and forwards data to the Dose Assessment Coordinator, provides

samples to the Lab Analysis Coordinator, assures the physical resources and equipment needed for monitoring, and manages the five technician crews. The crews will consist of two technicians each. A sixth technician will be assigned to the field monitoring helicopter.

8. LAB ANALYSIS COORDINATOR

This position is responsible for the operation of the (mobile or fixed) environmental analytical laboratory which processes samples collected by the field crews. He compiles and forwards data to the Offsite Radiological Coordinator, maintains operation of the equipment and manages the work of two technicians.

9. DOSE ASSESSMENT COORDINATOR

This position receives data either directly from the Field Monitoring Coordinator and Laboratory Analysis Coordinator. This individual performs dose calculations and keeps the Off-Site Radiological Coordinator informed of the pertinent results. The Dose Assessment Coordinator may need a technician to run computer programs and handle data.

10. SPECIAL ASSISTANCE COORDINATOR

This person serves as an assistant to the Off-Site Radiological Coordinator by keeping in contact with the various agencies (BRH, NRC, EPA, etc.), funneling information from these agencies to the Off-Site Radiological Coordinator and making recommendations. Any special projects, conflicts, or other problems which the Off-Site Radiological Coordinator could not handle due to the priorities, would be handled by this position.

11. RADIO OPERATOR

This position provides radio communication support for the Off-Site Radiological Coordinator and his staff in the field and with supporting agencies.

12. LOCAL AGENCY LIAISON (LAL)

This position is assigned as the Duke Power Company representative at the local Emergency Operations Center (EOC). He will interpret information provided to the EOC by the Crisis Management organization and provide answers to questions asked in the EOC. He will maintain telephone or radio contact with the Crisis Management Center.

This individual reports to the lead county facility initially. The LAL remains there until the State facility(s) is (are) established and then reports to the State Center(s). Two individuals are required for response to a Catawba emergency.

B.7.7 Nuclear Engineering Services Manager and Staff

The Nuclear Engineering Services Manager and staff are shown on Figure B-10. Implementing Procedure 5.3.7 describes the workings of this group in more detail. The responsibilities of each position and the designated individuals to fill each position are as follows:

1. NUCLEAR ENGINEERING SERVICES MANAGER

This position provides support to the Recovery Manager in matters relating to licensing, core analysis, and system analysis, including procedure development.

2. STAFF SUPPORT SUPERVISOR

This position provides technical advice, planning, scheduling, and directing of assignments made in the Nuclear Engineering Services organization.

3. ADMINISTRATIVE SUPERVISOR

This position supervises the Nuclear Engineering Services Group clerical personnel and coordinates the group needs for work space, communications, office supplies, personnel, office equipment, etc., with the Administration & Logistics Group.

4. DATA COORDINATOR

This position coordinates the accumulation, retention, retrieval and retransmittal of information needed by the Crisis Management organization.

5. LICENSING SUPPORT COORDINATOR

This position resolves questions of FSAR and Technical Specifications commitments, abnormal operating modes and other license requirements with the NSSS Vendor and NRC representatives. It provides periodic updates to the NOTEPAD System.

6. SYSTEMS ANALYSIS COORDINATOR

This position analyzes problems with plant systems and equipment and develops recommendations to resolve these problems.

7. CORE PHYSICS COORDINATOR

This position analyzes core parameters and develops guidance for the Recovery Manager on protection of the core.

B.8 COORDINATION WITH PARTICIPATING ORGANIZATIONS

When the Crisis Management Team is officially activated (see Figure E-3), the Crisis Management Organization takes over the coordination of activities (from the TSC) between Duke Power Company and offsite agencies. A representative of the Recovery Manager is sent to the principal offsite Emergency Operations Center to assist the agencies in their responsibilities to the public. This individual is identified in Figure B-9. A representative of state and/or local government is also identified as an advisor to the Recovery Manager. These contacts, as well as the previously identified contact (see Section B.7.1) between a corporate officer of Duke Power Company and the Governor's office, serve as the coordination with participating government agencies.

The primary interfaces involved in emergency activities are shown on Figures B-1, B-2, and B-3.

The Institute of Nuclear Power Operations (INPO) serves as a clearinghouse for industry wide support during an emergency. When notified of an emergency situation at a nuclear plant, INPO will provide emergency response as requested. Contact will be made with INPO on their dedicated emergency call number through the scheduling and planning group. INPO will be able to provide the following emergency support functions:

- a. Assistance to the affected utility in locating sources of emergency manpower and equipment.
- b. Analysis of the operational aspects of the incident.
- c. Dissemination to member utilities of information concerning the incident.
- d. Organization of industry experts who could advise on technical matters.

If requested, one or more suitably qualified members of the INPO staff will report to the Recovery Manager and will assist in coordinating INPO's response to the emergency.

The State of South Carolina

The response provided by the State of South Carolina to an emergency developing at Oconee or Catawba is described in the South Carolina Operational Radiological Emergency Plan. The principal state agency for mobilization of state resources to cope with an emergency is the Emergency Preparedness Division under the Adjutant General. This agency is supported by the Bureau of Radiological Health, which provides radiological assessment and protection functions, and by other state agencies.

The State assumes overall direction of offsite operations. County governments respond within their jurisdiction based on State guidance.

For an emergency at Oconee, the State would establish an FEOC (Forward Emergency Operations Center) at the Clemson National Guard Armory. The representative of the State of South Carolina designated to advise the Recovery Manager is an individual from the Bureau of Radiological Health. He is provided with work space and a telephone in the Crisis Management Center (CMC). For a Catawba emergency, the State of South Carolina would operate out of the Clover Armory using this facility as the FEOC for Catawba.

The State of North Carolina

The response provided by the State of North Carolina to an emergency development is described in the North Carolina Radiological Emergency Response Plan in Support of McGuire Nuclear Station and in their plan for Catawba Nuclear Station. (Developed by the Emergency Management Division, Department of Crime Control and Public Safety.)

The principal state agency for mobilization of State resources to cope with an emergency is the Emergency Management Division under the Assistant Secretary for Public Safety. This agency is supported by the Radiation Protection Branch of the Department of Human Resources, for radiological assessment and protection functions, and by other State agencies.

The state organization, when it is mobilized at the site as the State Emergency Response Team (SERT), becomes the primary response authority.

For an emergency at McGuire or Catawba, the SERT organization is established in the Air National Guard facility in Charlotte, N.C.

The State of Georgia

The response provided by the State of Georgia to an emergency developing at Oconee Nuclear Station is described in Annex F to the State of Georgia Radiological Emergency Plan.

The principal state agency for mobilization of State resources to cope with an emergency is the Department of Natural Resources - Environmental Protection Division.

The state organization when activated is responsible for ingestion pathway monitoring within the State of Georgia to a distance of 50 miles from Oconee. The state headquarters in Atlanta will be the EOC.

Nuclear Regulatory Commission

The response provided by the NRC to an emergency developing at a Duke nuclear station is described in the NRC Region II Emergency Plan. For an emergency at Oconee, the NRC would establish an EOC at the Oconee Training Center. For an emergency at McGuire or Catawba, the NRC would operate out of the Station Technical Support Center and at the EOF (Duke Power General Office). The representative of the NRC who would provide input to the Recovery Manager is J. P. O'Reilly, the Director of Region II. He is provided work space and a telephone in the CMC.

The role of the NRC in an emergency situation is to provide oversight and recommendations on licensee actions.

County Governments

In a severe and rapidly developing emergency situation at a nuclear station, county governments are immediately notified of the accident. They have the primary responsibility for the protection of the citizens within the county boundaries. The principal Duke Power contact with county government is through the emergency preparedness director. This contact will be maintained by the TSC until relieved by the Special Assistance Coordinator of the Radiological Support Group.

It is recognized that the county council, the chief executive of the county, and mayors of local communities have responsibilities in an emergency situation as well. The Government's Liaison Coordinator on the staff of the Crisis News Director serves as the primary Duke Power Company contact with these people.

American Nuclear Insurers (ANI)

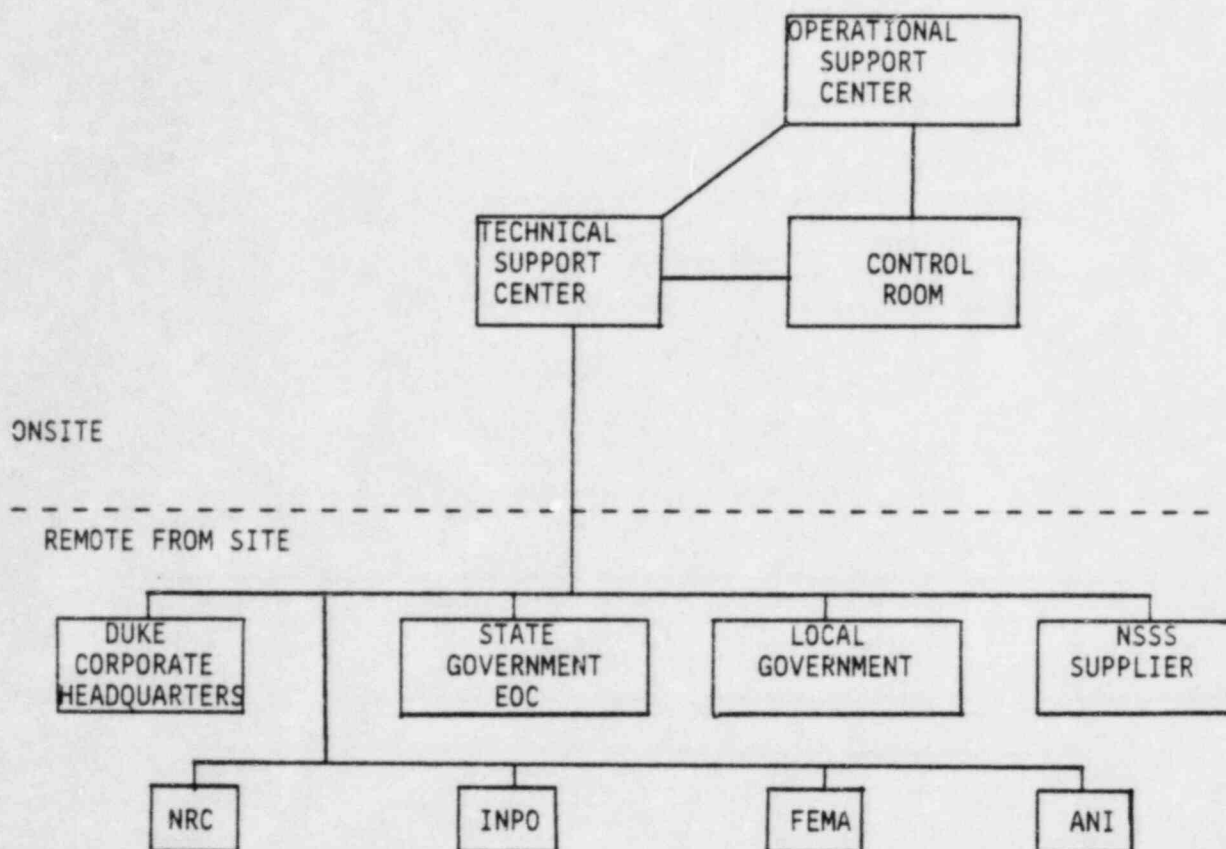
ANI will be notified of emergency conditions by the Insurance Director of the Admin. and Logistics group. ANI's response group would set up claims payments and other such capabilities at facilities appropriate to the emergency.

Contractors

Contractors who may be requested to respond are Babcock & Wilcox (Oconee Nuclear Station) and Westinghouse (McGuire Nuclear Station and Catawba Nuclear Station). B&W would operate out of Lynchburg, Va. with a small group onsite. Westinghouse, similarly, would operate from Pittsburgh, Pa. with a small contingent at the plant.

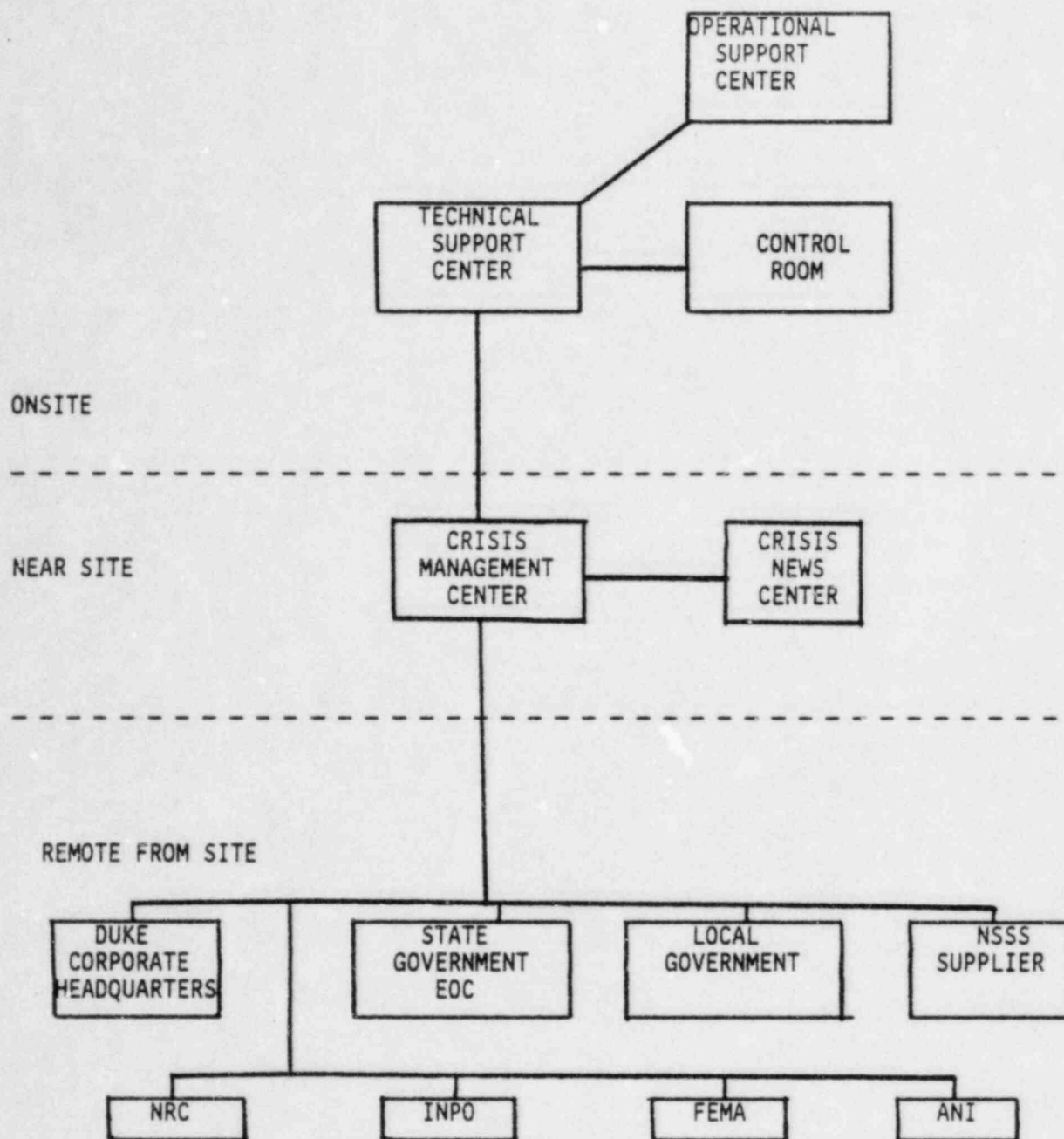
B.9 LOCAL AGENCY SUPPORT SERVICES

Support of the Nuclear Station by local police, ambulance, fire, medical, and hospital organizations is described in the Nuclear Station Emergency Plans. During an emergency, requests for support from these groups will come from the Emergency Coordinator or designee.



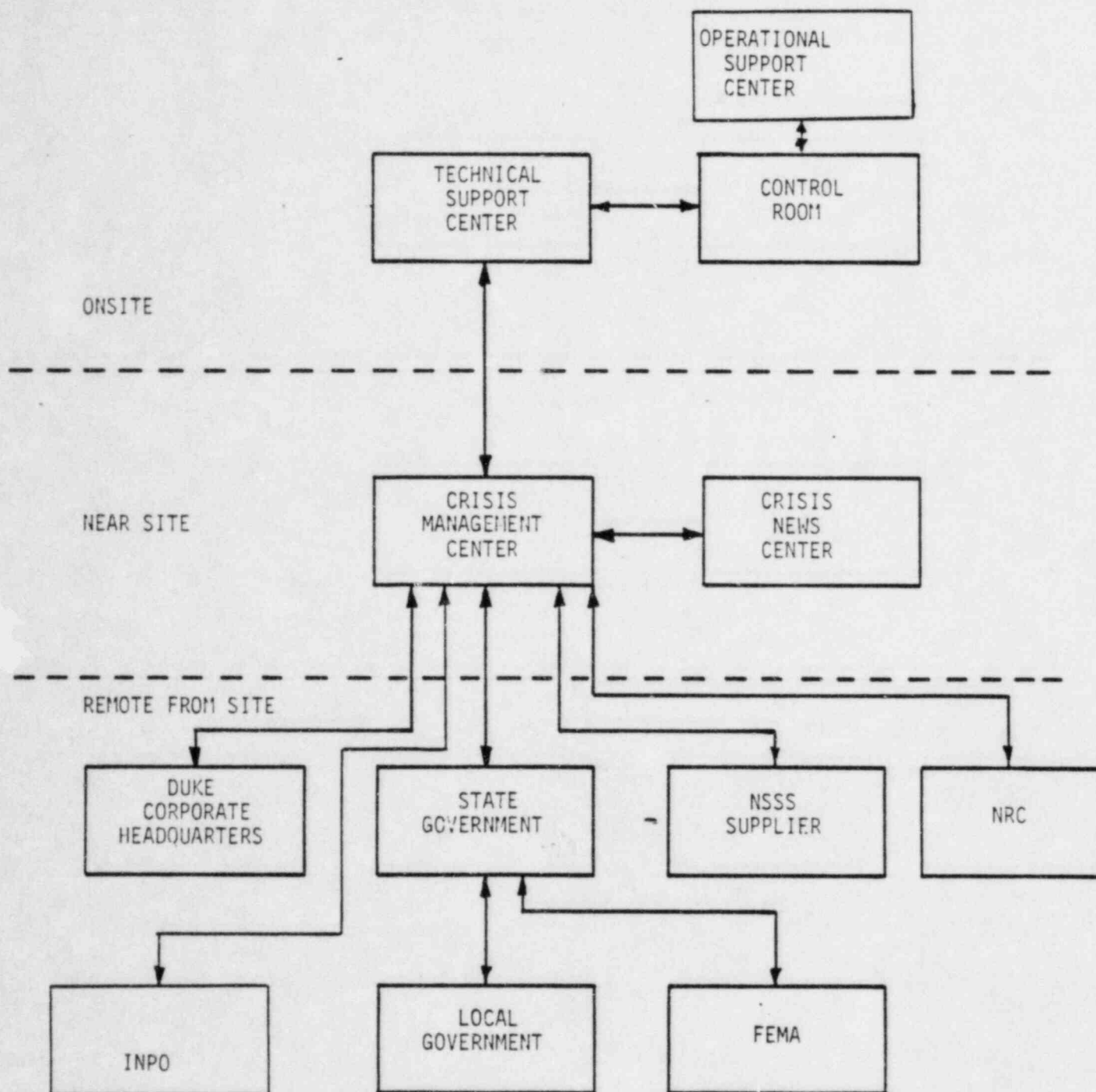
Note: For use prior to CMC and State Activation/Operation.

RECOVERY ACTIVITY PRIMARY
INTERFACES
CRISIS MANAGEMENT PLAN
Figure B-1



Note: To Be Used after CMC Activation/Operation but prior to State FEDC Activation.

RECOVERY ACTIVITY PRIMARY
INTERFACES
CRISIS MANAGEMENT PLAN
Figure B-2



RECOVERY ACTIVITY PRIMARY
INTERFACES

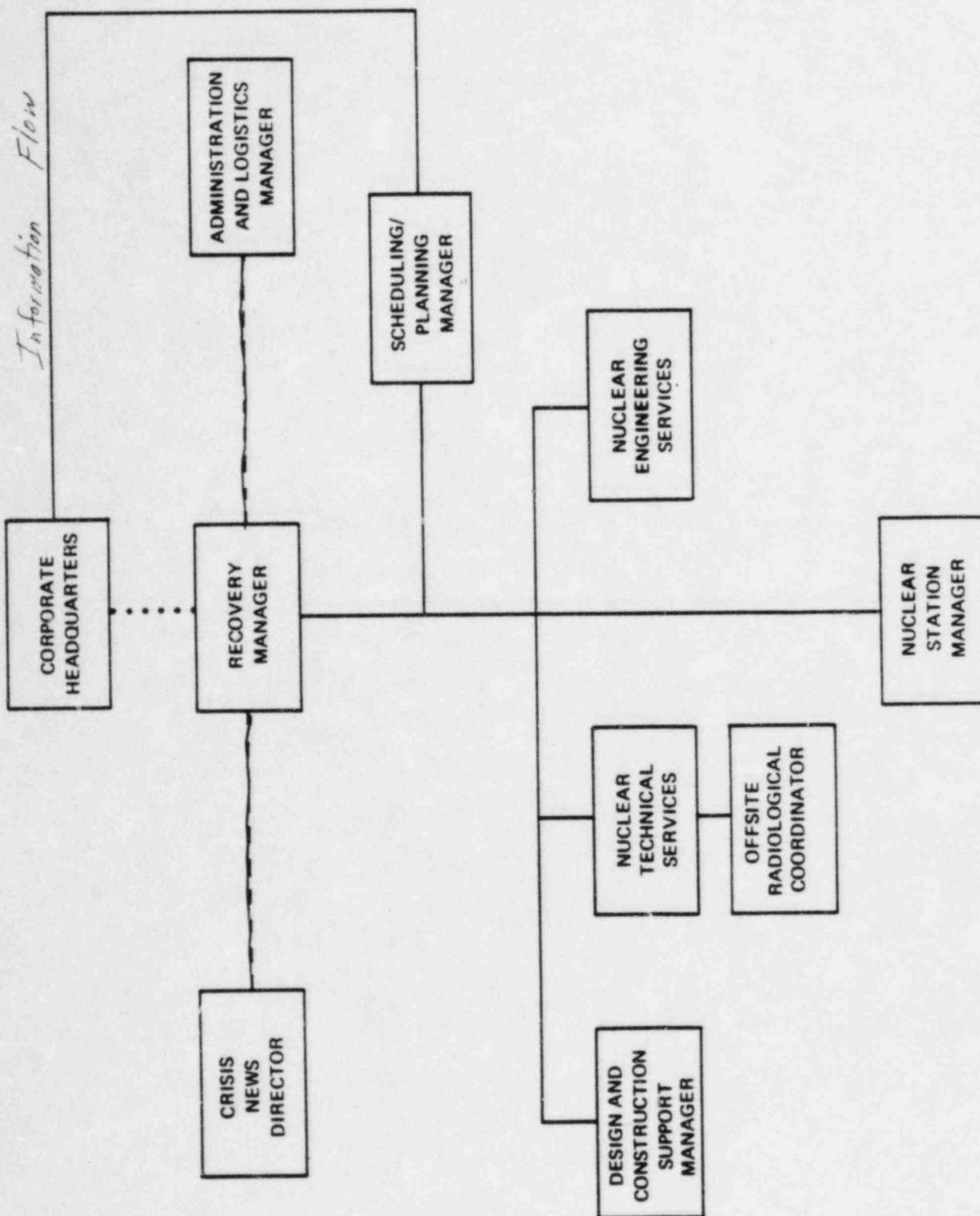
CRISIS MANAGEMENT PLAN

Figure B-3



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October 29, 1982

B-20



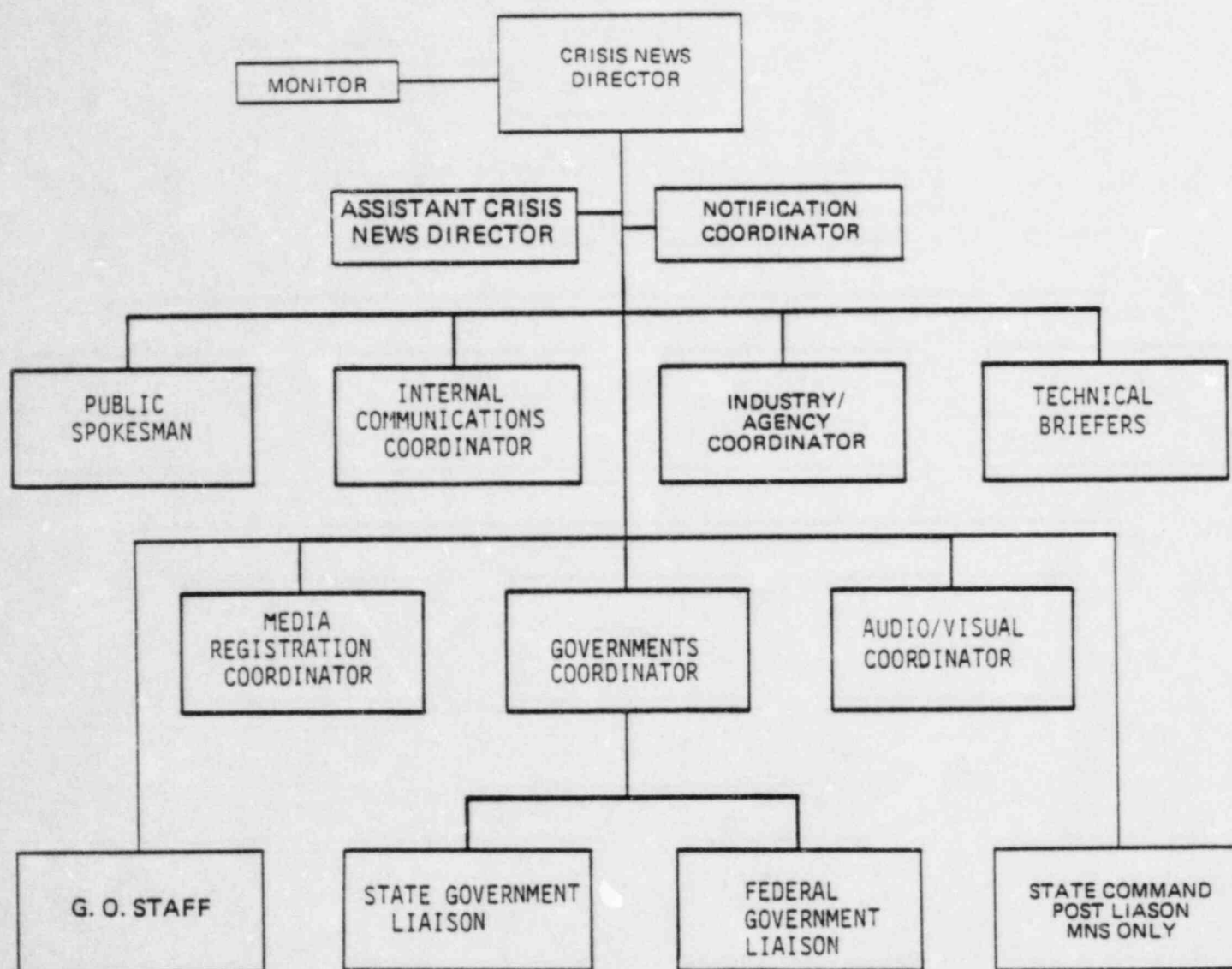
* CORPORATE POLICY INPUT

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JANUARY 31, 1984



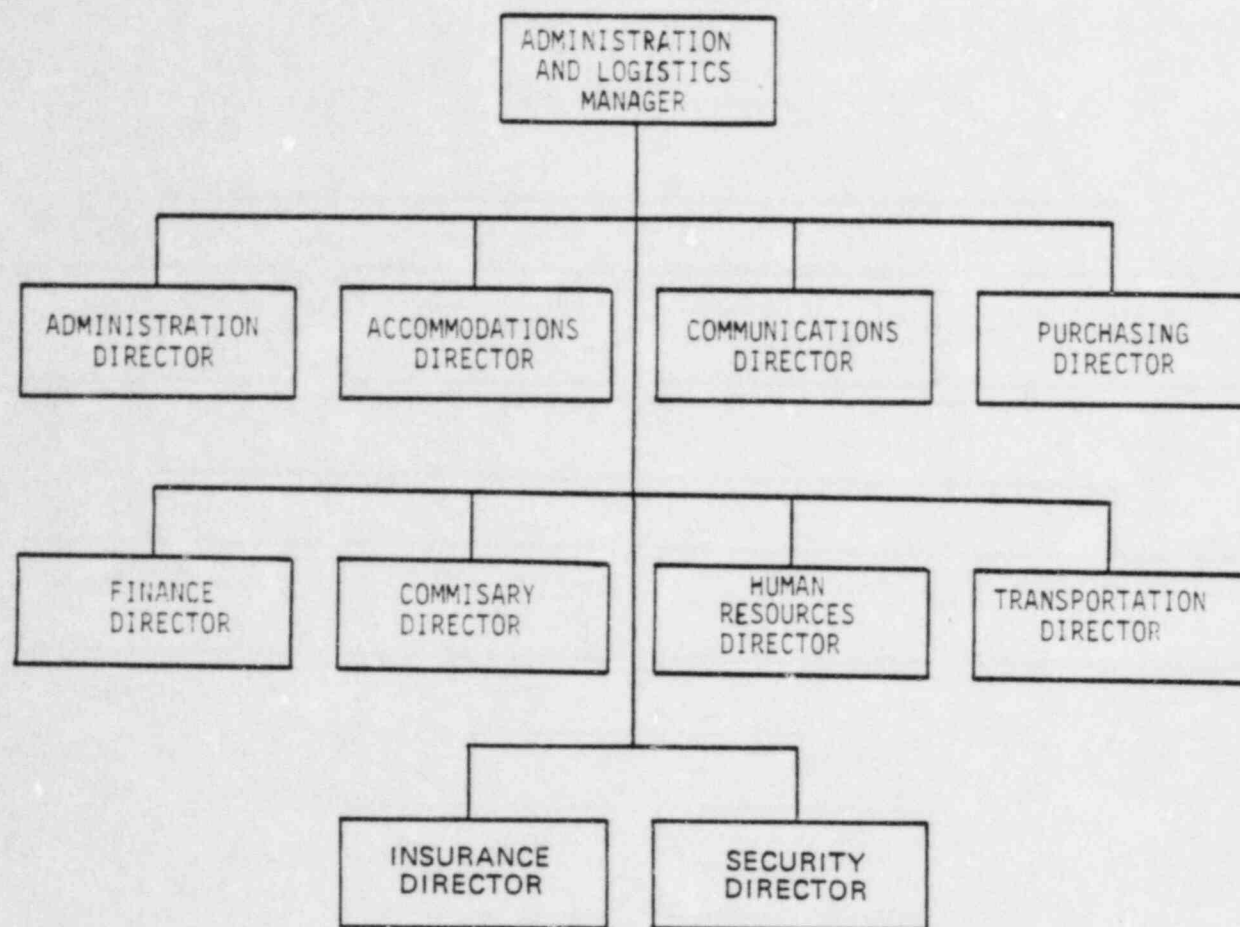
RECOVERY MANAGER AND STAFF

CRISIS MANAGEMENT PLAN
FIGURE B-4



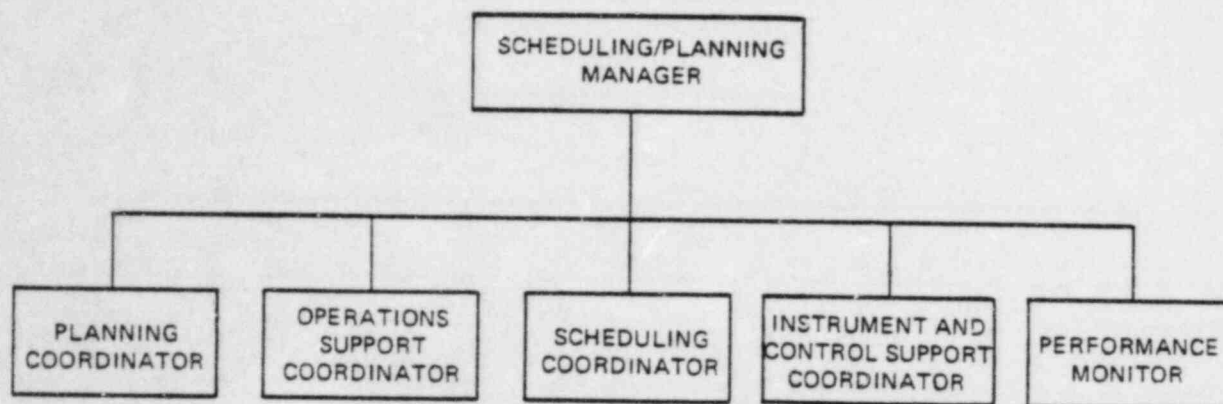
CRISIS NEWS DIRECTOR AND STAFF
CRISIS MANAGEMENT PLAN

FIGURE B-5



ADMINISTRATION AND LOGISTICS
MANAGER AND STAFF
CRISIS MANAGEMENT PLAN

Figure B-6



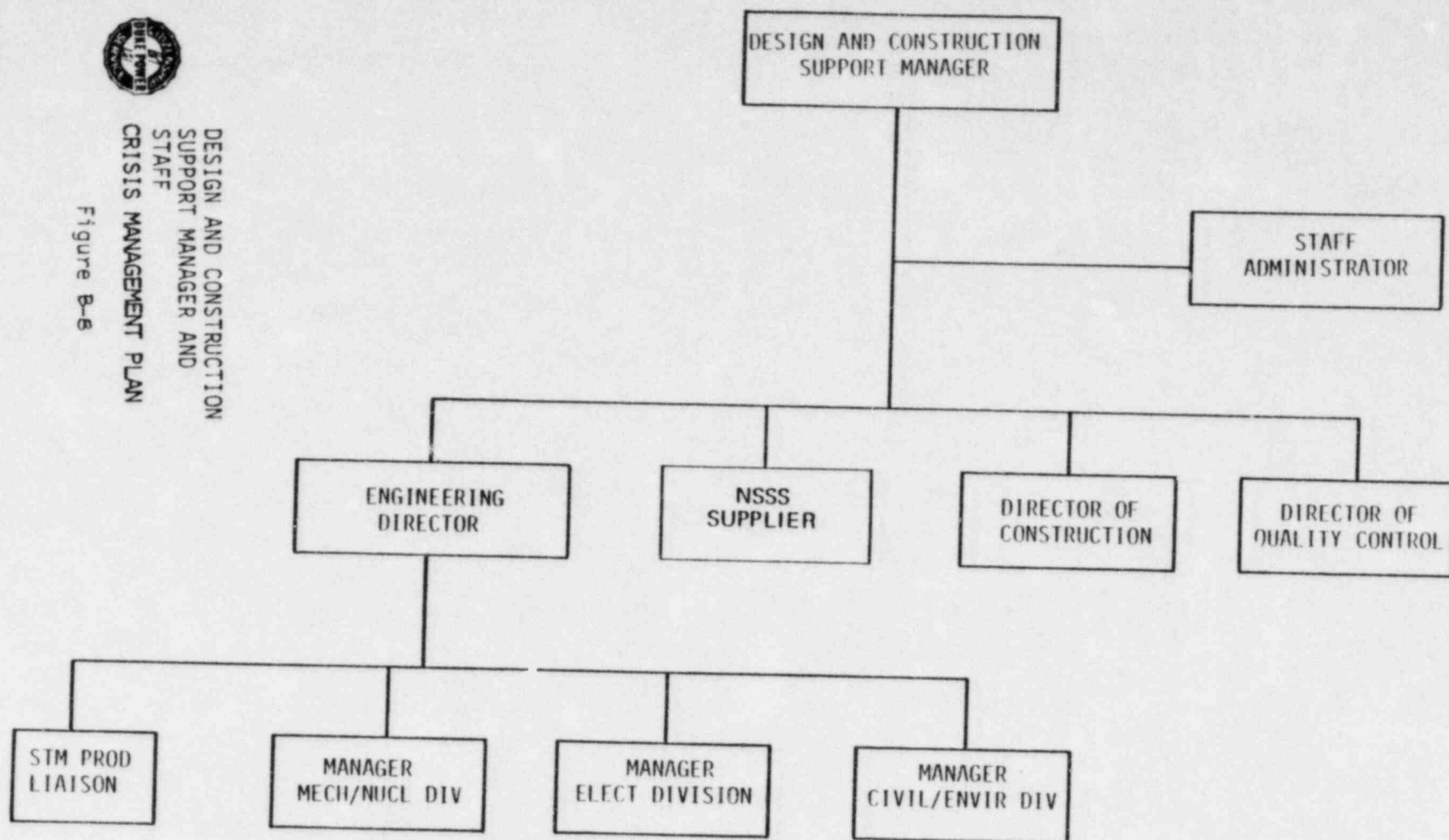
SCHEDULING/PLANNING
MANAGER AND STAFF
CRISIS MANAGEMENT PLAN

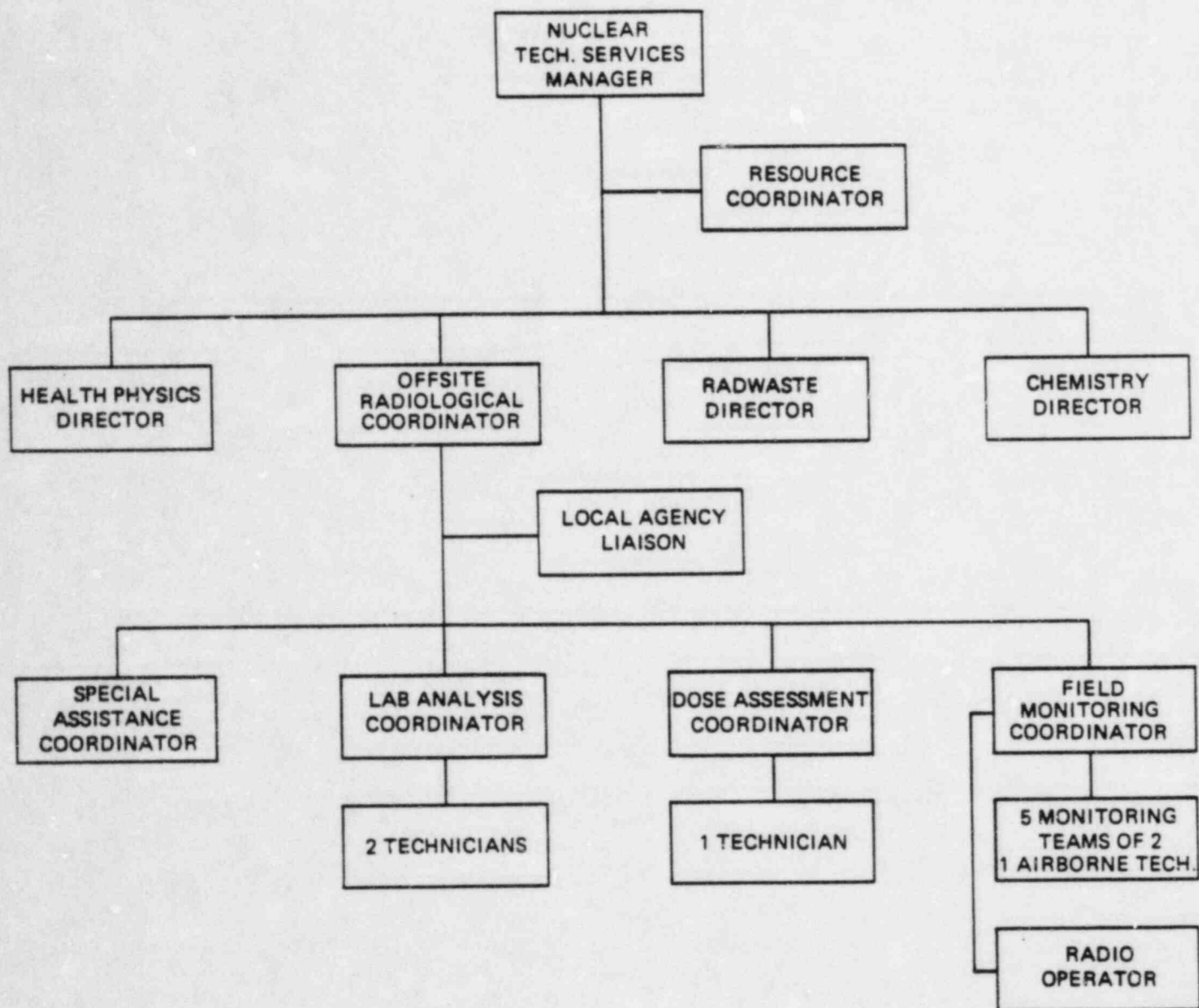
Figure B-7



DESIGN AND CONSTRUCTION
SUPPORT MANAGER AND
STAFF
CRISIS MANAGEMENT PLAN

Figure B-8



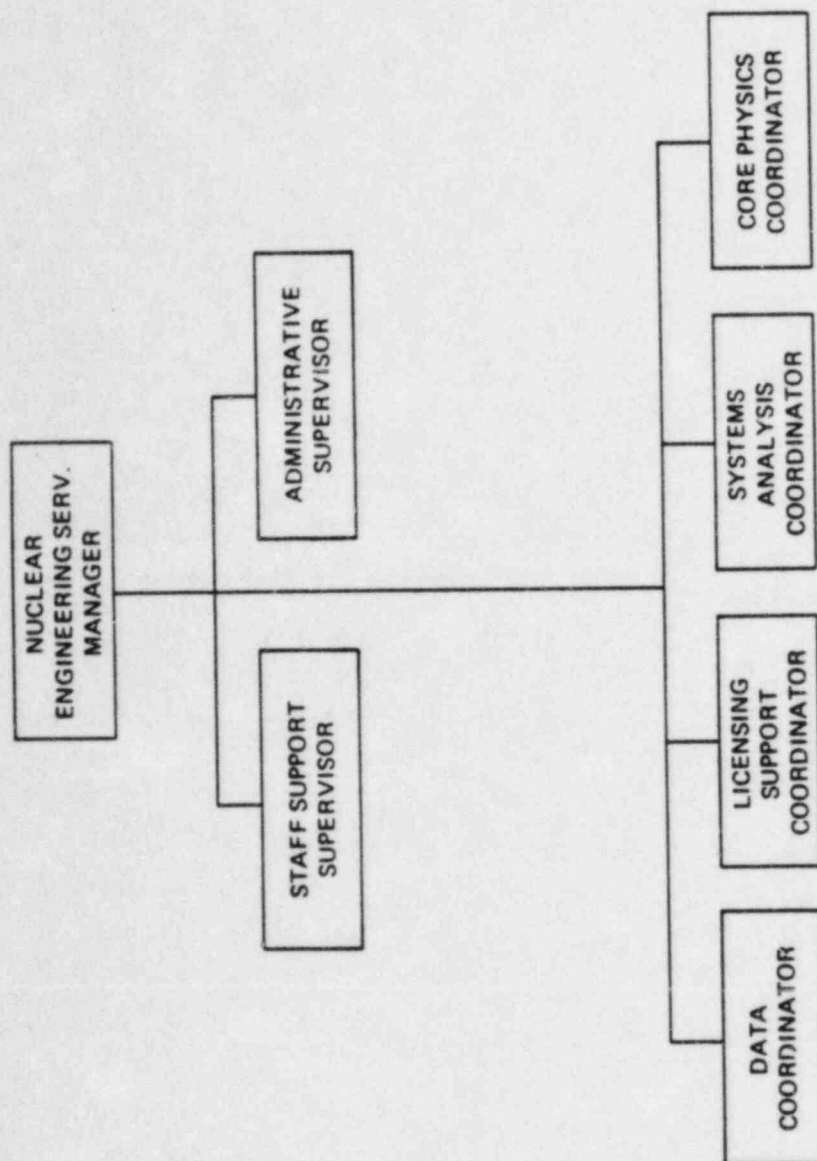


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JAN. 31, 1984



NUCLEAR TECHNICAL SERVICES
MANAGER AND STAFF

CRISIS MANAGEMENT PLAN
FIGURE B-9



NUCLEAR ENGINEERING SERVICES
MANAGER AND STAFF

CRISIS MANAGEMENT PLAN
FIGURE B-10

FIGURE B-11

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FIGURE B-12

DUTY ENGINEER CRISIS MANAGEMENT CALL LIST

<u>Recovery Manager</u>	<u>Work No.</u>	<u>Home No.</u>
G. E. Vaughn(P)	2542	704/375-9444
J. Ed Smith (A)	882-1211	803/654-2866
M. D. McIntosh (A)	875-4212	704/483-3417
J. W. Hampton (A)	831-2300	803/366-5300

Note: In a Site Area Emergency or General Emergency, if the Recovery Manager or his alternates are not available, contact the group managers as they will assemble their groups to support the station until the Recovery Manager is available. In an Alert, if the Recovery Manager or his alternates are not available, ask the Shift Supervisor if the CMC is to be activated and react appropriately.

Crisis News Director

Mary Cartwright (P)	5584	704/588-2584
Mary Boyd	2328	704/552-6185
Andy Thompson	8138	803/324-3620
Cecily Newton	2812	704/366-6919
Mike Dembeck	4672	704/364-6735
24 Hour aswering service	----	704/527-5970

Administration & Logistics

R. F. Smith (P)	4470	704/537-0934
R. H. Lynn	803/882-0954	704/542-8812
	Ext. 216	
Ed Morton	4893	704/552-2308
Steve Kessler	7123	704/892-3192
R. N. Johnson	803/832-0263	803/327-4628

Nuclear Technical Services Manager

W.A. Haller (P)	8506	704/366-1591
L. Lewis	4341	704/366-0159
R. T. Simril	2310	803/831-1407
M. S. Tuckman	882-1150	803/882-8522
R. C. Futrell	8485	704/364-6608

Nuclear Engineering Services Manager

K. S. Canady (P)	4712	704/847-8336
R. M. Koehler	704/875-1686	704/263-1643
H. T. Snead	4038	704/847-5266
J. W. Simmons	5781	704/535-3925
J. A. Reavis	7567	704/875-9469

Scheduling/Planning

P. H. Barton (P)	4392	704/364-7073
S. A. Holland	8004	704/825-2869
G. W. Hallman	2345	803/366-9545
R. G. Snipes	8704	704/332-2448

Design & ConstructionWork No.Home No.

J. L. Elliott (P)	4968	704/892-6898
A. R. Hollins	8070	704/542-8516
S. K. Blackley	4917	704/364-0391
C. J. Wylie	4438	704/545-9620
S. B. Hager	4226	704/827/2608

Westinghouse

John Roth	704/875-1708	704/788-3816
Bob Howard	412/256-6504	412/931-5826
Joe Leblang	412/256-6390	412/325-1023
Dave Richards	412/256-6491	412/327-8178
Graham Murray	412/256-6351	412/373-0176
Tom Mitlo	412/256-6400	412/793-7512

C. Emergency Response Support and Resources

C.1.a Individuals Authorized to Request Federal Assistance

Environmental radiological measurements are made in the field by radiological survey teams described in Section B.7.6. This information is used by the Off-Site Radiological Coordinator to confirm environmental projects of doses and dose rates. If necessary to relieve Duke personnel, environmental surveillance support personnel from the DOE Radiological Assistance Plan may be requested by the Off-Site Radiological Coordinator or the Recovery Manager.

C.1.b Recovery Manager-Federal Resources - Arrival Times

The Agreement letter between Duke Power Company and DOE - Savannah River is found in Appendix 5. DOE emergency radiological assistance is expected within 3 to 4 hours from a call for these services at McGuire or Catawba and within 4 to 5 hours from a call for these services at Oconee. (Driving and setup time - does not consider use of helicopter or other aerial means of transport.

NRC's full team from Region 2 would be onsite within 7-8 hours from declaration of an emergency at McGuire or Catawba and 4-5 hours at Oconee. Some portions of their team could arrive on-site much earlier by the use of helicopter transport from Atlanta.

C.1.c Crisis Management Organization Resources Available to Federal Response Organizations

The following Duke Power Company resources are available to support Federal emergency response from DOE - Savannah River:

Oconee Nuclear Station

Air field - Greenville/Spartanburg Airport (1 hour drive from station)

- Command Posts - Duke's Crisis Management Center - Oconee Training Center
- Room for 5-10 people
 - 3 extension telephone lines are available
 - 1 radio frequency available for communications with monitoring teams in the field

McGuire Nuclear Station/Catawba Nuclear Station

Airfield - Douglas International Airport (~30 - 40 minutes from station)

- Command Posts - Duke's Crisis Management Center - Charlotte General Office
(McGuire and Catawba)
- Room for 5-10 people

- 3 telephone lines are available
- 1 radio frequency available for communications with monitoring teams in the field (shared with Duke teams)

C.2.a State and County Representation at the Crisis Management Center (CMC)

The state(s) and counties in the EPZ around Duke Power Company Nuclear facilities have space and communications available in the CMC. Section H of this plan describes those provisions.

C.2.b Local Agency Liaison

Provisions have been made to dispatch a "Local Agency Liaison" to principal offsite governmental emergency operations centers (EOC's). Section B.7.6 describes the role and function of this individual within the Offsite Radiological Coordination Group.

C.3 Radiological Laboratories - Availability and Capability

Radiological laboratory capability is provided at each nuclear station. Emergency backup to station capability is provided for Oconee by the backup facility located at the Visitor Center and by the System Environmental Laboratory located near the McGuire Nuclear Station. Driving time from Oconee to McGuire is approximately 3 hours. Emergency backup laboratory facilities from McGuire are provided by the System Environmental Laboratory located approximately 3/4 mile from the station and by the Oconee and Catawba facilities. Backup laboratory facilities for Catawba Nuclear Station are the Environmental Laboratory at McGuire (~45 miles), McGuire Nuclear Station, and Oconee Nuclear Station.

North Carolina and South Carolina each have radiological monitoring and analysis capabilities through the use of their mobile radiological vans. The vans are available in 3-5 hours from an emergency declaration at Oconee, 7-9 hours from an emergency declaration at McGuire, and 7-9 hours from an emergency declaration at Catawba.

C.4 Emergency Support From Other Organizations

Other support can be provided by:

- INPO Fixed Nuclear Facility, Voluntary Assistance Agreement Signatories
- DOE Savannah River
- Area Hospitals (See Station plans)
- Volunteer Fire Departments (See station plans)
- Oak Ridge National Lab Hospital

D. EMERGENCY CLASSIFICATION SYSTEM

This section of the Crisis Management Plan generally describes each of the four classes of emergency action levels specifically addressed by each station's Emergency Plan. The four classes are as follows:

- 1) Notification of Unusual Event
- 2) Alert
- 3) Site Area Emergency
- 4) General Emergency

D.1/D.2 Emergency Classification - Initiating Conditions, Emergency Action Levels

Each class of emergency is described below. The Nuclear Station plans, Section D, list the initiating conditions and emergency action levels for each class. Table D-5 is a flowchart for emergency classification that can aid in determining the level of emergency more quickly.

NOTIFICATION OF UNUSUAL EVENT

This class is defined as primarily an in-plant occurrence requiring in-plant actions. It does not require offsite notification for the purpose of seeking assistance to protect the health and safety of the public. The purpose of this class is to provide notification of the emergency to the station staff, utility headquarters, State and Local EOC's, and others as designated in station procedures.

ALERT

This class involves events that are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the station. The purpose of the alert class is to assure that emergency personnel are readily available to (1) activate the response centers, (2) respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required, and (3) provide offsite authorities current status information.

SITE AREA EMERGENCY

This class involves events that are in process or have occurred which involve actual or likely major failures or plant functions needed for protection of station personnel and the public. The purpose of the Site Area Emergency Class is to (1) activate the response centers, (2) assure that monitoring teams are mobilized, (3) assure that personnel required for taking protective actions of near site areas are at duty stations if the situation becomes more serious, and (4) provide current information for and consultation with offsite authorities and the public.

GENERAL EMERGENCY

This class involves events that are in process or have occurred which involve actual or substantial core degradation or melting with imminent potential for loss of containment integrity. The purpose of the general emergency class is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of information from onsite and offsite measurements, (3) initiate additional measures as indicated by event releases or potential releases, and (4) provide current information for and consultation with offsite authorities and the public. The actions in this class include all actions which would be taken in a Site Emergency.

The Recovery Manager is guided by Table D-6, "Summary of General Emergency" on response to this condition. Actions Duke Power Company will base its response upon in each emergency class are listed in Tables D-1 to D- 4.

D.3 State and Local Organization - Emergency Classification System

The State and Local Organizations Emergency Classification System and Emergency Action Levels are consistent with the nuclear facility. (See state and local plans).

D.4 State and Local Organization - Procedures for Taking Emergency Actions

The state and local emergency response plans describe actions they could take based upon utility recommendations, Federal agency recommendations, or their own independent assessment. (See state and local plans)

CRISIS MANAGEMENT PLAN
Table D-1
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authority Actions</u>
<p>NOTIFICATION OF UNUSUAL EVENT</p> <p><u>Class Description</u></p> <p>Unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.</p> <p><u>Purpose</u></p> <p>Purpose of offsite notification is to (1) assure that the first step in any response later found to be necessary has been carried out, (2) bring the operating staff to a state of readiness, and (3) provide systematic handling of unusual events information and decisionmaking.</p>	<ol style="list-style-type: none"> 1. Promptly inform State and/or local offsite authorities of nature of unusual condition as soon as discovered 2. Augment on-shift resources as needed 3. Assess and respond 4. Escalate to a more severe class, if appropriate <p style="text-align: center;"><u>or</u></p> <ol style="list-style-type: none"> 5. Close out with verbal summary to offsite authorities; followed by written summary within 24 hours 	<ol style="list-style-type: none"> 1. Provide fire or security assistance if requested 2. Escalate to a more severe class, if appropriate 3. Stand by until verbal closeout

CRISIS MANAGEMENT PLAN
Table D-2
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authority Actions</u>
<p>ALERT</p> <p><u>Class Description</u></p> <p>Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.</p> <p><u>Purpose</u></p> <p>Purpose of offsite alert is to (1) assure that emergency personnel are readily available to respond if situation becomes more serious or to perform confirmatory radiation monitoring if required, and (2) provide offsite authorities current status information.</p>	<ol style="list-style-type: none"> 1. Promptly inform State and/or local authorities of alert status and reason for alert as soon as discovered. 2. Augment resources and activate on-site Technical Support Center and on-site operational support center. Bring Emergency Operations Facility (EOF) and other key emergency personnel to standby status 3. Assess and respond 4. Dispatch on-site monitoring teams and associated communications 5. Provide periodic plant status updates to offsite authorities (at least every 15 minutes) 6. Provide periodic meteorological assessments to offsite authorities and, if any releases are occurring, dose estimates for actual releases 7. Escalate to a more severe class, if appropriate 8. Close out or recommend reduction in emergency class by verbal summary to offsite authorities followed by written summary within 8 hours of closeout or class reduction 	<ol style="list-style-type: none"> 1. Provide fire or security assistance if requested 2. Augment resources and bring primary response centers and EBS to standby status 3. Alert to standby status key emergency personnel including monitoring teams and associated communications 4. Provide confirmatory offsite radiation monitoring and ingestion pathway dose projections if actual releases substantially exceed technical specification limits 5. Escalate to a more severe class, if appropriate 6. Maintain alert status until verbal closeout or reduction of emergency class

CRISIS MANAGEMENT PLAN
Table D-3
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authorities Actions</u>
<p>SITE AREA EMERGENCY</p> <p><u>Class Description</u></p> <p>Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary.</p> <p><u>Purpose</u></p> <p>Purpose of the Site Area Emergency declaration is to (1) assure that response centers are manned, (2) assure that monitoring teams are dispatched, (3) assure that personnel required for evacuation of near-site areas are at duty stations if situation becomes more serious, (4) provide consultation with offsite authorities, and (5) provide updates for the public through offsite authorities.</p>	<ol style="list-style-type: none"> 1. Promptly inform State and/or local offsite authorities of Site Area Emergency status and reason for emergency as soon as discovered 2. Augment resources by activating on-site Technical Support Center, on-site operational support center and near-site Emergency Operations Facility (EOF) 3. Assess and respond 4. Dispatch on-site and offsite monitoring teams and associated communications 5. Dedicate an individual for plant status updates to offsite authorities and periodic pressure briefings (perhaps joint with offsite authorities) 6. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis 7. Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission 8. Provide release and dose projections based on available plant condition information and foreseeable contingencies 	<ol style="list-style-type: none"> 1. Provide any assistance requested 2. If sheltering near the site is desirable, activate public notification system within at least two miles of the plant 3. Provide public within at least about 10 miles periodic updates on emergency status 4. Augment resources by activating primary response centers 5. Dispatch key emergency personnel including monitoring teams and associated communications 6. Alert to standby status other emergency personnel (e.g., those needed for evacuation) and dispatch personnel to near-site duty stations 7. Provide offsite monitoring results to licensee, DOE and others and jointly assess them 8. Continuously assess information from licensee and offsite monitoring with regard to changes to protective actions already initiated for public and mobilizing evacuation resources

CRISIS MANAGEMENT PLAN
Table D-3 (cont'd)
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authorities Actions</u>
Site Area Emergency	<p>9. Escalate to <u>General Emergency</u> class, if appropriate</p> <p>or</p> <p>10. Close out or recommend reduction in emergency class by briefing of offsite authorities at EOF and by phone followed by written summary within 8 hours of closeout or class reduction</p>	<p>9. Recommend placing milk animals within 2 miles on stored feed and assess need to extend distance</p> <p>10. Provide press briefings, perhaps with licensee</p> <p>11. Escalate to <u>General Emergency</u> class, if appropriate</p> <p>12. Maintain Site Area Emergency status until closeout or reduction of emergency class</p>

CRISIS MANAGEMENT PLAN
Table D-4
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authorities Actions</u>
GENERAL EMERGENCY		
<u>Class Description</u>		
Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guidelines exposure levels offsite for more than the immediate site area.		
<u>Purpose</u>		
Purpose of the General Emergency declaration is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of information from licensee and offsite organization measurements, (3) initiate additional measures as indicated by actual or potential releases, (4) provide consultation with offsite authorities and (5) provide updates for the public through offsite authorities.		
	<ol style="list-style-type: none"> 1. Promptly inform State local offsite authorities of General Emergency status and reason for emergency as soon as discovered (Parallel notification of State/local) 2. Augment resources of activating on-site Technical Support Center, on-site operational support center and near-site Emergency Operations Facility (EOF) 3. Assess and respond 4. Dispatch on-site and offsite monitoring teams and associated communications 5. Dedicate an individual for plant status updates to offsite authorities and periodic press briefings (perhaps joint with offsite authorities) 6. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis 7. Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual or automated data transmission 8. Provide release and dose projections based on available plant condition information on foreseeable contingencies 9. Close out or recommend reduction of emergency class by briefing of offsite 	<ol style="list-style-type: none"> 1. Provide any assistance requested 2. Activate immediate public notification of emergency status and provide public periodic updates 3. Recommend sheltering for 2 mile radius and 5 miles downwind and assess need to extend distances. Consider advisability of evacuation (projected time available vs. estimated evacuation times) 4. Augment resources by activating primary response centers 5. Dispatch key emergency personnel including monitoring teams and associated communications 6. Dispatch other emergency personnel to duty stations within 5 mile radius and alert all others to standby status 7. Provide offsite monitoring results to licensee, DOE and others and jointly assess them 8. Continuously assess information from licensee and offsite monitoring with regard to changes to protective actions already initiated for public

CRISIS MANAGEMENT PLAN
Table D-4 (cont'd)
Response to Emergencies

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or Local Offsite Authority Actions</u>
General Emergency	authorities at EOF and by phone followed by written summary within 8 hours of closeout or class reduction	and mobilizing evacuation resources 9. Recommend placing milk animals within 10 miles on stored feed and assess need to extend distance 10. Provide press briefings, perhaps with licensee 11. Maintain general emergency status until closeout or reduction of emergency class

Crisis Management Plan

Table D-5

EMERGENCY CLASSIFICATION GUIDE FLOWCHART

EVENT CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
1) ABNORMAL PRIMARY LEAK RATE	EXCEEDING EITHER PRIMARY/SECONDARY LEAK RATE TECHNICAL SPECIFICATION OR PRIMARY SYSTEM LEAK RATE TECHNICAL SPECIFICATION REQUIRING SHUTDOWN BY TECH. SPEC.	PRIMARY COOLANT LEAK RATE GREATER THAN 50 GPM RAPID GROSS FAILURE OF A STEAM GENERATOR TUBE AND LOSS OF OFF-SITE POWER OR RAPID FAILURE OF STEAM GENERATOR TUBE(S)	KNOWN LOSS OF COOLANT ACCIDENT (LOCA) GREATER THAN MAKE-UP CAPACITY RAPID FAILURE OF STEAM GENERATOR TUBES WITH LOSS OF OFFSITE POWER (SEVERAL HUNDRED GPM)	SMALL OR LARGE BREAK LOCA OCCURS AND CONTAINMENT PERFORMANCE IS UNSUCCESSFUL AFFECTING LONGER TERM SUCCESS OF THE ECCS. COULD LEAD TO CORE DEGRADATION OR MELT IN SEVERAL HOURS WITHOUT CONTAINMENT BARRIER.
2) ABNORMAL CORE CONDITIONS AND FUEL DAMAGE	FUEL DAMAGE INDICATION—ABNORMAL COOLANT TEMP. AND/OR PRESSURE OR ABNORMAL FUEL TEMPS WHICH EXCEED TECH. SPEC. LIMITS	SEVERE LOSS OF FUEL CLADDING—COOLANT PUMP SEIZURE LEADING TO FUEL FAILURE	DEGRADED CORE WITH POSSIBLE LOSS OF COOLABLE GEOMETRY	LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH POTENTIAL LOSS OF THE THIRD BARRIER.
3) STEAM LINE BREAK OR MS RV/SV FAILURE	FAILURE OF A SAFETY OR RELIEF VALVE IN A SAFETY RELATED SYSTEM TO CLOSE FOLLOWING A REDUCTION OF APPLICABLE PRESSURE	STEAM LINE BREAK WITH SIGNIFICANT PRIMARY TO SECONDARY LEAK RATE	STEAM LINE BREAK WITH GREATER THAN 50 GPM P/S LEAKAGE AND INDICATION OF FUEL DAMAGE.	SMALL OR LARGE LOCA'S WITH FAILURE OF ECCS TO PERFORM LEADING TO CORE MELT DEGRADATION OR MELT IN MINUTES TO HOURS LOSS OF CONTAINMENT INTEGRITY MAY BE IMMINENT.
4) OTHER LCOS	LOSS OF CONTAINMENT INTEGRITY RESULTING IN IMMEDIATE SHUTDOWN BY TECH. SPEC. LOSS OF ENGINEERED SAFETY FEATURE OR FIRE PROTECTION FUNCTION REQUIRING SHUTDOWN BY TECH. SPEC. EMERGENCY CORE COOLING SYSTEM (ECCS) INITIATED AND DISCHARGED TO VESSEL			
5) ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS	RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATION LIMITS EXCEEDED	HIGH RADIATION LEVELS OR HIGH AIRBORNE CONTAMINATION WHICH INDICATES SEVERE DEGRADATION IN CONTROL OF RADIOACTIVE MATERIAL RADILOGICAL EFFLUENTS GREATER THAN 10 TIMES TECH. SPEC. INSTANTANEOUS LIMITS	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO GREATER THAN 50 MR/HR FOR 1 HOUR OR GREATER THAN 500 MR/HR W.B. FOR TWO MINUTES AT THE SITE BOUNDARY FOR ADVERSE METEOROLOGY THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE ENVIRONS EPA PROTECTIVE ACTION GUIDELINES ARE PROJECTED TO BE EXCEEDED OUTSIDE THE SITE BOUNDARY TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCRAM (CONTINUED POWER GENERATION WITH NO CORE DAMAGE IMMEDIATELY EVIDENT) LOSS OF ANY FUNCTION NEEDED FOR PLANT HOT SHUTDOWN LOSS OF OFFSITE POWER AND LOSS OF ALL ONSITE AC POWER FOR MORE THAN 15 MIN. LOSS OF ALL VITAL ONSITE DC POWER FOR MORE THAN 15 MIN. FIRE COMPROMISING THE FUNCTIONS OF SAFETY SYSTEMS EVACUATION OF CONTROL ROOM AND CONTROL OF SHUTDOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS IN 15 MIN. MOST OR ALL ALARMS (ANNUNCIATORS) LOST AND PLANT TRANSIENT INITIATED OR IN PROGRESS	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO 1 REM/HR W.B. OR 5 REM/HR THYROID AT THE SITE BOUNDARY UNDER ACTUAL METEOROLOGICAL CONDITIONS THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE ENVIRONS TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCRAM. ADDITIONAL FAILURE OF CORE COOLING AND MAKEUP SYSTEM WOULD LEAD TO CORE MELT. TRANSIENT INITIATED BY LOSS OF PRINCIPLE HEAT REMOVAL SYSTEMS FOLLOWED BY FAILURE OF EMERGENCY FEEDWATER SYSTEM FOR EXTENDED PERIOD. CORE MELT POSSIBLE IN SEVERAL HOURS WITH ULTIMATE FAILURE OF CONTAINMENT LIKELY IF CORE MELTS. ANY MAJOR INTERNAL OR EXTERNAL EVENTS (E.G. FIRES, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
6) LOSS OF SHUTDOWN FUNCTIONS DECAY HEAT OR REACTIVITY		FAILURE OF REACTOR PROTECTION SYSTEM TO INITIATE AND COMPLETE A SCRAM WHICH BRINGS THE REACTOR SUBCRITICAL COMPLETE LOSS OF ANY FUNCTION NEEDED FOR PLANT COLD SHUTDOWN		
7) ELECTRICAL OR POWER FAILURES	LOSS OF OFFSITE POWER OR LOSS OF ONSITE AC POWER CAPABILITY	LOSS OF OFFSITE POWER AND LOSS OF ALL ONSITE AC POWER FOR UP TO 15 MIN. LOSS OF ALL ONSITE DC POWER		
8) FIRE	FIRE WITHIN THE PLANT LASTING MORE THAN 10 MINUTES	FIRE POTENTIALLY AFFECTING SAFETY SYSTEMS EVACUATION OF CONTROL ROOM ANTICIPATED OR REQUIRED WITH CONTROL OF SHUTDOWN SYSTEMS ESTABLISHED FROM LOCAL STATIONS		
9) CONTROL ROOM EVACUATION				
10) LOSS OF MONITORS, ALARMS, ETC.	INDICATIONS OR ALARMS ON PROCESS OR EFFLUENT PARAMETERS NOT FUNCTIONING IN CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN OTHER SIGNIFICANT LOSS OF ASSESSMENT OF COMMUNICATION CAPABILITY	MOST OR ALL ALARMS (ANNUNCIATORS) LOST		
11) FUEL HANDLING ACCIDENT		FUEL DAMAGE ACCIDENT WITH RELEASE OF RADIOACTIVITY TO CONTAINMENT OR FUEL HANDLING BUILDING	MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT OR FUEL HANDLING BUILDING	
12) HAZARDS TO PLANT OPERATIONS	HAZARDS BEING EXPERIENCED OR PROJECTED THAT AFFECT PLANT OPERATIONS	SEVERE HAZARDS BEING EXPERIENCED OR PROJECTED POTENTIALLY AFFECTING SAFETY SYSTEMS	OTHER SEVERE HAZARDS BEING EXPERIENCED OR PROJECTED WITH PLANT NOT IN COLD SHUTDOWN	
13) SECURITY THREATS	SECURITY THREAT OR ATTEMPTED SABOTAGE	ONGOING SECURITY COMPROMISE	IMMINENT LOSS OF PHYSICAL CONTROL OF PLANT	LOSS OF PHYSICAL CONTROL OF THE FACILITY
14) NATURAL EVENTS	NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED BEYOND USUAL LEVELS	SEVERE NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED	SEVERE NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED WITH PLANT NOT IN COLD SHUTDOWN	ANY MAJOR INTERNAL OR EXTERNAL EVENTS (E.G. FIRES, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
15) OTHERS	OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF PLANT OPERATING STAFF OR STATE AND/OR LOCAL OFFSITE AUTHORITIES OR REQUIRE PLANT SHUTDOWN UNDER TECHNICAL SPECIFICATION REQUIREMENTS AND INVOLVE OTHER THAN NORMAL CONTROLLED SHUTDOWN TRANSPORTATION OF CONTAMINATED INJURED INDIVIDUAL FROM SITE TO OFFSITE HOSPITAL	OTHER PLANT CONDITIONS EXIST WARRANTING PRECAUTIONARY ACTIVATION OF THE TSC AND/OR THE CRISIS MANAGEMENT CENTER	OTHER PLANT CONDITIONS EXIST WARRANTING ACTIVATION OF EMERGENCY CENTERS AND MONITORING TEAMS OR ISSUANCE OF A PRECAUTIONARY NOTIFICATION TO THE PUBLIC NEAR THE SITE	OTHER PLANT CONDITIONS EXIST FROM WHATEVER SOURCE THAT MAKE RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PERIOD POSSIBLE (E.G. ANY CORE MELT SITUATION)

TABLE D-6

SUMMARY OF GENERAL EMERGENCY

What Constitutes a General Emergency Condition? (See station specific procedures)

1. Actual or projected dose rates at site boundary ≥ 1 Rem/hr W.B.; $\geq 5 \frac{\text{Rem}}{\text{HR}}$ Thyroid
2. Loss of 2 or 3 fission product barriers with a potential loss of 3rd.
3. Loss of physical control of the facility.
4. Core melt sequence in progress.
5. Any major event (fire, earthquake, flood) substantially beyond design basis that could cause massive common damage to plant systems, resulting in 1-4 above.

Where is further detail on each of these 5 conditions available?

1. Station emergency plan - Section D.

What are our responsibilities following declaration of a General Emergency?

1. Inform State & Local officials, within 15 minutes of the declaration, of our recommendations for protective action.
2. Update offsite authorities and media on a regular basis.
3. Make senior technical and management staff available to consult with NRC and the State(s).
4. Provide meteorological data and dose estimates to offsite authorities via a dedicated individual.
5. Provide information on the release and any dose projections based on contingencies to NRC & offsite authorities.
6. Provide a formal closeout message and a written summary (within 8 hours) to NRC & offsite authorities upon class reduction or termination.

E. NOTIFICATION METHODS AND PROCEDURES

E.1 Response Organization Notification Procedures

A coordinated Emergency Message Format has been established for use by the Company's Nuclear Stations and the Crisis Management Center in transmitting information to and for notifications of county, state, federal agencies or other organizations. The format is shown in Table E-1. Use of this format includes verification procedures. The station emergency plans, Section E address notification procedures consistent with the emergency classification and action level scheme.

E.2 Activation of the Crisis Management Organization

This section describes the necessary communication steps to be taken to alert or activate the Crisis Management Organization for each emergency class described in Section D. (See Crisis Management Plan Implementing Plans for specific callout procedures.)

NOTIFICATION OF UNUSUAL EVENT

The actions required for this emergency class are performed by station personnel. Outside organizations (Nuclear Production Duty Engineer, NRC, State and local officials) are notified of the event for information. Unless deemed necessary by the Emergency Coordinator or Recovery Manager, the Crisis Management Plan is not activated for this emergency class.

If an Unusual Event occurs, a station representative calls the Nuclear Production Duty Engineer, the NRC, the State, and appropriate local officials. The Nuclear Production Duty Engineer notifies Corporate Communications and the Recovery Manager. (See Figure E-5.) The Corporate Communications representative notifies media representatives and public officials per established public information procedures.

ALERT, SITE EMERGENCY, AND GENERAL EMERGENCY

In these emergency classes, the alert or activation of the Crisis Management Organization is accomplished in a similar way. (See Figure E-1.) The Emergency Coordinator or his designee, contacts the Nuclear Production Duty Engineer. The Duty Engineer contacts the Recovery Manager and the appropriate members of the Recovery Manager's staff, and those staff members call the appropriate members of their teams.

For these three emergency classes, the station is responsible for the initial notification of appropriate offsite agencies and for activating the onsite Technical Support Center and onsite Operational Support Center. Further, the TSC staff is responsible for updating offsite agencies until the activation of the Crisis Management Center.

The Crisis Management Organization, upon their arrival at the CMC, will activate the Crisis Management Center and the Crisis News Center after completion of Figure E-3, Crisis Management Organization Activation Checklist.

The callout method within each Functional Area of the Crisis Management Organization is displayed within each groups' Implementing Plan.

The prearranged message format for giving information to alert/activate members of the Crisis Management Organization is shown in Figure E-2. The Recovery Manager considers which facility to activate according to the decision tree in Figure E-6.

E.3 Emergency Message Format - Initial Message to Outside Agencies

Table E-1 is the emergency message format for use at the Company's nuclear stations in providing emergency information to county and state agencies in North and South Carolina.

E.4 Emergency Message Formats - Followup Message To Outside Agencies

Table E-1 is used for followup notifications to state and county agencies, just as it is used for the initial notification. This form provides for transmittal of the following (if known and appropriate):

- Location of incident and name/telephone No. of caller
- Date/time of incident
- Class of emergency
- Type of release (airborne, liquid): actual or projected: estimated duration
- Chemical and physical form of release: estimates of relative quantities and concentrations of noble gases, iodines, and particulates
- Meteorological conditions
- Actual or projected dose rates downwind: projected integrated dose
- Licensee actions underway
- Recommendations for protective actions
- Request for any necessary offsite support
- Assessment of whether situation is improving or degrading

E.5 State and Local Organizations - Disseminating Public Information

The State and local governments have established means for disseminating public information over the EBS. (See State and Local plans).

E.6 Alert and Notification System

An alerting and notification system which meets the criteria of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1 is installed and operational at Oconee and McGuire Nuclear Stations. (See Appendix 3 of this plan.) Catawba Nuclear Station's system will be installed and operational prior to startup.

The systems at Oconee and McGuire consists of 50 sirens in each EPZ whose activation is controlled by the counties in the 10 mile area around the station. Catawba's system, due to the larger population in Rock Hill, includes 64 sirens.

Maps of the design coverages for the Oconee, McGuire, and Catawba siren systems and system descriptions are shown in Appendix 3.

E.7 Supporting Information For Public Information Messages

The portion of Table E-1 in which protective action recommendations are made assists the state and local authorities in preparing messages for the public's information via the EBS (Emergency Broadcast System).

EBS message formats are described in the North Carolina and South Carolina Emergency Plans.

Figure E-1

Alerting the Crisis Management Organization
For Alert, Site Area Emergency or General Emergency Conditions

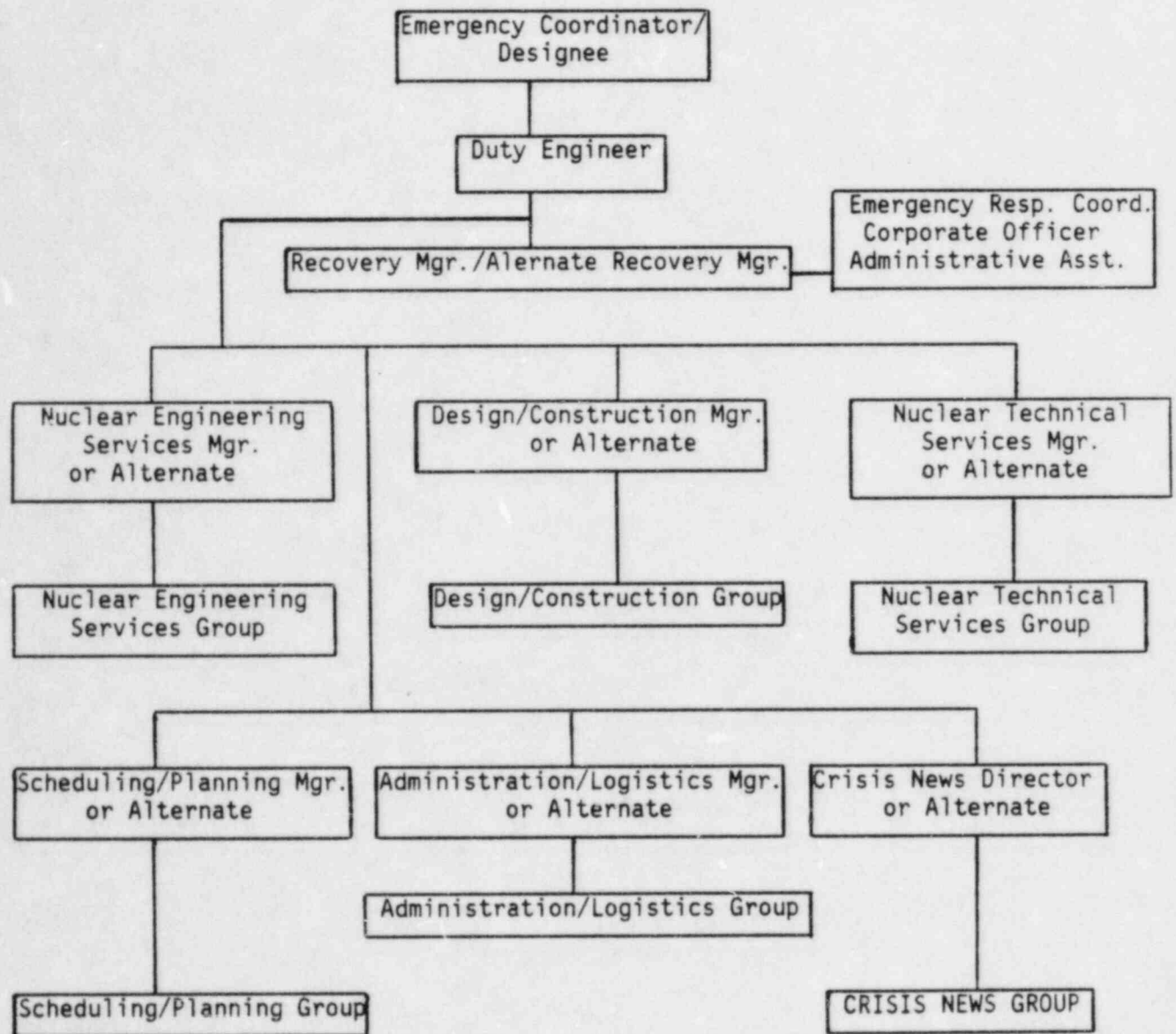


Figure E-2

Crisis Management Organization (CMO)
Emergency Activation Message

The Nuclear Production Duty Engineer is contacted by the Nuclear Station in an emergency with information as shown in Figure E-4. The Duty Engineer contacts the Recovery Manager with that information. If the CMO is to be activated, the Duty Engineer uses this format to contact at least one person from each group shown in Figure B-12 of the Crisis Management Plan. Each group in the CMO uses this format to alert its members.

Your name _____
Person who contacted you _____ Your Group _____
Persons you contacted with this message _____
_____. (If Any)

Message Format

1. This is _____ (caller's name).
2. I am notifying you of a drill /actual emergency at _____ Nuclear Station, Unit No. _____.
3. At this time the class of emergency is:

_____	Alert
_____	Site Area Emergency
_____	General Emergency
4. You are to activate your portion of the Crisis Management Organization and have them report to: _____ the Charlotte General Office
_____ the Oconee Training Center
_____ the Liberty Retail Office
5. Specific Instructions (if any) _____

6. Please return a copy of this completed format to the Emergency Response Coordinator.

Figure E-3

Crisis Management Organization
Activation Checklist

This checklist is to be completed by the Recovery Manager prior to informing the Station Emergency Coordinator that the Crisis Management Organization is ready to assume its responsibilities.

1. ☐ All groups are in place, with adequate representation, and ready to perform their roles.
2. ☐ Telephones and radios are operational. Dedicated phones and ringdown lines are open with speaker phones in place.
3. ☐ Tables and chairs are set up in accordance with CMC layout figure for the appropriate nuclear station.
4. ☐ Offsite Radiological Coordinator has been in contact with the Station Health Physicist and is prepared to take over contact with State & County Agencies. A person is designated for manning the "Red Phone" and for updating INPO and Notepad.
5. ☐ A contact for Senior Level Duke Power Company Management has been identified and is prepared to perform that function. The Scheduling/Planning Group is adequately staffed to keep the Recovery Manager appraised of critical trends and the plant condition.
6. ☐ Public Spokesman is present.
7. ☐ Each manager has prepared a list of who is present to represent their group and has provided a copy of that list to the A&L Manager.
8. ☐ Recovery Manager is up to date on station status and pertinent information. (See Table E-2 for turnover sheet)

Crisis Management Center activated at _____ hours on __/__/__ (Date).

Recovery Manager

Figure E-4

EMERGENCY MESSAGE FORMAT
Nuclear Station To
Nuclear Production Duty Engineer

Operating Unit Engineer/Duty Engineer shall contact:

Name: _____ Phone: (704) 373-5491
(Nuclear Production Duty Engineer)
Date: _____ Time: _____

Provide CMC Notification through the Nuclear Production Duty Engineer.

1. This is _____ at _____ Station.
(Name and Title)
2. This _____ is _____ is not a drill. An _____ Unusual Event _____ Alert
_____ Site Area Emergency _____ General emergency was declared by the
Emergency Coordinator at _____ on Unit number _____.
(Time)
3. Initiating condition: (Give as close to the emergency plan description
as possible together with station parameters used to determine emergency
status). _____

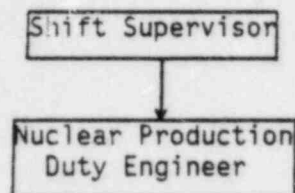
4. Corrective measures being taken: _____

5. There _____ have _____ have not been any injuries to plant personnel.
6. Release of radioactivity: _____ is taking place _____ is not taking place
and is, is not affecting the CMC.
7. NRC _____ Yes _____ No; State _____ Yes _____ No; Counties _____ Yes _____ No;
have been notified.
8. The Crisis Management Team should/should not be activated. Corporate
Communications & Company Management should be notified. (Unusual Event
Only) See Figure E-2 For Activation Information
9. I can be reached at _____ for follow-up information.
(Telephone number)
10. Additional Comments: _____

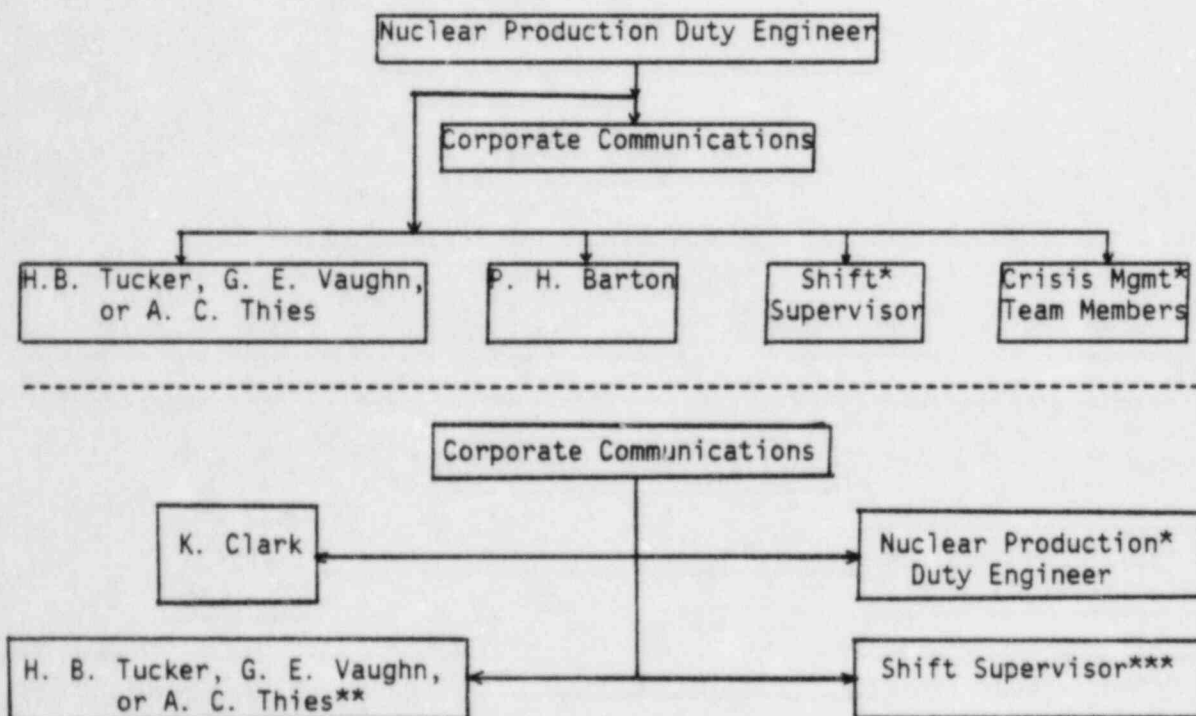
Figure E-5

Notification of Unusual Event
Communications Procedure - Station To General Office

Initial Calls (Station To General Office)



Followup Calls For Information



- * - Primary Interface (If necessary For Follow-Up Information)
- ** - Secondary Interface (If Information Other Than That Available From Primary Interface is Needed)
- *** - Tertiary Interface (If Primary or Secondary Interface Is Not Available)

Figure E-6

Recovery Manager's Facility Activation Considerations - Ocone

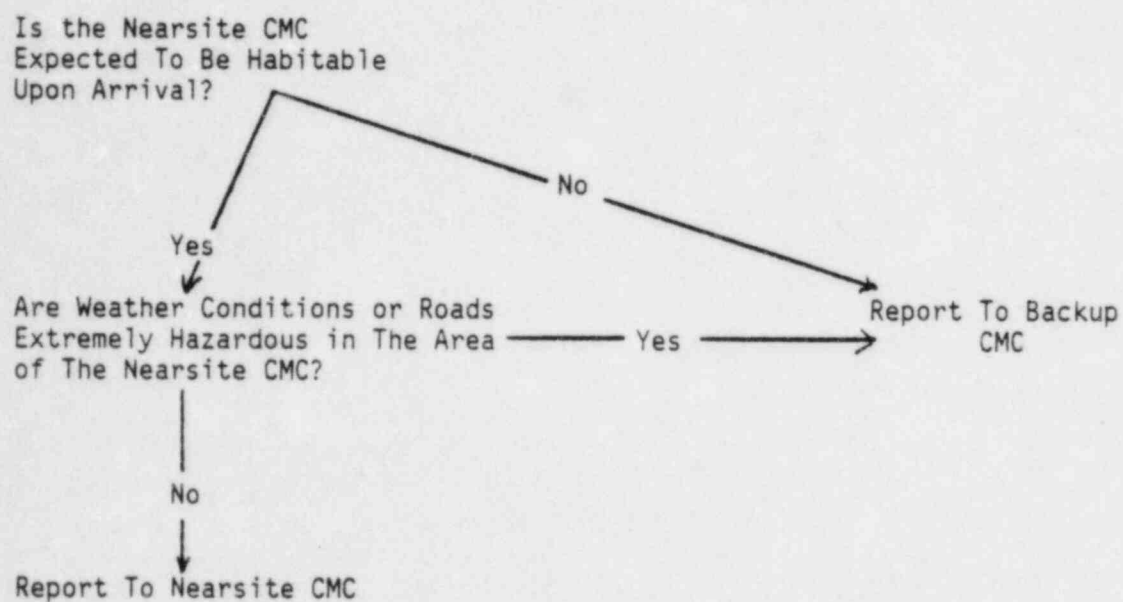


TABLE E-1

WARNING MESSAGE: NUCLEAR FACILITY TO STATE/LOCAL GOVERNMENT

Instructions:

A. For Sender:

1. Complete Part I for the Initial Warning Message.
2. Complete Parts I & II for followup messages.

RELEASE OF THIS MESSAGE APPROVED
BY THE RECOVERY MANAGER

(RECOVERY MANAGER)

(DATE/TIME)

B. For Receiver:

1. Record the date, time and your name in the area below.
2. Authenticate this message by verifying the code word or by calling back to the facility. (See Part I .5)

Time: _____ Date: _____

Message Received By: _____

PART I

1. This is: _____
(Insert name of facility)
2. My name is: _____
3. This message (number__):
 _____ (a) Reports a real emergency.
 _____ (b) Is an exercise message.
4. My telephone number/extension is: _____
5. Message authentication: _____
(Verify code word or call back to the facility)
6. The class of the emergency is: _____ (a) Notification of Unusual Event
 _____ (b) Alert
 _____ (c) Site Emergency
 _____ (d) General Emergency
7. This classification of emergency was declared at: _____ (a.m./p.m.) on _____ (date).
8. The initiating event causing the emergency classification is: _____

9. The emergency condition: _____ (a) Does not involve the release of radioactive materials from the plant.
 _____ (b) Involves the potential for a release, but no release is occurring.
 _____ (c) Involves a release of radioactive material.

10. We recommend the following protective action:

- _____ (a) No protective action is recommended at this time.
- _____ (b) People living in zones _____ remain indoors with the doors and windows closed.
- _____ (c) People in zones _____ evacuate their homes and businesses.
- _____ (d) Pregnant women and children in zones _____ remain indoors with the doors and windows closed.
- _____ (e) Pregnant women and children in zones _____ evacuate to the nearest shelter/reception center.
- _____ (f) Other recommendations: _____

11. There will be:

- _____ (a) A followup message
- _____ (b) No further communications

12. I repeat, this message:

- _____ (a) Reports an actual emergency
- _____ (b) Is an exercise message

13. RELAY THIS INFORMATION TO THE PERSONS INDICATED ON YOUR ALERT PROCEDURE FOR AN INCIDENT AT A NUCLEAR FACILITY.

END OF INITIAL WARNING MESSAGE

PART II

1. The type of actual or projected release is:

- _____ (a) Airborne
- _____ (b) Waterborne
- _____ (c) Surface spill
- _____ (d) Other

2. The source and description of the release is: _____

3. _____ (a) Release began/will begin at ____ a.m./p.m.; time since reactor trip is ____ hours.
- _____ (b) The estimated duration of the release is ____ hours.

4. Dose projection base data:

Radiological release: _____ curies, or _____ curies/sec.

Windspeed: _____ mph

Wind direction: From _____°

Stability class: _____ (A,B,C,D,E,F, or G)

Release height: _____ Ft.

Dose conversion factor: _____ R/hr/Ci/m³ (whole body)

_____ R/hr/Ci/m³ (Child Thyroid)

Precipitation: _____

Temperature at the site: _____°F

5. Dose projections:

Dose Commitment

Distance	Whole Body Rem/hour	(Child Thyroid) Rem/hour of inhalation
Site boundary		
2 miles		
5 miles		
10 miles		

Projected Integrated Dose In Rem

Distance	Whole Body	Child Thyroid
Site Boundary		
2 miles		
5 miles		
10 miles		

6. Field measurement of dose rate or contamination (if available): _____

7. Emergency actions underway at the facility include: _____

8. Onsite support needed from offsite organizations: _____

9. Plant status:

(a) Reactor is: not tripped/tripped

(b) Plant is at: _____ % power/hot shutdown/cold shutdown/cooling down

(c) Prognosis is: stable/improving/degrading/unknown.

10. I repeat, this message:

_____ (a) Reports an actual emergency.

_____ (b) Is an exercise message.

11. Do you have any questions?

END OF FOLLOW-UP MESSAGE**

NOTE: Record the name, title, date, time, and warning point notified. (Senders)

Record the name title, date, time, and persons notified per alert procedure. (Receivers)

1. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

2. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

3. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

4. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

5. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

6. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

7. _____
(name) _____ (title)

_____ (date) _____ (time) _____ (warning point)

Table E-2

Recovery Manager Turnover Sheet

Before activating the CMC, the Recovery Manager must receive a turnover from the Emergency Coordinator. The Recovery Manager is guided by this form in performing the turnover but will use his best judgment in completing the evaluation of plant conditions.

Time: _____ Date: _____ Plant & Unit affected _____

Status of other units _____ Level of emergency _____

List the problems ongoing at this time:

- 1.
- 2.
- 3.

Status of offsite and onsite power and supplies (including diesels):

Onsite and offsite radiological status is as follows:

Have any zones been recommended for evacuation or sheltering?

Has the station conducted a site assembly and/or evacuation?

At what time was the last offsite notification made? _____

Are field monitoring teams deployed? _____ If yes, how many? _____

F. EMERGENCY COMMUNICATIONS

F.1 CMC Communications Plan

F.1.a 24 Hours Per Day Notification Capability

In the event of an emergency, the station provides 24 hour capability for notification to and activation of the State/local emergency response network. This capability lies with the control room operators and their use of primary telephone contact or through the backup radio system. All points that form a primary part of the communications line are manned 24 hours per day (i.e., control room, county warning points, state warning points). The Station Plan, Section F, describes the station emergency communications system.

F.1.b Communication With State/Local Governments

The Crisis Management Center has primary and backup means of contacting states/counties in the 10 mile EPZ. Telephone lines within the Offsite Radiological Coordinator's office and the Recovery Manager's office are the primary means of communication. A backup radio system is also installed in the Coordinator's office. The radio system can contact monitoring teams in the field, county EOC's, and the state EOC. The state FEOC (Forward Emergency Operations Center) and county warning points can be contacted from the Offsite Radiological Coordinator's office through a selective signaling system (telephone), via dedicated telephone lines of the emergency communications system, or via radio. The selective signaling is on the ~~Duke~~ microwave system tied to short leased lines from Southern Bell. The circuit allows intercommunication between Duke and counties, State(s) and counties, and among the counties themselves. Further 3 lines to N.C. and to S.C. are dedicated for specific tasks.

- Recovery Manager to Director Emergency Preparedness.
- Special Assistance Coordinator to Rad. Health Group.
- Crisis News Director to State PIO Representative.

F.1.c Communications With Federal Organizations

The Offsite Radiological Coordinator has the capability to contact DOE-Savannah River for assistance through the use of telephone circuits of the CMC emergency communications system.

F.1.d Communications Between Station, CMC, EOC, Local EOC's, and Monitoring Teams

The CMC is able to be in contact with contiguous state/local EOC's and radiological monitoring teams as described in F.1.b. Communications with the Technical Support Center and Control Room are available via emergency telephone lines reserved within the CMC or by the backup radio system. Communications with the Operational Support Center is via the reserved emergency telephone lines in the CMC.

F.1.e Activation of the Crisis Management Organization

Provisions for notifying, alerting, and activating personnel within each of the Functional Areas are described in the individual group's Implementation Plan. Section E.2 describes the means for "activation of the Crisis Management Organization".

F.1.f Communications Between NRC Headquarters, NRC Regional Office, CMC, and Monitoring Teams

Communications between the CMC and NRC Headquarters is via the Emergency Notification System (E.N.S.) in the Recovery Manager's office and the H.P. Network Phone in the Offsite Radiological Coordinator's office. The Communications link between the CMC and NRC Region II in Atlanta, Georgia is via the ENS. Communications within the CMC to field teams exist. The system is radio. The radio system and communications system for Oconee and McGuire/Catawba is described in Crisis Management Plan Implementing Procedures 5.3.10 and 5.3.11, respectively.

F.2 Medical Support Communications

The Nuclear Station Emergency Coordinator is responsible for requesting assistance from the local hospitals/rescue squads for any injured individuals on site. This person is able to contact these groups via telephone or indirectly via radio. The Recovery Manager is responsible for requesting assistance from these support organizations in the event of an injury to CMC personnel. A communications link between the station and the medical support services exists and is described in the Station emergency plan. The CMC would use telephone lines in the Administration & Logistics Group Room for the call.

F.3 Communications System Testing - Crisis Management Center

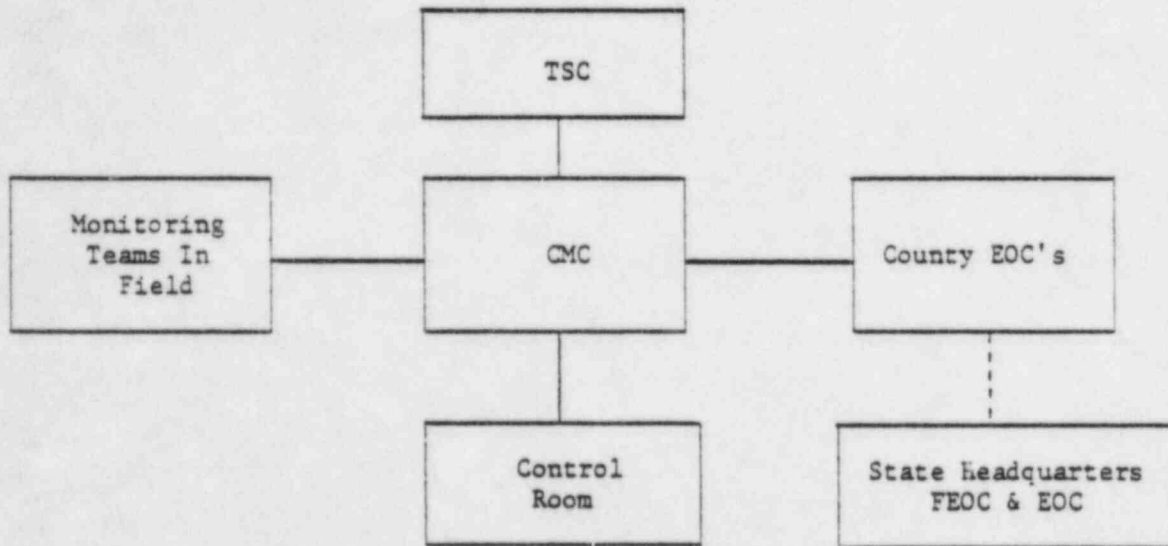
The CMC communications system will be exercised fully during the annual exercise and will be tested during other drills involving CMC personnel.

F-3

Rev. 5
July 9, 1982

Figure F-1 (a)

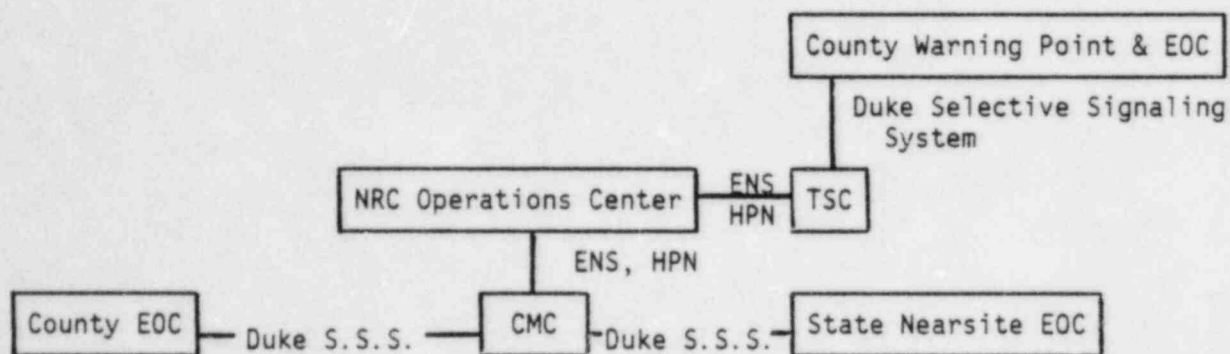
Crisis Management Center Communications
Radio System



- - - - - via a different radio frequency

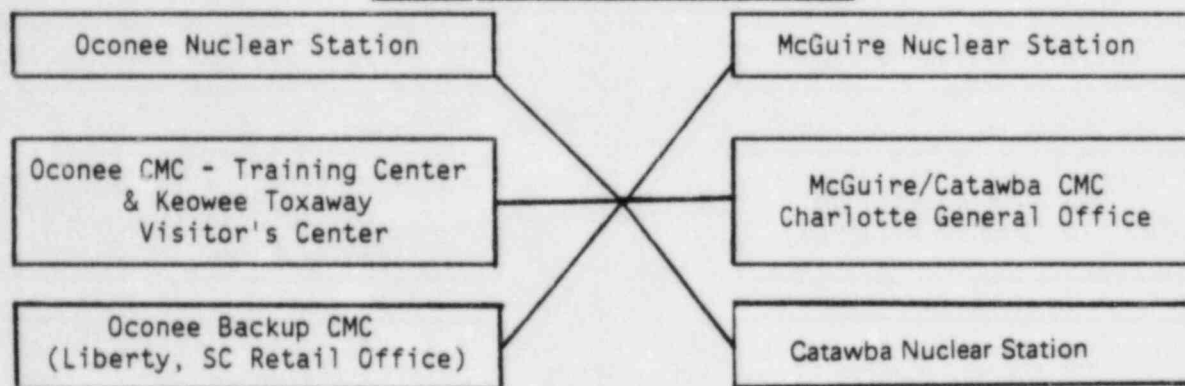
Figure F-1 (b)

Crisis Management Center Communications
Selective Signaling Phone System & NRC Ringdown Systems



E.N.S. - Emergency Notification System (Red Phone)
H.P.N. - Health Physics Network

Dispatch Microwave Phone System



NOTE: All are linked in Duke Power Company's Microwave system.

Figure F-1 (c)

Crisis Management Center Communications
Phone System Dedicated For Emergency Use

CMC (Facility Switchboard Extensions and Outside Lines To Local
Switching Station)

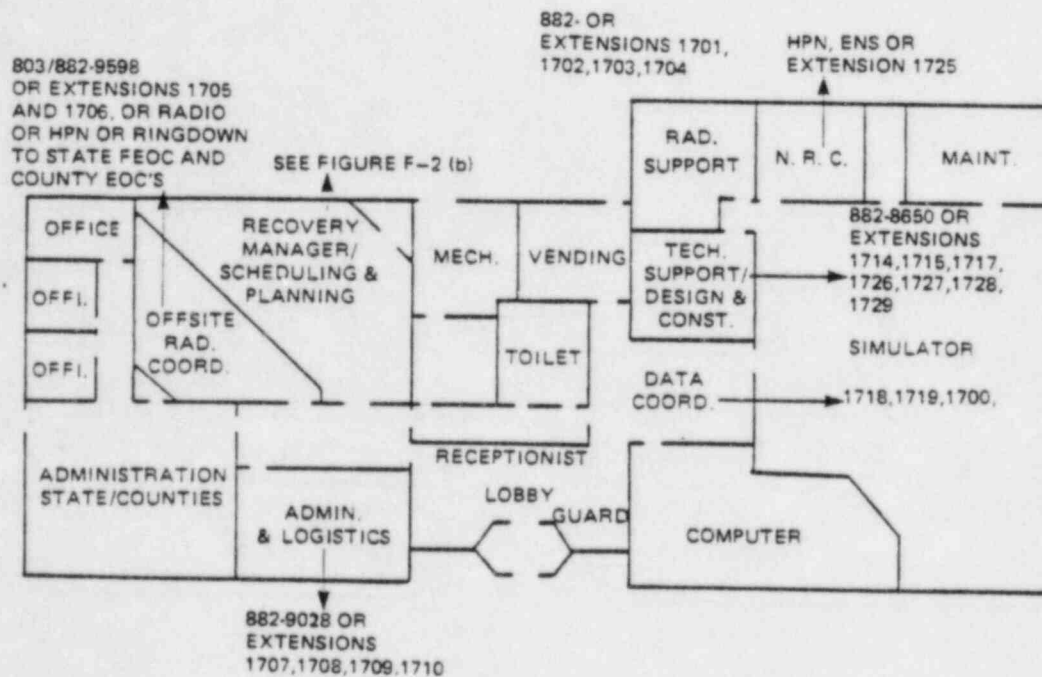
To: NRC, FEMA, Corporate Headquarters, Station, County Warning
Points and EOC's, State EOC and FEOC, INPO, ANI, et. al.

See Tables F-1 and F-2 for specific extensions and outside lines.

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE F-2(a)

NEARSITE CRISIS MANAGEMENT CENTER
OCONEE TRAINING CENTER
COMMUNICATIONS LAYOUT



NOTE: EXTENSIONS ARE OFF OF

882-5363	859-0108
882-5368	859-0113
882-5369	859-0116
882-5370	224-8376
882-5371	868-2717
882-5621	

(AREA CODE IS 803)

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

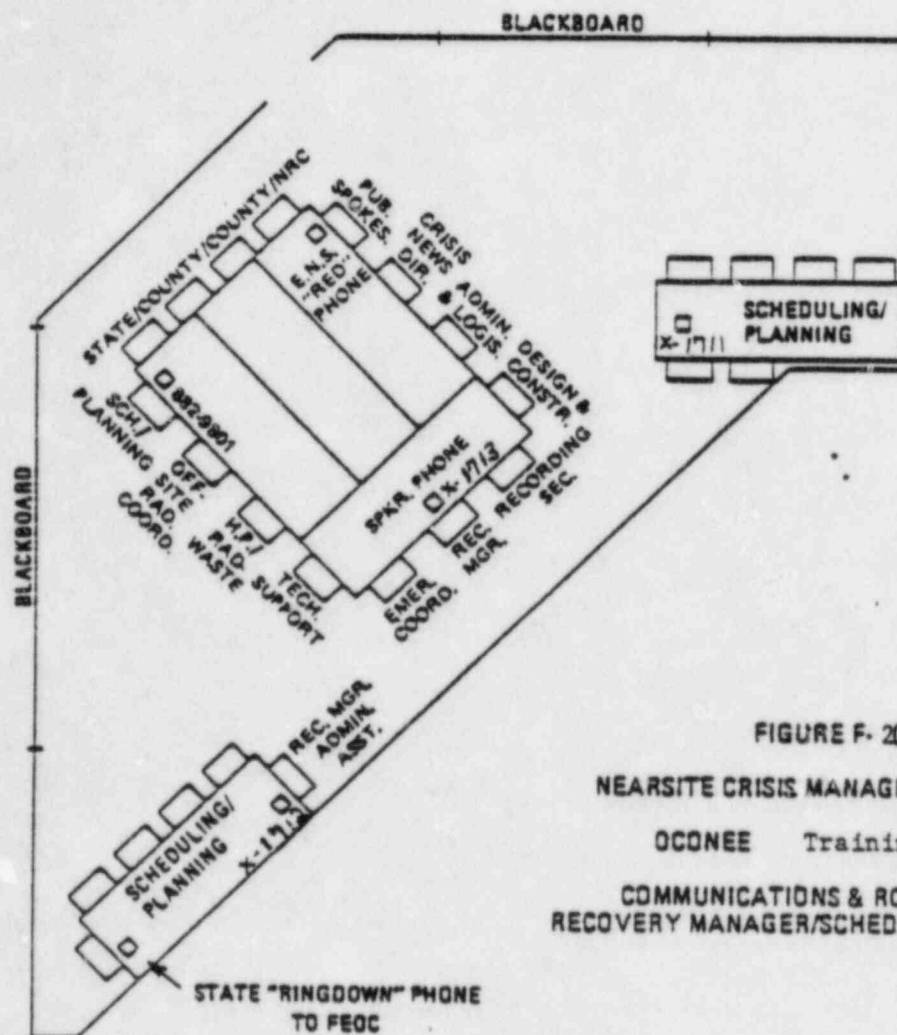


FIGURE F- 2(b)
NEARSITE CRISIS MANAGEMENT CENTER
OCONEE Training Center
COMMUNICATIONS & ROOM LAYOUT
RECOVERY MANAGER/SCHEDULING & PLANNING

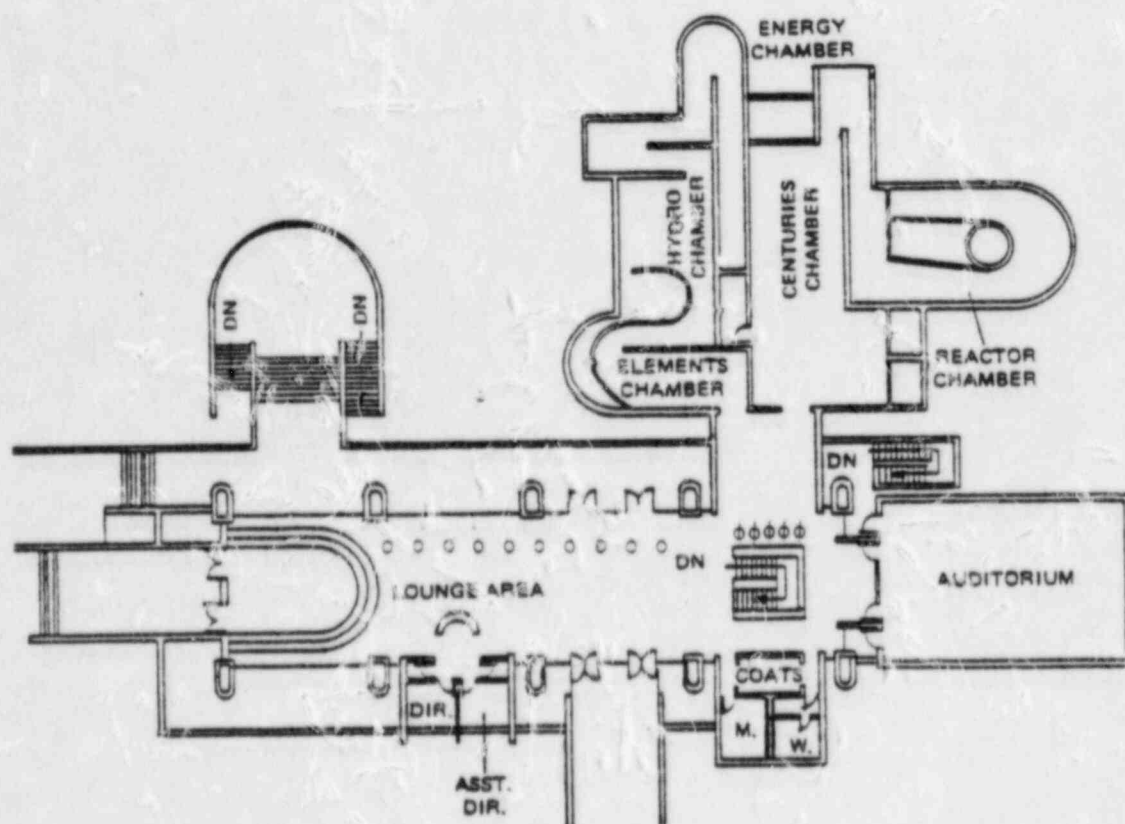
DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE F-2 (c)

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (UPPER LEVEL)
MEDIA AREA-NEWS CONFERENCES, PHONES

o - 10 Seneca lines cabled but not active 882-6529, 6530, 6533, 6535, 6538, 6540, 6541, 6543, 6544

φ - 5 Seneca lines in service 882-6514, 6515, 6519, 6520, 6522

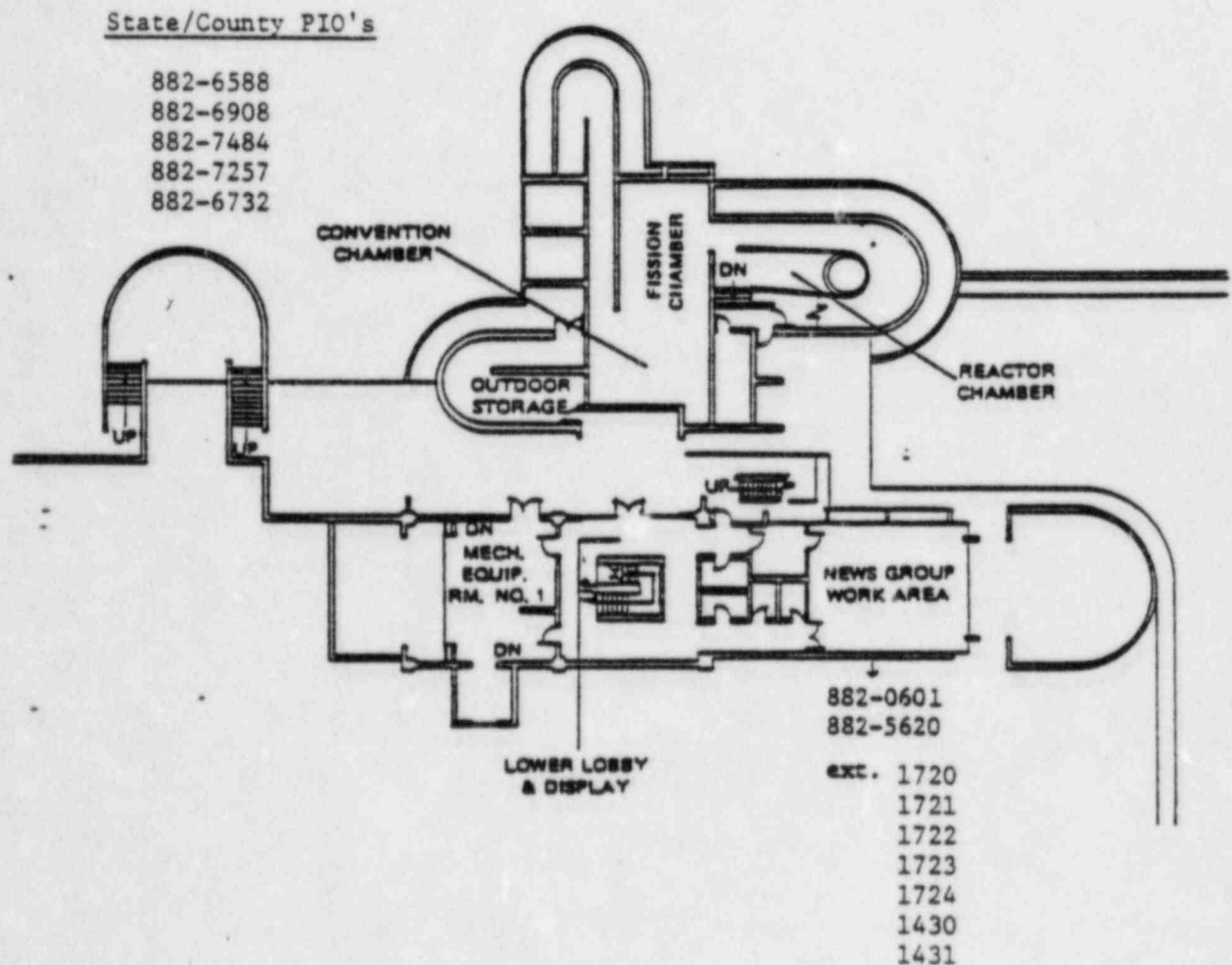


UPPER LEVEL FLOOR PLAN

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

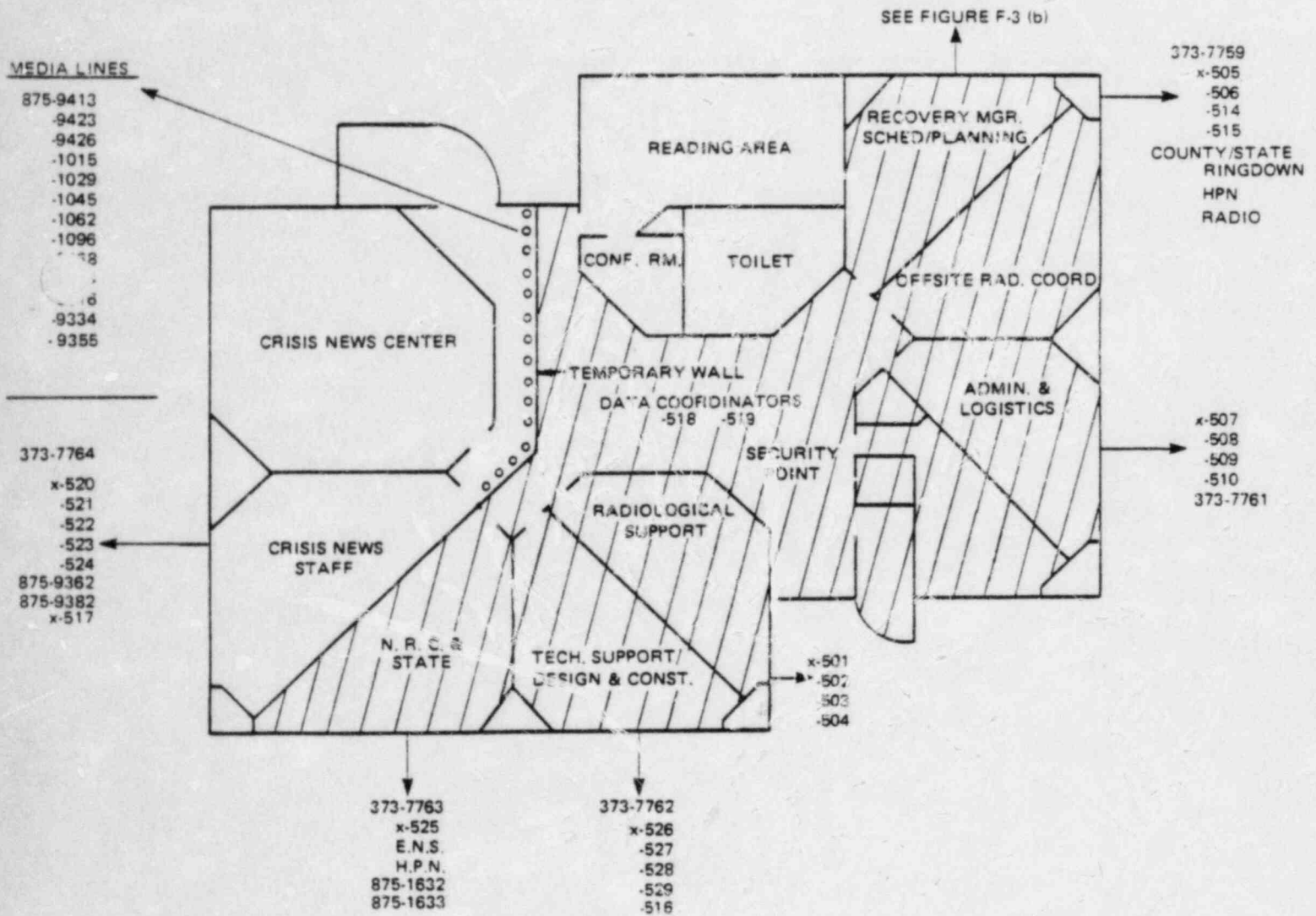
FIGURE F-2 (d)

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (LOWER LEVEL)
CRISIS NEWS GROUP WORK AREA



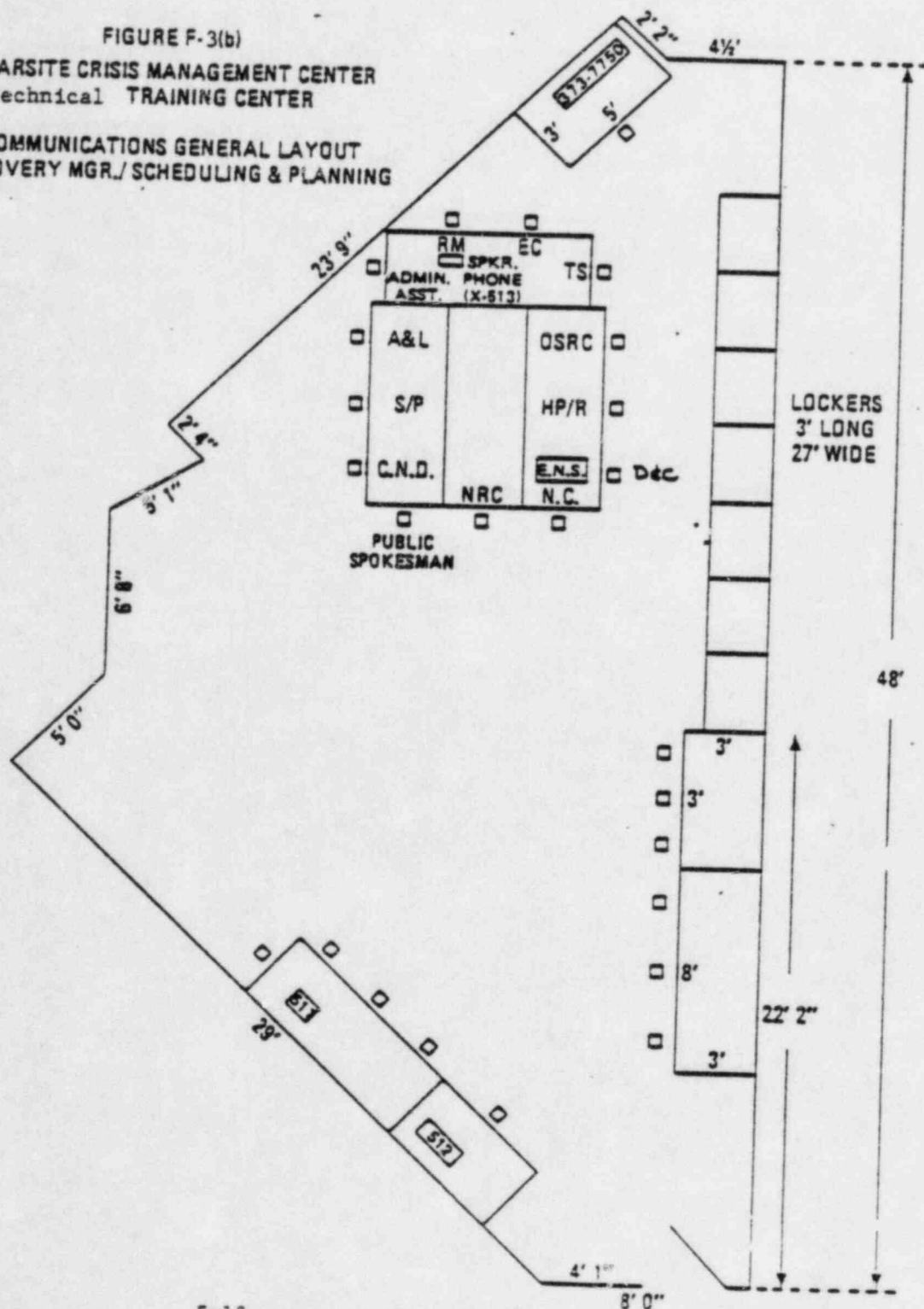
DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
McGUIRE NUCLEAR STATION

FIGURE F-3 (a)
McGUIRE NUCLEAR STATION NEARSITE CRISIS MANAGEMENT CENTER
TECHNICAL TRAINING CENTER
(UPPER LEVEL)



DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES

FIGURE F-3(b)
NEARSITE CRISIS MANAGEMENT CENTER
Technical TRAINING CENTER
COMMUNICATIONS GENERAL LAYOUT
RECOVERY MGR./ SCHEDULING & PLANNING



G. PUBLIC EDUCATION AND INFORMATION

G.1/G.2 Public Education and Information Program

Duke Power Company will, on an annual basis, review and revise, as necessary, the public's emergency information brochures for Oconee, McGuire and Catawba Nuclear Stations (Attachments G-1, G-2, and G-3, respectively). These brochures will be distributed to the people within the 10 mile area of the plant as well as to hotels, motels, gas stations, and other transient areas. The brochures provide information on radiation, contact for additional information, protective measures (e.g., evacuation routes and relocation centers/shelters, respiratory protection, and special needs of the handicapped). The Station Emergency Coordinator is responsible for distributions to special areas.

G.3.a Crisis News Group - Location and Contacts

Public information during an emergency at Oconee, McGuire, or Catawba will be provided at the Crisis News Center (CNC). The CNC for McGuire and Catawba is located at the O. J. Miller Auditorium in Charlotte. The CNC for Oconee is located at Keowee-Toxaway Visitor's Center. Layouts of both News Areas are shown in Figures H-7 for Oconee and H-8 for McGuire and Catawba. The Crisis News Director and Public Spokesman are the principal contacts for the news media.

In an emergency, should the CMC and CNC be evacuated, the Crisis News Organization, working out of the General Office will coordinate any public information releases with the Emergency Coordinator in the TSC. Until the CMC has been reestablished at the backup location, the Emergency Coordinator becomes the key decisionmaker in the Company's emergency response effort. When the CMC is reestablished, the Recovery Manager assumes responsibility for overall emergency response.

G.3.b Crisis News Center - Space

The CNC's at Oconee, McGuire and Catawba are capable of accommodating 100 - 300 news media personnel.

G.4.a Public Spokesman

The Public Spokesman for Duke Power Company will be the one individual designated to provide the Company's information to the media. The persons filling this role on a primary or alternate basis are described in the Crisis News Group Implementing Plan.

G.4.b Spokesperson Information Exchange

The Crisis News Director will with the consensus of outside agencies, establish a timetable for joint news conferences at which time designated spokespersons will exchange information on operations and the situation at hand. Prior to these conferences, designated spokespersons will briefly meet to review the situation.

G.4.c Rumor Control

The Crisis News Director and Public Spokesman will, in their conferences with the spokesmen of other agencies, determine if any rumors are known to be circulating. If so, a coordinated plan and effort will be made by the group to deal with the misinformation and specifically correct it in the news conference.

G.5 News Media Training Sessions

A media training session will be conducted annually, just prior to the annual emergency preparedness exercise. This training session will cover aspects of emergency planning, reactor operations, radiation information, and points of contact in an emergency.

H. EMERGENCY FACILITIES AND EQUIPMENT

H.1/H.2/H.3 Technical Support Center (TSC), Crisis Management Center (CMC), OSC - Operations Support Center, Crisis News Center. The layout of the nuclear stations and their response facilities is shown in figure H-1.

Control Room

The Control Room is utilized for evaluation and control of the initial phase of an emergency, including corrective actions and notification of offsite agencies as necessary prior to the establishment of other emergency centers. The Control Room could also serve as the alternate location for the Technical Support Center.

The Control Room has redundant (telephone and alternate) two-way communications with the Crisis Management Center, corporate headquarters and appropriate offsite support agencies as well as two-way communications with the Operations Center.

Technical Support Center

The onsite Technical Support Center (TSC) is utilized for evaluation of plant status by knowledgeable personnel in support of operations during an emergency situation. This center will also be utilized to direct the onsite and initial offsite aspects of an emergency. Anticipated occupants are the Station Manager, station superintendents, advisors, and representatives from the station's health physics, chemistry, performance, instrument and electrical and maintenance groups, the NSSS supplier, and the Nuclear Regulatory Commission.

This center has the following capabilities:

1. Redundant two-way communication with the Control Room, the Crisis Management Center, and the Nuclear Regulatory Commission Operations Center; telephone communication with the NSSS supplier.
2. Monitoring for direct radiation and airborne radioactive contaminants in the TSC.
3. Display, printout or trend record of data necessary to assess safety systems status and in plant and offsite radiological parameters. This capability is provided via each unit's operator aid computer and is independent of control room actions.
4. Ready access to as-built plant drawings such as general arrangements, flow diagrams, electrical one-lines, instrument details, etc.
5. Habitability to the same degree as the Control Room during postulated radiological accidents.

The Technical Support Centers are located as follows:

Oconee: Auxiliary Building elevation 822 -
work areas adjacent to Unit 1, 2 Control Room

McGuire: Service Building elevation 767 -
rooms 911, 912, 913, 914, - offices south
of and adjacent to computer room.

Catawba: Service Building elevation 594
Layouts of these facilities are available in the Nuclear Station
Emergency Plans, Section H.

Operational Support Center

The Operational Support Center (OSC) is the place designated for operations support personnel to report in an emergency situation. This center may be used as a briefing area for station personnel in preparation for work assignments.

The OSC has two-way communications with the Control Room.

The OSC's are located as follows

Oconee: I&E Lab. Oconee 3 Control Room Area
McGuire: Operator's kitchen area, Service Building elevation 767
Catawba: Control Room Office Area (See Station Plan)

Layouts of these facilities are available in the Nuclear Station Emergency Plans, Section H.

Crisis Management Center (i.e. EOF)

The Crisis Management Center (CMC) is utilized for direction and control of all emergency and recovery activities, with emphasis on the coordination of offsite activities such as dispatching mobile emergency monitoring teams, communications with local, State and Federal agencies, and coordination of corporate and other outside support. Anticipated occupants are the Recovery Manager and his advisors and staff, clerical support, crisis news representative and appropriate local, State and Federal agency representatives.

The CMC has redundant two-way communications with the Technical Support Center, Control Room and appropriate offsite support agencies.

The CMC's are located as follows:

Oconee: Oconee Training Center (near site) and Charlotte General Office (for technical response groups).

McGuire: Charlotte General Office

Catawba: Charlotte General Office

The McGuire/Catawba CMC and Oconee CMC layouts are shown on Figures H-1 and H-2.

Alternate Crisis Management Center

Depending upon the severity of the accident, it may become necessary to temporarily relocate the Crisis Management Center functions at Oconee. The Alternate Crisis Management Center is designated for this potential need. (See Figure H-4 for Oconee's backup facility.

The Alternate Crisis Management Centers are located as follows:

Oconee: Liberty Retail Office,
Liberty, S. C. (See Figure H-4)

Crisis News Center

The Crisis News Center is utilized for the origination of all briefings and interviews. Anticipated staffing Crisis includes the News Director, industry and government representatives and support personnel. News media personnel can be accommodated for press conferences, etc. (See Figures H-5 to H-6)

The Crisis News Center has two-way communications with the Crisis Management Center and corporate headquarters.

The Crisis News Centers are located as follows:

Oconee: (See Figures H-5 (a) and H-5 (b))
Keowee-Toxaway Visitors Center
Liberty City Hall - Backup Crisis News Center

McGuire: O. J. Miller Auditorium - Duke Power Electric Center -
Charlotte, N.C.

Catawba: O. J. Miller Auditorium - Duke Power Electric Center -
Charlotte, N.C.)

Trailer City

Temporary quarters for additional support personnel called to respond will be established as necessary at the time of the emergency in a near-site "trailer city". Space for 25-30 trailers and mess facilities is provided; power and telephone services will be provided at the discretion of an under the direction of the Administration and Logistics Manager.

"Trailer City" locations are as follows:

Oconee: Keowee-Construction Yard, ~1600 feet east
of 525KV switchyard (if needed)

McGuire: Parking lot area at Technical Training Center (if needed)

Local, State and Federal Agency Emergency Centers

Emergency Operations Centers are established for use by local, State and Federal agencies. These centers are described in the appropriate agency emergency plans and are located as follows:

	<u>Local</u>	<u>State</u>
Oconee	<ul style="list-style-type: none">• Oconee County Law Enforcement Center, Walhalla, SC• Pickens County Courthouse, Pickens, SC	National Guard Armory, Clemson, SC
McGuire	<ul style="list-style-type: none">• Iredell County County Agriculture Building, Statesville, NC• Mecklenburg County Charlotte-Mecklenburg Law Enforcement Center Charlotte, NC• Gaston County Gaston County Police Department Gastonia, NC• Lincoln County Lincoln County Courthouse Lincolnton, NC	N. C. Air National Guard facility at Douglas Municipal Airport, Charlotte NC

	<u>Local</u>	<u>State</u>
McGuire	• Catawba County Public Safety Building Newton, NC	
Catawba	• Mecklenburg County Mecklenburg County Law Enforcement Center Charlotte, N.C.	N.C. Air National Guard facility at Douglas Municipal Airport, Charlotte, N.C.
	• Gaston County Gaston County Police Department Gastonia, N.C.	Clover, S.C. Armory (S.C. Forward Emergency Operations Center)
	• York County York County Emergency Center Rock Hill, S.C.	

H.4 Timely Activation and Staffing of the CMC

Timely activation and staffing of the Crisis Management Center is important to allow the Nuclear Station staff the ability to correct the situation with minimal interference from outside organizations. The Station Emergency Coordinator will perform the role and function of the Recovery Manager until activation of the CMC has taken place. For Oconee, McGuire and Catawba the CMC Organization will be alerted and activated for Site Area Emergency and higher emergency class situations. In an Alert, the Recovery Manager and Emergency Coordinator will determine the need to activate the CMC. This will enable the facilities to be staffed and activated in timely fashion. Further, the callout procedures established in each functional area will allow timely alerting of the Crisis Management Organization.

H.5/H.6 Assessment Actions

This section describes the methodologies and techniques that are used by the station personnel and the Crisis Management personnel to assess the emergency. The assessment actions provide reasonable assurance that the magnitude of releases of radioactive materials can be determined, that the magnitude of any resulting radioactive contamination can be determined, that projected exposure to persons onsite or offsite can be estimated, and that emergency action levels specified can be determined, all in a timely manner.

If an emergency situation occurs at a station, the station personnel continually monitor station parameters with regard to limits and surveillance requirements specified in the appropriate Technical Specifications, Operating Procedures, and Emergency Procedures. These parameters will affect the emergency classification and therefore affect decisions implementing specific emergency measures. In addition to monitoring station parameters, radiological surveys may be used to verify, augment and/or delineate the assessment of the emergency.

Station parameters are monitored by surveillance of control room instrumentation as follows:

1. Natural phenomena instrumentation to monitor wind speed and direction, temperature, and vertical temperature gradient; condenser intake level; and seismic activity.
2. Radiological instrumentation to monitor process and effluent systems.
3. Non-radiological instrumentation to monitor containment integrity, including reactor coolant pressure, temperature flows, and water levels; containment pressure, temperature, and water levels; and status of equipment.
4. Fire detection devices located throughout the station.

Radiological surveys may be used to evaluate radiation hazards.

1. In-station surveys to monitor for radiation hazards from station equipment and systems.
2. Site-boundary surveys to determine if emergency is confined to the site boundary.
3. Environment surveys to evaluate the extent of the emergency by use of short term and long term assessment.
 - a. Short-term assessment: A rapid survey of areas downwind of the station to determine the extent and magnitude of the releases of radioactive materials to the environment.
 - b. Long-term assessment: An extensive survey of offsite areas to determine the extent of contamination resulting from the releases of radioactive material.

In a particular emergency situation, any or all of the above-mentioned assessment actions may be utilized.

Short and long term radiological assessments are provided through various means. Monitoring teams in the field (Duke, state, and local where applicable) have the capability to determine impacts from both radiological and environment samples. Further, as described in station Emergency Plan Implementing Procedures, a series of TLD's and other detection devices have been placed in the surrounding area and provide data on any releases. The station's access to laboratory facilities would be applicable to the CMC as well.

H.7 Monitoring Equipment

The Nuclear Station Emergency Plan Implementing Procedures describe monitoring equipment available for use in an emergency. Also, Implementing Procedure 5.3.16 (Quarterly Inventory) describes equipment maintained for use by the HP staff of the CMC when responding to Ocone.

H.8 Meteorology Instrumentation and Procedures

The Nuclear Station Emergency Plan addresses the meteorological instrumentation and procedures which satisfy the criteria of NUREG-0654, Appendix 2. Figures H-21 and H-22 describe the meteorological measurements system for Oconee and McGuire/Catawba, respectively. Appendix 2 details the capability of each system.

H.9 Operations Support Center (OSC)

The OSC is described in Section H of the Station Emergency Plan.

H.10 Emergency Equipment/Instrumentation Inspection, Inventory, Operational Check, Calibration

Crisis Management Plan Implementing Procedure 5.3.16 describes the emergency equipment stored for use by the Team in an incident. This equipment falls in several areas:

- Communications
- Decisional Aids
- HP equipment for Oconee response

This equipment will be inventoried, calibrated (as appropriate), and operationally checked on a quarterly basis.

H.11 Emergency Kits

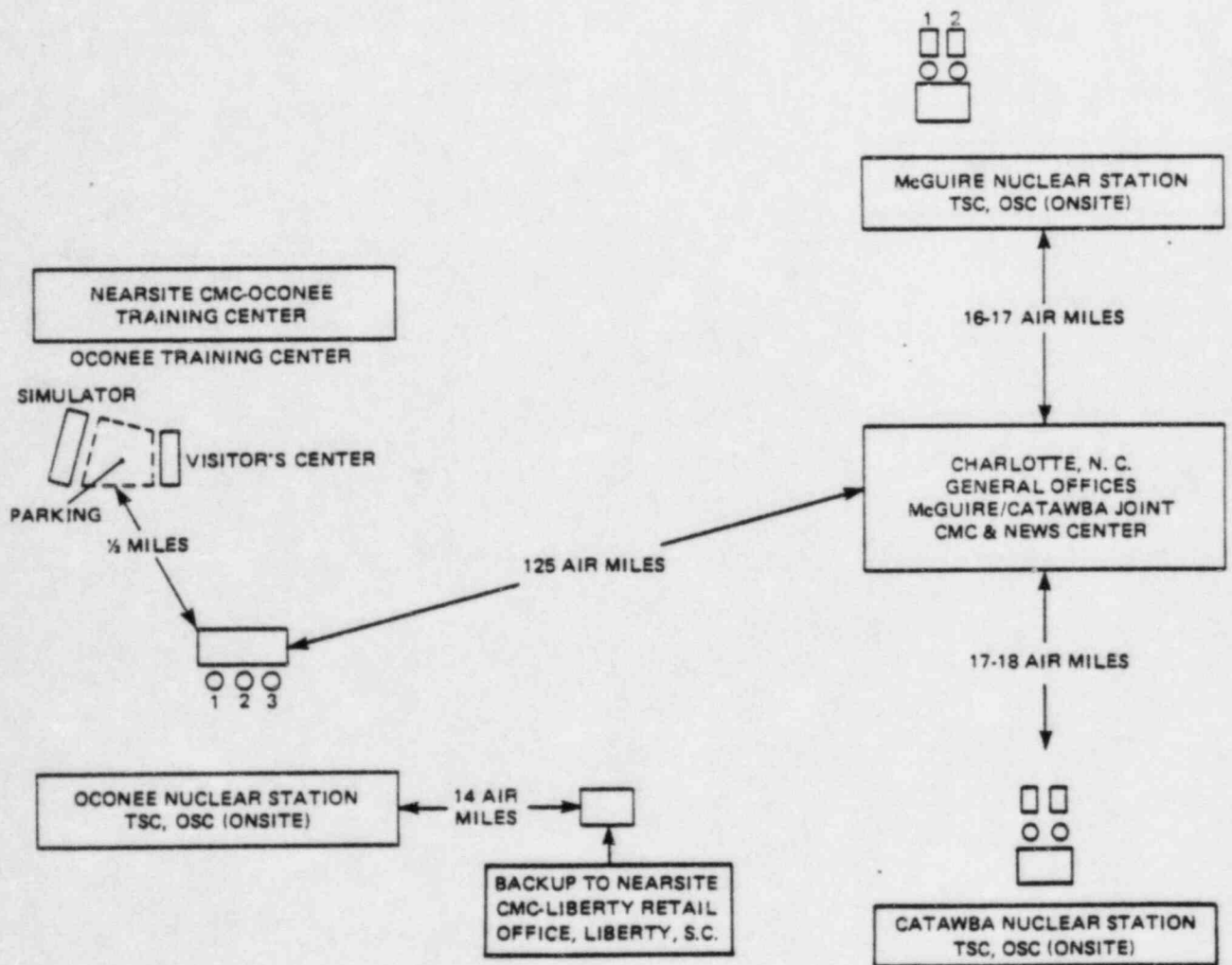
The equipment described above and in procedure 5.3.16 is available for use in an emergency.

H.12 Receipt and Analysis of Field Monitoring Data

Duke Power Company's Crisis Management Center (Offsite Radiological Coordinator) will be the central point for the receipt and analysis of field monitoring data and sample media collected by Duke personnel. Resources exist within the organization to evaluate the information and make recommendations based upon the evaluations. The Offsite Radiological Coordinator's group will perform these evaluations and make recommendations to the Recovery Manager for protective actions. The Recovery Manager (upon Crisis Management Center activation) is the individual responsible for making protective action recommendations to offsite agencies after activation of the CMC. (See Section B.4, "Protective Action Recommendations - Station Emergency Coordinator/Recovery Manager".)

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES

FIGURE H-1

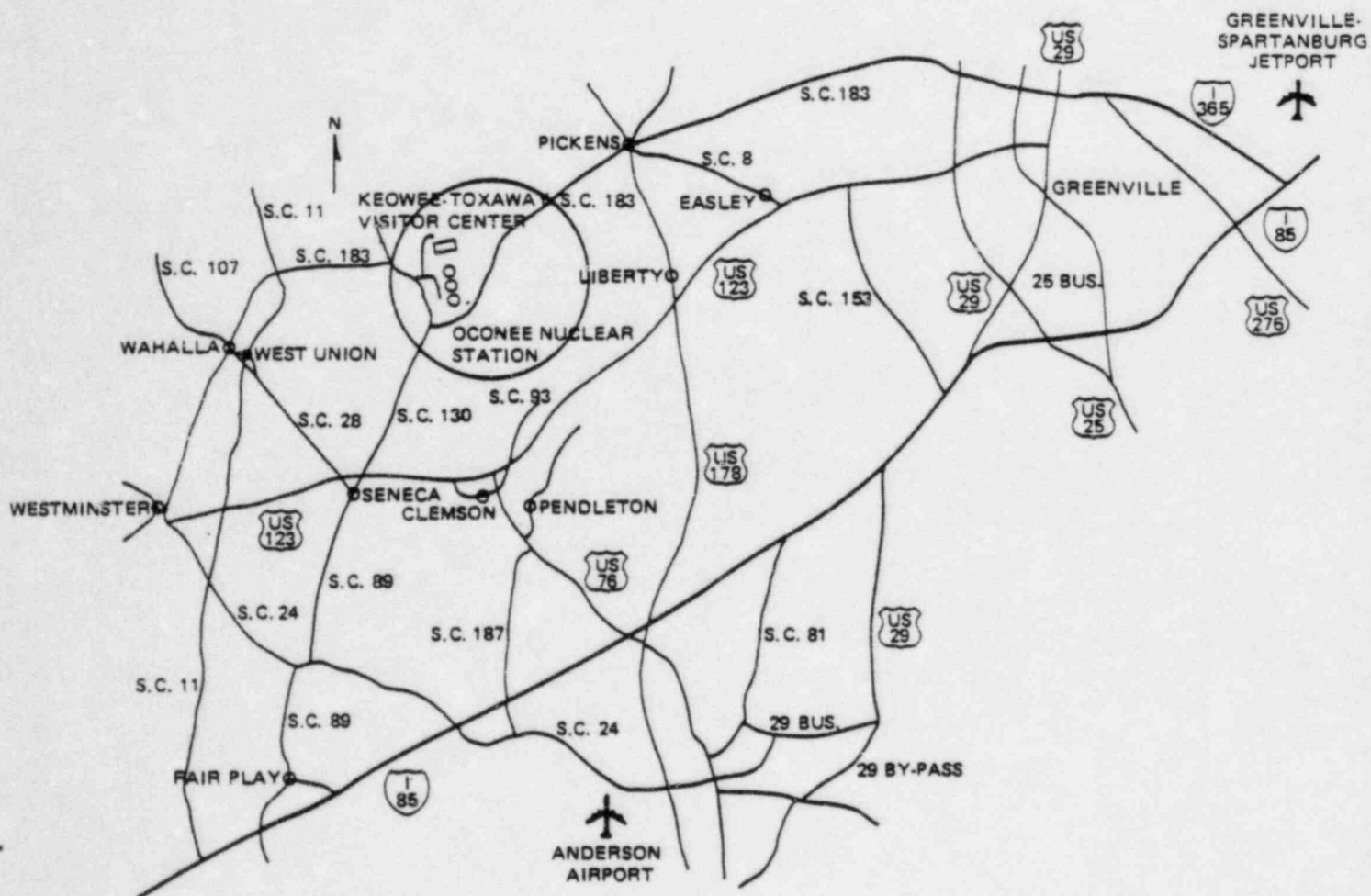


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JUNE 15, 1983

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-2

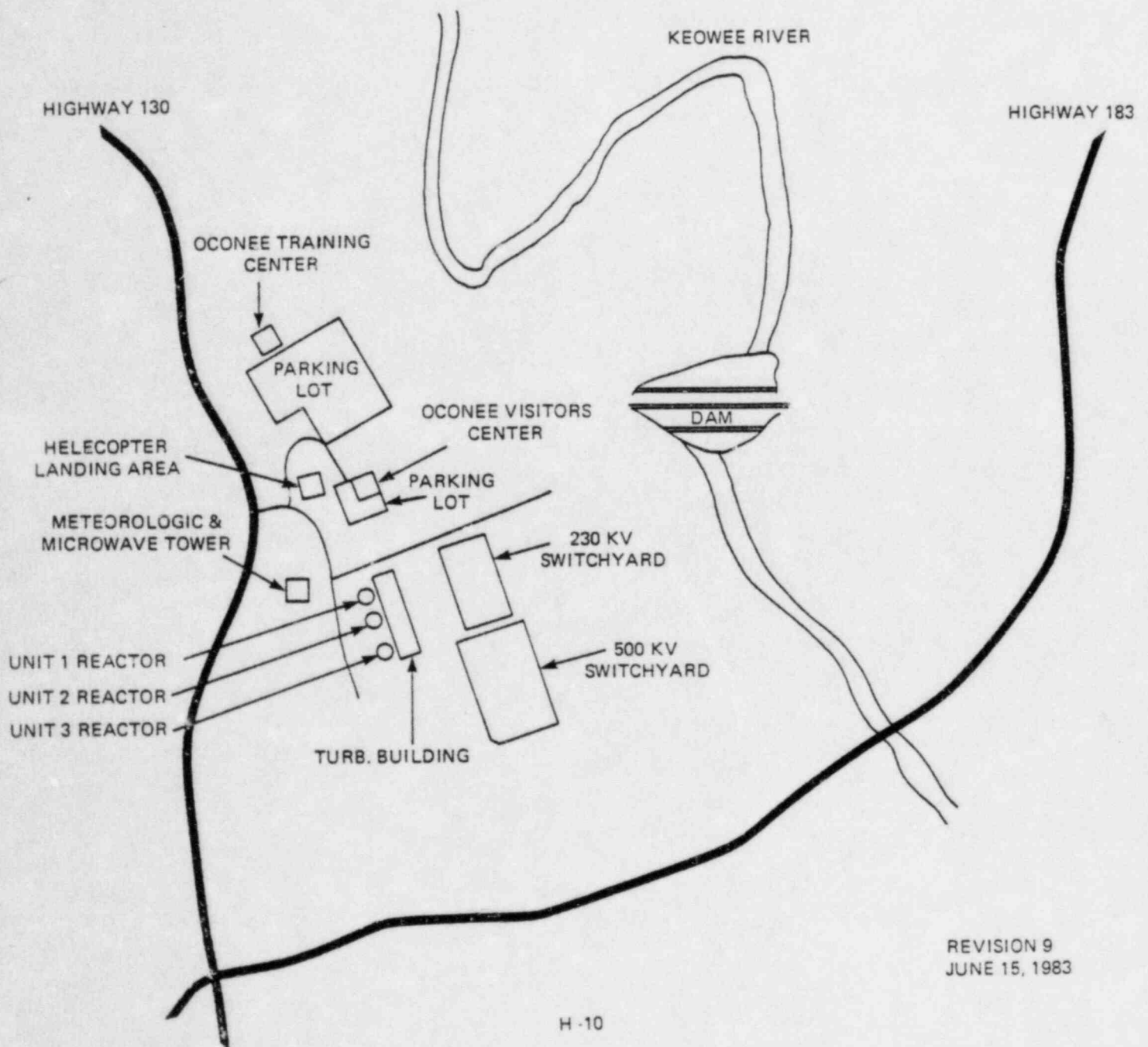
OCONEE NUCLEAR STATION
NEARSITE RESPONSE FACILITIES
GENERAL LOCATION



DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-3

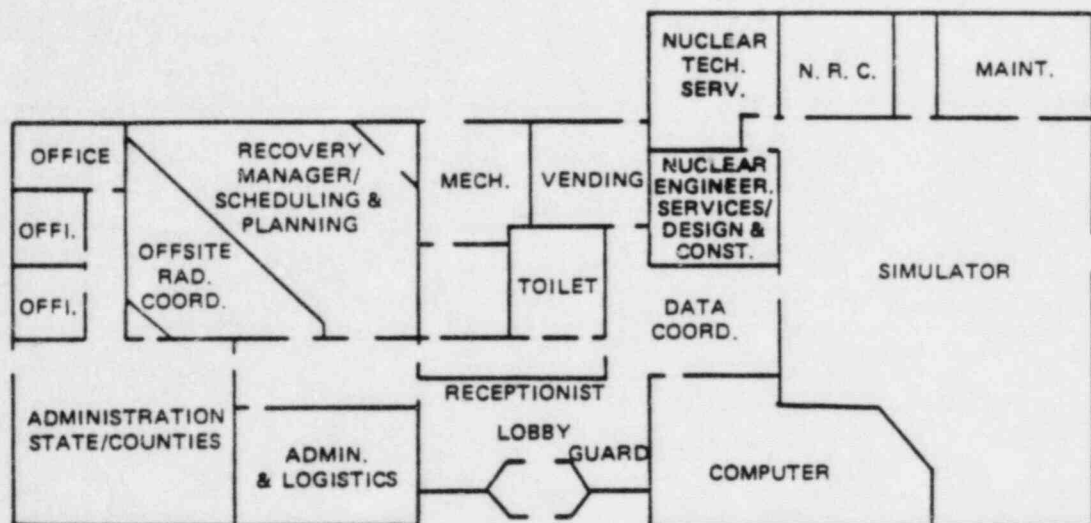
OCONEE NUCLEAR STATION
NEARSITE RESPONSE FACILITIES
GENERAL LAYOUT



REVISION 9
JUNE 15, 1983

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-4
NEARSITE CRISIS MANAGEMENT CENTER
OCONEE TRAINING CENTER

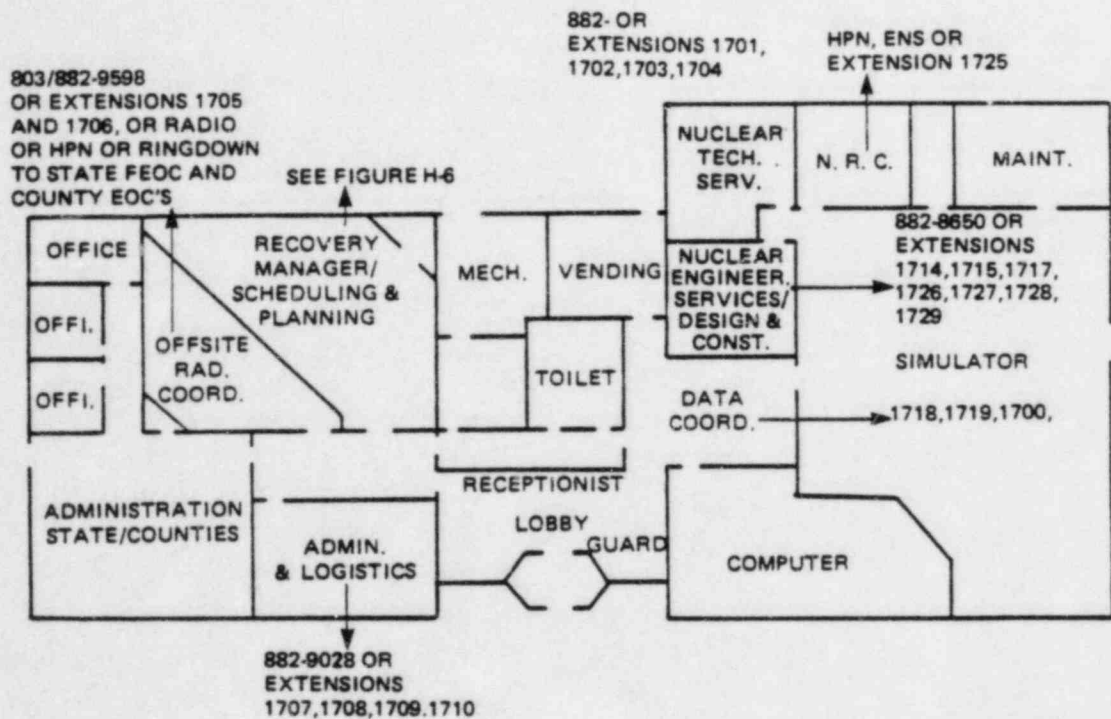


REVISION 11
JANUARY 31, 1984

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-5

NEARSITE CRISIS MANAGEMENT CENTER
OCONEE TRAINING CENTER
COMMUNICATIONS LAYOUT



NOTE: EXTENSIONS ARE OFF OF

882-5363	859-0108
882-5368	859-0113
882-5369	859-0116
882-5370	224-8376
882-5371	868-2717
882-5621	

(AREA CODE IS 803)

REVISION 11
JANUARY 31, 1984

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

- ① TSC RINGDOWN ON SPEAKERPHONE
- ② 882-9801 (DEDICATED LINE TO S. C. DIRECTOR ON SPEAKERPHONE)
- ③ X-1713 ON SPEAKERPHONE

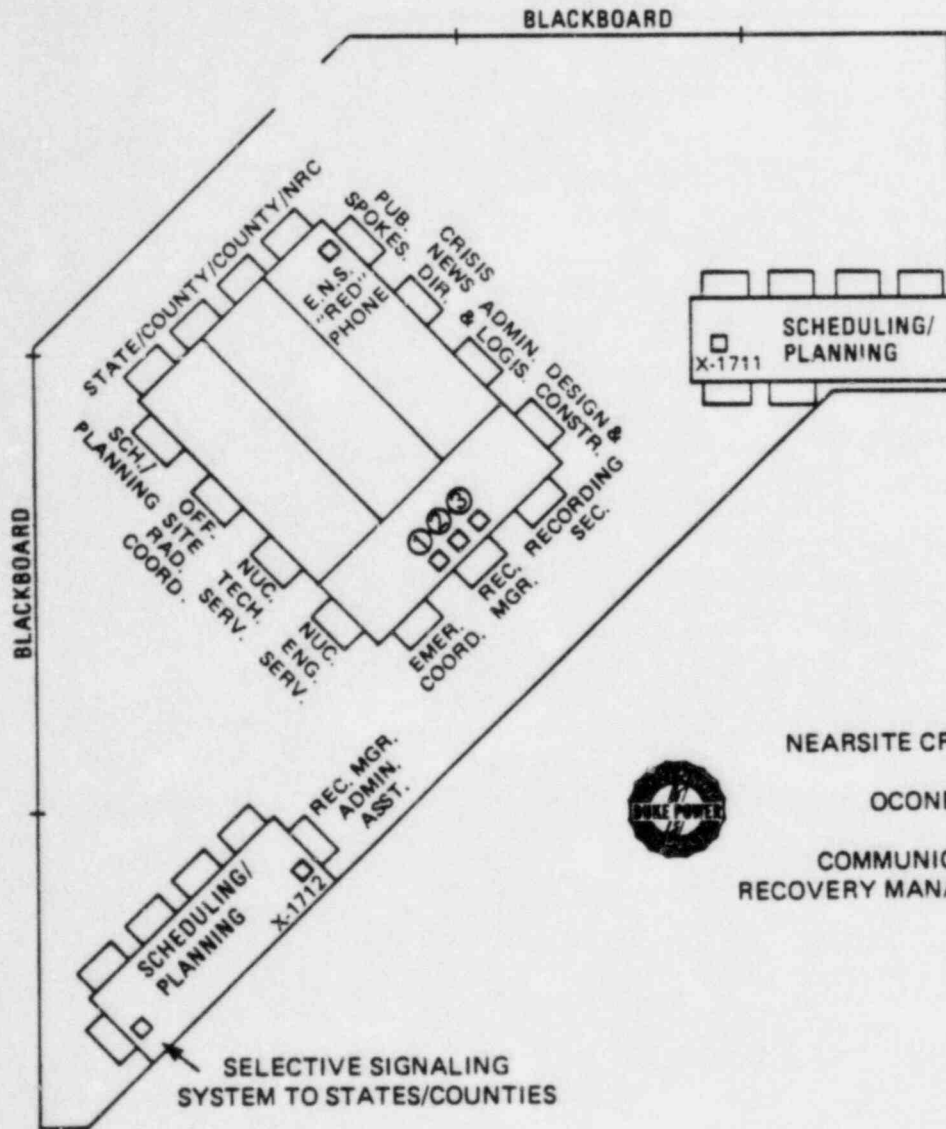


FIGURE H-6

NEARSITE CRISIS MANAGEMENT CENTER

OCONEE TRAINING CENTER

COMMUNICATIONS & ROOM LAYOUT
RECOVERY MANAGER/SCHEDULING & PLANNING

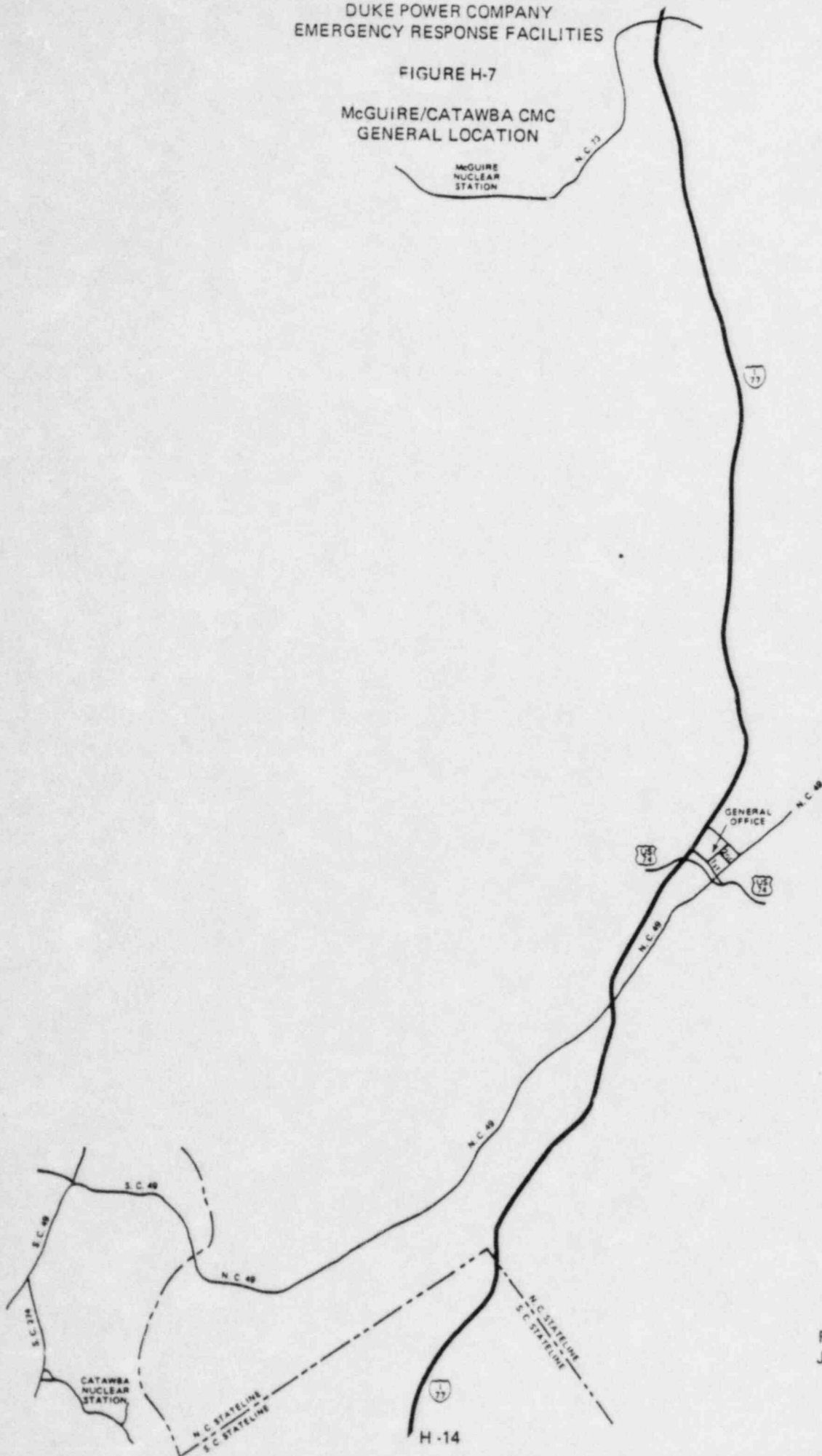


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JAN. 31, 1984

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES

FIGURE H-7

McGUIRE/CATAWBA CMC
GENERAL LOCATION



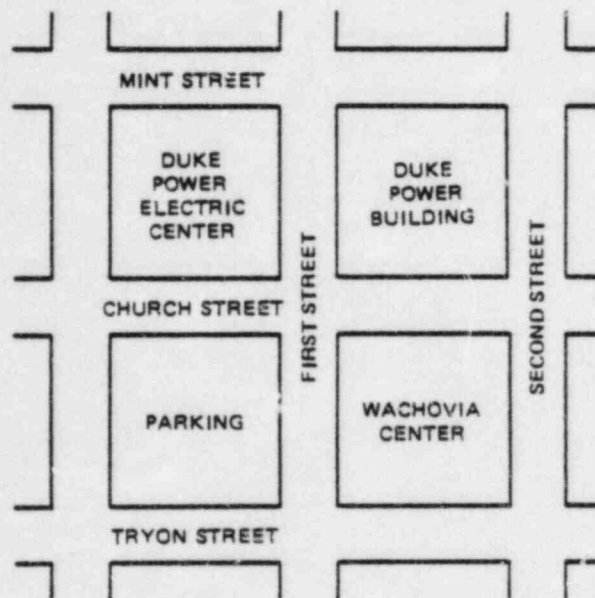
REVISION 9
JUNE 15, 1983

DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H-8

McGUIRE/CATAWBA CMC

GENERAL OFFICE BUILDING LAYOUT - CHARLOTTE, N. C.



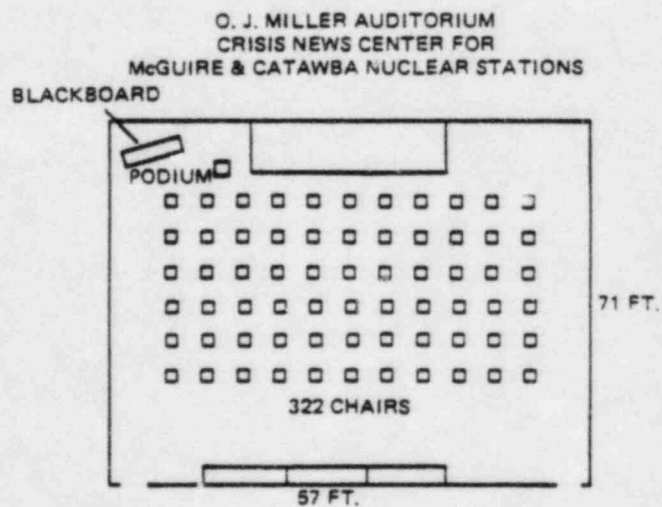
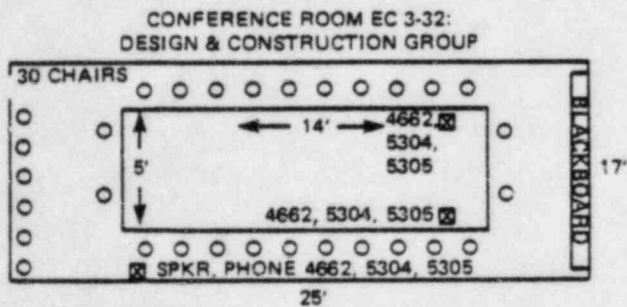
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JUNE 15, 1983

DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H-9

McGUIRE/CATAWBA CMC

ELECTRIC CENTER ROOMS
DESIGNATED FOR EMERGENCY USE



373-2637	373-7946	373-2628	373-2633
373-2638	373-7947	373-2629	373-2634
373-2639	373-7948	373-2630	373-2635
373-2620	373-2632	373-2631	373-2636
373-2641	373-2642		

DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H-10

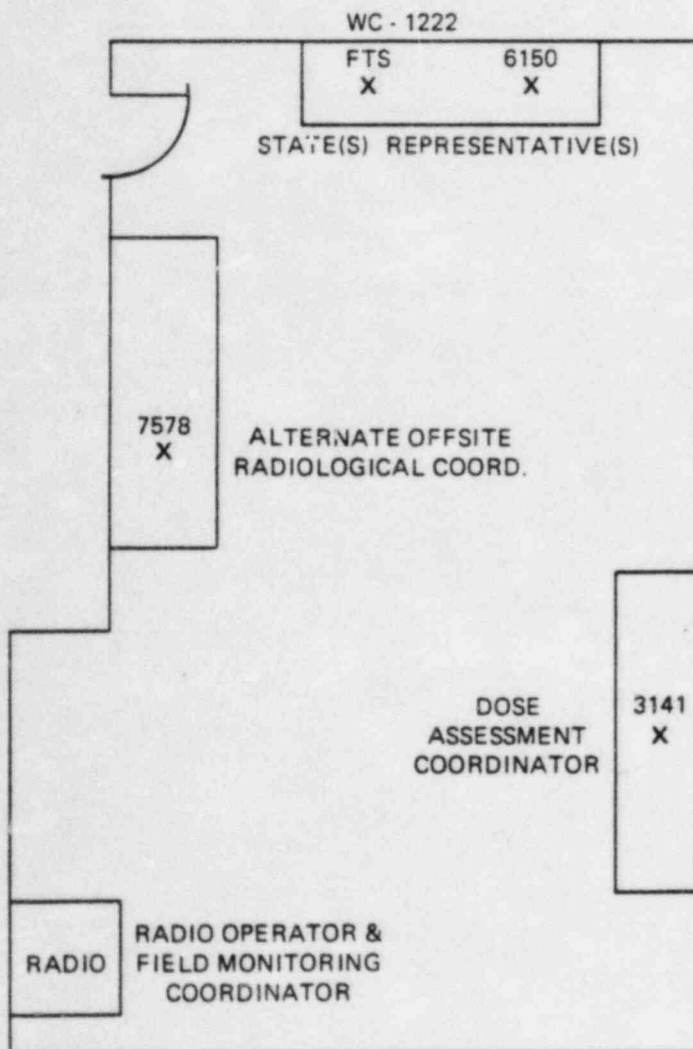
McGUIRE/CATAWBA CMC

CRISIS NEWS GROUP
5TH FLOOR POWER BLDG.
ROOMS: 5014, 5012, 5010
PHONES: 373-5584, 373-3107, 373-2864,
373-4023, 373-2877

SOUTH CAROLINA PIO'S
5TH FLOOR POWER BLDG.
ROOMS: PB 5020, 5022
PHONES: 372-9818, 372-9824, 372-0970,
373-7302

NORTH CAROLINA PIO'S
5TH FLOOR POWER BLDG. ROOM
ROOMS: PB 5018
PHONES: 373-2812, 372-9788, 373-2846,
373-8138

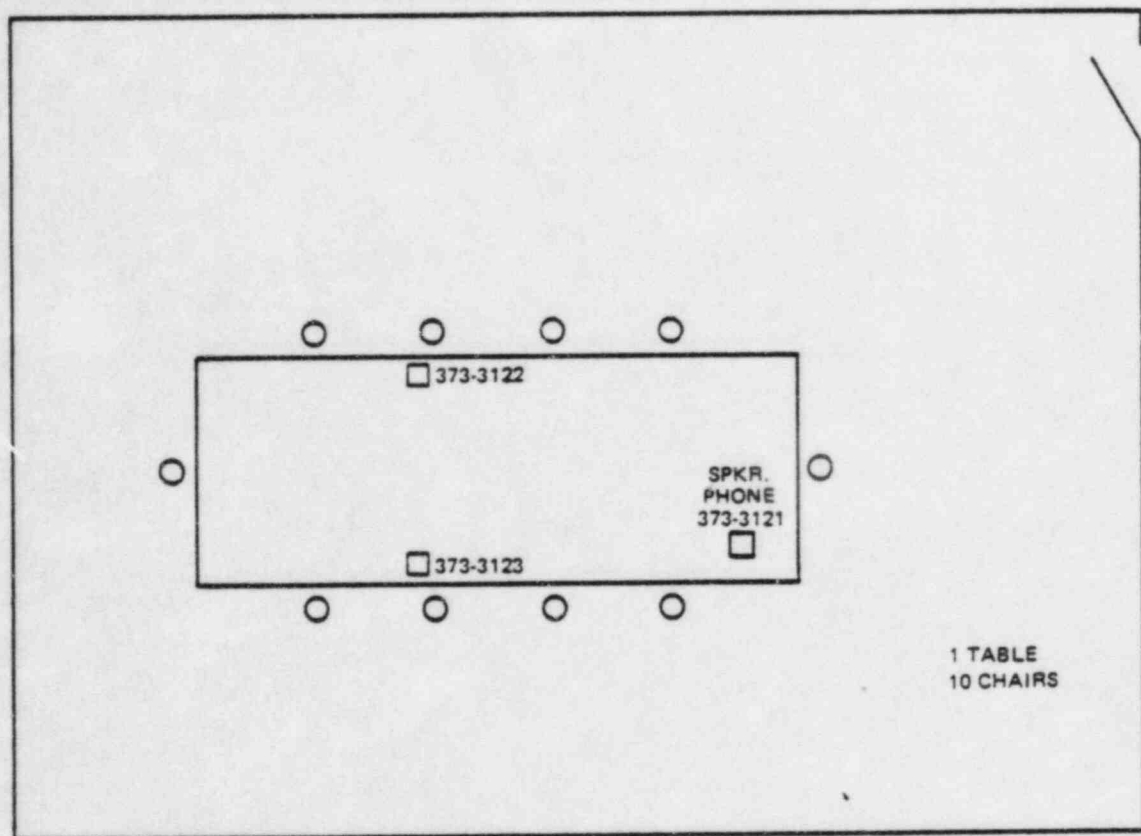
OFFSITE RADIOLOGICAL COORDINATOR
WACHOVIA CENTER - ROOM 1222



DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H - 11

ADMINISTRATION & LOGISTICS OFFICE, ROOM 0925



1 TABLE
10 CHAIRS

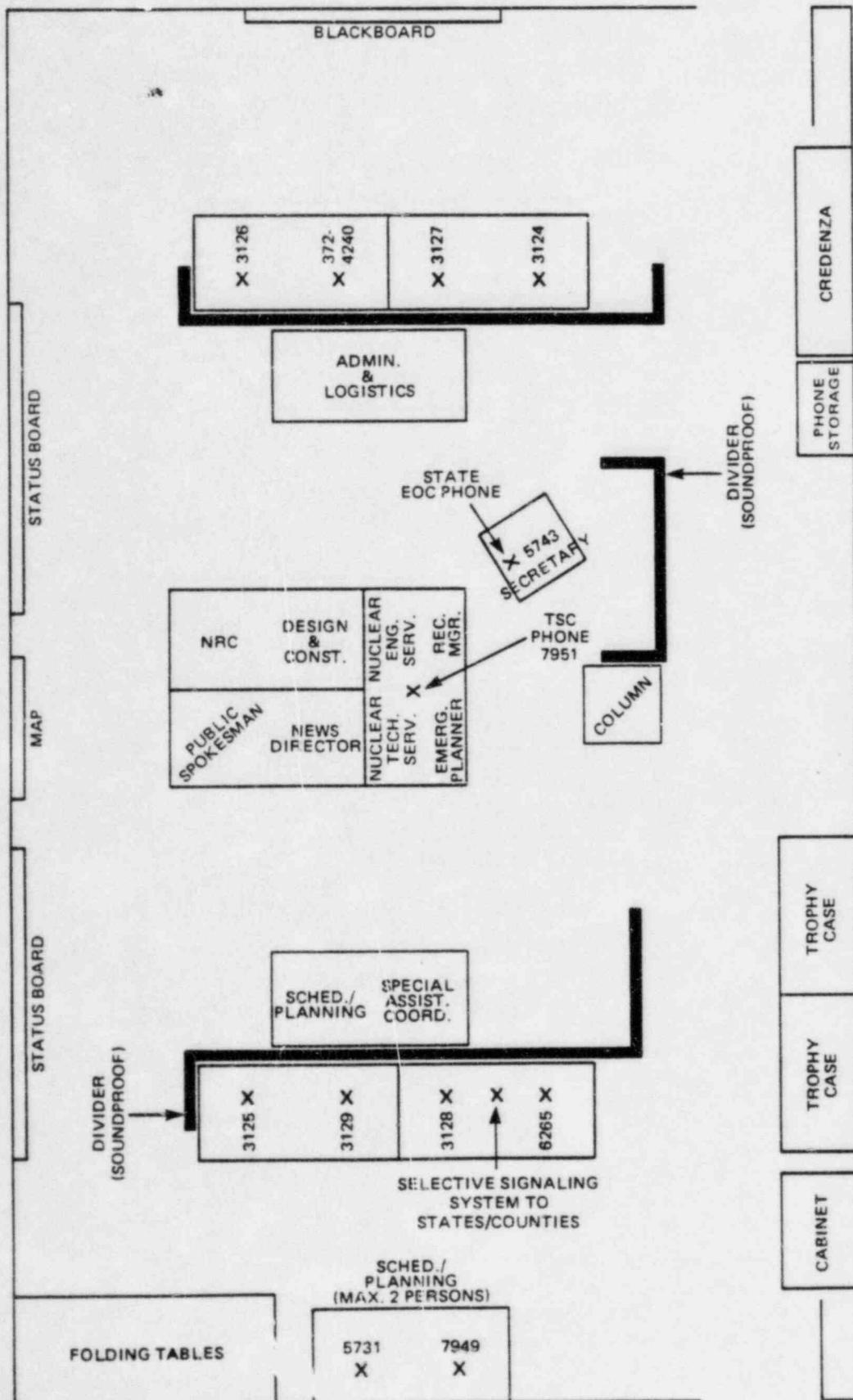
15 FT.

11 FT.

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DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

RECOVERY MANAGER/SCHEDULING & PLANNING OFFICE
WACHOVIA CENTER - ROOM 1010
FIGURE H-12

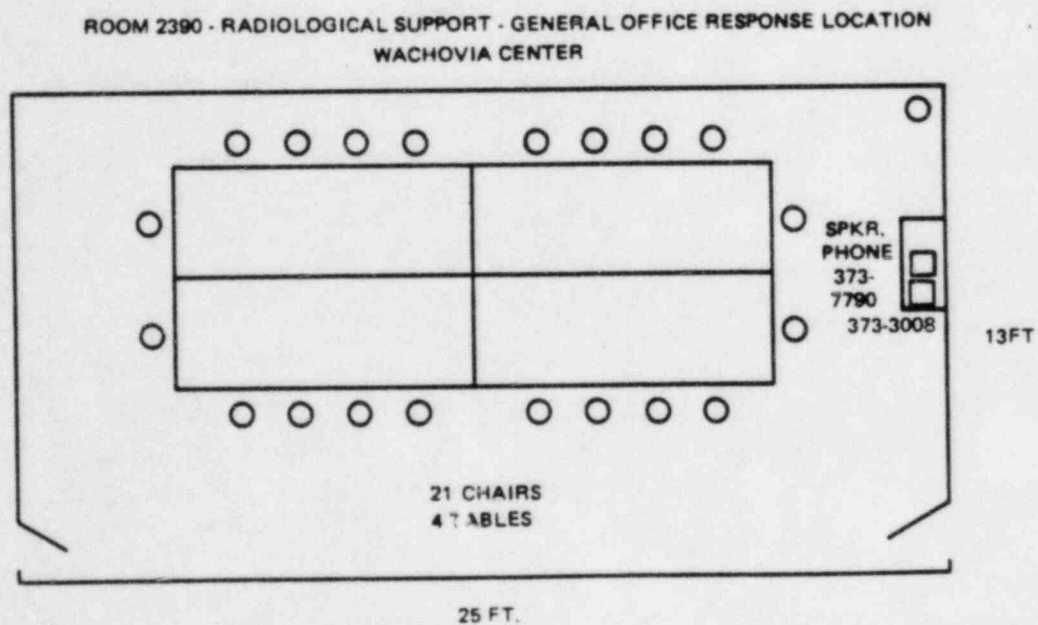
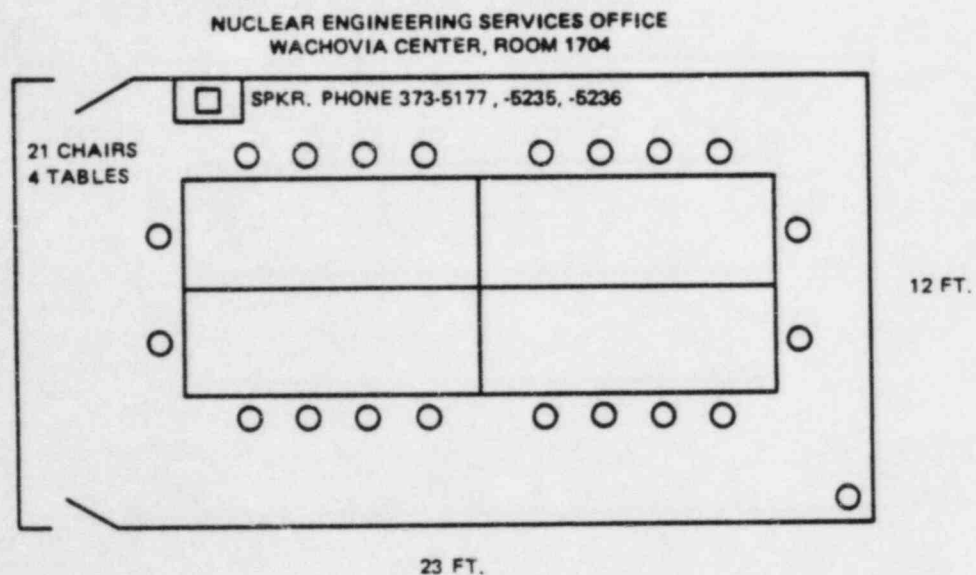


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DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H-13

McGUIRE/CATAWBA CMC

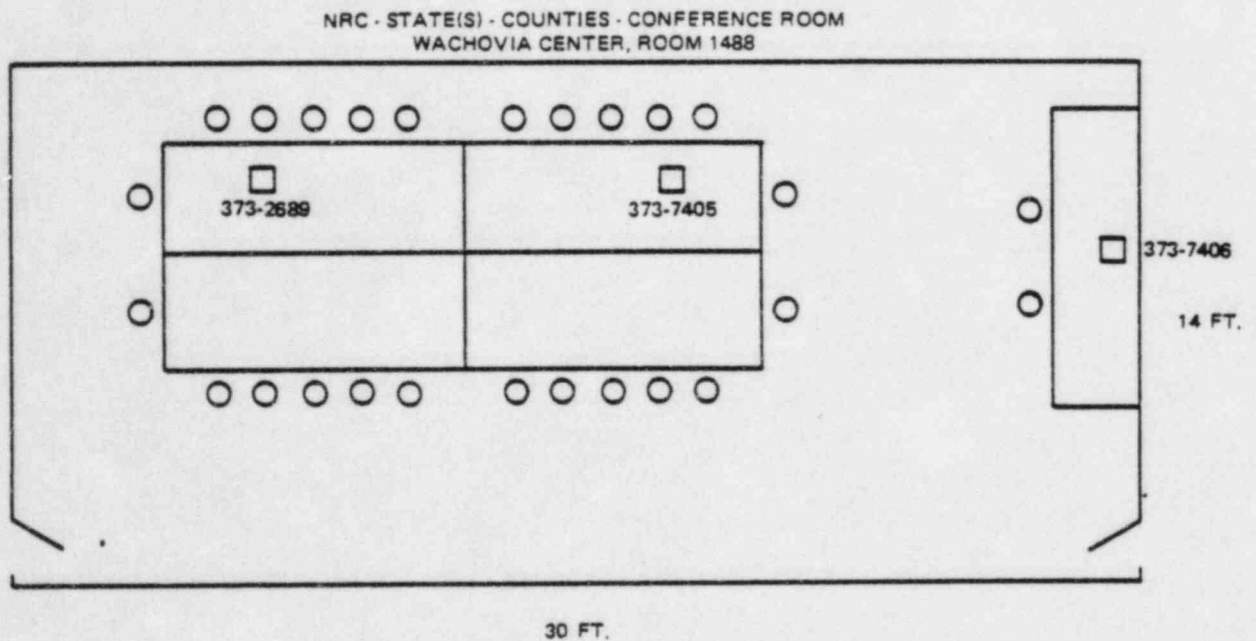


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DUKE POWER COMPANY
GENERAL OFFICE RESPONSE FACILITIES

FIGURE H - 14

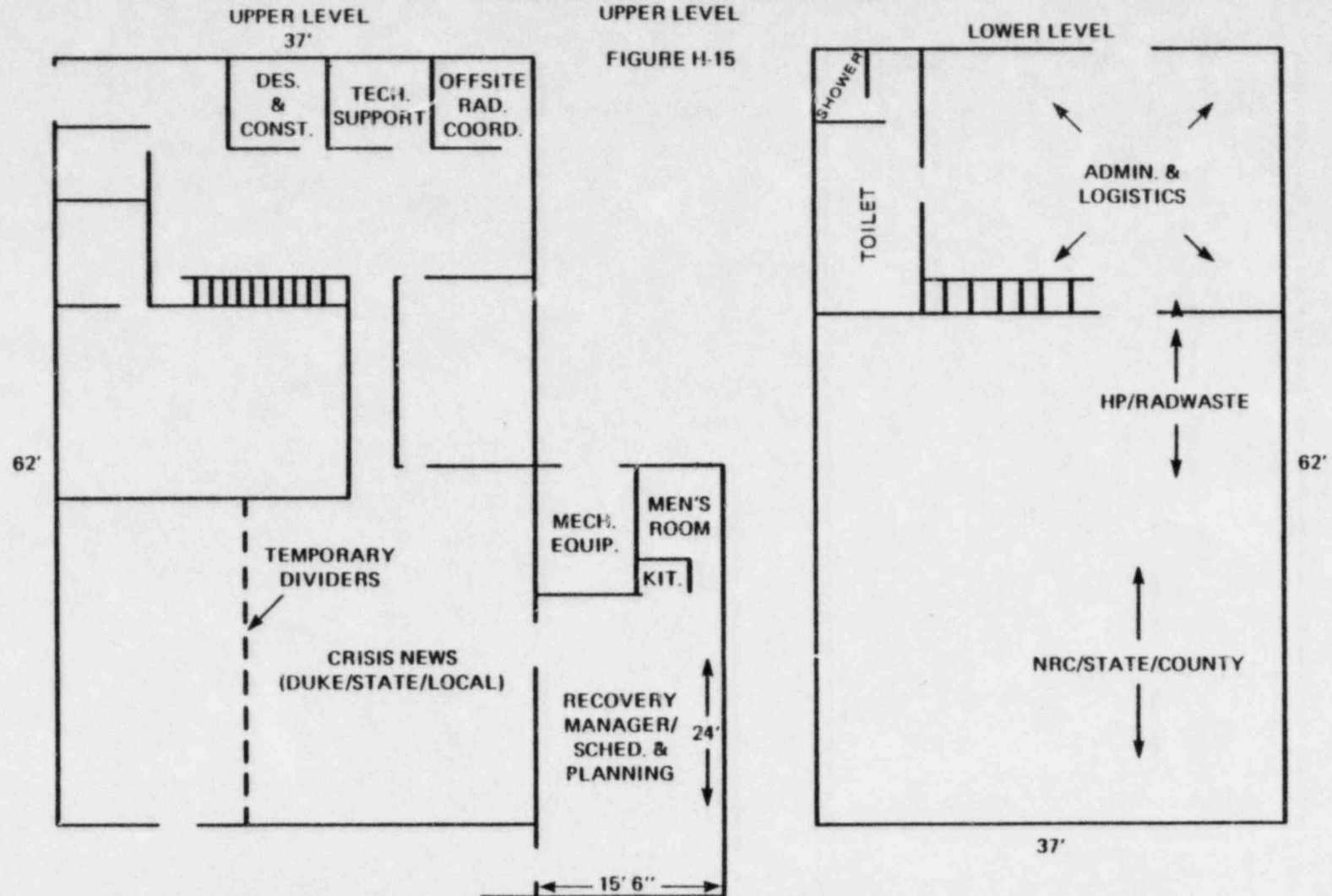
McGUIRE/CATAWBA CMC



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LIBERTY RETAIL OFFICE
LAYOUT

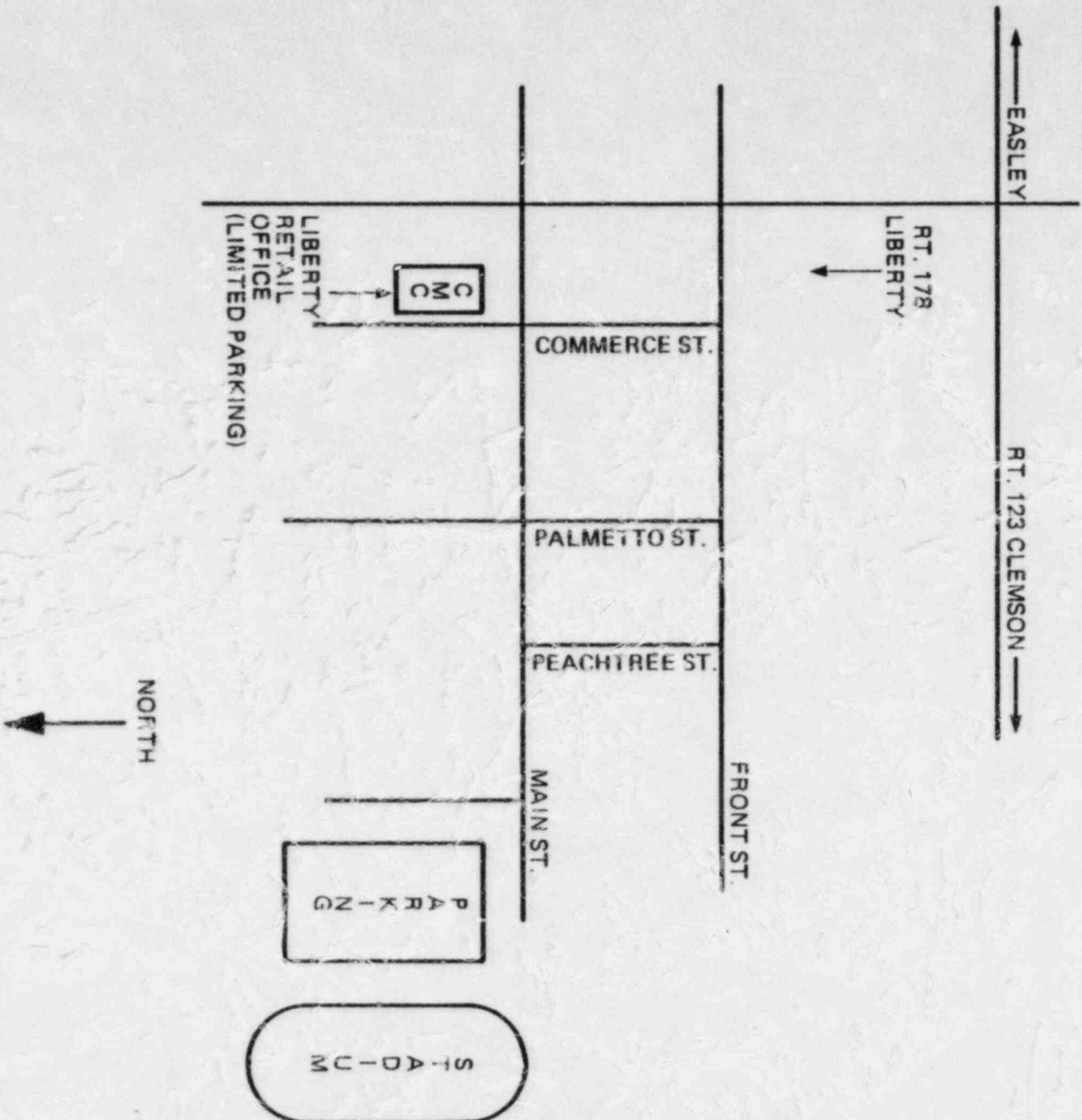
DUKE POWER COMPANY CRISIS MANAGEMENT PLAN
OCONEE NUCLEAR STATION BACKUP CMC



DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

OCONEE NUCLEAR STATION BACKUP CMC LOCATION

FIGURE H-16



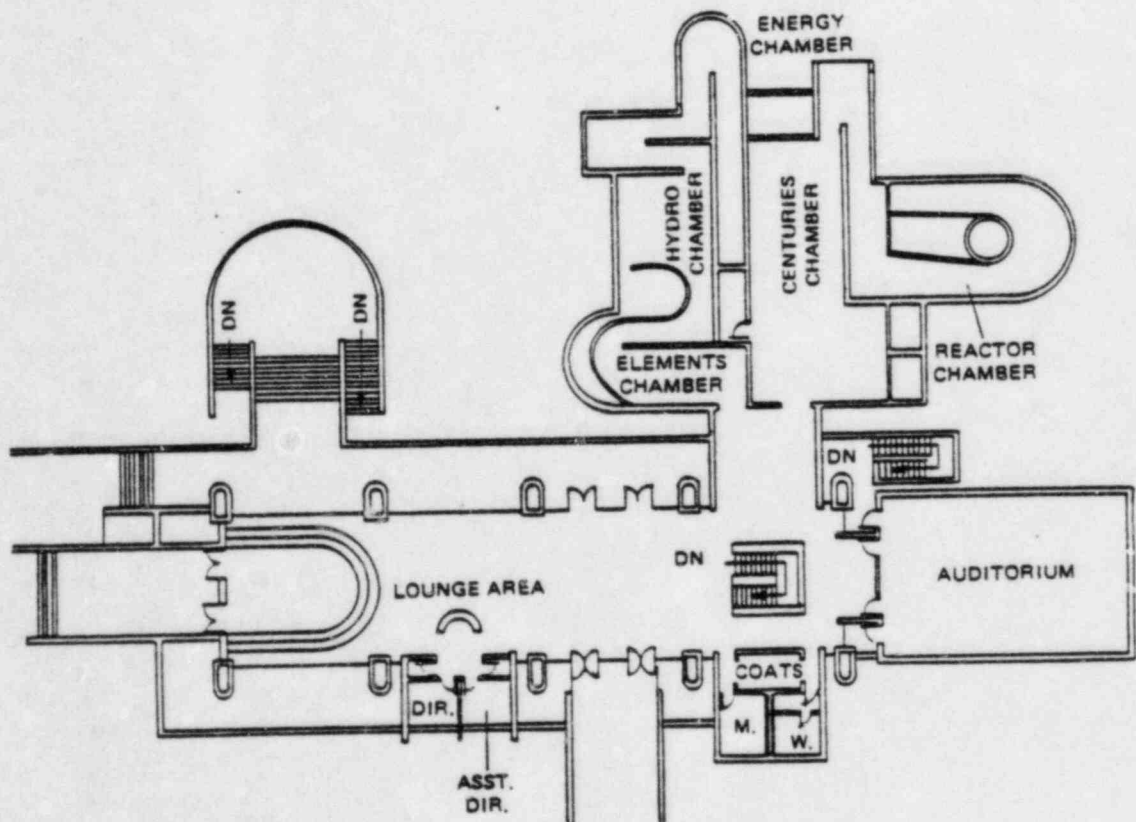
H-23

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DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-17

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (UPPER LEVEL)
MEDIA AREA-NEWS CONFERENCES, PHONES



UPPER LEVEL FLOOR PLAN

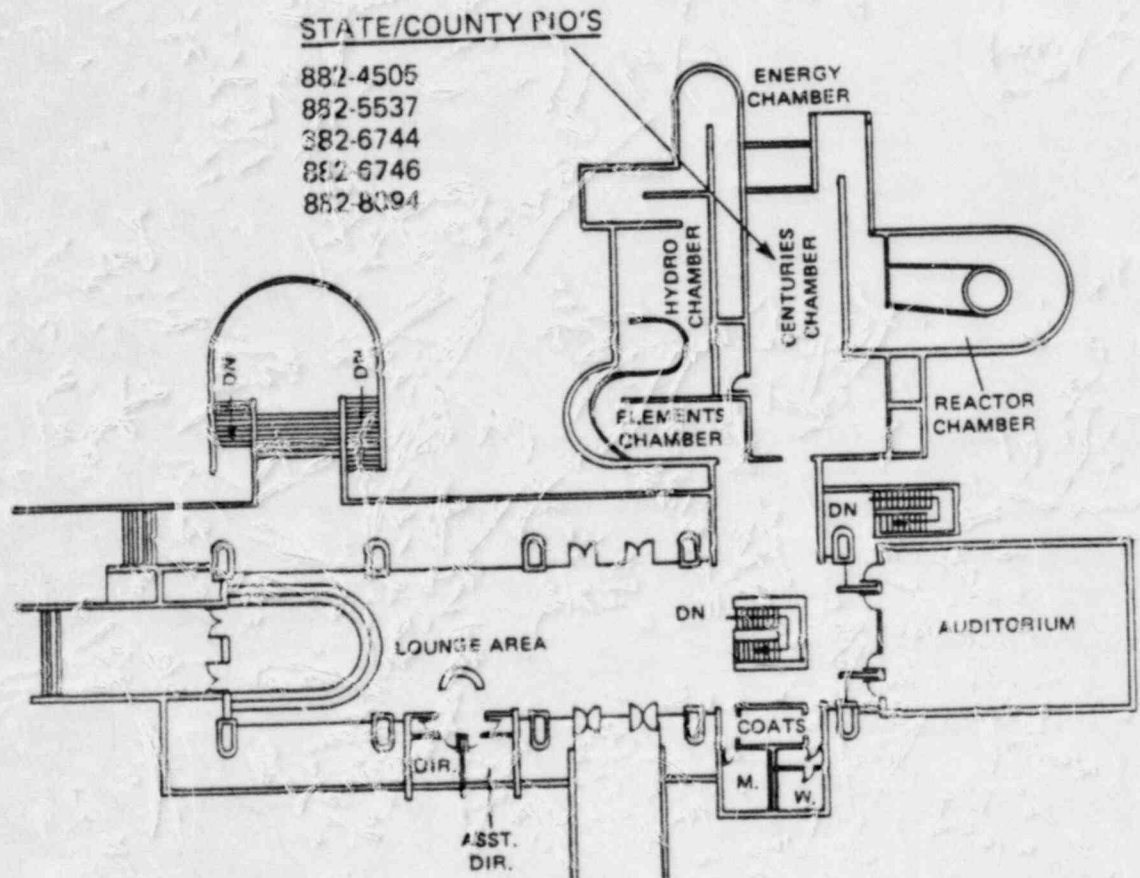
REVISION 9
JUNE 15, 1983

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-18

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (UPPER LEVEL)
MEDIA AREA-NEWS CONFERENCES, PHONES

* - 5 SENECA LINES IN SERVICE 882-6514, 6515, 6519, 6520, 6522



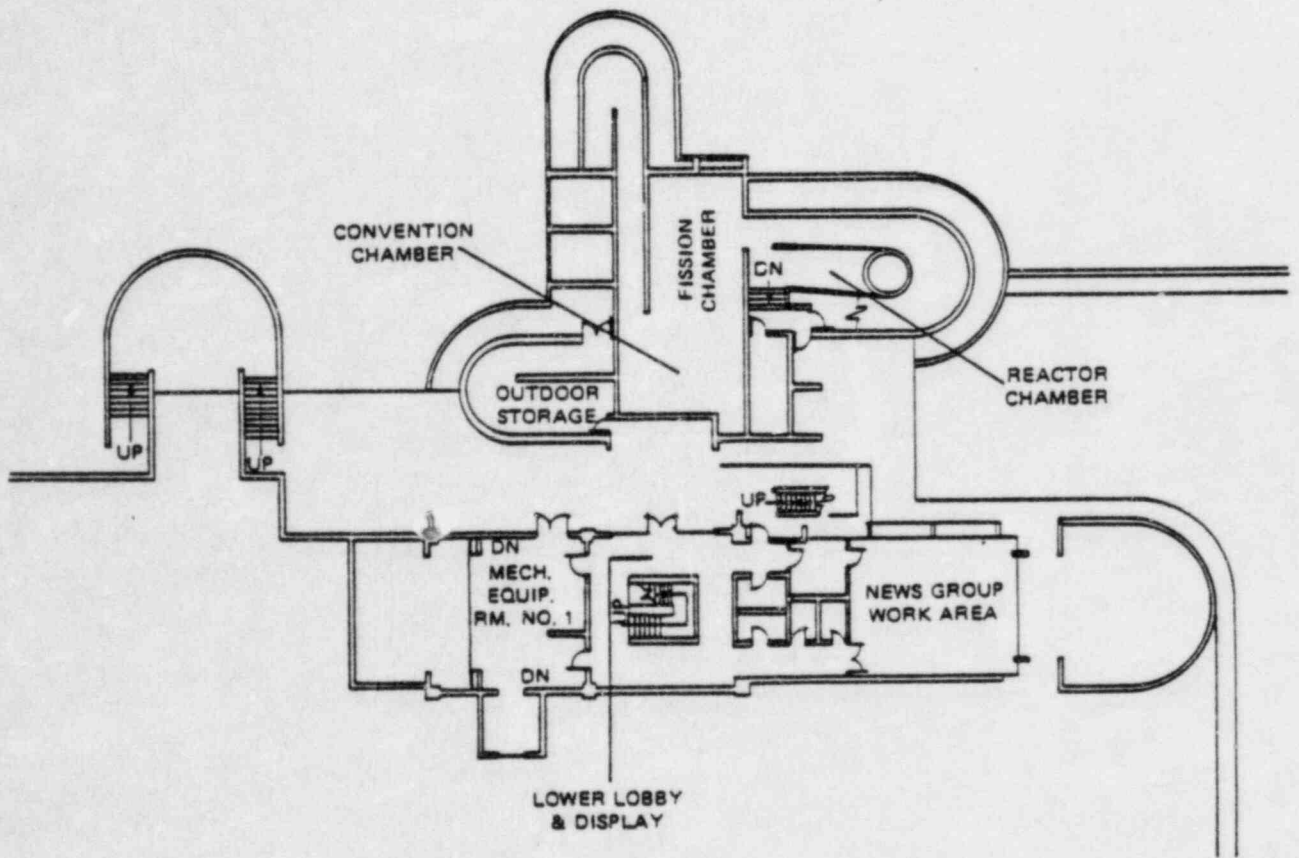
UPPER LEVEL FLOOR PLAN

REVISION 11
JANUARY 31, 1984

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-19

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (LOWER LEVEL)
CRISIS NEWS GROUP-WORK AREA

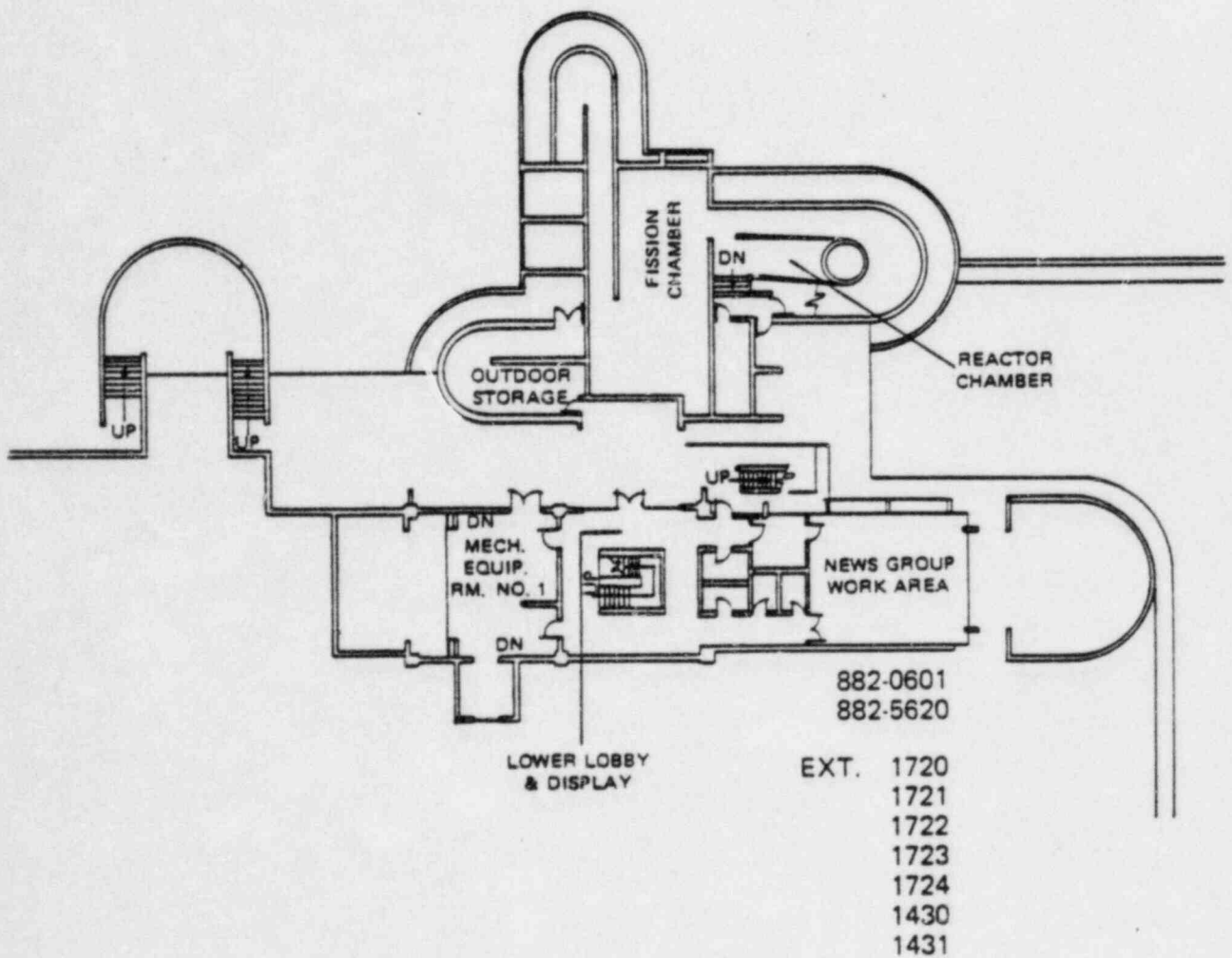


REVISION 9
JUNE 15, 1983

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES
OCONEE NUCLEAR STATION

FIGURE H-20

NEARSITE CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITOR'S CENTER (LOWER LEVEL)
CRISIS NEWS GROUP-WORK AREA



REVISION 9
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Figure H-21

Oconee Nuclear Station
Generalized Met System - Sensor to Computer Link

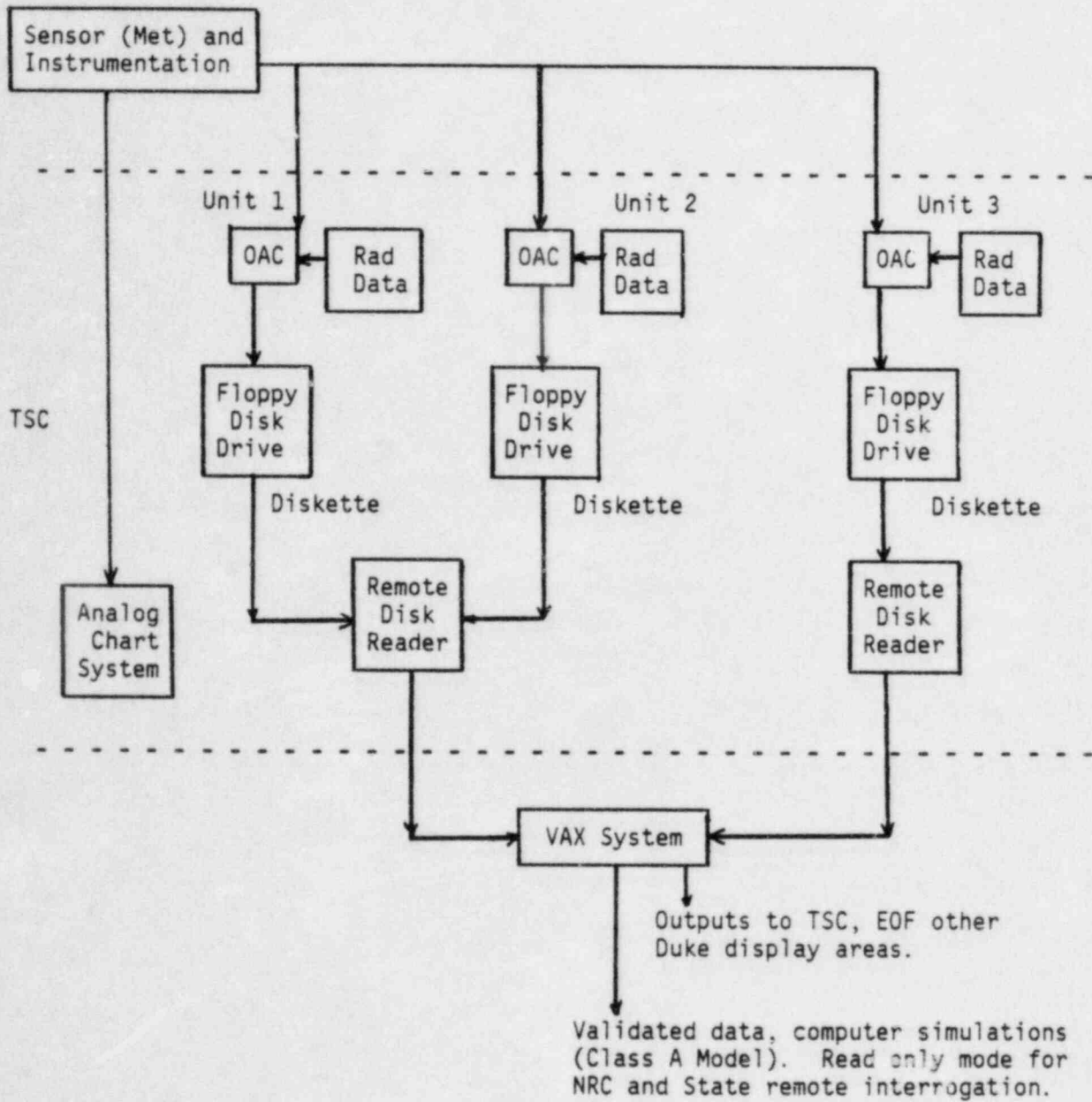
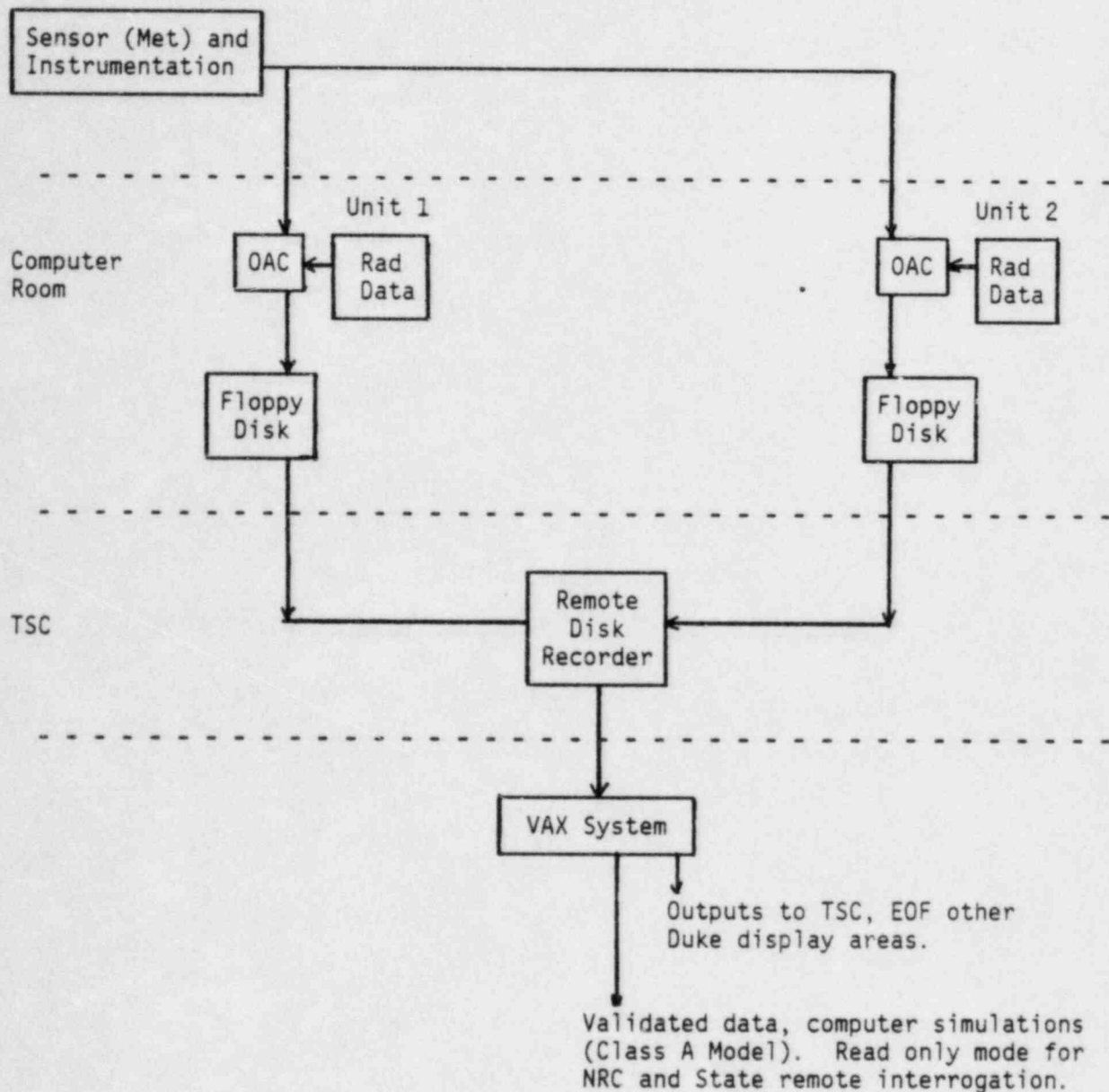


Figure H-22

McGuire and Catawba Nuclear Stations
Generalized Met System



I. ACCIDENT ASSESSMENT

I.1 Emergency Conditions - Initiating Conditions/Emergency Action Levels

The Nuclear Station Emergency Plan, Section D, address plant system and effluent parameter values characteristic of a spectrum of off-normal conditions. These Emergency Action Levels (EALs) serve as the basis for determination of emergency class.

In an emergency the use of the simulator will be considered as a means for improved accident assessment.

I.2 Post Accident Sampling, Radiation & Effluent Monitors, In-Plant Iodine Monitors, Containment Radiation Monitoring

The Station Emergency Plan Section I describes the post-accident sampling capability, radiation and effluent monitors, inplant iodine instrumentation, and containment radiation monitoring systems.

I.3.a/I.3.b Method For Determining Release Source Term

Manual Procedures listed in the Crisis Management Plan Dose Assessment Implementing Procedures are used in CMC for the calculation of potential offsite doses based on a design basis accident, release of primary coolant, or release of gap activity situation scaled to actual containment monitor readings. Provisions for use of actual source terms exist in the procedures.

The magnitude of the release is based on actual effluent monitoring readings, plant system parameters (containment pressure), area meteorology, and the duration of the release. A listing of these procedures is found in Table P-2.

I.4 Dose Calculation Methodology

The procedures referenced in I.3 establish the relationship between effluent monitor readings and onsite/offsite exposures and contamination for various meteorological conditions.

I.5 Meteorological Information Availability.

The Crisis Management Center, State authorities, and the NRC's Offsite Emergency Operations Center have the capability of acquiring meteorological information sufficient to meet the criteria of NUREG-0654 Appendix 2. A plant status sheet has been developed for Oconee, McGuire and Catawba Nuclear Stations (See Figures I-1, I-2, and I-15.) This information is available to members of the TSC, CMC, NRC (Region Office and Headquarters), and the NSSS Vendor via telephone links to the DDP (Distributed Data Processor) System. Each group has been trained in the means for access to this data. State and county authorities have access to the information via the message format in Table E-1. Training has been provided to both North and South Carolina to allow them access to the plant status sheets on the DDP.

A procedure exists for the transmission and distribution of Figures I-1, I-2, and I-15 and other data available during an incident at the Company's Nuclear

Stations. Implementing Plan Procedure 5.3.9, "Data and Information Transmission" is used by the Technical Support Group and Scheduling/Planning Group for the transmission and distribution of data. The distribution lists and data forms available are listed in Figures I-1 through I-15.

I.6 Release Rates/Projected Doses for Offscale Instrumentation Situations

If instrumentation used for dose assessment is offscale or inoperable, procedures exist at the Company's Nuclear Stations for determining dose rate inside the reactor building. The nuclear station plans, Part I, address these procedures.

I.7/I-8 Crisis Management Organization Field Monitoring

Crisis Management Plan Implementing Procedures 5.3.14, 5.3.15, and 5.3.18 address the methods used by the Offsite Radiological Coordinator's group in offsite monitoring around McGuire, Oconee and Catawba following a large unplanned release of gaseous activity.

These procedures describe monitoring team responsibilities, organization, and concept of operation. Further, they detail TLD and sampling point locations, instrumentation available in emergency kits, transportation available for this use and communications.

I.9 Environmental Monitoring Equipment

The environmental monitoring equipment used by the Crisis Management Organization for sampling of the atmosphere is described in procedures 5.3.14, 5.3.15, and 5.3.18 of Crisis Management Plan.

The samples taken by the monitoring teams will be evaluated at one of the available laboratory facilities described in part C.3 of this plan.

I.10 Relationship Between Contamination Levels and Integrated Dose/Dose Rate

Provisions for relating contamination levels, water, and air to dose rates for key isotopes is provided by Crisis Management procedure 5.3.19 Procedure for Estimating Food Chain Dose Under Post-Accident Conditions. This procedure is used by the Crisis Management Team for Oconee, McGuire and Catawba.

I.11 Plume Tracking

The states of North Carolina, South Carolina and Georgia have arrangements to locate and track an airborne plume of radioactive materials. Duke Power Company will have monitoring teams in the field, fixed TLD sites, and the capability for airborne monitoring (Civil Air Patrol or private helicopter service) to assist in plume tracking.

Plant Status: _____

OCONEE NUCLEAR STATION
PLANT DATA AND STATUS
INFORMATION
Figure I-1

Page _____
Date _____
Time _____

A. PRIMARY COOLANT SYSTTEM

1. (Point ID) T/Hot - Loop A _____ °F
2. (Point ID) T/Hot - Loop B _____ °F
3. (Point ID) T/Cold - Loop A1 _____ °F
4. (Point ID) T/Cold - Loop A2 _____ °F
5. (Point ID) T/Cold - Loop B1 _____ °F
6. (Point ID) T/Cold - Loop B2 _____ °F
7. (Point ID) RC System Press. _____ PSIG
8. (Point ID) PZR. Water Level _____ IN
9. (Point ID) Latest Boron Conc. _____ PPM
10. (Point ID) Neutron Flux (SR) _____ CPS
11. (Point ID) Neutron Flux (IR) _____ Amps
12. (Point ID) Neutron Flux (PR) _____ %FP
13. (Point ID) RCP/A1 Status: _____
14. (Point ID) RCP/A2 Status: _____
15. (Point ID) RCP/B1 Status: _____
16. (Point ID) RCP/B2 Status: _____

B. SECONDARY COOLANT SYSTEM

1. (Point ID) SG/A Level _____ IN
2. (Point ID) SG/B Level _____ IN
3. (Point ID) SG/A Press. _____ PSIG
4. (Point ID) SG/B Press. _____ PSIG
5. (Point ID) Main FW Flow _____ #/Hr
6. (Point ID) SG/A Emer FW Flow _____ GPM
7. (Point ID) SG/B Emer FW Flow _____ GPM
8. (Point ID) Upper Surge T Lev _____ FT

C. AUXILIARY SYSTEMS

1. (Point ID) HPI Letdown Flow _____ GPM
2. (Point ID) HPI Makeup Flow _____ GPM

D. SAFETY INJECTION

1. (Point ID) HPI Loop A Flow _____ GPM
2. (Point ID) HPI Loop B Flow _____ GPM
3. (Point ID) LPI Loop A Flow _____ GPM
4. (Point ID) LPI Loop B Flow _____ GPM
5. (Point ID) LPI Pump A Status: _____
6. (Point ID) LPI Pump B Status: _____

D. SAFETY INJECTION (cont.)

7. (Point ID) LPI Pump C Status: _____
8. (Point ID) HPI Pump A Status: _____
9. (Point ID) HPI Pump B Status: _____
10. (Point ID) HPI Pump C Status: _____

E. CONTAINMENT SYSTEMS

1. (Point ID) Containment Press _____ PSIG
2. (Point ID) Containment Temp. _____ °F
3. (Point ID) Containment Emer Sump Level _____ FT
4. (Point ID) Containment H. Concen _____ %
5. (Point ID) RB Normal Sump Level _____ IN

F. RADIATION MONITORING SYSTEM

1. (Point ID) SG/A RIA 16-Gross Activity _____ MR/HR
2. (Point ID) SG/B RIA 7-Gross Activity _____ MR/HR
3. (Point ID) RIA-40 CSAE Monitor _____ CPM
4. (Point ID) RIA-44 Vent Iodine _____ CPM
5. (Point ID) RIA-45 Low Range Vent Noble Gas _____ CPM
6. (Point ID) RIA-46 High Range Vent Noble Gas _____ CPM
7. (Point ID) RIA-56 Vent Noble Gas _____ MR/HR
8. (Point ID) RIA-4 Containment H.R. Area _____ MR/HR
9. (Point ID) RIA-57 Containment High Range _____ R/HR
10. (Point ID) RIA-58 Containment High Range _____ R/HR

G. ENVIRONMENTAL SYSTEMS

1. (Point ID) Upper Wind Speed _____ MPH
2. (Point ID) Lower Wind Speed _____ MPH
3. (Point ID) Upper Wind Direction from _____ DEG
4. (Point ID) Lower Wind Direction from _____ DEG
5. (Point ID) Delta Temp _____ °F
6. (Point ID) Dew Point _____ °F
7. (Point ID) Ambient Temp. _____ °F
8. (Point ID) Precipitation _____ IN

Unit _____
Plant Status: _____

MCGUIRE NUCLEAR STATION
PLANT DATA AND STATUS
INFORMATION
Figure I-2

Page _____
Date _____
Time _____

A. PRIMARY COOLANT SYTSTEM

1. (Point ID) T/Hot - Loop A _____ °F
2. (Point ID) T/Hot - Loop B _____ °F
3. (Point ID) T/Hot - Loop C _____ °F
4. (Point ID) T/Hot - Loop D _____ °F
5. (Point ID) T/Cold - Loop A _____ °F
6. (Point ID) T/Cold - Loop B _____ °F
7. (Point ID) T/Cold - Loop C _____ °F
8. (Point ID) T/Cold - Loop D _____ °F
9. (Point ID) NC System Fress _____ PSIG
10. (Point ID) Pzr. Water Level _____ %
11. (Point ID) NCP/A Status: _____
12. (Point ID) NCP/B Status: _____
13. (Point ID) NCP/C Status: _____
14. (Point ID) NCP/D Status: _____
15. (Point ID) Boron Concentration _____ PPM
16. (Point ID) Neutron Flux (SR) _____ CPS
17. (Point ID) Neutron Flux (IR) _____ AMPS
18. (Point ID) Neutron Flux (PR) _____ %FP

B. SECONDARY COOLANT SYSTEM

1. (Point ID) SG/A Level _____ %
2. (Point ID) SG/B Level _____ %
3. (Point ID) SG/C Level _____ %
4. (Point ID) SG/D Level _____ %
5. (Point ID) SG/A Steam Press _____ PSIG
6. (Point ID) SG/B Steam Press _____ PSIG
7. (Point ID) SG/C Steam Press _____ PSIG
8. (Point ID) SG/D Steam Press _____ PSIG
9. (Point ID) SG/A CF Flow _____ MPPH
10. (Point ID) SG/B CF Flow _____ MPPH
11. (Point ID) SG/C CF Flow _____ MPPH
12. (Point ID) SG/D CF Flow _____ MPPH
13. (Point ID) SG/A CA Flow _____ GPM
14. (Point ID) SG/B CA Flow _____ GPM
15. (Point ID) SG/C CA Flow _____ GPM
16. (Point ID) SG/D CA Flow _____ GPM

C. AUXILIARY SYSTEMS

1. (Point ID) NV Letdown Flow _____ GPM
2. (Point ID) NV Charging Flow _____ GPM
3. (Point ID) ND Return Flow _____ GPM

D. SAFETY INJECTION SYSTEM

1. (Point ID) CCP Inj. Hdr. Flow _____ GPM
2. (Point ID) CCP/A Status: _____
3. (Point ID) CCP/B Status: _____
4. (Point ID) NI Pump A Status: _____
5. (Point ID) NI Pump B Status: _____

E. CONTAINMENT SYSTEMS

1. (Point ID) Containment Press _____ PSIG
2. (Point ID) Containment Temp. _____ °F
3. (Point ID) Containment Sump Level _____ FT
4. (Point ID) Containment H₂ Concen. _____

F. RADIATION MONITORING SYSTEMS

1. (Point ID) NCS Monitor _____ CPM
2. (Point ID) Cont. HI Range Area _____ R/HR
3. (Point ID) Cont. Gas Monitor _____ CPM
4. (Point ID) Unit Vent Noble Gas _____ CPM
5. (Point ID) Unit Vent Iodine _____ CPM

G. ENVIRONMENTAL SYSTEMS

1. (Point ID) Upper Wind Speed _____ MPH
2. (Point ID) Lower Wind Speed _____ MPH
3. (Point ID) Upper Wind Direction from _____ DEG
4. (Point ID) Lower Wind Direction from _____ DEG
5. (Point ID) Barometric Pressure _____ In. Hg
6. (Point ID) Lower to Upper Temp. Diff. _____ °C
7. (Point ID) Lower to Middle Temp. Diff. _____ °C
8. (Point ID) Switchyard Ambient Air Temp. _____ °C

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

FIGURE I-3

Plant Data and Status Information/
Other Operating Reports/Radiological Data Sheet

Distribution List

Recovery Manager
Crisis News Director
Crisis News Monitor
Administration and Logistics Manager
NRC - Primary Representatives
Vendor - Primary Representative
Scheduling and Planning Group - Planning Coordinator
Design and Construction Support Manager
Health Physics/Radwaste Manager
Off-site Radiological Coordinator
Corporate Headquarters
State Representative - CMC
County Representative(s) - CMC

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
RADIOLOGICAL DATA SHEET

Station _____
Unit _____

Figure I-4

RADIOLOGICAL CONDITIONS

Date/ Time	RX BLDG DOSE (rem)	(Design Leak Rate)				(Containment Failure)			
		OFFSITE DOSE (rem)				OFFSITE DOSE (rem)			
		1 mi.	3 mi.	5 mi.	10 mi.	1 mi.	3 mi.	5 mi.	10 mi.

RADIOLOGICAL RECOMMENDATIONS

Date/ Time	SECTORS in Exposure Pathway	RECOMMENDATION	
		State/County Contacted	Statement of Recommendation*

*Must state either (1) NONE, (2) (Precautionary) Evacuation of _____ miles radius and/or _____ miles in _____ direction involving _____ sectors, (3) other recommendations

Approved By: _____

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-5

PLANT STATUS (Circle)
Unusual Event - Alert
Site Emer. - Gen. Emer.

NUCLEAR STATION
PLANT DATA AND STATUS
INFORMATION

UNIT _____
DATE _____
TIME _____

Approved By: _____
Station Operations

DATE: _____
TIME: _____

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-6

MEMORANDUM TO: _____

SUBJECT: _____

MESSAGE:

Submitted by: _____

Reviewed by: _____

- ☐ This sheet contains finalized information/data to be utilized
by the Recovery Manager

COPY TO:

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-7

WORK ACTIVITY JOB REQUIREMENTS

Title For Work Activity -

Work Activity Description -

Manpower Requirements - (Number of workers, estimated work hours, necessary
worker classification)

Estimated Start and Completion Dates For This Work Activity -

Crisis Management Group Responsible for this Work Activity -

Special Constraints - (such as the impact of this project on other
work activities)

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-8

PERFORMANCE MONITOR WORK ACTIVITY STATUS REPORT

Work Activity:

Report No. _____ Date of this Report _____ Time _____

% Complete as of this report - _____ %

Original Estimate for Job Completion _____

Outstanding Items for this Work Activity -

Potential Delays and/or Problems

Should this Work Activity's Estimated Completion Date be Revised? _____

If so, the new Estimated Completion Date is _____

Prepared By: _____

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-9

DAILY WORK SCHEDULE

DATE: _____ SCHEDULE NO. _____

Work Activity Description	A.M.				P.M.				A.M.			
	8	10	12	2	4	6	8	10	12	2	4	6
	10	12	2	4	6	8	10	12	2	4	6	8

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-10

TWO DAY WORK SCHEDULE

DATES: _____ SCHEDULE NO. _____

Work Activity Description	DAY 1										DAY 2														
	A.M.					P.M.					A.M.					P.M.					A.M.				
	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8
	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	

DIJKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-11

LONG TERM WORK SCHEDULE

DATE PREPARED: _____

SCHEDULE NO. _____

Work Activity Description	Time Periods
<hr/>	

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

Figure I-12

PROJECT MILESTONES

REPORT NO. _____ DATE OF THIS REPORT _____

Estimated Completion Dates x
Actual Completion Dates *

MILESTONES

Dates

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN

PROGRESS REPORT # _____ DATE _____

Figure I-13

TO: _____

FROM: _____

PERIOD FROM _____ TO _____

I. SITE AND UNIT CONDITION

- A. UNIT STATUS _____

B. SITE CONDITION _____

C. BOUNDARY CONDITION _____

II. OBJECTIVES FOR PERIOD

ITEM DESCRIPTION

COMPLETION STATUS (%)
PROJECTED=0 ACTUAL=X
0-----25-----50-----75-----100%

III. DELAYS AND/OR PROBLEMS ENCOUNTERED

IV. UPCOMING OBJECTIVES FOR PERIOD FROM _____ TO _____ COMPLETION STATUS (%)

ITEM DESCRIPTION

PROJECTED=0
0-----25-----50-----75-----100%

FIGURE 1-14

Group	Function Manager

Shifts

[illegible]

Unit _____
Plant Status: _____

CATAWBA NUCLEAR STATION
PLANT DATA AND STATUS
INFORMATION
Figure I-15

Page _____
Date _____
Time _____

A. PRIMARY COOLANT SYSTEM

1. (Point ID) T/Hot - Loop A _____ °F
2. (Point ID) T/Hot - Loop B _____ °F
3. (Point ID) T/Hot - Loop C _____ °F
4. (Point ID) T/Hot - Loop D _____ °F
5. (Point ID) T/Cold - Loop A _____ °F
6. (Point ID) T/Cold - Loop B _____ °F
7. (Point ID) T/Cold - Loop C _____ °F
8. (Point ID) T/Cold - Loop D _____ °F
9. (Point ID) NC System Press. _____ PSIG
10. (Point ID) Pzr. Water Level _____ %
11. (Point ID) NCP/A Status: _____
12. (Point ID) NCP/B Status: _____
13. (Point ID) NCP/C Status: _____
14. (Point ID) NCP/D Status: _____
15. (Point ID) Boron Concentration _____ PPM
16. (Point ID) Neutron Flux (SR) _____ CPS
17. (Point ID) Neutron Flux (IR) _____ mA
18. (Point ID) Neutron Flux (PR) _____ %FP

B. SECONDARY COOLANT SYSTEM

1. (Point ID) SG/A Level _____ %
2. (Point ID) SG/B Level _____ %
3. (Point ID) SG/C Level _____ %
4. (Point ID) SG/D Level _____ %
5. (Point ID) SG/A Steam Press. _____ PSIG
6. (Point ID) SG/B Steam Press. _____ PSIG
7. (Point ID) SG/C Steam Press. _____ PSIG
8. (Point ID) SG/D Steam Press. _____ PSIG
9. (Point ID) SG/A CF Flow _____ MPPH
10. (Point ID) SG/B CF Flow _____ MPPH
11. (Point ID) SG/C CF Flow _____ MPPH
12. (Point ID) SG/D CF Flow _____ MPPH
13. (Point ID) SG/A CA Flow _____ GPM
14. (Point ID) SG/B CA Flow _____ GPM
15. (Point ID) SG/C CA Flow _____ GPM
16. (Point ID) SG/D CA Flow _____ GPM

C. AUXILIARY SYSTEMS

1. (Point ID) NV Letdown Flow _____ GPM
2. (Point ID) Charging Flow _____ GPM
3. (Point ID) ND Return Flow _____ GPM

D. SAFETY INJECTION SYSTEM

1. (Point ID) CCP Inj. Hdr. Flow _____ GPM
2. (Point ID) CCP/A Status: _____
3. (Point ID) CCP/B Status: _____
4. (Point ID) NI Pump A Status: _____
5. (Point ID) NI Pump B Status: _____

E. CONTAINMENT SYSTEMS

1. (Point ID) Containment Press _____ PSIG
2. (Point ID) Containment Temp _____ °F
3. (Point ID) Containment Sump Level _____ FT
4. (Point ID) Containment H₂ Concen. _____ °F

F. RADIATION MONITORING SYSTEMS

1. (Point ID) MCS Monitor _____ CPM
2. (Point ID) Cont. HI Range Area _____ R/HR
3. (Point ID) Cont. Gas Monitor _____ CPM
4. (Point ID) Unit Vent Noble Gas _____ CPM
5. (Point ID) Unit Vent Iodine _____ CPM

G. ENVIRONMENTAL SYSTEMS

1. (Point ID) Upper Wind Speed _____ MPH
2. (Point ID) Lower Wind Speed _____ MPH
3. (Point ID) Upper Wind Direction from _____ DEG
4. (Point ID) Lower Wind Direction from _____ DEG
5. (Point ID) Barometric Pressure _____ IN HG
6. (Point ID) Lower To Upper Temp. Diff. _____ °C
7. (Point ID) Lower To Middle Temp. Diff. _____ °C
8. (Point ID) Switchyard Ambient Air Temp. _____ °C

J. PROTECTIVE RESPONSE

J.1.a - J.1.d Onsite Alerting and Notification

The means for alerting and notifying employees not having emergency assignments, visitors, contractors and construction personnel, and others who may be in the public access areas or within the owner controlled area is described in the Nuclear Station Emergency Plan, Sections J.1.a - J.1.d.

J.2 Site Evacuation Procedures - Evacuation Routes and Transportation

The Nuclear Station Emergency Plan, Section J, describes the evacuation routes and means of transportation for site personnel being evacuated.

J.3 Site Evacuation Procedures - Personnel Monitoring

The Nuclear Station Staff would use plant procedures for personnel monitoring following site evacuation. The procedures used are described in the Station Plans, Section J.

J.4 Site Evacuation Procedures - Decontamination/Non Essential Personnel Criteria

The procedures referenced in J.3 provide for evacuation of non-essential personnel in the event of a Site Emergency or General Emergency. Personnel considered essential and non-essential are detailed in the procedures. A decontamination station is established for each plant. The McGuire decontamination point is the Training and Technology Center or the Cowan's Ford Dam (depending upon radiological and meteorological conditions). The Oconee decontamination station is located at Daniel High School or Keowee School depending upon the meteorological and radiological conditions. The Catawba decontamination sites are the Newport Transmission Line Warehouse or Allen Steam Station.

J.5 Site Evacuation Procedures - Personnel Accountability

The station procedures referenced in J.2 provide for a capability to account for all individuals onsite at the time of an emergency and to determine missing individuals.

J.6 Protective Equipment - Breathing Apparatus, Protective Clothes, KI

The nuclear station emergency plan makes provisions for use of individual respiratory protection (as necessary), use of protective clothing, and use of KI. Quantities and locations of these materials are referenced in part H of the Station Emergency Plans.

The Crisis Management Organization (CMO) will relocate to the alternate CMC in the event of a release sufficient to warrant the action. The Nuclear Technical Services Manager of the CMO will provide the thyroid-blocking agent. This material is located and stored as described in Procedure 5.3.16.

J.7 Mechanism for Protective Action Recommendations

As described in section B.4, the Station Emergency Coordinator and the Recovery Manager are responsible for making protective action recommendations. Prior to activation/operation of the CMC, the Station Emergency Coordinator will be responsible for making these recommendations. After activation of the CMC, the Recovery Manager assumes this responsibility.

The mechanism for making these recommendations upon CMC activation is as follows: The Offsite Radiological Coordinator is responsible for making dose projections on a periodic basis. These calculations will use existing plant procedures to calculate projected dose to the population-at-risk for either potential or actual release conditions. For conditions in which a release has not occurred as yet but fuel damage has taken place and radiation levels in the containment building atmosphere are significant, a scoping analysis will be performed to determine what recommendations would be made if containment integrity were lost at that time on a design leak rate basis to a penetration failure indicated by a hole size of certain diameter. This analyses will include the use of actual containment pressure, realistic meteorology, and actual source term. As described in the procedure used (for either potential or actual releases), a whole body and thyroid dose will be calculated at various distances from the plant (Site boundary, 2 miles, 5 miles, 10 miles). These dose projections are compared to the Protective Action Guides set forth in Tables 2.1 and 2.2 of the "Manual of Protective Action Guides and Protective Actions For Nuclear Incidents (EPA-520/1-75-001). Based on these comparisons, protective action recommendations are developed by the Offsite Radiological Coordinator. If these recommendations involve sheltering or evacuation of the public around the plant, the Offsite Radiological Coordinator makes the Recovery Manager aware of the situation and his recommendations thru the Nuclear Technical Services Manager. The Recovery Manager will contact the offsite authorities (state and county) with these recommendations on the preestablished message format. (See Tables E-1 and E-2). Table K-4 is a flowchart which goes into more detail on this process including consideration of General Emergency EAL's and environmental/road factors. This is the official methodology used by Duke decision makers in making protective action recommendation.

J.8 Evacuation Time Estimates

Tables J-1 - J-47 detail the evacuation time estimates for Oconee, McGuire and Catawba. Excerpts of the study used in developing each station's evacuation time estimates are included. Oconee's estimates and bases for the estimate are found in Tables J-1 through J-15. McGuire's evacuation time estimates are described in Tables J-16 through J-31. Catawba's estimates are found in Tables J-32 - J-47. Table K-4 is a flowchart which goes into more detail on this process including consideration of General Emergency EAL's and environmental/road factors. This is the official methodology used by Duke decision makers in making protective action recommendations.

J.9 Implementing Protective Measures

The State and County organizations referenced in Section A of this plan have the capability to implement protective measures deemed necessary by the appropriate officials.

J.10.a EPZ - MAPS of Oconee and McGuire EPZ's

The Oconee EPZ is described in Tables J-3 through J-7, and J-9 through J-11. The McGuire EPZ is described in Tables J-18 through J-23 and J-25 through J-27. The Catawba EPZ is described in Tables J-32 through J-47.

J.10.b EPZ - Population Distribution Maps

Oconee's population distribution in Tables J-12 through J-15. McGuire's population distribution is shown in Tables J-28 through J-31. Catawba's population distribution is listed in Tables J-32 and J-32.

J.10.c EPZ - Population Alerting and Notification

As described in Appendix 3 of this plan, a system exists for alerting and notifying the population (resident and transient) within the EPZ areas. This system is activated by the county or State organization and includes the use of large fixed-site sirens and the Emergency Broadcast System. This system is supplemented by a door-to-door alert and notification means within the county organizations.

J.10.d EPZ - Protecting Immobile Persons

The State and county organizations referenced in Section A of this plan have the capability to protect those persons whose mobility may be impaired. The State and county plans provide for bus transport from the persons's location to a reception center or shelter.

J.10.e Use of Radioprotective Drugs For Persons in EPZ

See State and County Plans

J.10.f Conditions for Use of Radioprotective Drugs

See Plans for the states and counties referenced in Section A.

J.10.g State/County Means For Relocation of People In EPZ

See plans of the State and counties referenced in Section A.

J.10.h State/County Relocation Center Plans

See Attachments G-1, G-2, and G-3 for layouts of the shelters around Oconee, McGuire, and Catawba, respectively. The plans of the states and counties in the 10 mile EPZ areas around Oconee, McGuire, and Catawba detail these facilities.

J.10.i Evacuation Routes - Traffic Capacities

See the plans of the States and counties referenced in Section A.

J.10.j Evacuated Area Access Control

See the plans of the States and counties referenced in Section A.

J.10.k Planning for Contingencies In Evacuation

See the plans of the States and counties referenced in Section A.

J.10.l State/County Evacuation Time Estimates

The estimates shown in this section are referenced in the State and local plans of Section A.

J.10.m. Bases for Protective Action Recommendations

Tables K-3 and K-4 describe the considerations used by Duke management in developing protective action recommendations.

J.11 Ingestion Pathway Planning

See the State plans listed in Section A.

J.12 Relocation Center - Registering & Monitoring

See the State and local plans listed in Section A.

TABLE J-1 SUMMARY OF EVACUATION TIMES
Oconee Nuclear Station

	Permanent Population	Permanent Population Vehicles	Transient Population	Transient Population Vehicles	Evacuation Capacity per Hour	Notification Time	Preparation Time	Permanent Population Response Normal Conditions	Permanent Population Response Adverse Conditions	Transient Population Response Normal Conditions	Transient Population Response Adverse Conditions	General Population Evacuation Time - Normal Conditions	General Population Evacuation Time - Adverse Conditions	Confirmation Time	Special Population Evacuation Time - Normal Conditions	Special Population Evacuation Time - Adverse Conditions
Zones Within Two Miles																
Central East	212	92	700	230	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
Central West	95	41	2,495	891	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
All Zones	307	133	3,195	1,141		(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
Zones Within Five Miles																
A-1	417	180	1,334	484	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
B-1	1,698	734	—	—	3,600	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45	4:15
C-1	338	146	301	179	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
D-1	209	90	1,181	422	3,600	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
E-1	709	306	1,133	405	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	1:45	2:30
F-1	279	121	1,229	439	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)	(5)
All Zones	3,957	1,710	2,993	3,070		(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40		
Zones Within Ten Miles																
A-2	1,631	705	2,189	782	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	1:45	2:30
B-2	3,614	1,561	—	—	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	4:00	1:40	(5)	(5)
C-2	18,838	8,147	2,487	888	6,000	(1)	(2)	(3)	(3)	(4)	(4)	3:25	4:15	1:40	2:45	4:15
D-2	15,602	6,740	4,064	1,451	6,000	(1)	(2)	(3)	(3)	(4)	(4)	3:45	5:30	1:40	2:45	4:15
E-2	8,897	3,844	1,373	490	3,600	(1)	(2)	(3)	(3)	(4)	(4)	3:30	5:00	1:40	1:45	2:30
F-2	2,804	1,211	1,535	548	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45	4:15
All Zones	55,363	23,918	20,241	7,229		(1)	(2)	(3)	(3)	(4)	(4)	3:45	5:30	1:40		

These estimates are based upon a study performed by PRC-Voorhees Company for Duke Power Company. This study was submitted to NRC in January, 1982. Tables J-2 through J-15 describe the Oconee Nuclear Station EPF (evacuation routes, planning zones, special facilities, etc.) These tables are excerpts of the study which is available for review at the Duke Power Company General Offices or Oconee Nuclear Station.

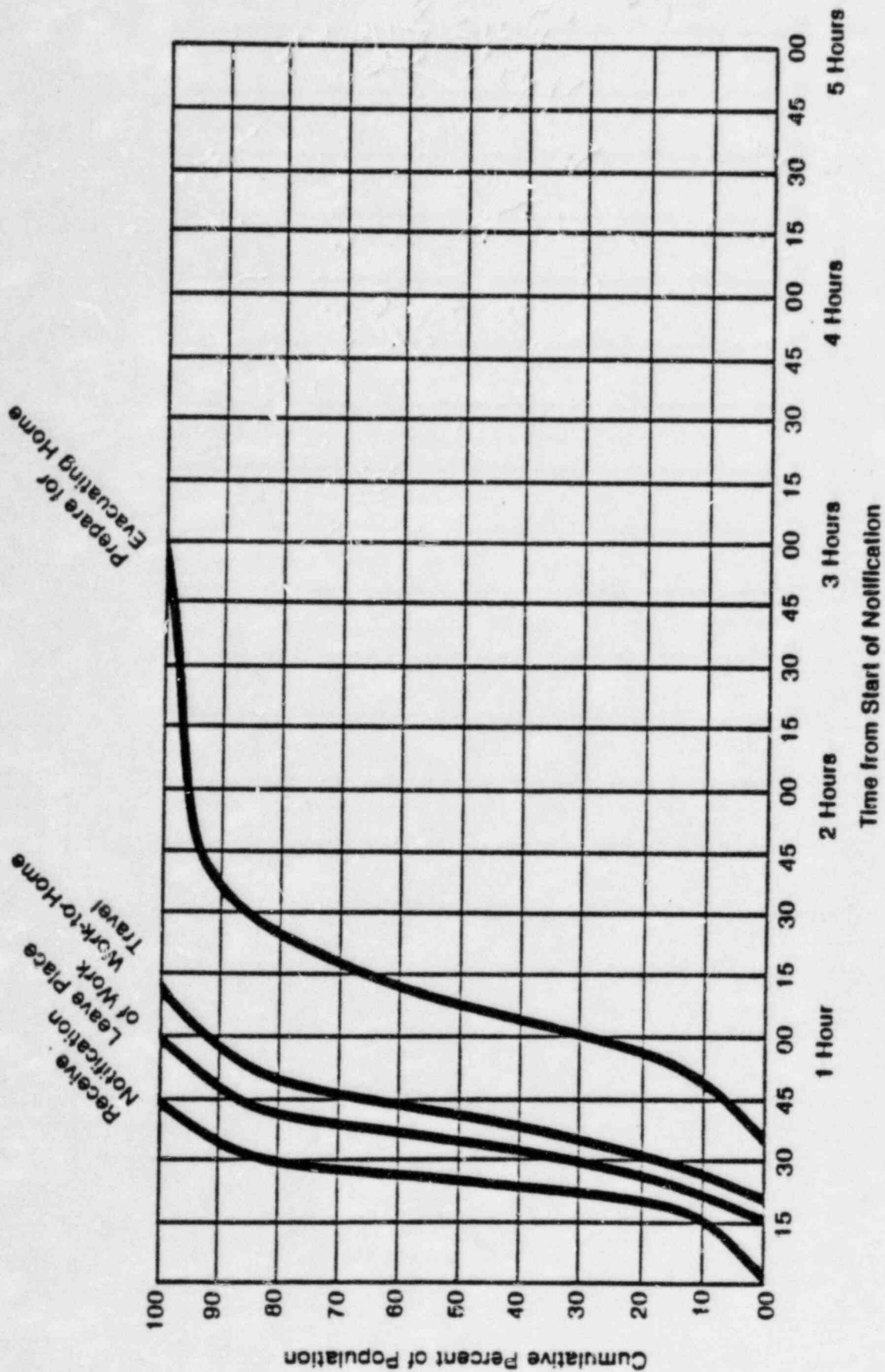


TABLE J-2 Evacuation Time for the Permanent Resident Population (Auto-Ownng)

EPZ Boundary

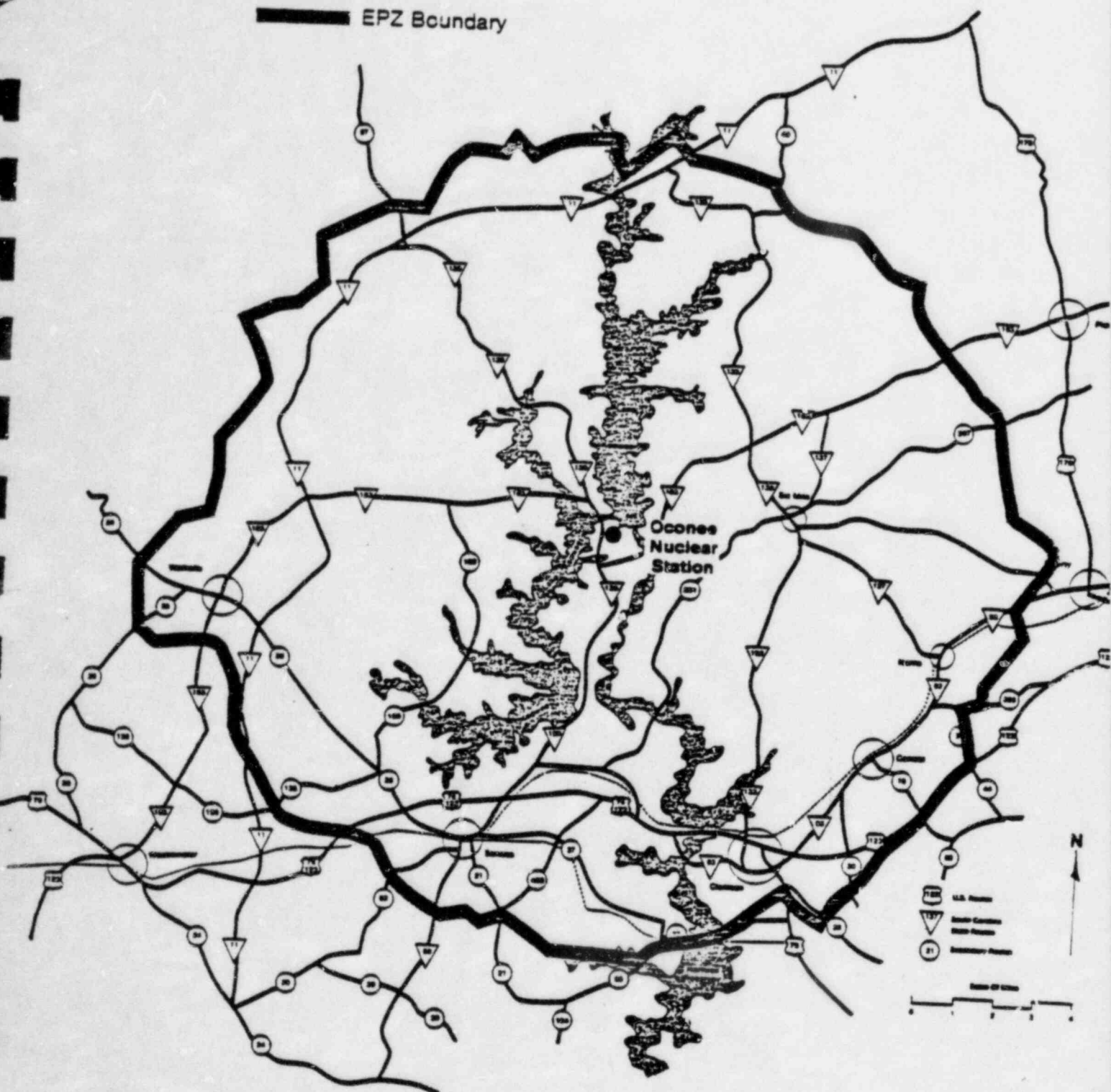


TABLE J-3 Emergency Planning Zone (EPZ) for the Oconee Nuclear Station

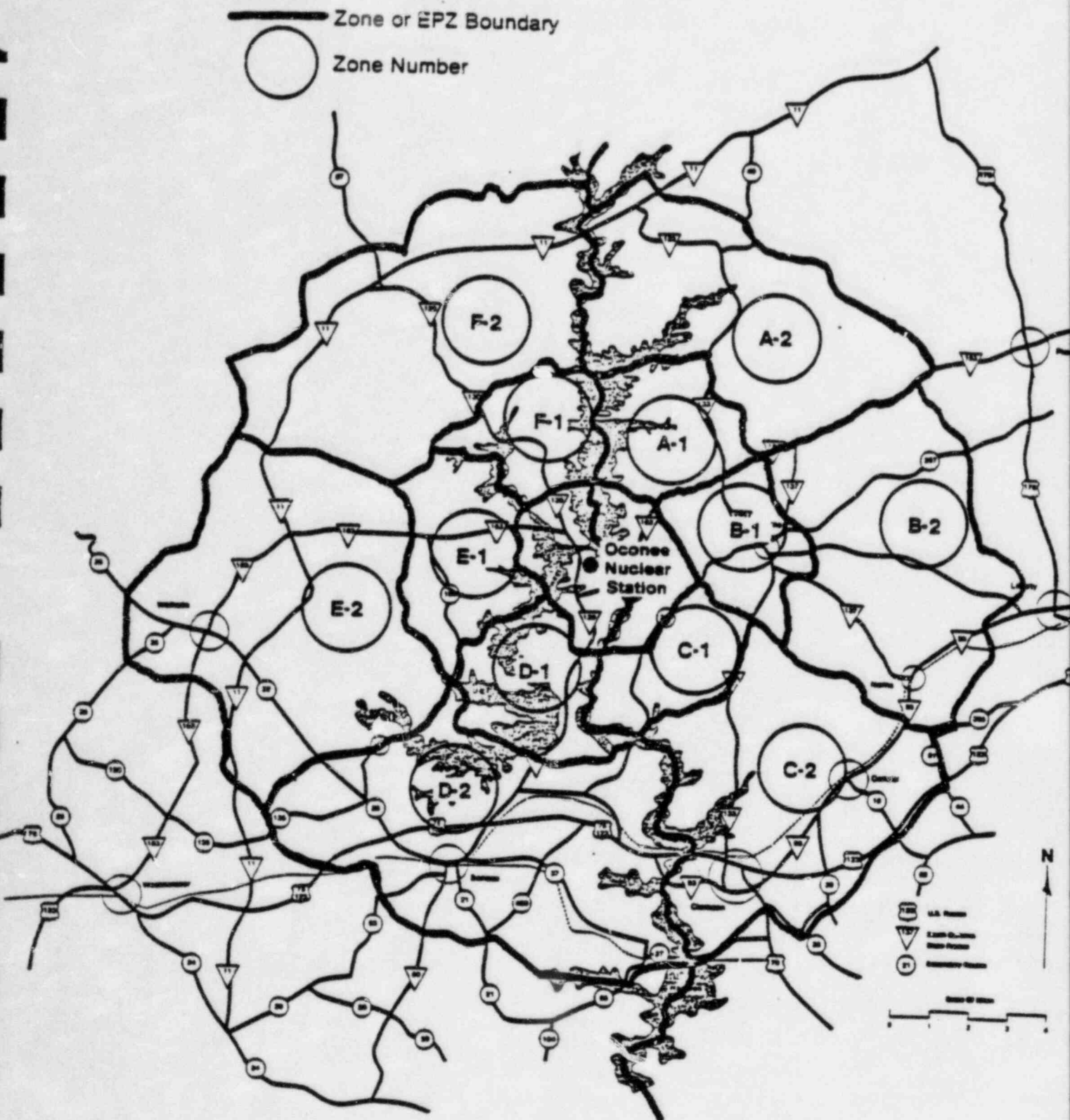



TABLE J-4 Selective Evacuation Zones for the Oconee EPZ

- EPZ Boundary
-  Incorporated Area
- - - County Line

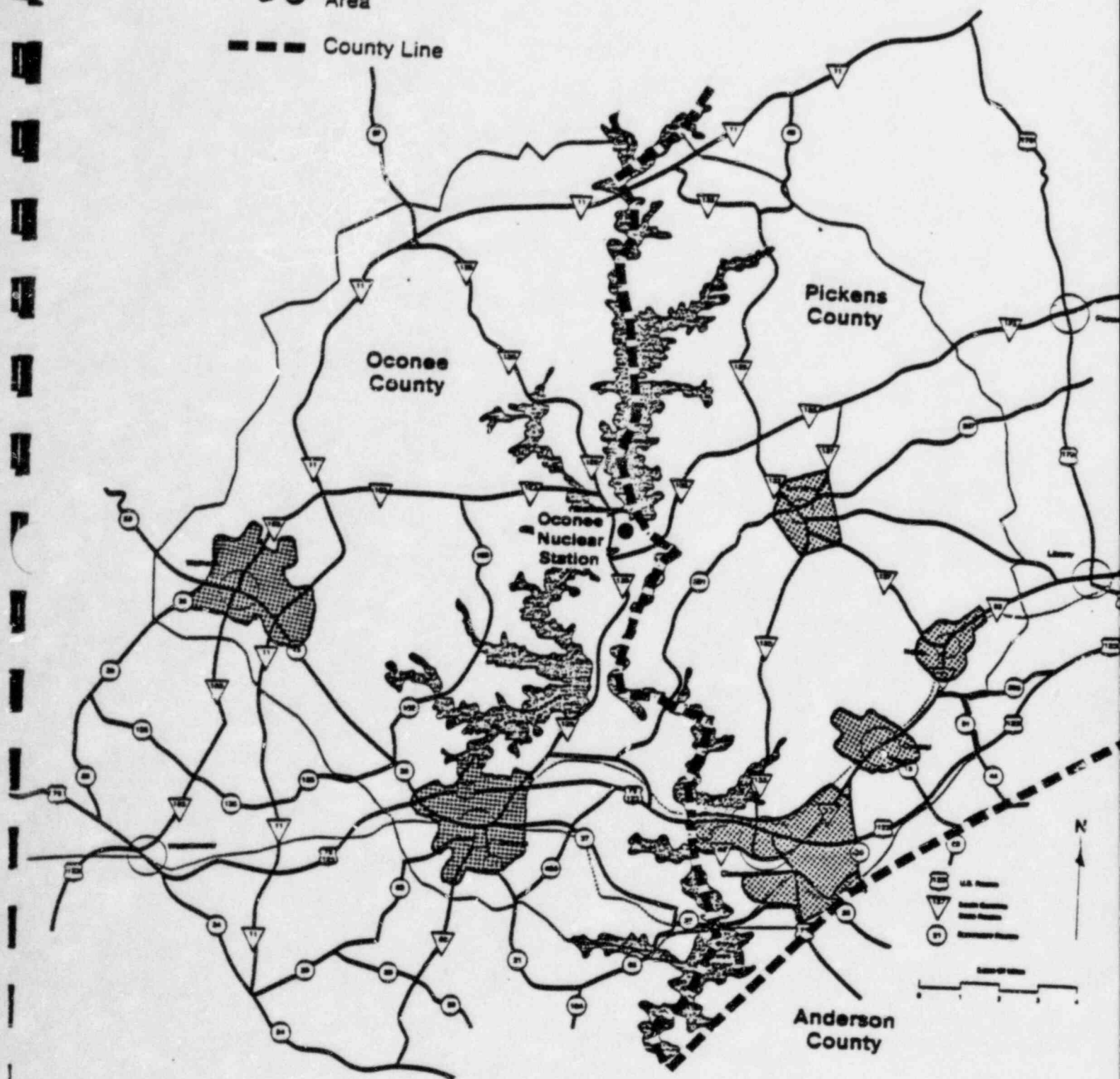





TABLE J-5 Local Government Jurisdictions

— Highway

Route Number System

 U.S. Routes

 South Carolina State Routes

 Secondary Routes

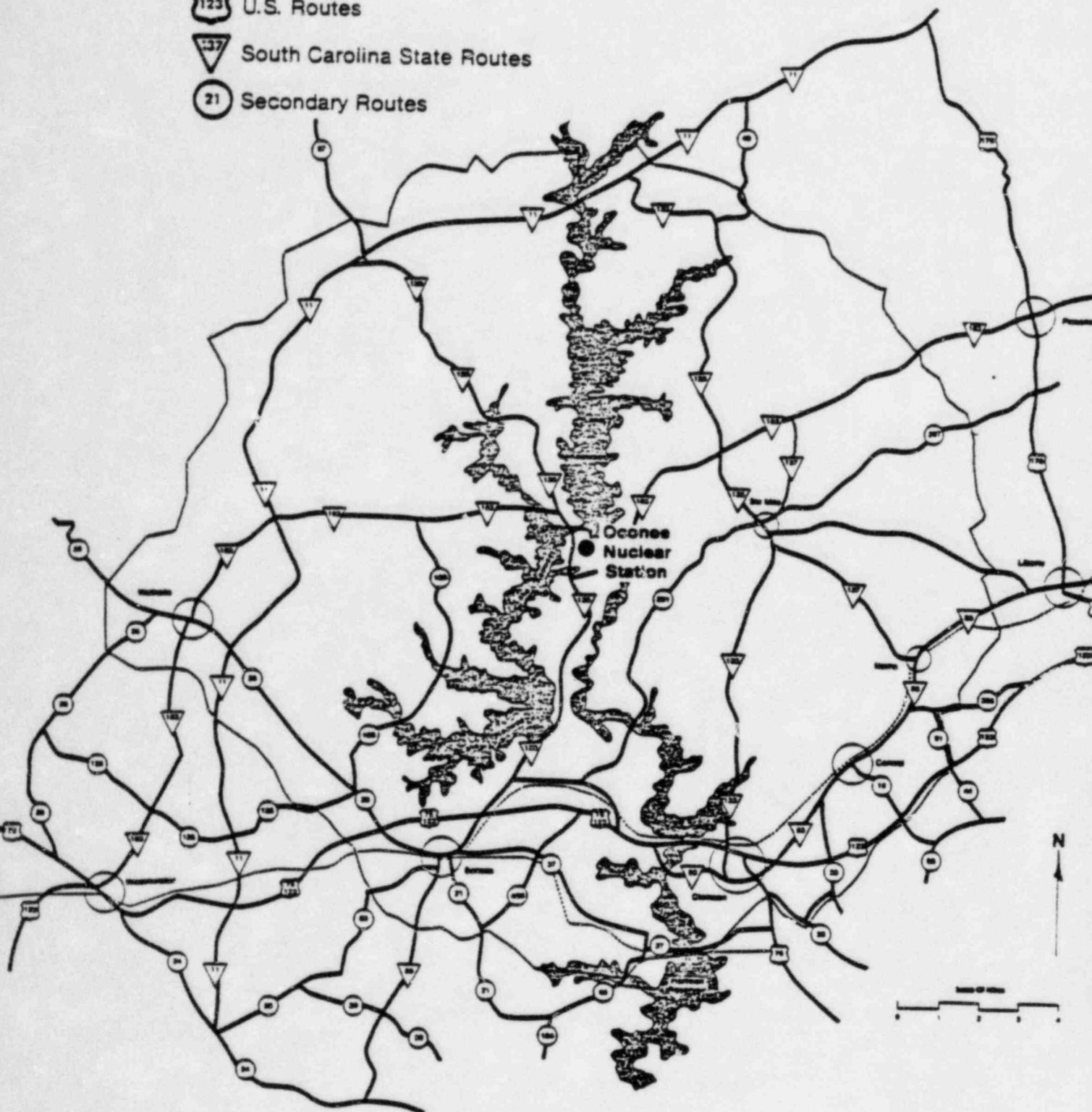


TABLE J-6 Highway System in the Vicinity of the Oconee Nuclear Station

- EPZ Boundary
- ||||| Railroads
- ◆ Airport

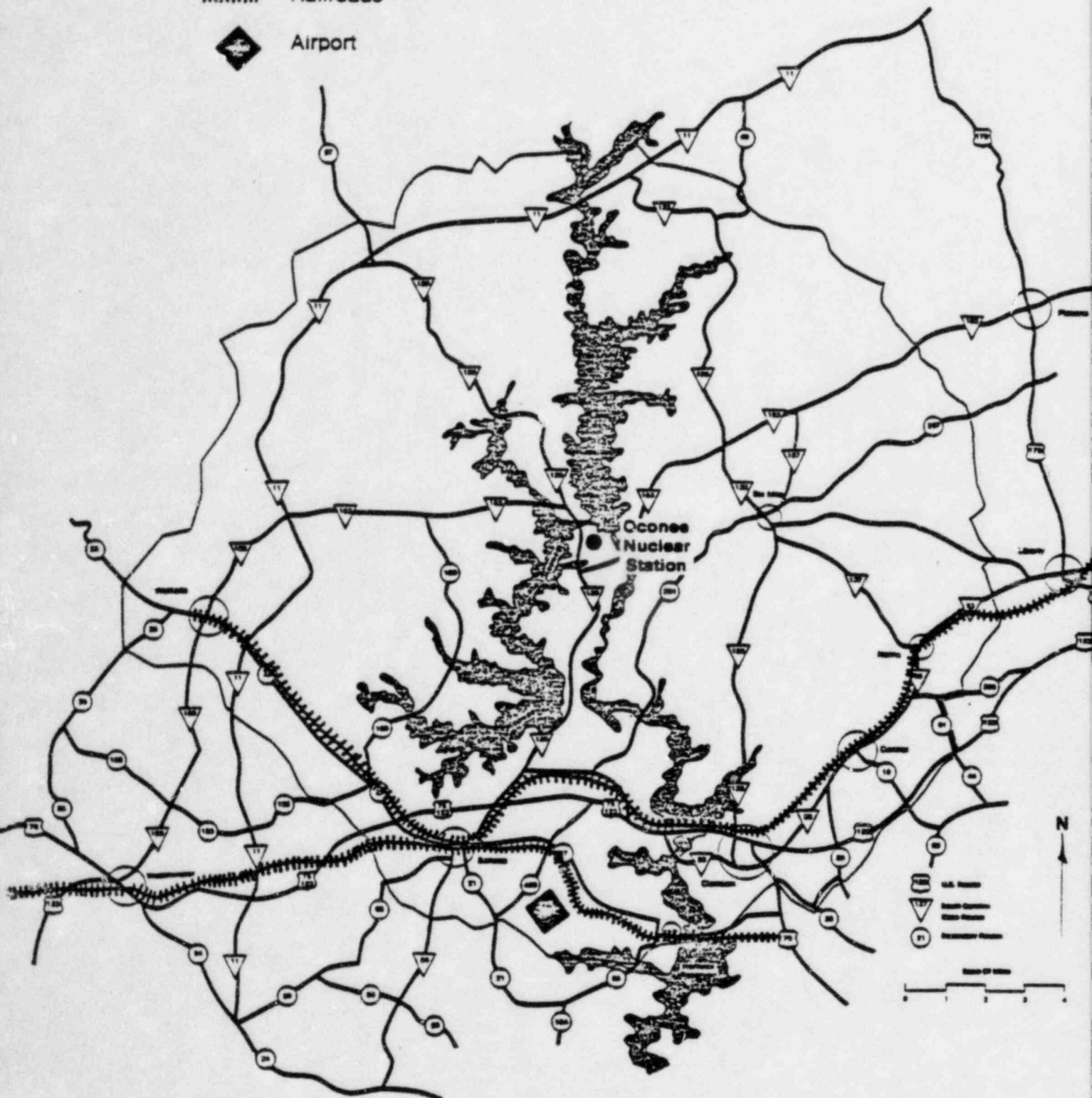


TABLE J-7 Other Transportation Facilities in the Vicinity of the Oconee Nuclear Station

TABLE J-8 SPECIAL FACILITIES POPULATION IN THE OCONEE EPZ

<u>Schools</u>	<u>Population</u>	<u>Location (Zone)</u>	<u>Schools</u>	<u>Population</u>	<u>Location (Zone)</u>
Central Elementary School	434	C-2	Seneca Preschool	250	D-2
Clemson University	11,291	C-2	Six Mile Elementary School	448	B-1
Daniel High School	706	C-2	Tammasee Elementary School	231	F-2
R. C. Edwards Junior High	712	C-2	Tribble Center	45	D-2
Gignillat Middle School	423	D-2	Tribble Center Annex	16	D-2
J. N. Kellet Elementary School	358	D-2	Utica Elementary School	227	D-2
Keowee Elementary School	257	E-1	Walhalla Elementary School	466	E-2
Albert R. Lewis Elementary School	287	A-2	Walhalla High School	852	E-2
Morrison Annex	100	C-2	Walhalla Middle School	649	E-2
Morrison Elementary School	640	C-2	Walhalla Preschool	60	E-2
Northside Elementary School	362	D-2			
Oconee Christian Academy	80	D-2	<u>Hospitals</u>		
Oconee Vocational School	250	D-2	Oconee Memorial Hospital	130	D-2
Pine Street Elementary School	531	E-2	Redfearn Health Infirmary	20	C-2
Ravenel Elementary School	458	D-2			
Salem Elementary School	153	F-2	<u>Nursing Homes</u>		
Salem High School	288	F-2	Lila Doyle Annex	79	D-2
Seneca Christian Academy	50	D-2	Hall House	16	F-2
Seneca High School	1,128	D-2	Harvey's Love and Care	40	B-1
Seneca Junior High	706	D-2	Six Mile Retirement Home	35	B-1

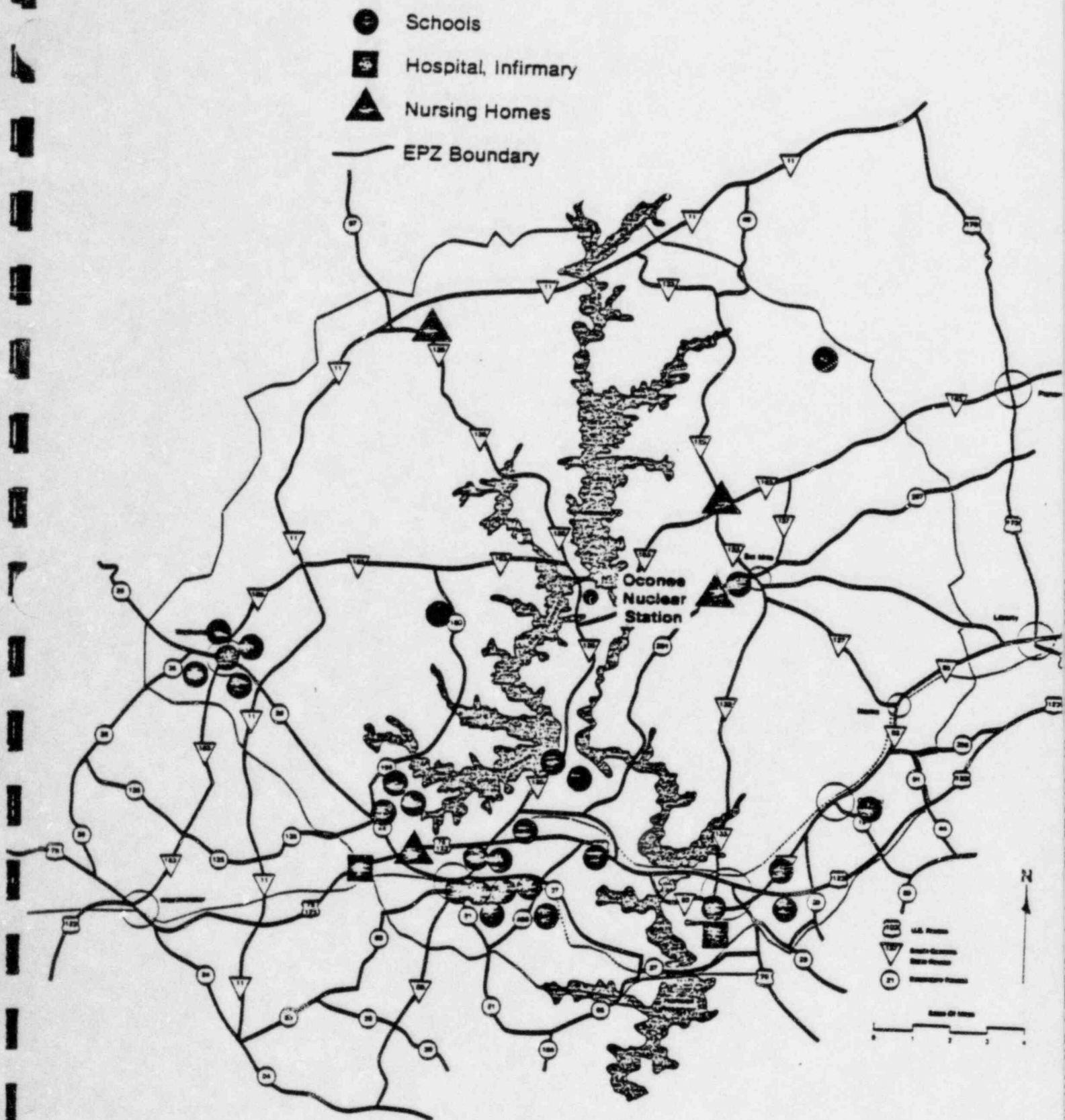


TABLE J-9 Location of Special Facilities

— EPZ Boundary

— Evacuation Routes

--- Supplemental Evacuation Routes

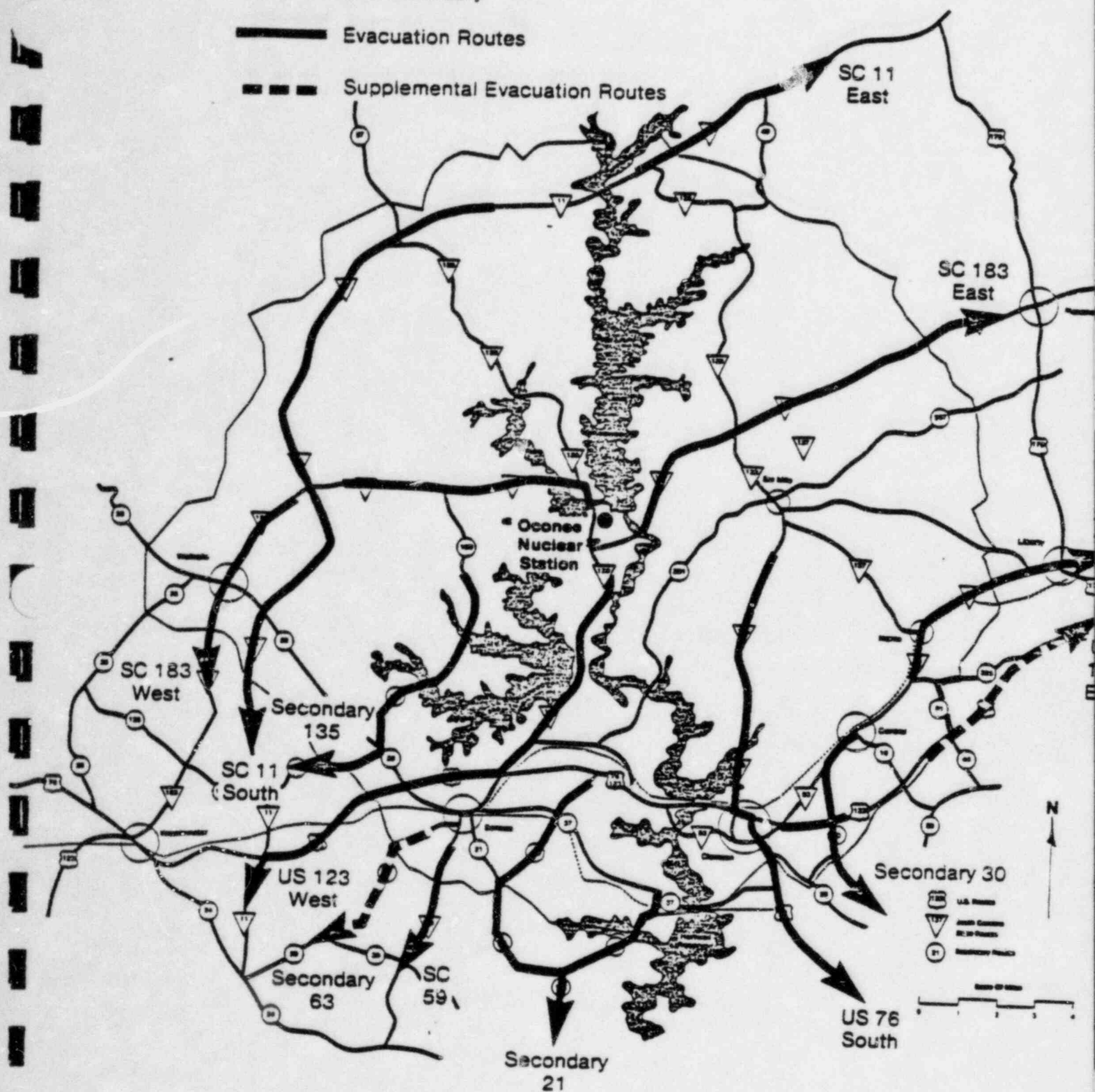


TABLE J-10 Evacuation Routes for the Oconee Nuclear Station

- ◆ 15 to 30 Minute Delay
- ◆ More than 30 Minute Delay
- xxx Maximum Evacuation Time On Route

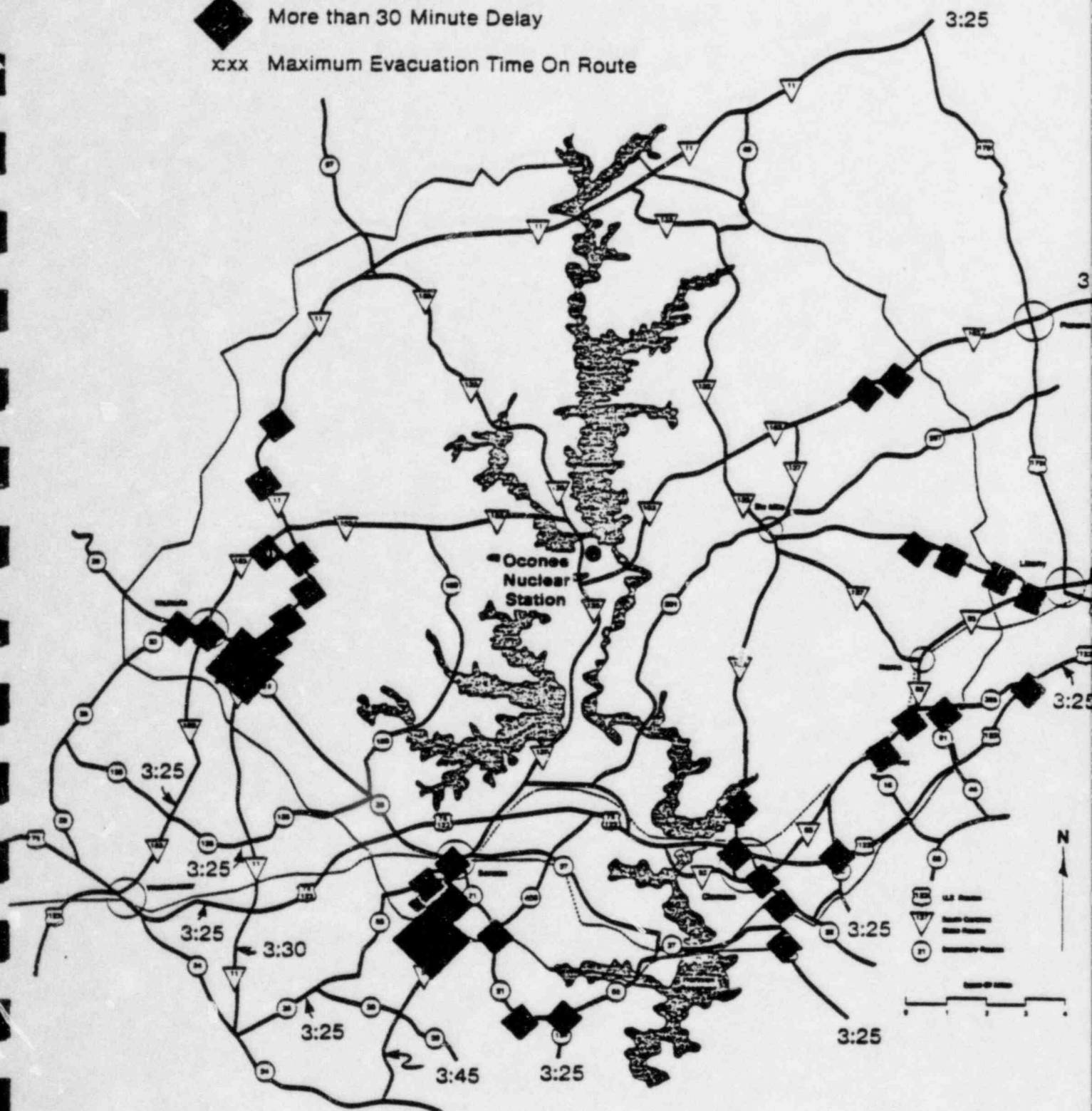
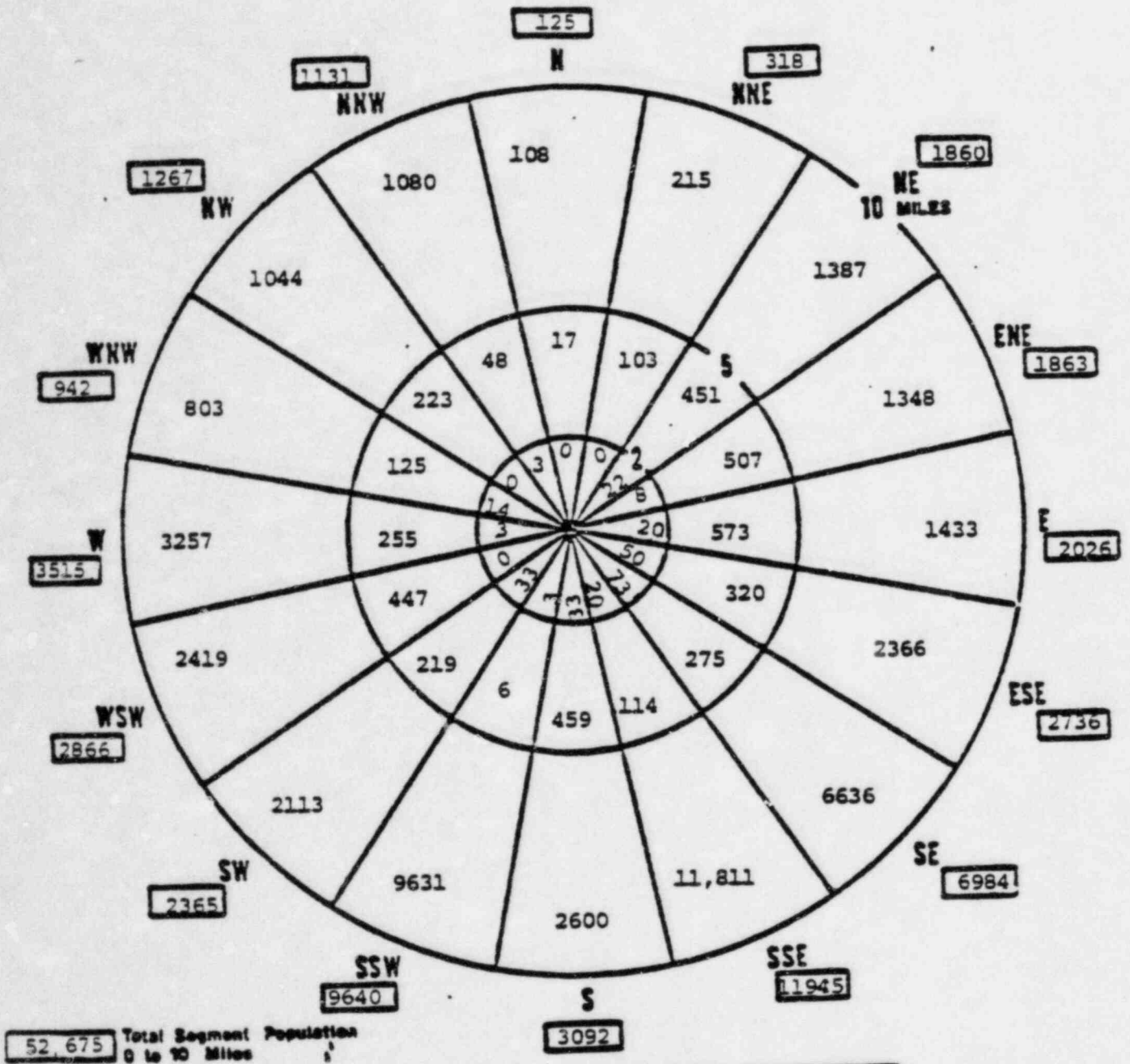


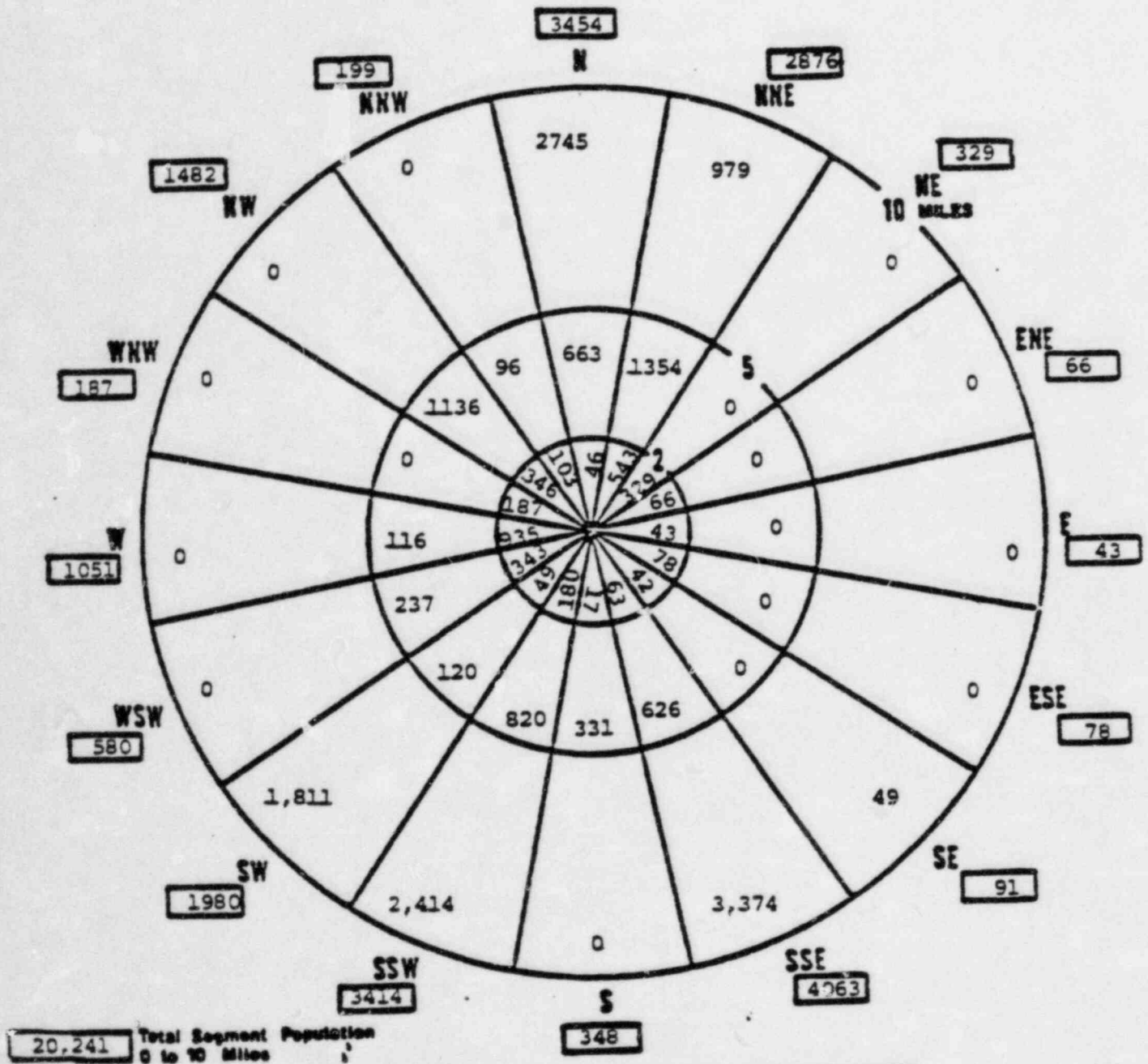
TABLE J-11 Traffic Congestion Summary

TABLE J-13 Permanent Population by Sector



POPULATION TOTALS			
RING, MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	282	0-2	282
2-5	4,142	0-5	4,424
5-10	48,251	0-10	52,675

TABLE J-14 Estimated Transient Population



POPULATION TOTALS			
RING, MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	3,370	0-2	3,370
2-5	5,499	0-5	8,809
5-10	11,372	0-10	20,241

Table J-15

OCONEE NUCLEAR STATION
EMERGENCY PLANNING ZONE
AREA AND 1980 POPULATIONS

<u>Zones</u>	<u>Area (sq. mi.)</u>	<u>Population</u>
Central	13.259	307
A-1	11.232	417
A-2	34.281	1,631
B-1	13.396	1,698
B-2	34.590	3,614
C-1	9.549	338
C-2	30.915	18,858
D-1	10.271	209
D-2	44.998	15,602
E-1	14.427	709
E-2	43.590	8,897
F-1	10.133	279
F-2	<u>42.079</u>	<u>2,804</u>
Total	312.722	55,362

Source: Field Survey on January 1980 by Duke of houses within 5 miles
and 1980 Advanced Census Report.

Table J-16

SUMMARY OF EVACUATION TIMES

McGuire Nuclear Station

Areas	Permanent Population	Permanent Population Vehicles	Transient Population	Transient Population Vehicles	Evacuation Capacity per Hour	Notification Time	Preparation Time	Permanent Population Response Normal Conditions	Permanent Population Response Adverse Conditions	Transient Population Response Normal Conditions	Transient Population Response Adverse Conditions	General Population Evacuation Time -- Normal Conditions	General Population Evacuation Time -- Adverse Conditions	Confirmation Time	Special Population Evacuation Time -- Normal Conditions	Special Population Evacuation Time -- Adverse Conditions
Within Two Miles																
2 NE	439	188	974	348	1,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
2 SE	195	80	---	---	1,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
2 SW	541	222	---	---	1,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
2 NW	1,261	517	2,026	724	4,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
All Subareas	2,456	1,007	3,000	1,071	7,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
Within Five Miles																
5 NE	2,566	1,032	3,401	1,215	1,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
5 SE	1,996	818	---	---	1,300	1	2	3	3	4	4	3:25	4:00	1:40	5	5
5 SW	2,417	991	1,235	448	1,300	1	2	3	3	4	4	3:25	3:25	1:40	5	5
5 NW	3,485	1,429	3,347	1,267	4,300	1	2	3	3	4	4	3:25	4:00	1:40	1:45	2:30
All Subareas	10,464	4,290	8,203	2,930	7,300	1	2	3	3	4	4	3:25	4:00	1:40	1:45	2:30
Within Ten Miles																
10 NE	15,309	6,277	7,834	2,804	9,600	1	2	3	3	4	4	3:25	3:25	1:40	1:45	2:30
10 SE	18,634	7,648	2,685	939	9,600	1	2	3	3	4	4	3:25	4:00	1:40	2:45	4:15
10 SW	18,268	7,490	1,235	448	6,000	1	2	3	3	4	4	4:00	5:45	1:40	1:45	2:30
10 NW	9,274	3,802	6,673	2,382	6,000	1	2	3	3	4	4	3:25	4:00	1:40	1:45	2:30
Total EPZ	61,305	25,217	18,467	6,393	27,600	1	2	3	3	4	4	4:00	5:45	1:40	2:45	4:15

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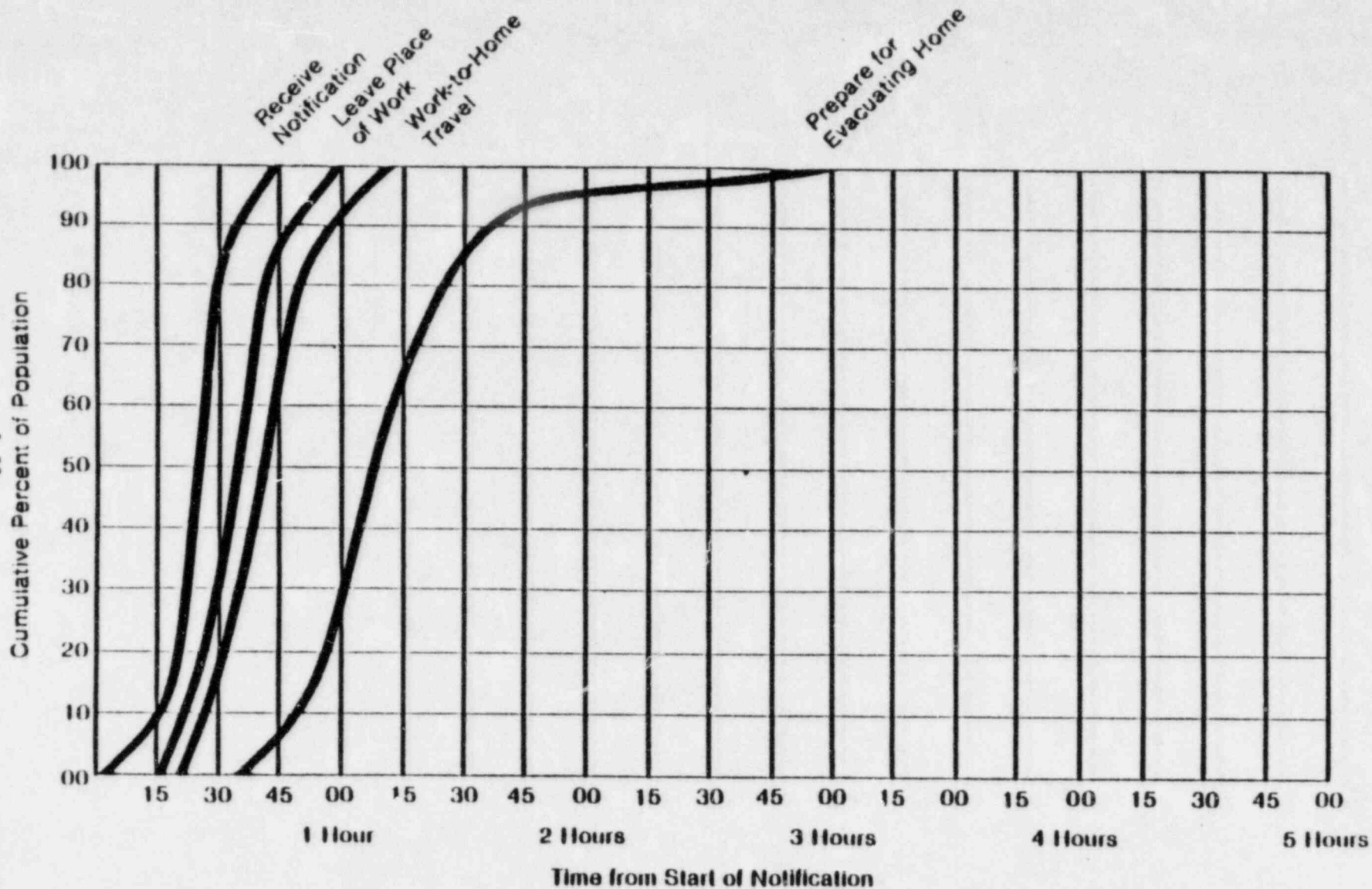


TABLE J-17 Evacuation Time for the Permanent Resident Population (Auto-Ownng)

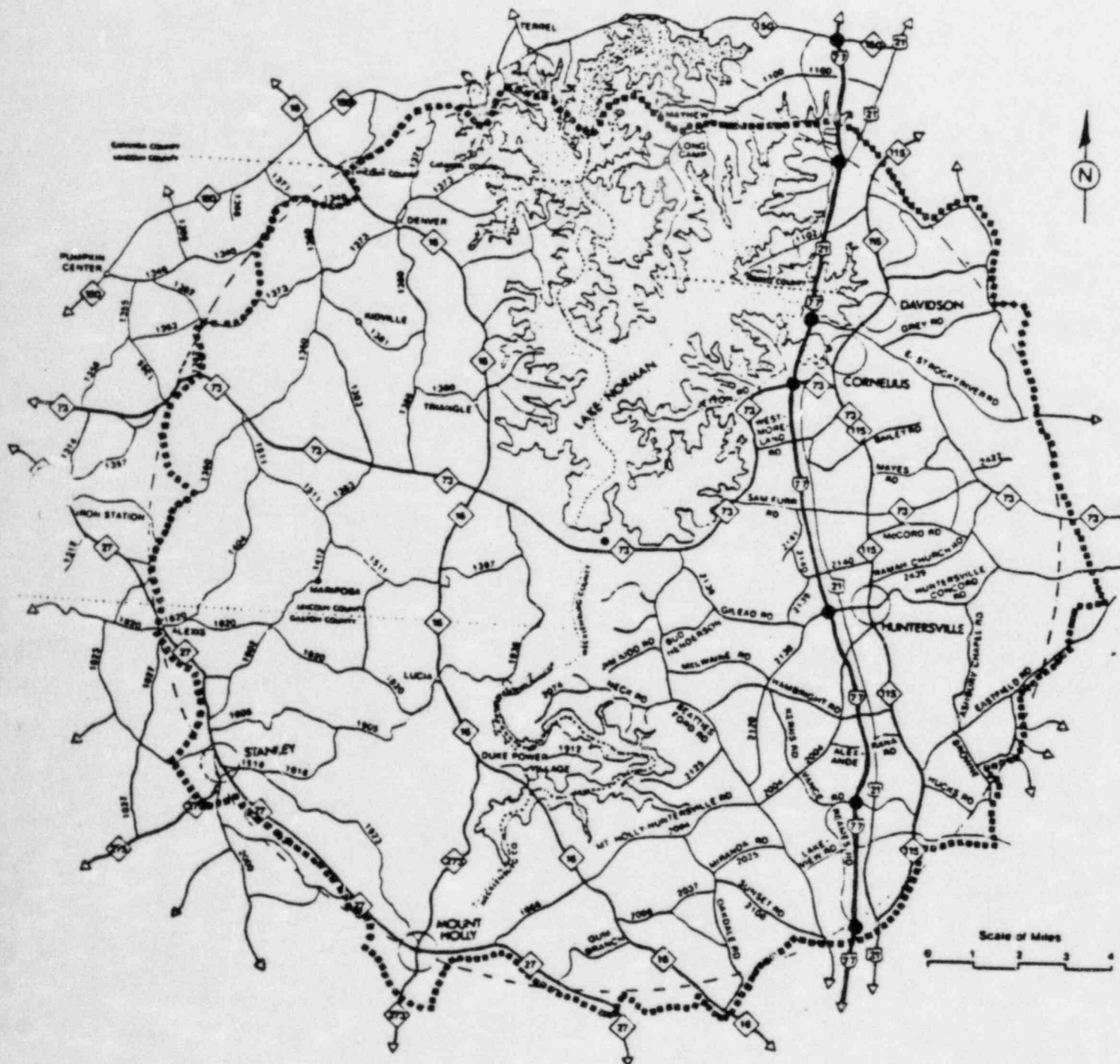


TABLE J-18
EMERGENCY PLANNING ZONE (EPZ)
FOR MCGUIRE NUCLEAR POWER STATION

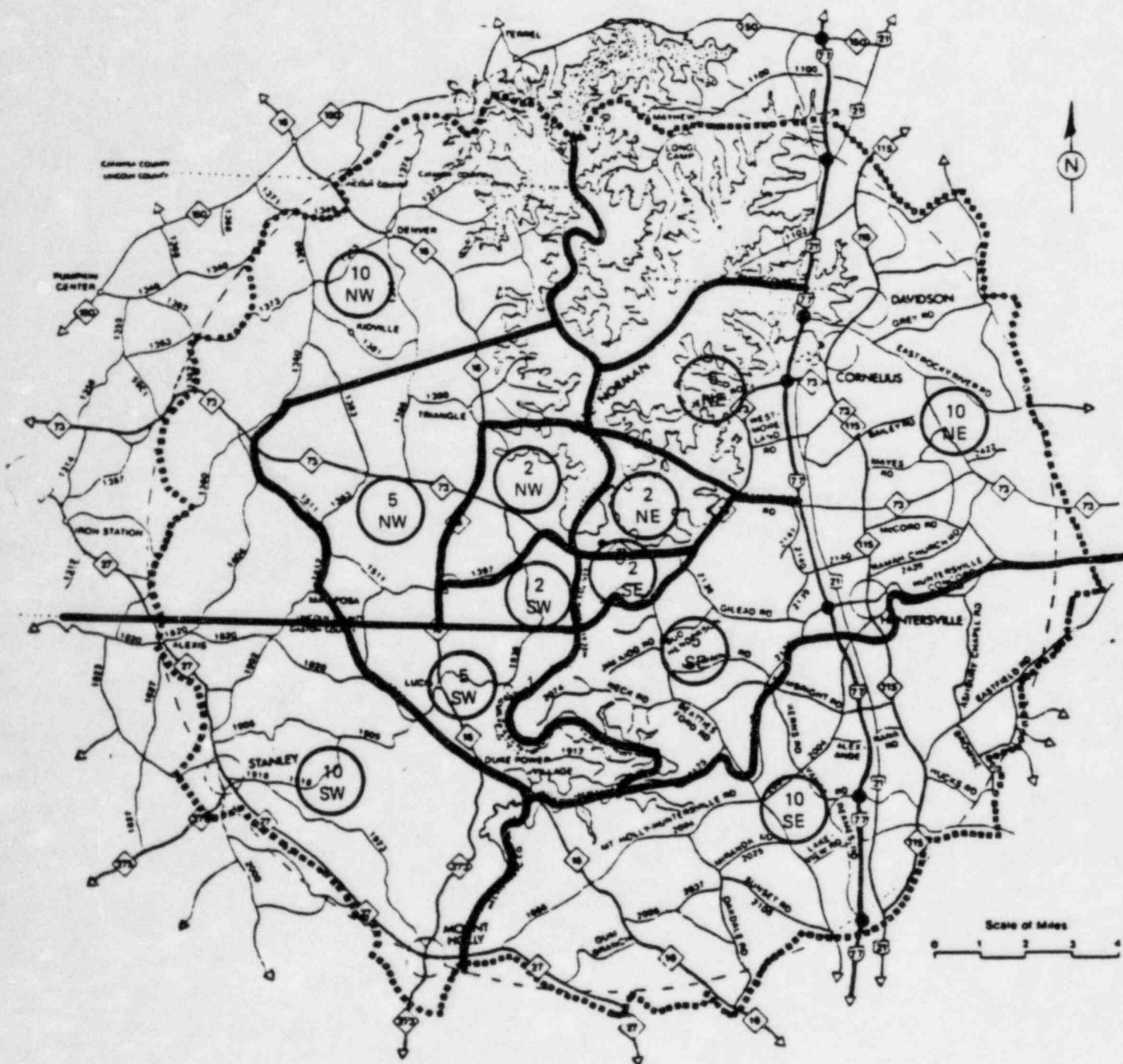


TABLE J-19
SELECTIVE EVACUATION SUBAREAS FOR McGUIRE EPZ

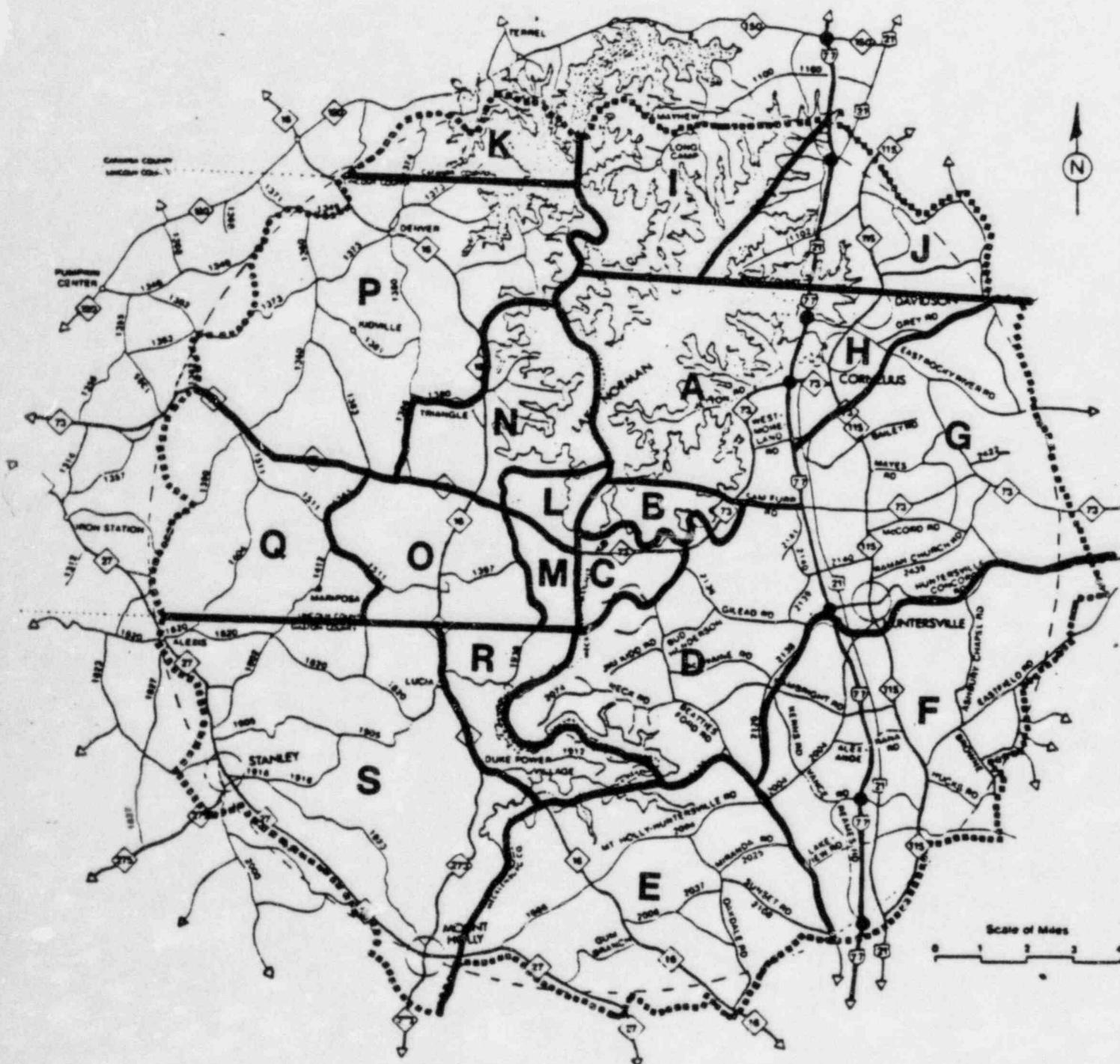


TABLE J-20
PROTECTIVE ACTION ZONES FOR THE
McGUIRE NUCLEAR POWER STATION

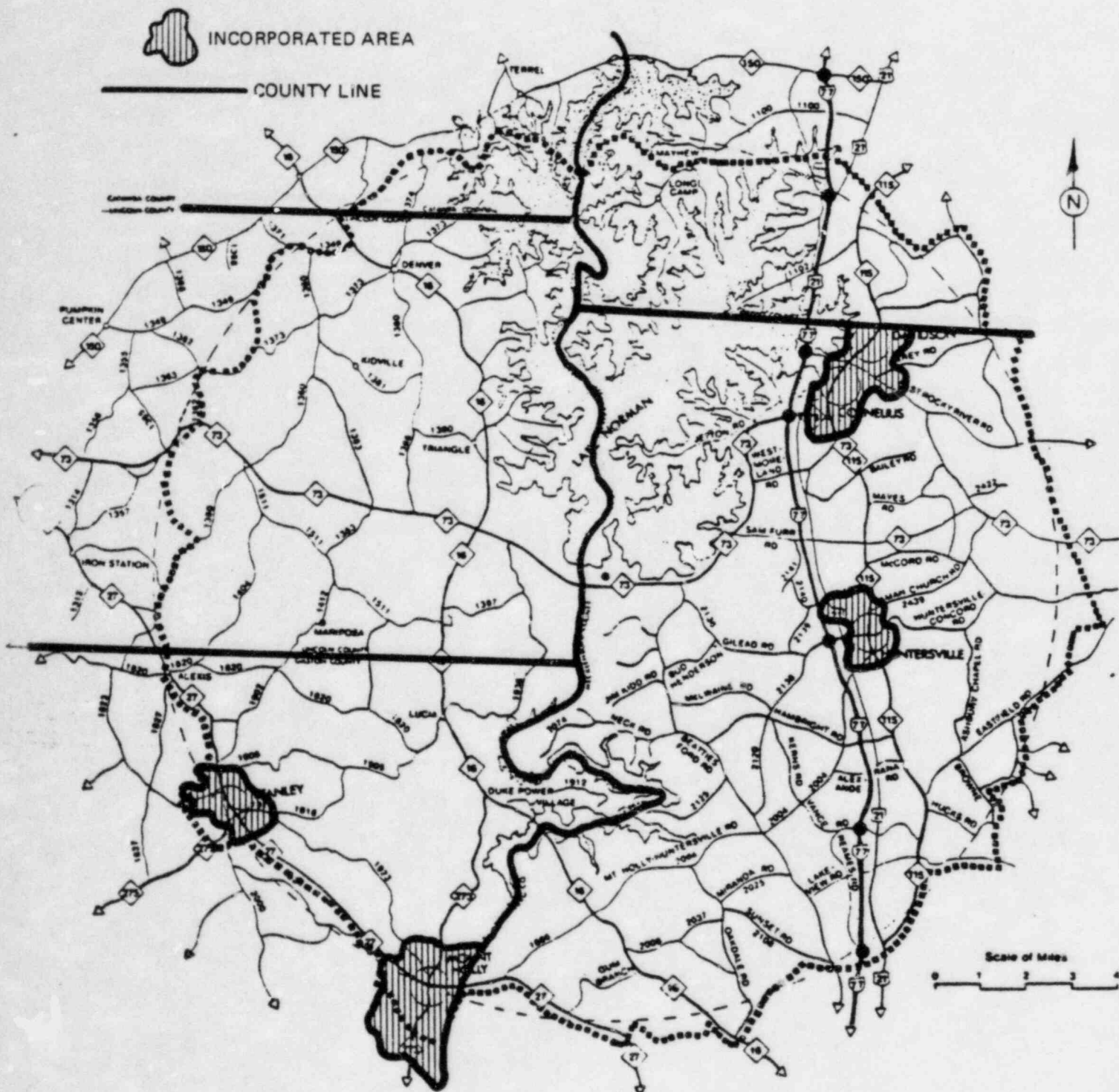


TABLE J-21
LOCAL GOVERNMENT JURISDICTIONS

RAILROADS

AIRPORT

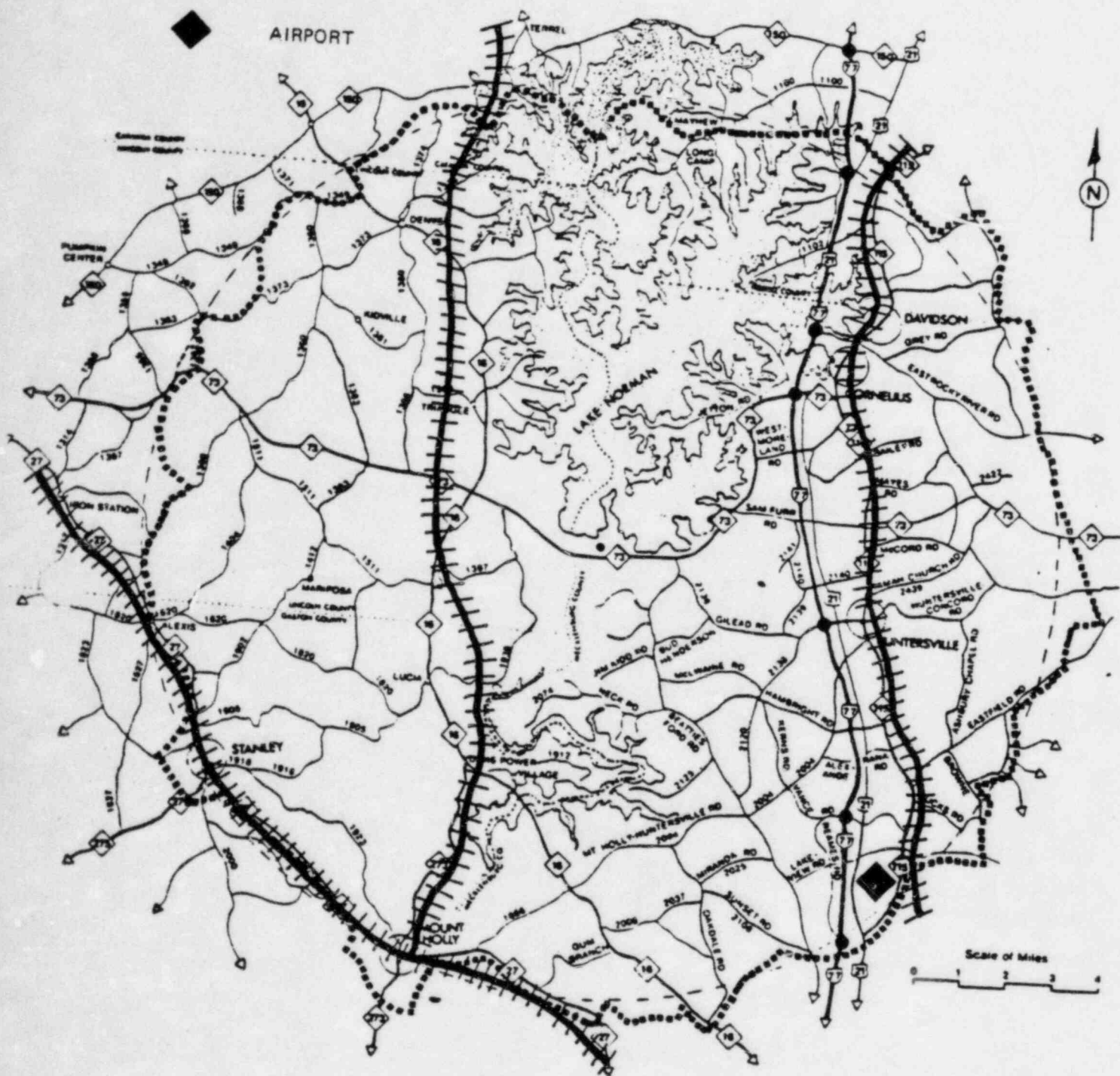


TABLE J-23
OTHER TRANSPORTATION FACILITIES IN THE VICINITY
OF THE MCGUIRE NUCLEAR POWER STATION

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Table J-24

SPECIAL FACILITIES POPULATION

<u>Schools</u>	<u>Population</u>	<u>Location (Selective Evacuation Subarea)</u>
Jolin McKnitt Alexander Junior High School	935	10 SE
Cornelius Elementary School	590	10 NE
Coulwood Junior High School	676	10 SE
Davidson College	1,364	10 NE
Davidson Elementary School	286	10 NE
Davidson Street Academy	5	10 NE
East Lincoln High School	674	5 NW
East Lincoln Junior High School	703	10 NW
Huntersville School	722	10 NE
O.L. Kiser Elementary School	739	10 SW
Long Creek Elementary School	750	10 SE
Mount Holly Junior High School	735	10 SW
Mt. Mourne School	495	10 NE
North Mecklenburg High School	1,369	10 SE
Oakdale Elementary School	418	10 SE
Paw Creek Elementary School	479	10 SE
Pinewood Elementary School	548	10 SW
Rankin Elementary School	742	10 SW
Rock Springs Elementary School #1	932	5 NW
Rock Springs Elementary School #2	160	10 NW
Valleydale School	170	10 SE
<u>Prison Camps</u>		
North Carolina Department of Corrections	66	10 SE
<u>Hospitals</u>		
Huntersville Hospital	233	10 SE

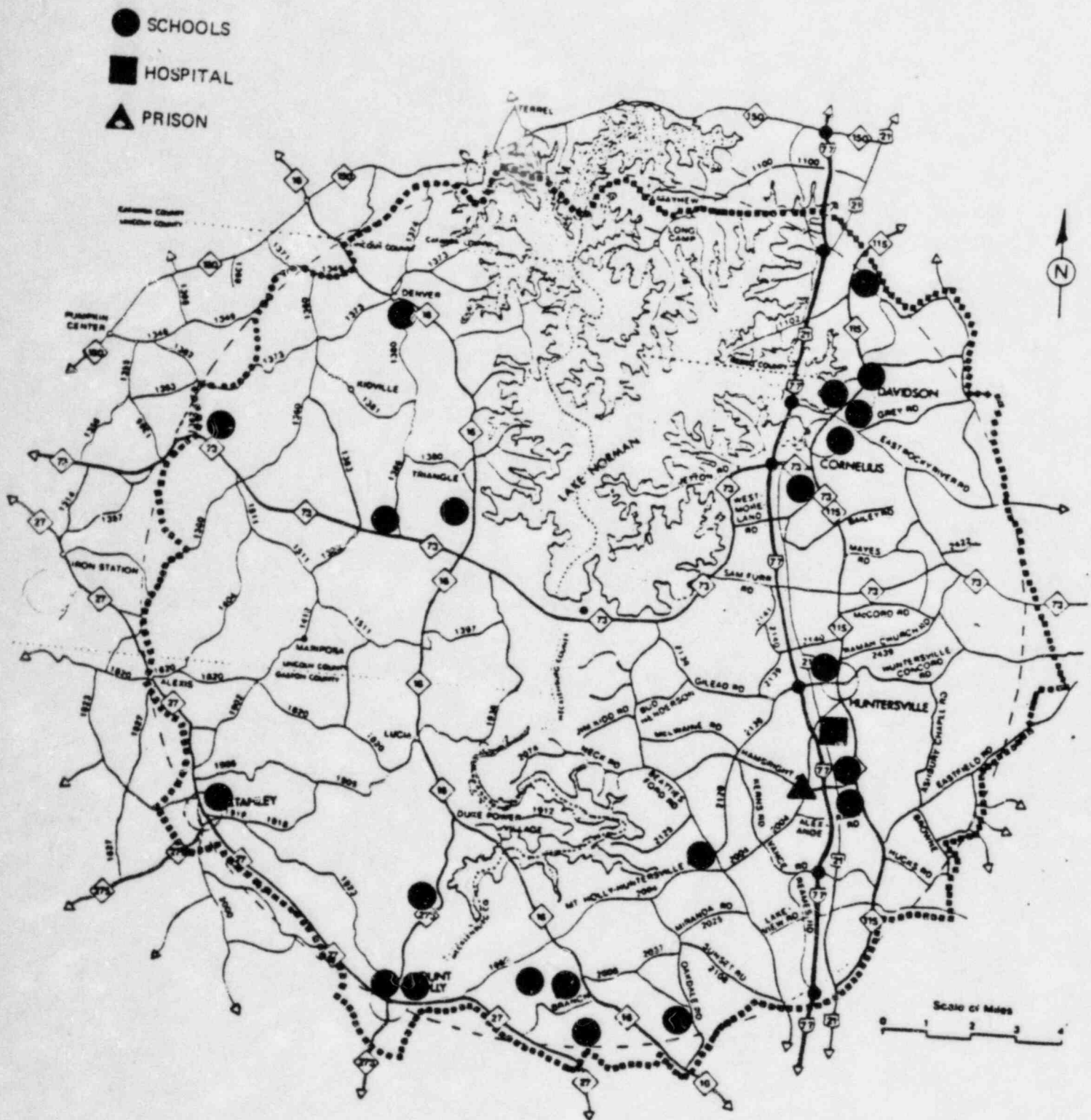


TABLE J-25
LOCATION OF SPECIAL FACILITIES

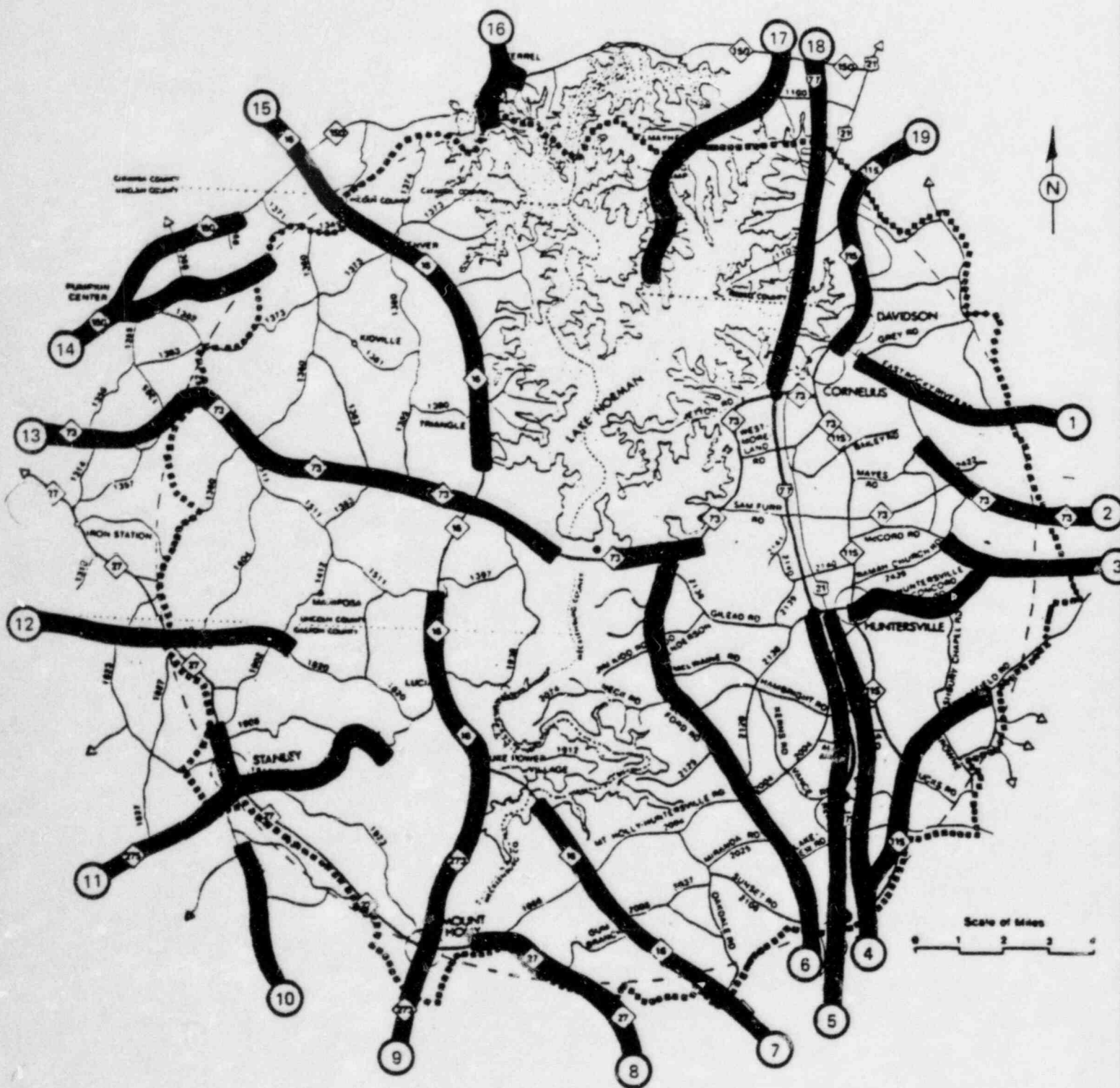


TABLE J-26
EVACUATION ROUTES FOR THE
McGUIRE NUCLEAR POWER STATION

- ◆ 15 TO 30 MINUTE DELAY
- ◆ MORE THAN 30 MINUTE DELAY

3:25 MAXIMUM EVACUATION TIME ON ROUTE

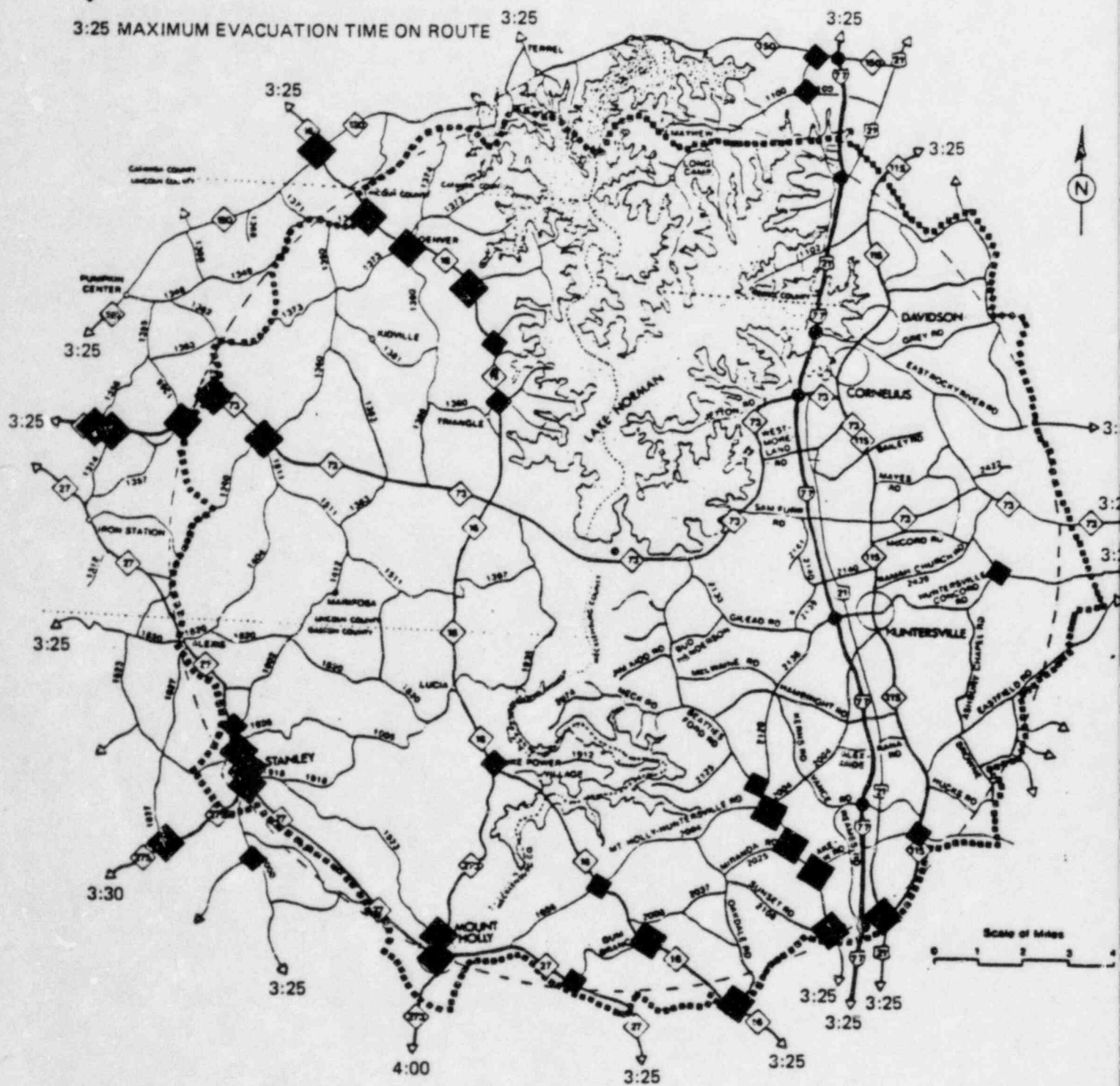


TABLE J-27
TRAFFIC CONGESTION SUMMARY

Type

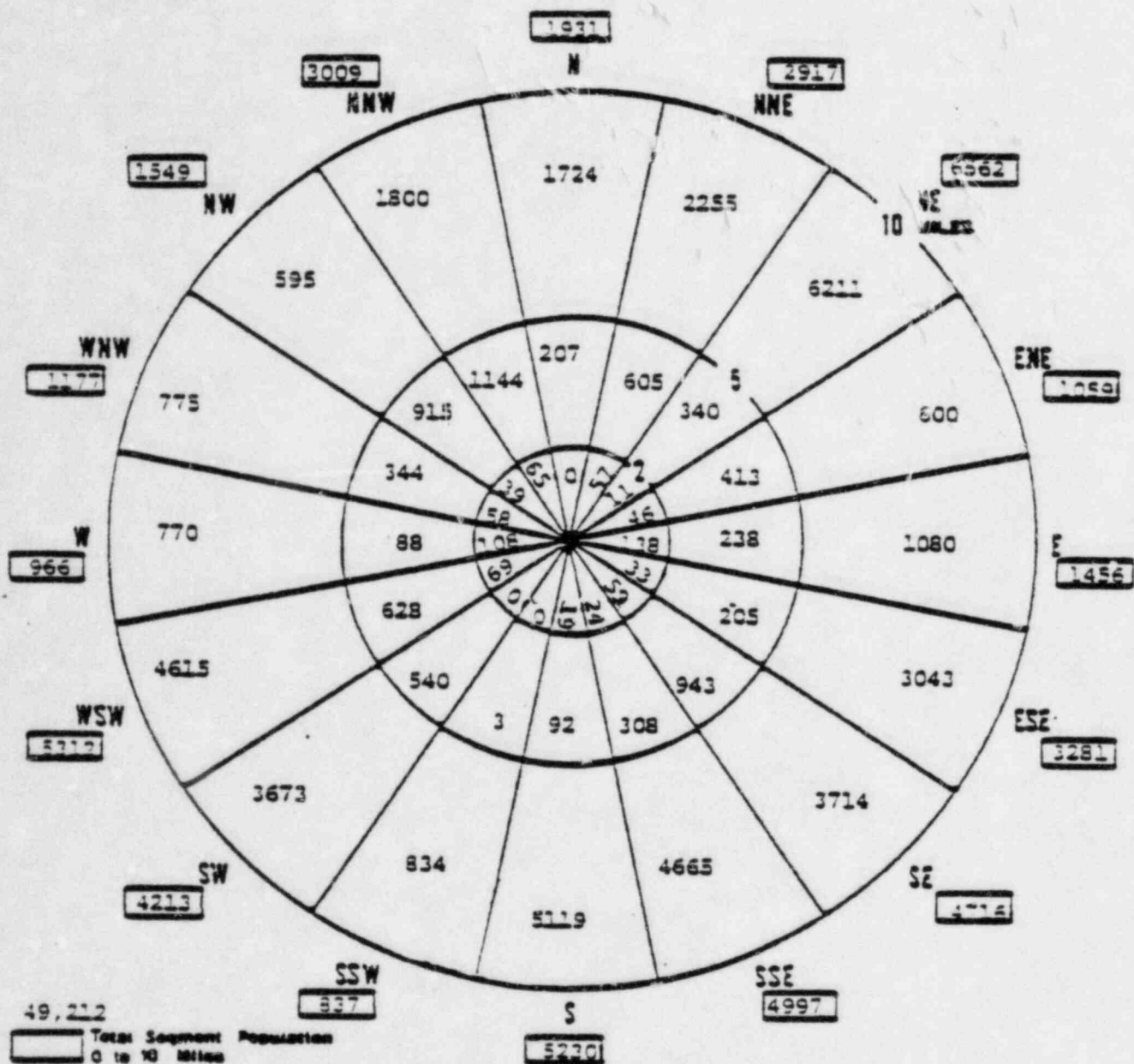
TABLE J-28 POPULATION OF THE McGUIRE EPZ AND SUBAREAS

Subarea ¹	Permanent Resident Population			Transient Population ⁴	Special Facility Population ⁵
	Auto-Owning ²	Non-Auto-Owning ²	Total ³		
2 NE	423	36	459	974	---
2 SE	180	15	195	---	---
2 SW	498	43	541	---	---
2 NW	1,160	101	1,261	2,026	---
All Subareas, 0-2 miles	---	---	(2,456)	(3,000)	---
5 NE	2,361	205	2,566	3,401	---
5 SE	1,836	160	1,996	---	---
5 SW	2,224	193	2,417	1,255	---
5 NW	3,206	279	3,485	3,457	1,606
All Subareas, 0-5 miles	---	---	(10,464)	(8,203)	(1,606)
10 NE	14,084	1,225	15,309	7,854	3,462
10 SE	17,160	1,494	18,654	2,685	5,096
10 SW	16,805	1,463	18,268	1,255	2,764
10 NW	<u>8,531</u>	<u>743</u>	<u>9,274</u>	<u>6,673</u>	<u>2,469</u>
Total EPZ	56,580	4,925	61,505	18,467	13,791

1. Cumulative by Quadrant. For example, 10 SW includes 5 SW plus 2 SW, etc.
2. County auto-ownership rates, 1970 census.
3. Source of population totals; 0-5 miles, house count by Duke Power Company, May, 1980; 5-10 miles, 1980 Census Advance Report.
4. McGuire Nuclear Station, Final Safety Analysis Report.
5. School year 1980-81 enrollments as furnished by school administration.

Duke Power Company
Crisis Management Plan
McGuire Nuclear Station

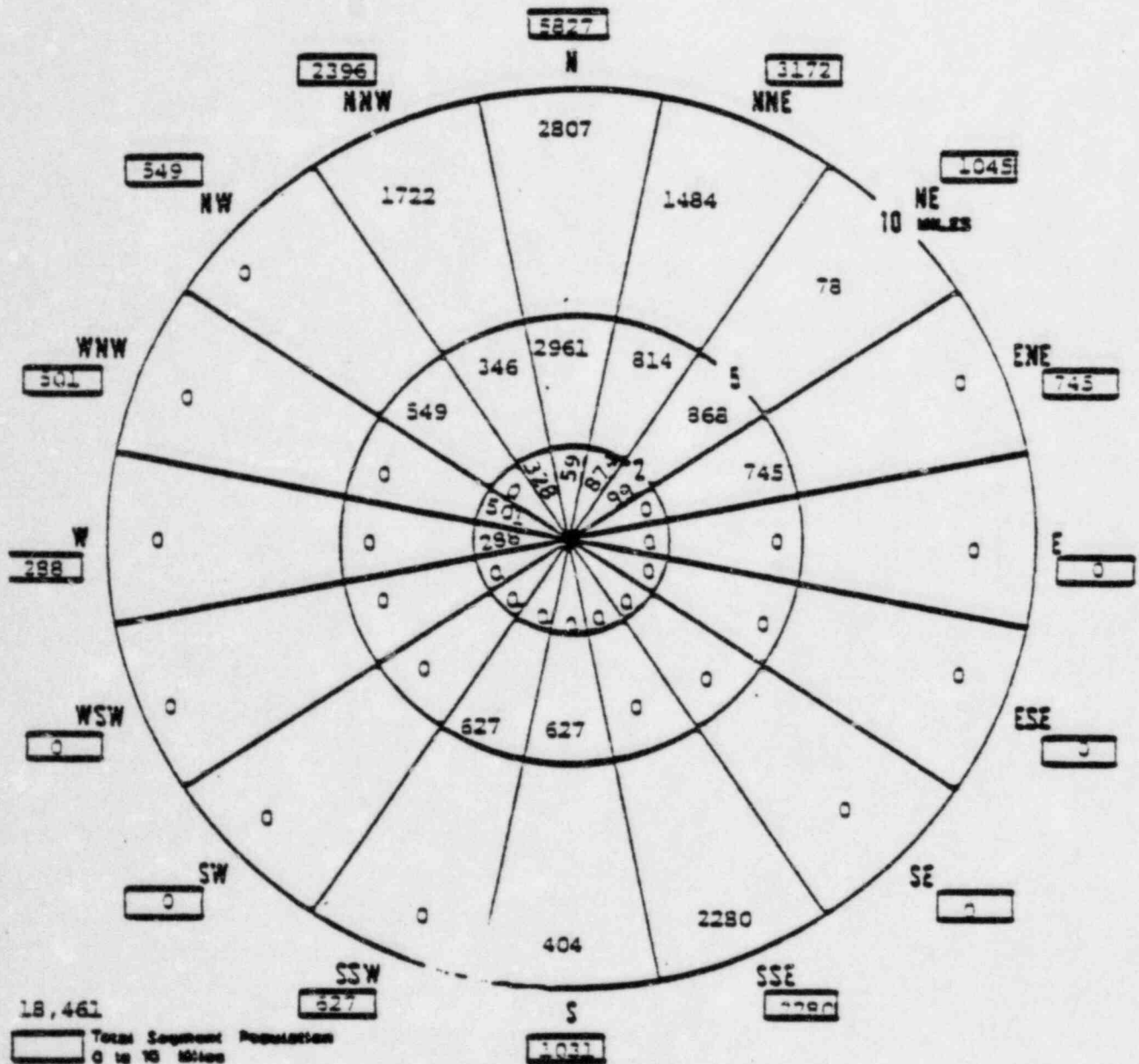
TABLE J-29 Permanent Population by Sector



POPULATION TOTALS			
RING MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	726	0-2	726
2-6	7,213	0-6	7,939
6-10	41,267	0-10	49,212

Duke Power Company
Crisis Management Plan
McGuire Nuclear Station

TABLE J-30 Estimated Transient Population



POPULATION TOTALS			
RING MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	2,249	0-2	2,249
2-5	7,527	0-5	9,776
5-10	8,685	0-10	18,461

Table J-31
MCGUIRE NUCLEAR STATION
EMERGENCY PLANNING ZONE
AREA AND 1980 POPULATIONS

ZONE

POPLUATION *Typo*

	<u>TOTAL</u>
A	2,341
B	225
C	195
D	1,801
E	9,948
F	6,629
G	2,944
H	5,136
I	2,558
J	2,105
K	400
L	367
M	179
N	1,979
O	873
P	2,916
Q	1,070
R	742
S	<u>12,968</u>
	55,376

Table J-32

CATAWBA SUMMARY OF EVACUATION TIMES

Permanent Population	Permanent Population Vehicles	Transient Population	Transient Population Vehicles	Evacuation Capacity per Hour (Major Routes)	Notification Time	Preparation Time	Permanent Population Response Normal Conditions	Permanent Population Response Adverse Conditions	Transient Population Response Normal Conditions	Transient Population Response Adverse Conditions	General Population Evacuation Time - Normal Conditions	General Population Evacuation Time - Adverse Conditions	Confirmation Time	Special Population Evacuation Time - Normal Conditions	Special Population Evacuation Time - Adverse Conditions
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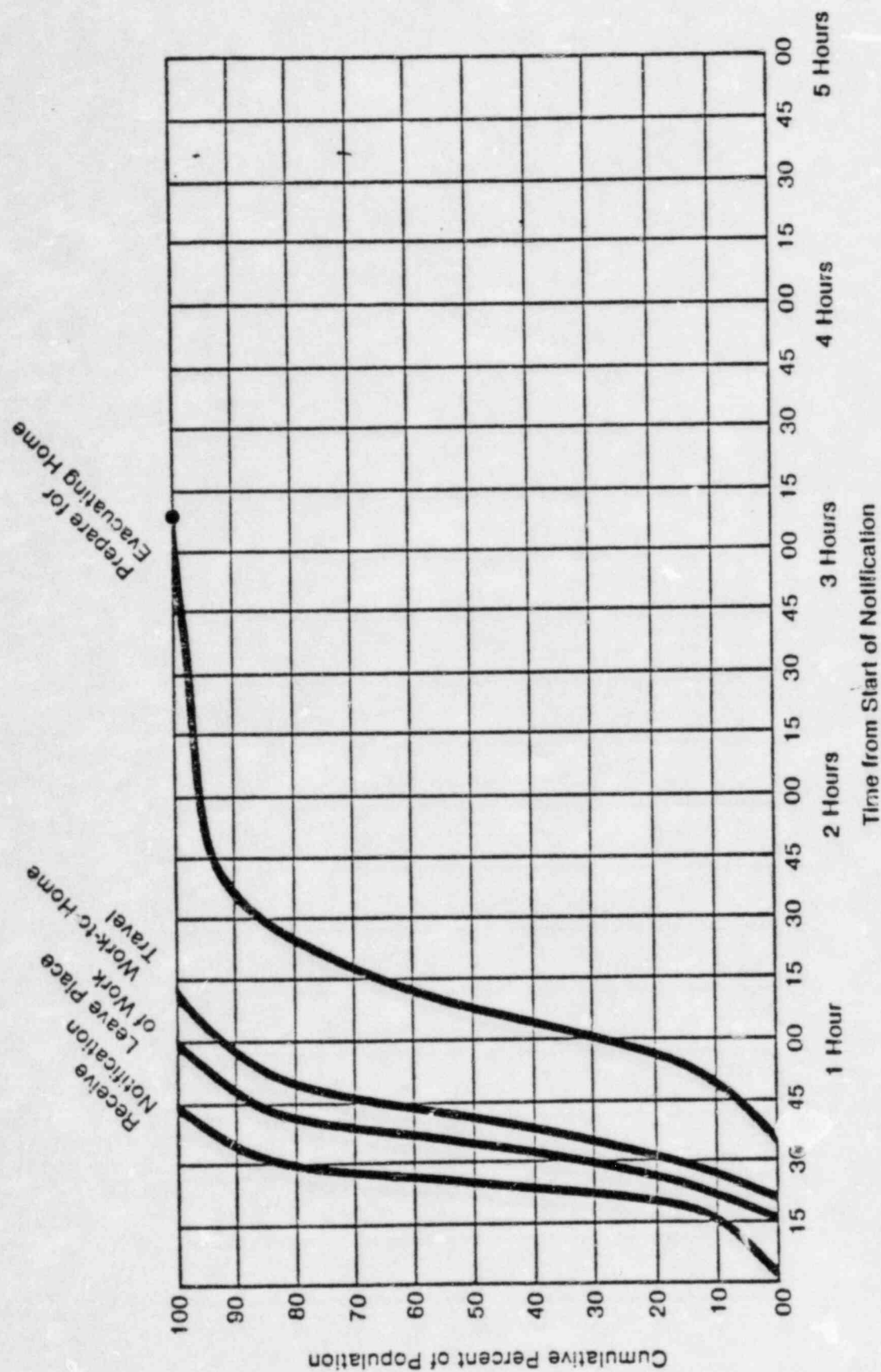
Zones		Within Two Miles													
North Carolina	357	154	654	233	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
South Carolina	363	156	5,552	1,982	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
All Zones	720	310	6,206	2,215		(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)

Zones		Within Five Miles													
A-1	529	227	10,187	3,637	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
B-1	2,631	1,131	2,588	924	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:30
C-1	6,161	2,649	16,827	6,007	1,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:30
D-1	1,414	608	109	39	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
E-1	429	184	0	0	3,600	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
F-1	2,573	1,106	1,582	565	3,600	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:30
All Zones	13,737	5,905	31,293	11,172		(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:30

Zones		Within Ten Miles													
A-2	4,838	2,080	4,073	1,454	4,800	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45
B-2	9,771	4,201	46,826	16,717	4,200	(1)	(2)	(3)	(3)	(4)	(4)	3:25	4:00	1:40	2:45
C-2	44,964	19,335	0	0	11,400	(1)	(2)	(3)	(3)	(4)	(4)	4:00	6:15	1:40	2:45
D-2	9,169	3,943	0	0	4,800	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45
E-2	4,957	2,132	0	0	4,800	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45
F-2	2,655	1,142	650	232	6,000	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	(5)
F-3	2,672	1,149	651	232	2,400	(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:30
All Zones	79,026	33,982	52,220	18,635		(1)	(2)	(3)	(3)	(4)	(4)	3:25	3:25	1:40	2:45

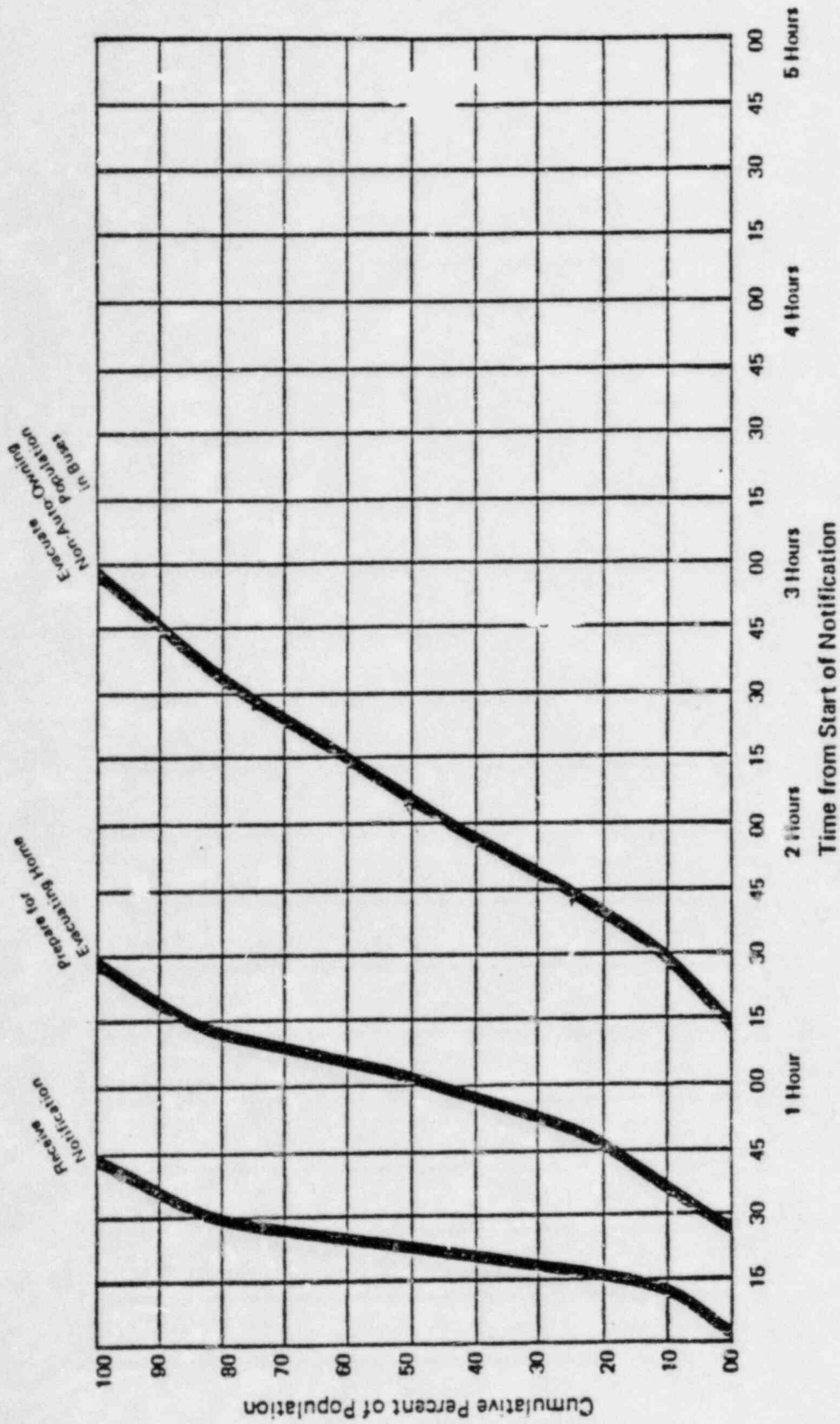
1. See distribution in Table 7.
2. See distributions in Tables 8 and 9.
3. See distributions in Tables 10 and 11.
4. See distribution in Table 13.
5. No special facilities in these zones.

Table J-33



Catawba
Evacuation Time for the Permanent Resident Population (Auto-Ownings)

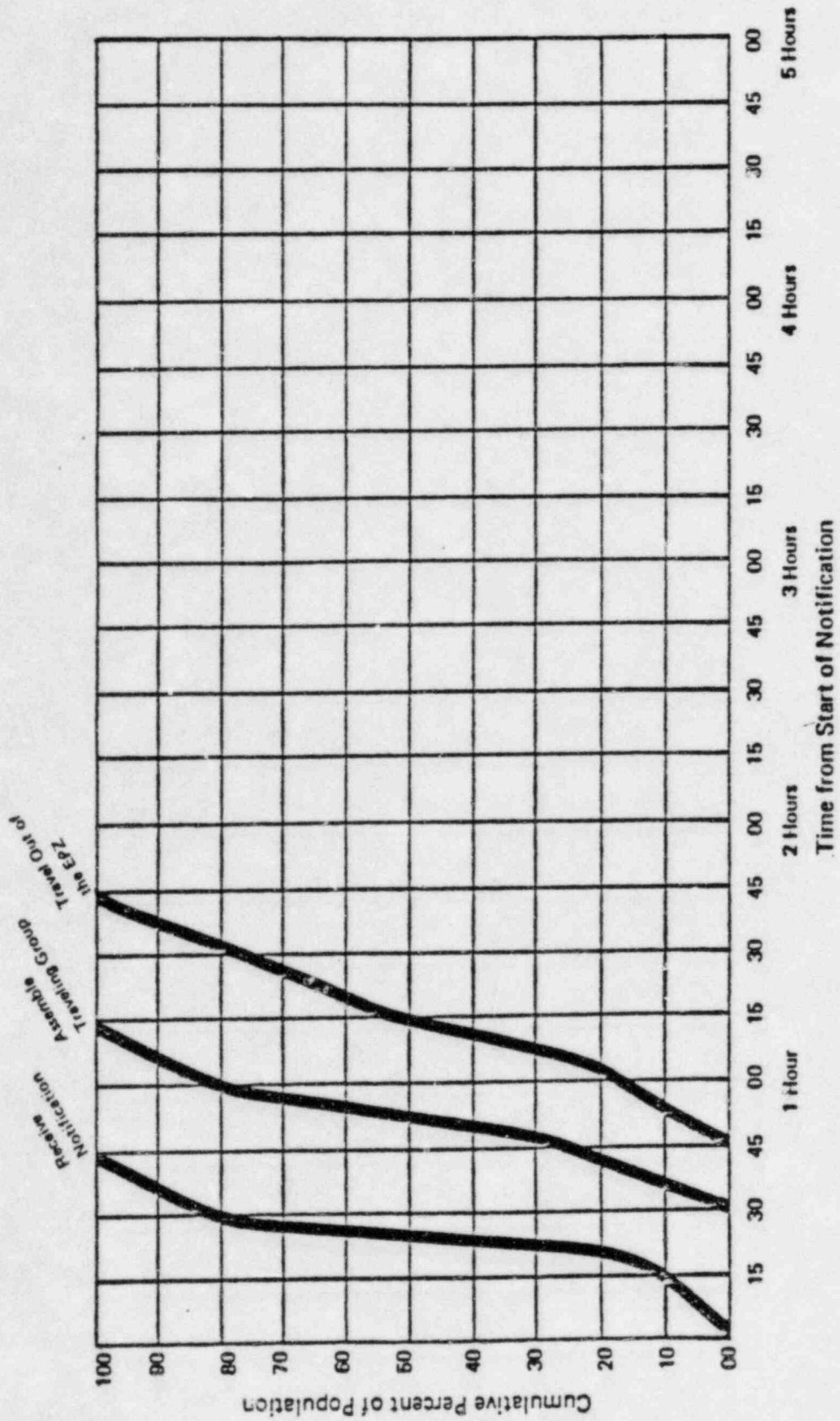
Table J-34



Evacuation Times for the
Permanent Resident Population (Non-Auto-owning)

Catawba

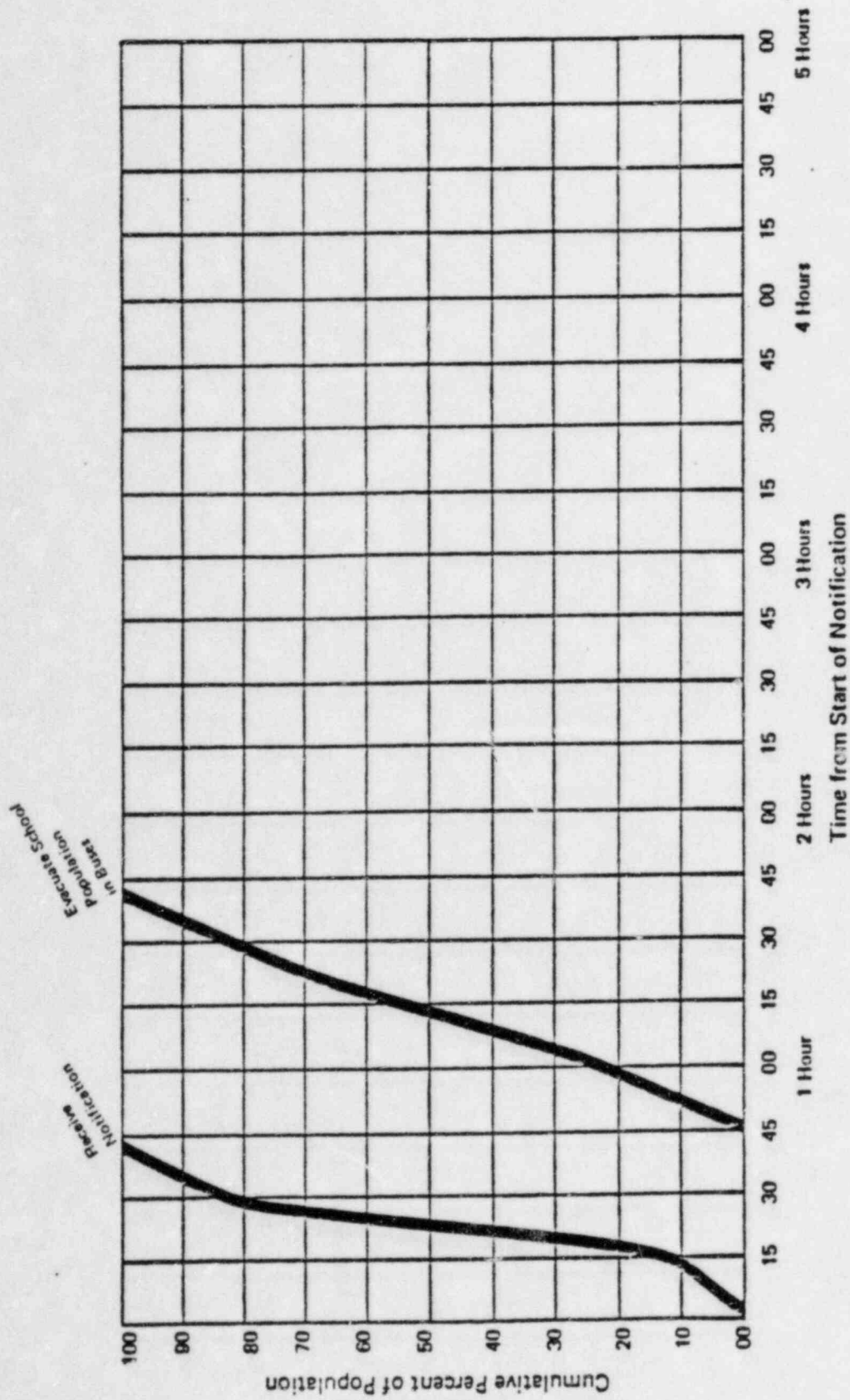
Table J-35



Evacuation Times for the Transient Population

Catawba

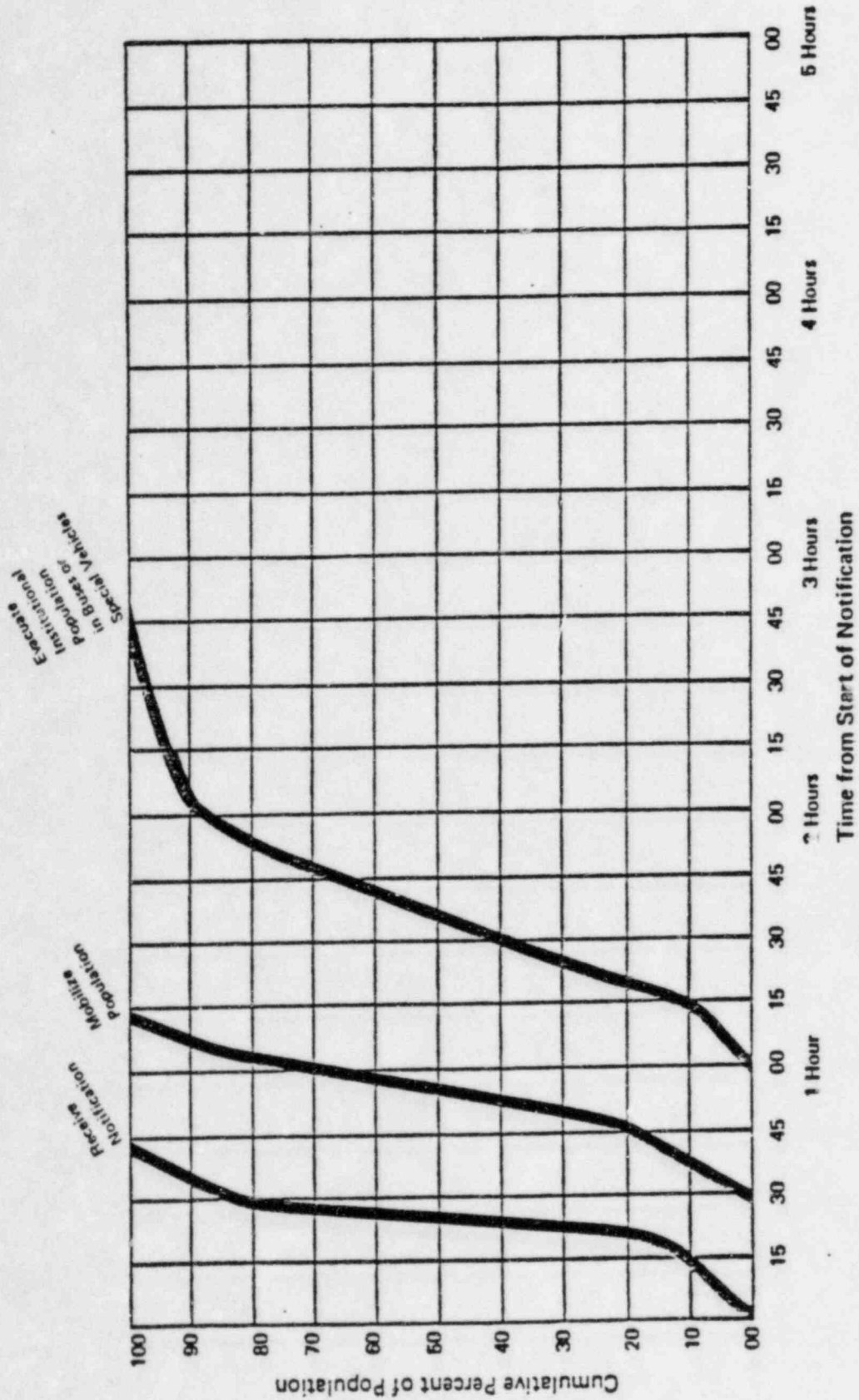
Table J-36



Catawba

Evacuation Times for the Special Facilities Population (Schools)

Table J-37



Evacuation Times for the Special Facility Population (Institutions)

Catawba

Emergency Planning Zone (EPZ)
for the Catawba Nuclear Power Station

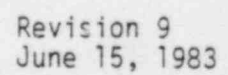
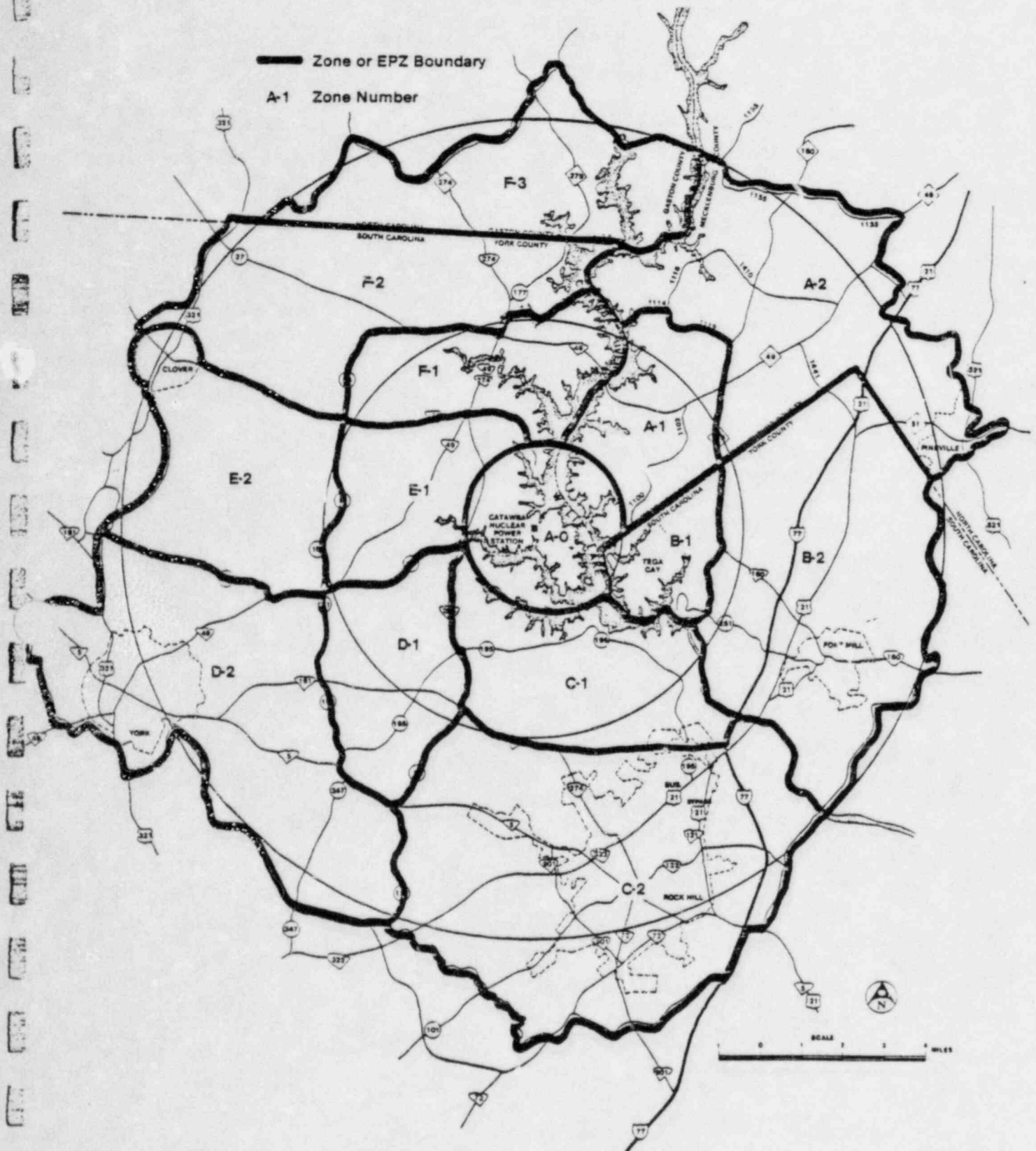
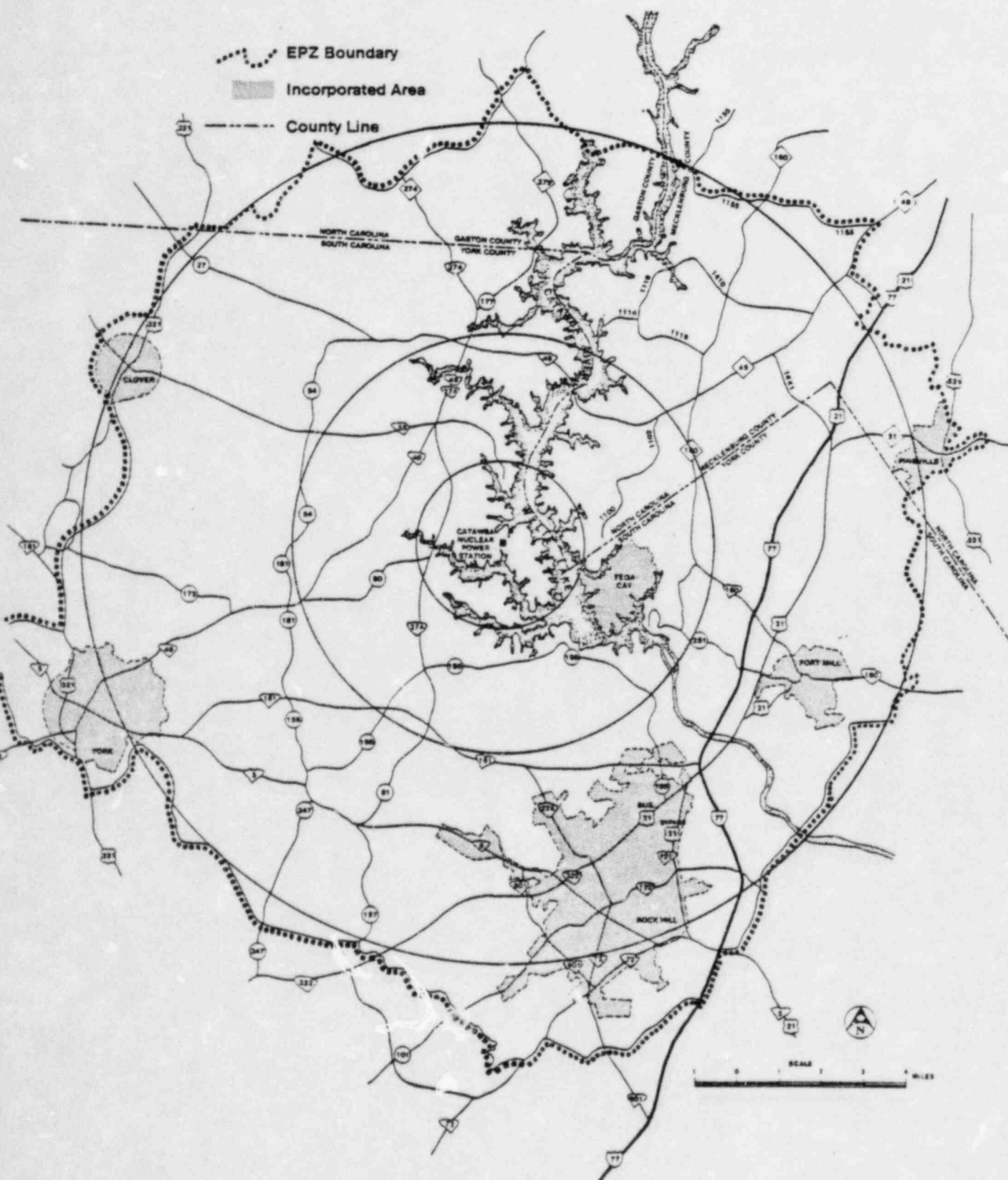


Table J-39



Selective Evacuation Zones
for the Catawba EPZ

Table J-40



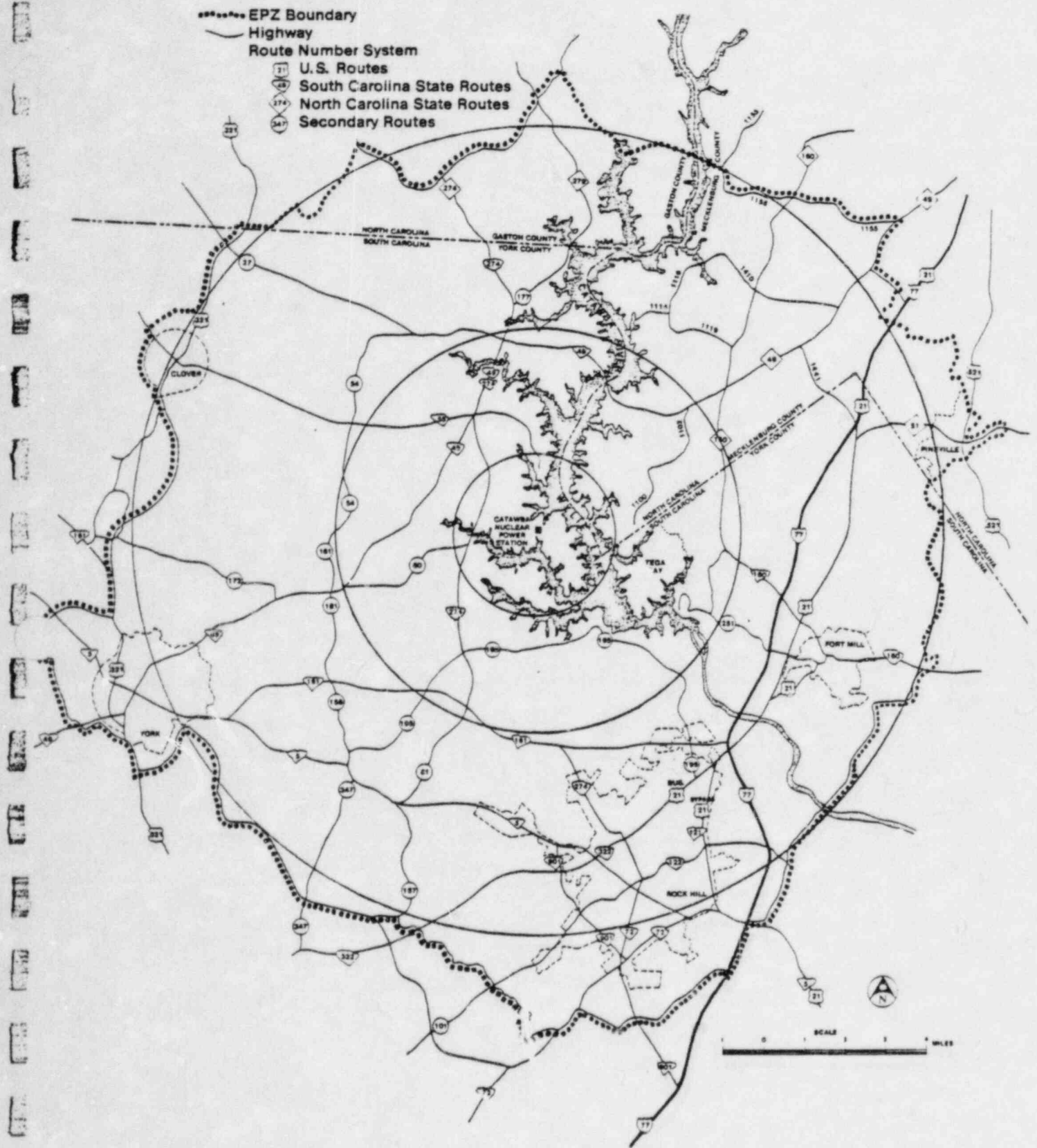
Local Government Jurisdictions

CATAWGA

J-44

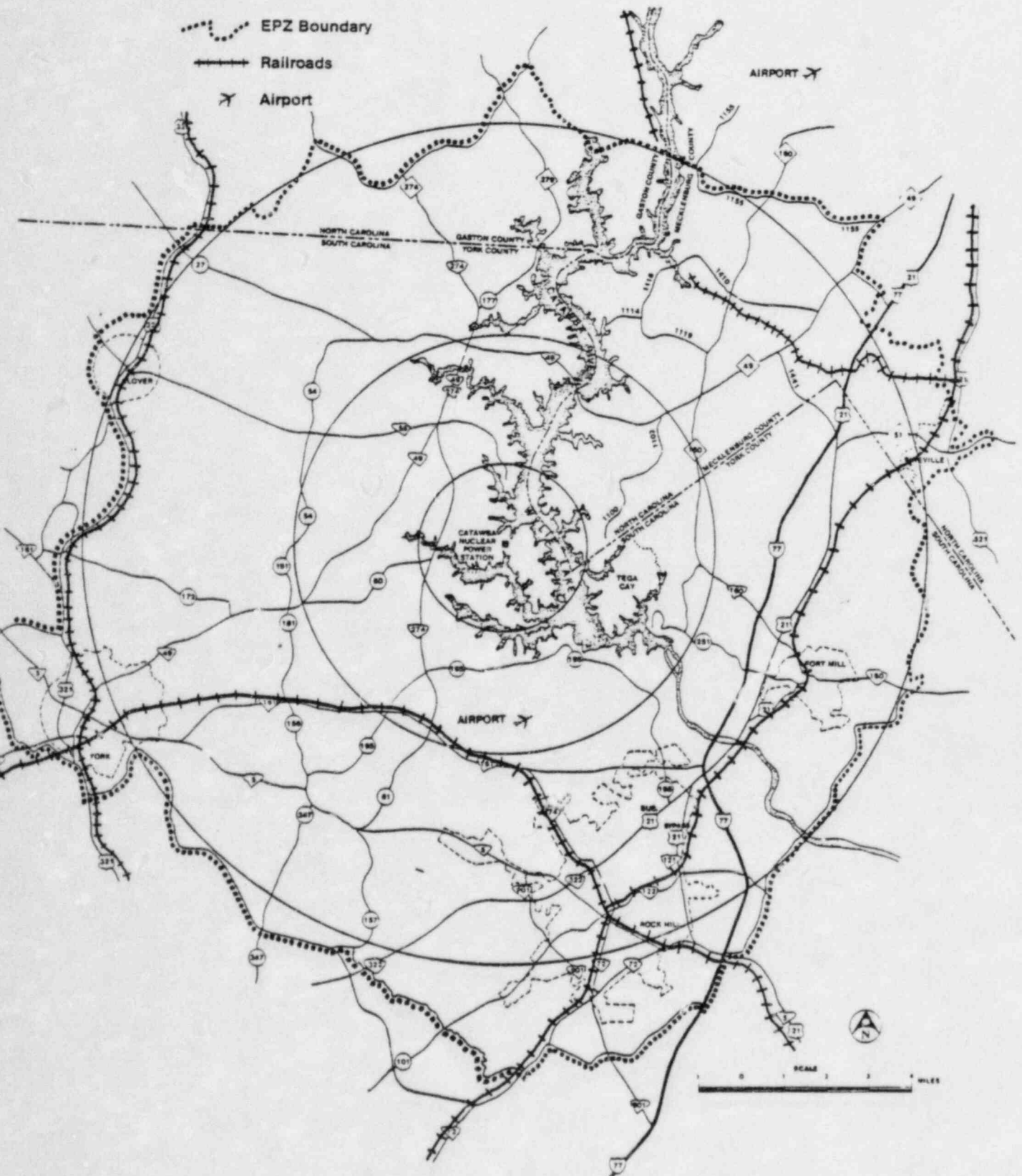
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Table J-41



Highway System in the Vicinity
 of the Catawba Nuclear Power Station

Table J-42



Other Transportation Facilities in the Vicinity
of the Catawba Nuclear Power Station

Table J-43

SPECIAL FACILITIES POPULATION
IN THE CATAWBA EPZ

<u>Facility</u>	<u>Population</u>	<u>Location (Zone)</u>
Gaston County Schools		
W.A. Bess	469	F-3
Mecklenburg County Schools		
Steele Creek Elementary	777	A-2
Pineville Elementary	844	A-2
Olympic High	1,176	A-2
York County Schools		
A. O. Jones School	563	B-2
Alternative School	76	C-2
Belleview Elementary	450	C-2
Bethel Elementary School	364	F-1
Career Development Center	862	C-2
Castle Heights Junior High	960	C-2
Catawba School	445	C-1
Clover High School	1,008	E-2
Clover Junior High	596	E-2
Clover Middle School	561	E-2
Ebenezer Avenue Elementary	431	C-2
Ebinport Elementary	417	C-2
Edgewood Center	116	C-2
Episcopal Church Home for Children	62	D-2
Finley Road Elementary	453	C-2
Fort Mill High School	915	B-2
Fort Mill Junior High School	250	B-2
Harold C. Johnson Middle School	1,025	D-2
Jefferson Elementary	715	D-2
Kinard Elementary School	591	E-2
McCelvery Elementary	686	C-1
Mount Gallant Elementary	790	D-2
Northside Elementary	454	C-2
Northwestern High School	1,322	C-2
Oakdale Elementary	448	C-2
Rawlinson Road Junior High	1,251	C-2
Richmond Drive Elementary	452	C-2
Riverview Primary and Elementary Complex	1,292	B-2
Rosewood Elementary	389	C-1
St. Anne's	171	C-2

Table J-43 (cont.)

Continued

<u>Facility</u>	<u>Population</u>	<u>Location (Zone)</u>
York County Schools (continued)		
Sullivan Junior High	1,010	C-2
Sunset Park Elementary	458	C-2
Sylvia Circle Elementary	369	C-2
Trinity Christian	324	C-2
Winthrop College	4,881	C-2
York Christian School	140	D-2
York Comprehensive High and Johnson Vocational	1,070	D-2
York Road Elementary	562	C-2
York Technical College	2,850	C-2
Clinton College	275	C-2
Day Care Centers		
Adams Care Center	21	C-2
Child Development Center	62	E-2
Children's Christian	119	C-2
Children's Wonderworld	70	C-2
College Park Nursery	30	C-2
Davis Day Care Center	33	C-2
Ebenezer Day Care Center, Inc.	32	C-2
Emmitt Scott Day Care	85	C-2
Jimmy's Day Care	40	C-2
Kiddie Kollege Child Development Center	200	C-2
LaPetite Academy	75	C-2
LaPetite Academy	47	C-2
Little Fox Nursery	33	B-2
Little Peoples Day Care	60	C-2
Mt. Gallant Day Care	49	C-1
Pine Grove Day Care Center	30	D-2
R. H. Comprehensive Day Care	114	C-2
Tega Cay Day Care	24	B-1
Toddler House Nursery	40	C-2
Wards Wonderland	35	B-2
Wee Care Day Care Nursery	68	C-2
Whiteheads Kiddie Kare	45	C-2
Yours, Mine and Ours	45	D-2

Table J-43 (cont.)

Continued

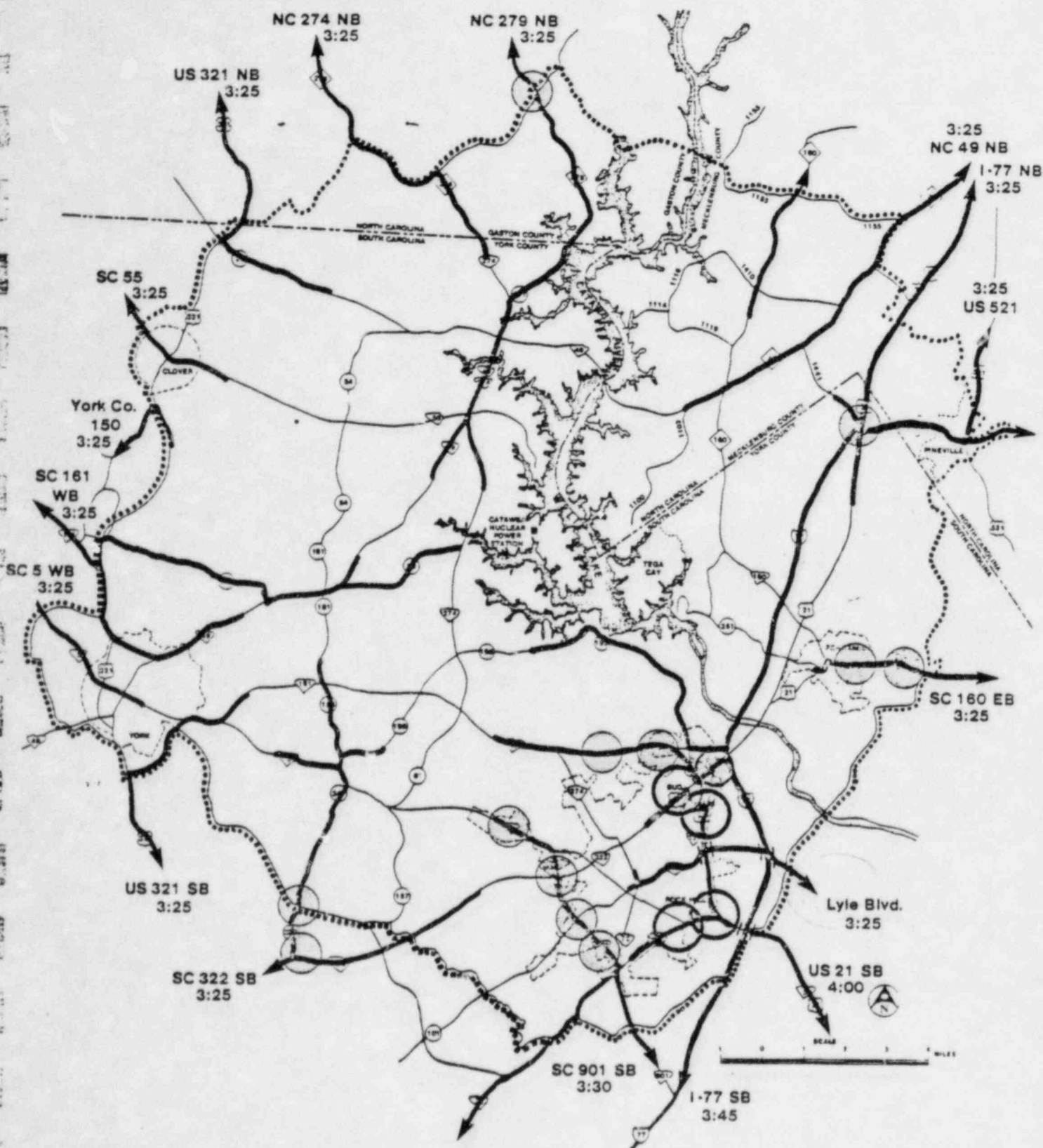
<u>Facility</u>	<u>Population</u>	<u>Location (Zone)</u>
Hospitals		
Divine Savior Hospital	51	D-2
Piedmont Medical Center	160	C-2
Nursing Homes		
Anne's Convalescence Home	62	C-2
Divine Savior Home	51	D-2
Failaw Residential Care	37	C-2
Meadow Haven Nursing Center	132	C-2
Rock Hill Convalescence Center	141	C-2
Sunshine Homes	10	D-2
Penal Institutions		
Clover Detention Center	2	E-2
Fort Mill Detention Center	6	B-2
Rock Hill Detention Center (Cherry Road)	14	C-2
Rock Hill Detention Center (City Hall)	4	C-2
York County Prison	45	D-2
York Detention Center	6	D-2

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Table J-45



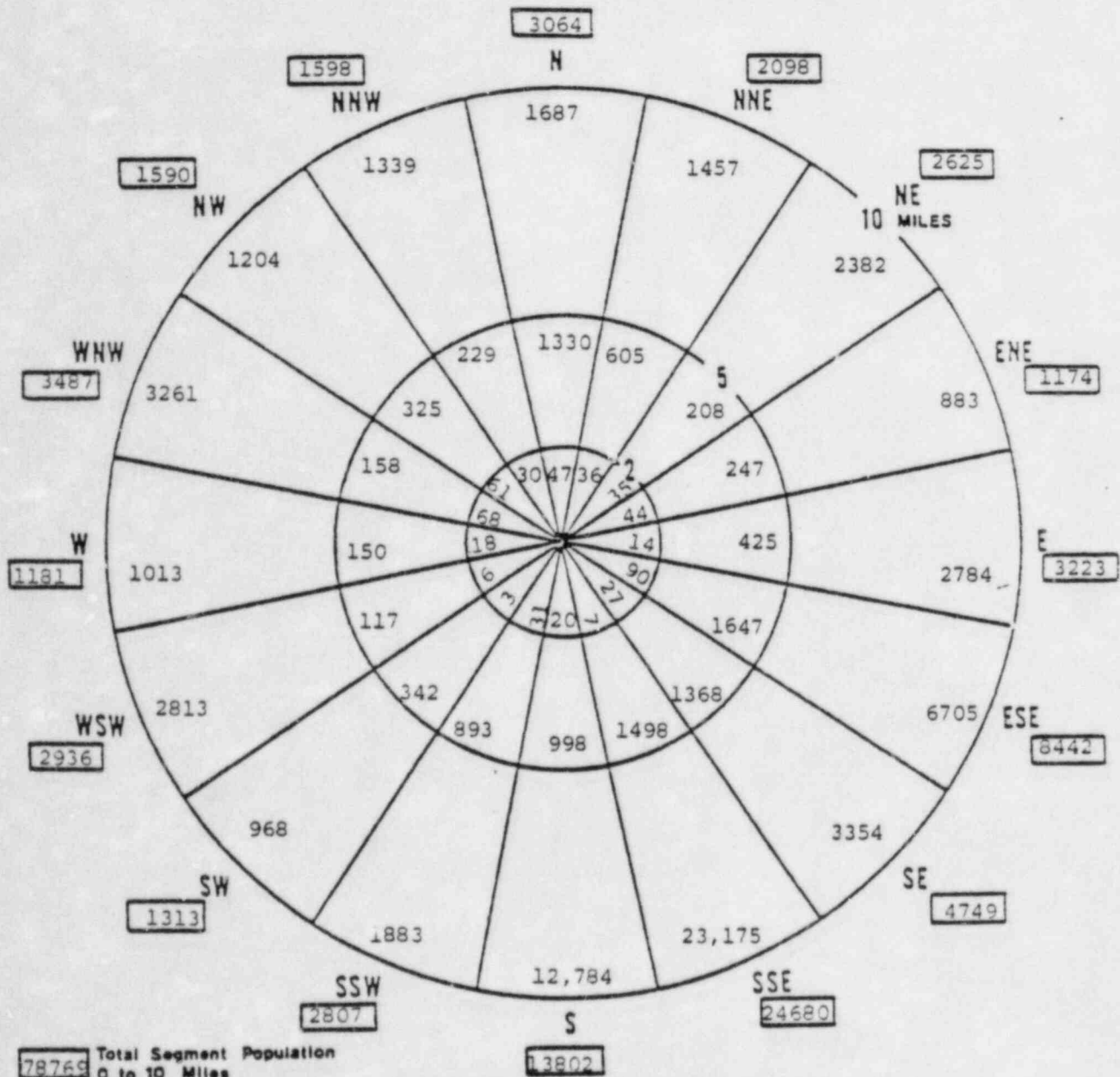
Traffic Congestion Summary - CATAWBA

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Table J-46

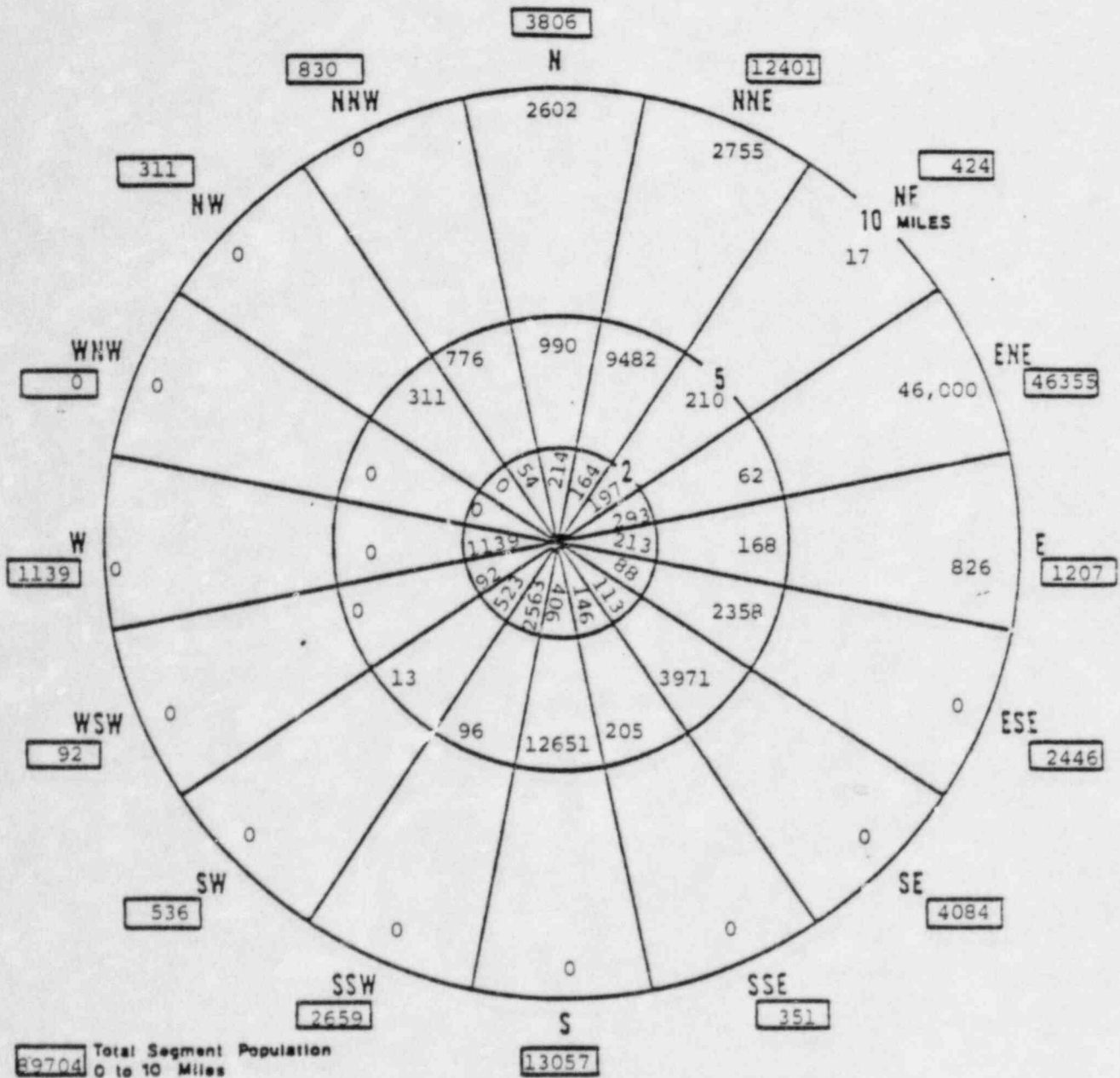
Permanent Population by Sector - CATAWBA



POPULATION TOTALS			
RING, MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	537	0-2	537
2-5	10,540	0-5	11,077
5-10	67,692	0-10	78,769

Table J-47

Estimated Maximum Transient Population - CATAWBA



POPULATION TOTALS			
RING MILES	RING POPULATION	TOTAL MILES	CUMULATIVE POPULATION
0-2	6,206	0-2	6,206
2-5	31,298	0-5	37,504
5-10	52,200	0-10	89,704

K. RADIOLOGICAL EXPOSURE CONTROL

K.1 Onsite Exposure Guidelines

Exposure limits for entry or reentry of areas to remove injured persons, undertake corrective actions, perform assessment actions, and limits for emergency personnel who may provide first aid, decontamination, ambulance, or medical-treatment services to injured persons, are specified below for monitored personnel:

Planned Emergency Exposure Limits for Duke Power Personnel

- a. If necessary to remedy a situation immediately hazardous to life and property:

5 (25)* rems whole-body, 30 rems skin of whole body, 75 rems extremities, 15 (125)* rems other single organ.
- b. If necessary to save lives or prevent loss of life and/or extensive damage to property (on voluntary basis only):

25 (75)* rems whole-body, 150 rems skin of whole body, or 375 rems extremities.

* See Table K-1 for authorization of higher limits.

Planned Emergency Exposure Limits for Outside Services

5 rems whole-body, 30 rems skin of whole body, 75 rems extremities, or 15 rems other single organ.

NOTE: Appropriate respiratory-protective equipment must be used to prevent or minimize internal exposure in any Planned Emergency situation.

In an emergency, personnel may have to be relocated quickly to prevent or minimize exposure to direct radiation or airborne hazards. The fundamental criterion for handling any accident or emergency is to prevent or minimize any hazard to station personnel and the general public. Action levels are based upon the recommendations and requirements of the International Commission on Radiological Protection (ICRP), the National Council on Radiation Protection (NCRP), the Environmental Protection Agency (EPA), and Nuclear Regulatory Commission (NRC) regulations.

Protective actions include the following:

Protective Cover - This action of staying inside and minimizing ventilation from the outside may be taken if the emergency is anticipated to be of short duration, or if evacuation is not possible.

Evacuation - This action may be taken on the basis of actual or potential radiation exposures which would equal or exceed the protective action guides.

The following guidance is provided for use by the Recovery Manager in determining appropriate actions concerning the rescue and recovery of personnel and the protection of health and property during periods of emergency.

Saving of Human Life

- Evaluate inherent risks by considering:
 - limits of error in calculating the dose rate in subject area.
 - effects (biological) upon rescue workers (both whole body and internal)
- Assess the ability to reduce risk through use of protective equipment, remote manipulation equipment, portable shielding, or similar means.
- Weigh the risk to rescue personnel against the probability of success of the rescue attempt.
- Ensure that all personnel planned for use in the rescue attempt understand their actions are voluntary and that they are made aware of the known or estimated extent of risk.

Recovery of Deceased Victim

- Recovery Operation should be well planned as time is not a factor as above.
- Radiation exposure should be controlled to remain within existing occupational exposure guidelines.
- If body (bodies) are in inaccessible areas due to high rad. levels and where recovery would result in exposure over occupational guidelines, special remote recovery devices should be used to retrieve the bodies.
- In special circumstances where removal of a body or bodies cannot take place without entry of emergency workers, Recovery Manager may determine it necessary to exceed occupational exposure standards. However, the planned exposure for recovery team members should not exceed 12 rems total for the year or 5 times (N-18) whichever is more limiting.

Protection Of Health and Property

Where the risk of the radiation hazard bears significantly on the health of people or may result in loss of property, so that immediate remedial action is required, the following criteria apply:

- To reduce the hazard, the Recovery Manager may initiate an operation. Planned exposures are not to exceed 12 Rems for the year or 5 times (N-18). Under special circumstances this can be extended to 25 Rems by the Recovery Manager (should conditions warrant) for volunteers.

1. Emergencies Involving Station Personnel Only

The Emergency Coordinator takes the appropriate actions necessary for personnel accountability and evacuation. These actions and the protection action levels are outlined in the station's Emergency Plan.

2. Emergencies Involving The General Public

The Emergency Coordinator recommends protective action for the general public in any location within the plume exposure pathway EPZ that may be affected as a result of the emergency. This includes the responsibility for the initial notification of the appropriate outside agencies. When the Crisis Management Center is established, the Recovery Manager assumes these responsibilities. The Station Manager retains the responsibility for the protection of station property and station personnel.

All members of the general public who are onsite must be evacuated if there is a possibility they may be exposed to dose rates in excess of any of the following:

External Radiation Level = 2 mrem/hr
Airborne Radioactivity = 1 times mpc for an
unrestricted area

Members of outside emergency services (unmonitored) responding to a call from the station must also be protected from excessive radiation exposure. Their exposure is not to exceed ten times the above dose rates or the following doses:

Whole body = 0.5 rems
Skin or thyroid = 3 rems
Extremities = 7.5 rems
Other single organs = 1.5 rems

Evacuation of persons from affected areas in the plume exposure pathway is undertaken for any reactor accident that is likely to result in doses in excess of those given in Table K-1.

If protective actions for any offsite location are deemed necessary, the civil preparedness agency of the affected county, in conjunction with the appropriate State agencies (SC-Emergency Preparedness Division, NC-Department of Crime Control and Public Safety) has the legal authority and responsibility for initiating protective measures for the general public in the plume exposure pathway EPZ including evacuation of these areas. Public notification of the emergency, the resources used to determine if an evacuation is necessary, the evacuation routes, and the methods used for evacuating persons in the plume exposure pathway EPZ are outlined in the appropriate local and State emergency plans.

Decisionmaking is guided by Tables K-3 "Summary of Protective Action Recommendations (PARs)" and K-4 "Protective Action Recommendation Flowchart".

K.2 Emergency Situation - Onsite Radiation Protection Program

The Nuclear Station Emergency Plan, Section K.2, describes the onsite radiation protection plan to be implemented during emergencies.

K.3 Personnel Exposure Records and Instrumentation

Protective equipment and supplies are available for use by personnel onsite, and offsite if necessary, to minimize the effects of radiological exposures or contamination. The equipment and supplies utilized and their locations are outlined in the station's Emergency Plan.

Provisions are made for preventing or minimizing inhalation or ingestion of contamination or exposure to contaminated areas or radioactive materials. Measures for protection of personnel onsite are under the control of the station staff and are outlined in the station's Emergency Plan.

K.4 State/Local Plan for Authorizing Doses Exceeding PAG's

(See State and Local Plans)

K.5 Decontamination

Personnel, supplies, instrument/equipment decontamination action levels and the means for radiological decontamination are outlined in the Nuclear Station Emergency Plan.

K.6 Onsite Contamination Control

The Nuclear Station Emergency Plan outlines contamination control measures for area access, drinking water and food supplies, and for returning areas or items to normal use. (See Section K.6)

K.7 Decontamination of Relocated Onsite Personnel

As described in Section J.3 of this plan, procedures describe the means for personnel monitoring and decontamination following site evacuation. McGuire's Station Directive 3.8.1 and the Station HP Manual allows for relocation of site personnel to the Cowan's Ford Hydroelectric Station or to the Technical Training Center (depending upon radiological and meteorological conditions) in the event of a site evacuation. At these facilities, monitoring and decontamination (as necessary) would take place. If an individual or group of individuals were severely injured and contaminated, facilities at Charlotte Memorial Hospital or the Oak Ridge National Lab Hospital would be used. A similar procedure and method exist at Oconee Nuclear Station. Catawba Nuclear Station personnel would follow their applicable Station Directive and proceed to the Newport Warehouse or Allen Steam Station depending on the meteorology at the time.

K.8 Protective and Restorative Actions

Table K-2 describes protective and restorative action recommendations that would be initiated for "puff" or continuous release situations in excess of PAGs. (Table K-1). These recommendations would, as necessary, be time dependent. Thus the table reflects actions necessary in the first four hours, at hours 4-8, at times past 8 hours, and during the recovery/restoration phase.

TABLE K-2

PROTECTIVE AND RESTORATIVE ACTIONS FOR NUCLEAR
INCIDENTS RESULTING IN AIRBORNE RELEASES*

Nuclear Incident	Protection Phase			Restoration Phase ^(c)
	Approximate Time of Initiation			
	0-4 hr.	4-8 hr.	> 8 hr.	
Puff Release ^(a) -Gaseous or Gaseous and Particulate	1,2,3,4,5	3,4,5	3,4,5,6 7,8	9,10,11
Continuous Release ^(b) Gaseous or Gaseous and Particulate	1,3,3,4,5	1,2,3,4,5	1,2,3,4, 5,6,7,8	9,10,11

- | | |
|---|---|
| 1 Evacuation | (a) Puff release - less than 2 hours |
| 2 Shelter | (b) Continuous release - 2 hours or
more 3 Access Control |
| 4 Respiratory protection for
emergency workers | (c) Restoration phase may begin at
any time as appropriate |
| 5 Thyroid protection for emergency
workers | |
| 6 Pasture control | |
| 7 Milk control | |
| 8 Food and water control | |
| 9 Lift protection controls | |
| 10 Reentry | |
| 11 Decontamination | |

* With radioactive releases above PAG's per Table K-1

TABLE K-3

SUMMARY OF PROTECTIVE ACTION RECOMMENDATIONS (PAR)

What is a PAR?

There are two recommendations: take in place shelter or evacuate.

What Must the Recovery Manager Consider in Making a PAR?

1. Compare dose projections against EPA guidelines.

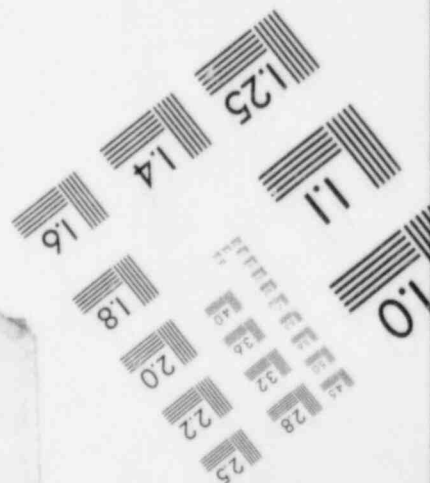
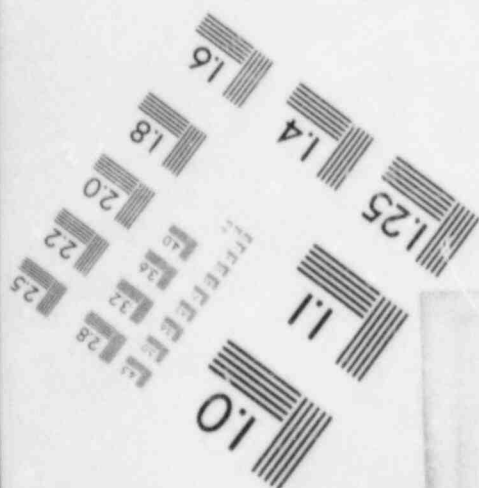
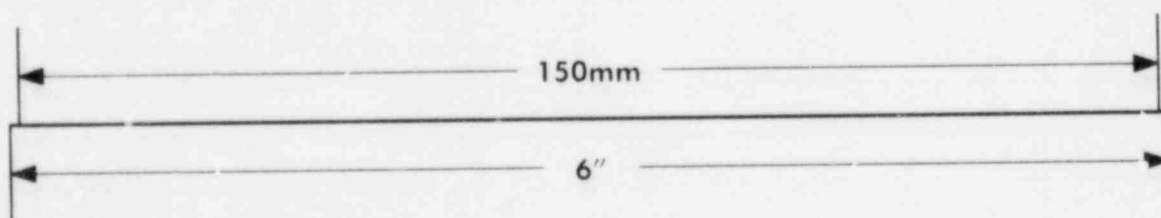
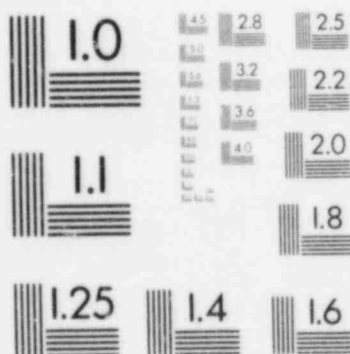
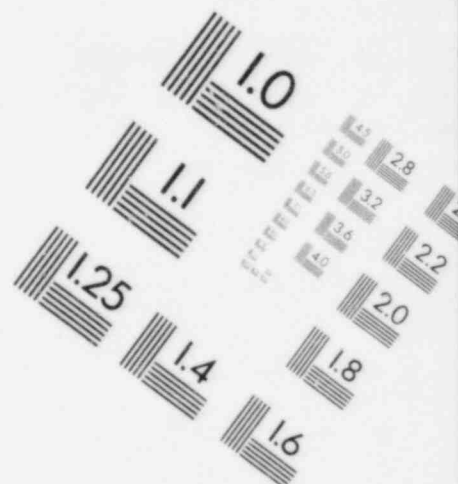
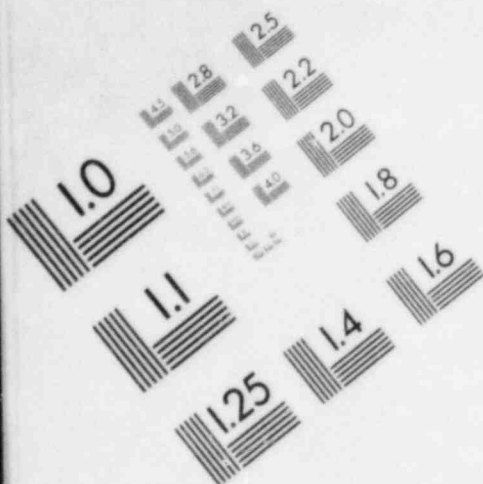
<1 Rem W.B.	<5 Rem Thyroid	: No Recommendation
1 to 5 Rem W.B.	5 to 25 Rem Thyroid	: Evacuate Pregnant Woman and Children
>5 Rem W.B.	>25 Rem Thyroid	: Evacuate all affected areas

2. Compare core and containment conditions against the core melt sequence guidance in Part D of the Station Emergency Plan.
3. Consider whether or not people could evacuate before plume reaches them (Evacuation Time Estimates).
4. Consider wind shifts and potential affect.
5. Is the situation improving or degrading?
6. Consider road/bridge conditions and whether or not severe weather plays a part.
7. Is this a "puff" or "continuous" release? (Balance medical effects of dose against the cost of the recommendation to implement).
8. Consider special groups (schools, hospitals, prison camps).

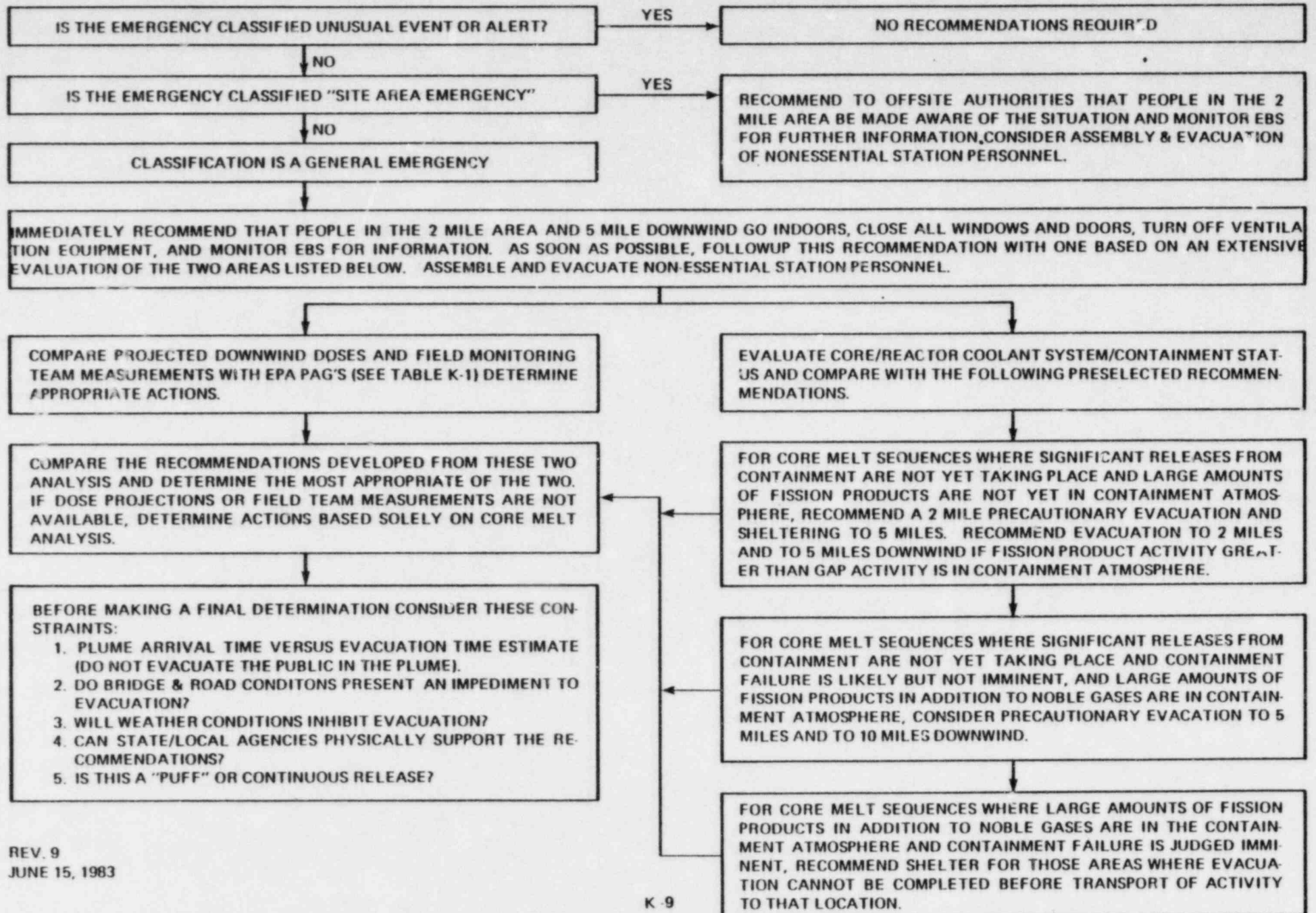
How are PAR's to be transmitted to State/County officials?

1. Quickly!
2. Recovery Manager to State/County Director and (in parallel) Special Assistance Coordinator to Rad. Health Representative.

IMAGE EVALUATION
TEST TARGET (MT-3)



LE K-4
PROTECTIVE ACTION RECOMMENDATION FLOW CHART



L. Medical and Public Health Support

L.1 Local and Backup Hospital and Medical Support

The local and backup hospital and medical support facilities identified in the Oconee, McGuire, and Catawba Plans are as follows:

Oconee

Local - Oconee Memorial Hospital
Backup - Oak Ridge National Lab Hospital
- REACTS

McGuire

Local - Charlotte Memorial Hospital
Backup - Oak Ridge National Lab Hospital
- REACTS

Catawba

Local - Piedmont Medical Center
Backup - Oak Ridge National Lab
- REACTS

Further definition of when and how these facilities might be used is included in the Station Emergency Plan Section L.

L.2 Onsite First Aid Capability

The Nuclear Station Emergency Plan describes onsite First Aid Capability in Section L.

L.3 Public, Private, Military Hospitals; Emergency Medical Facilities

The State plans described in Section A have listings of public, private, and military hospitals and other emergency medical facilities capable of providing medical support to contaminated, injured individuals.

L.4 Transportation of Accident Victims

The following organizations have signed letters of agreement to transport victims of radiological accidents at Oconee, McGuire, and Catawba to medical support facilities.

Oconee

Oconee Memorial Hospital

McGuire

North Mecklenburg Rescue Squad
North Mecklenburg Ambulance Service

Catawba

Piedmont Medical Center

The means for activating these services reside at the Station and are described in their plans, Section L.

M. RECOVERY AND REENTRY PLANNING AND POST-ACCIDENT OPERATIONS

M.1 Reentry/Recovery Plans and Procedures

The Nuclear Station Emergency Plan addresses recovery and reentry in its Section M. Figure M-1 describes the organization of the Crisis Management Group following deescalation from General Emergency or Site Emergency conditions. Implementation of Recovery Operations would occur as follows:

SUMMARY OF RECOVERY AND DEESCALATION GUIDELINES

Responsibility

It is the Recovery Manager's responsibility to determine when it is appropriate to enter into Recovery or to deescalate from a Site or General Emergency.

When to Enter Into Recovery

Prior to Deescalation: May enter into Recovery if plant situation is improving and the complete TSC, CMC, and OSC staffs are not needed to protect the public.

After Deescalation to a Lower (Alert or Unusual Event) or Non-Emergency Condition: Would enter into recovery if situation required long term support.

How to Enter Into Recovery

1. Develop a brief message (time and date of Recovery Operation initiation and any organizational realignments).
2. Distribute message to Function Mgrs., Emergency Coordinator, State and Local Officials, and NRC. Ask each group to inform their personnel.

When to Deescalate Emergency Class

1. Successful progress toward cold shutdown.
2. Containment is isolated.
3. Radioactive Waste Systems and Decon. facilities are operable.
4. A heat sink is available and operable.
5. Electrical equipment and power supplies are sound.
6. Radiation monitoring equipment is operable.
7. Radiation levels in the station are stable or decreasing with time and are reduced to such a level that public hazard is at a minimum.
8. Any radioactive releases are under control or have ceased.
9. Any fire, flooding, or similar condition is controlled or has ceased.

The decision to deescalate or terminate an emergency condition must be concurred in by the Senior NRC and State(s) representatives.

Decisions to relax protective actions for the public will be made by the appropriate State representatives. The Recovery Manager will provide information to the appropriate State agencies to facilitate the decision.

Reentry Planning

The plans and procedures for area reentry will be developed at the time and will consider existing as well as potential conditions inside containment. Prior to reentry, the Recovery Manager and Staff shall:

- a. Review all available radiation survey data and determine plant areas potentially affected by radiation exposure and contamination.
- b. Review the radiation exposure records of personnel participating in the recovery operation and determine the need for additional personnel.
- c. Review the adequacy of the radiation sampling and survey instrumentation to be used by the team (type, ranges, number, calibration, etc).
- d. Review protective clothing, dosimetry, and respiratory protection needs.
- e. Ensure appropriate communications are necessary.
- f. Ensure all team members are briefed concerning areas to be entered, anticipated radiation levels, access control procedures, and methods and procedures that will be employed during the entry.

The initial entry into the affected area should encompass the following actions:

- a. Conduct a comprehensive radiation survey of the plant facilities and define all radiological problem areas.
- b. Isolate and post with appropriate warning signs all radiation and contamination areas.
- c. Identify potential hazards associated with the recovery operation.

Recovery Planning

Recovery from a serious emergency situation is guided by the following principles:

The protection of the public health and safety is the foremost consideration in formulating recovery plans.

Public officials are kept informed of recovery plans so that they can properly carry out their responsibilities to the public.

Periodic briefings of media representatives are held to inform the public of recovery plans and progress made.

Periodic status reports are given to company employees at other locations and to government and industry representatives.

The radiation doses to employees and other radiation workers are kept as low as reasonably achievable.

Necessary adjustments in the size and makeup of the Recovery Manager's staff are made as deemed necessary by the Recovery Manager.

Station programs for security, health physics, fire protection and quality assurance are followed to the maximum practical extent during the recovery effort. If time exists to conduct full implementation of these requirements they should be followed. If resolution of the emergency dictates action to take which does not afford time to fully implement security, health physics, fire protection and quality assurance programs, the Recovery Manager or Station Manager may permit exemption of these requirements.

The Recovery Manager, in coordination with the NRC and State representatives make the determination that the crisis response can be deescalated or terminated.

Responsibility for providing a close out verbal summary and written summary to off-site authorities after the accident is the responsibility of the Station Manager for accidents in the Unusual Event and Alert classifications and the Recovery Manager for accidents classified as Site Emergency and General Emergency. These summaries should be simple and in sufficient detail only to define that the accident situation is ended. A followup report may be submitted if additional detail is requested.

M.2 Recovery Organization

Table M-1 describes the responsibilities and concept of operation for the Recovery Organization described in Figure M-1. The organization includes persons with the technical capability to develop, evaluate, and direct recovery and reentry operations. The responsibilities of these groups in recovery/reentry situations are described in the Implementing Plans.

M.3 Initiation of Recovery Operation

The Recovery Manager will take the following steps to inform members of the Crisis Management Organization, Station Organization, and Offsite Support Agencies that Recovery Operations are being initiated and that activities associated with bringing the plant to a safe shutdown condition are terminated:

1. Develop a brief message as to the time and date of Recovery Operation initiation as well as any necessary organizational realignments.

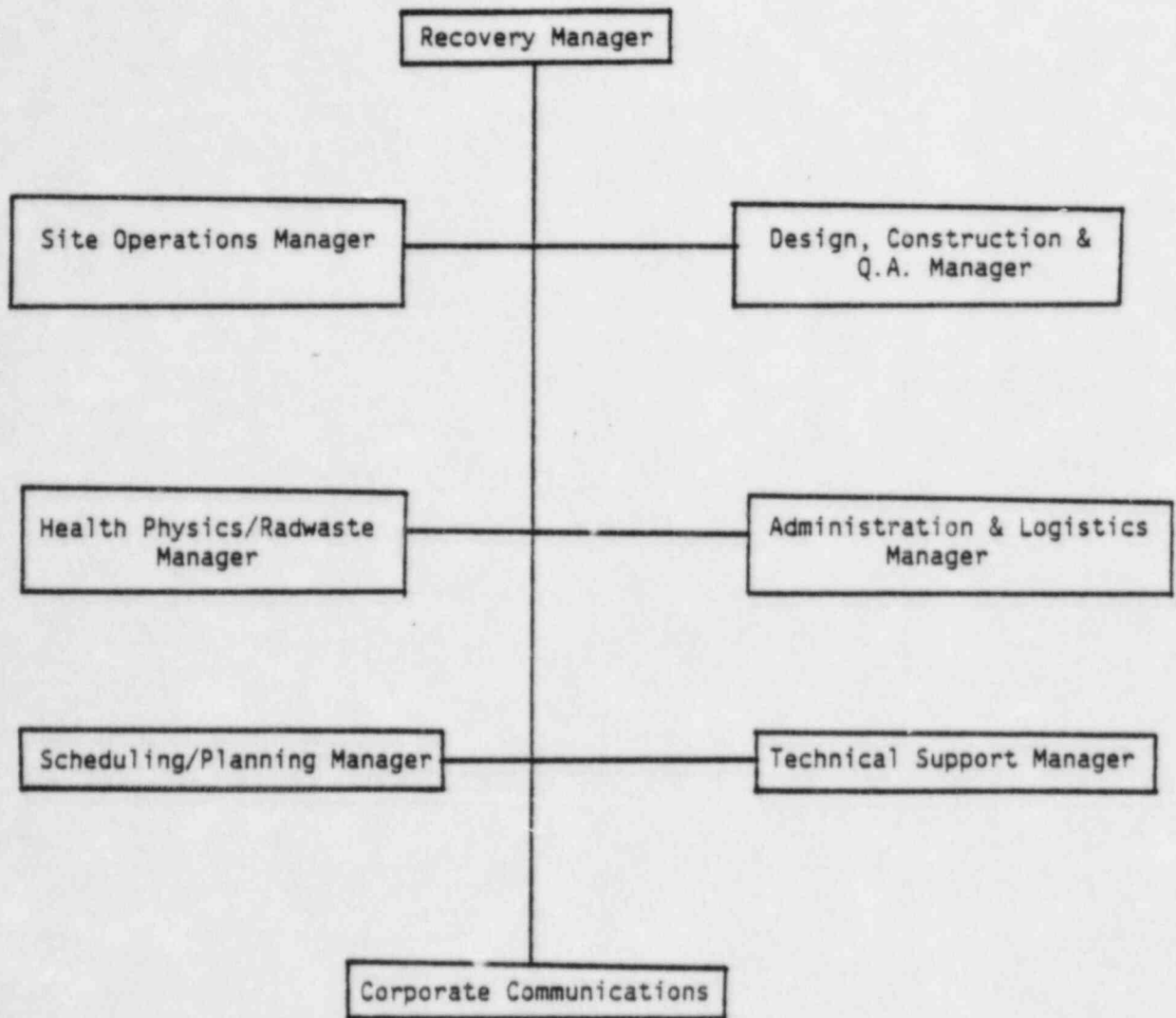
Table M-1 does not exist !

2. Distribute the message to Function Managers, Crisis News Director, Station Emergency Coordinator, State and Local Officials, NRC and other representatives. Ask that each person inform those under his/her direction.

M.4 Total Population Exposure Estimates

The Offsite Radiological Coordination Group (or its successor in Recovery/Reentry Operations) will periodically update the estimate of total population exposure.

Figure M-1
Recommendation On
Extended Recovery Organization



M. RECOVERY AND REENTRY PLANNING AND POST-ACCIDENT OPERATIONS

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SUMMARY OF RECOVERY AND DEESCALATION GUIDELINES

Responsibility

It is the Recovery Manager's responsibility to determine when it is appropriate to enter into Recovery or to deescalate from a Site or General Emergency.

When to Enter Into Recovery

Prior to Deescalation: May enter into Recovery if plant situation is improving and the complete TSC, CMC, and OSC staffs are not needed to protect the public.

After Deescalation to a Lower (Alert or Unusual Event) or Non-Emergency Condition: Would enter into recovery if situation required long term support.

How to Enter Into Recovery

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- c. Review the adequacy of the radiation sampling and survey instrumentation to be used by the team (type, ranges, number, calibration, etc).
- d. Review protective clothing, dosimetry, and respiratory protection needs.
- e. Ensure appropriate communications are necessary.
- f. Ensure all team members are briefed concerning areas to be entered, anticipated radiation levels, access control procedures, and methods and procedures that will be employed during the entry.

The initial entry into the affected area should encompass the following actions:

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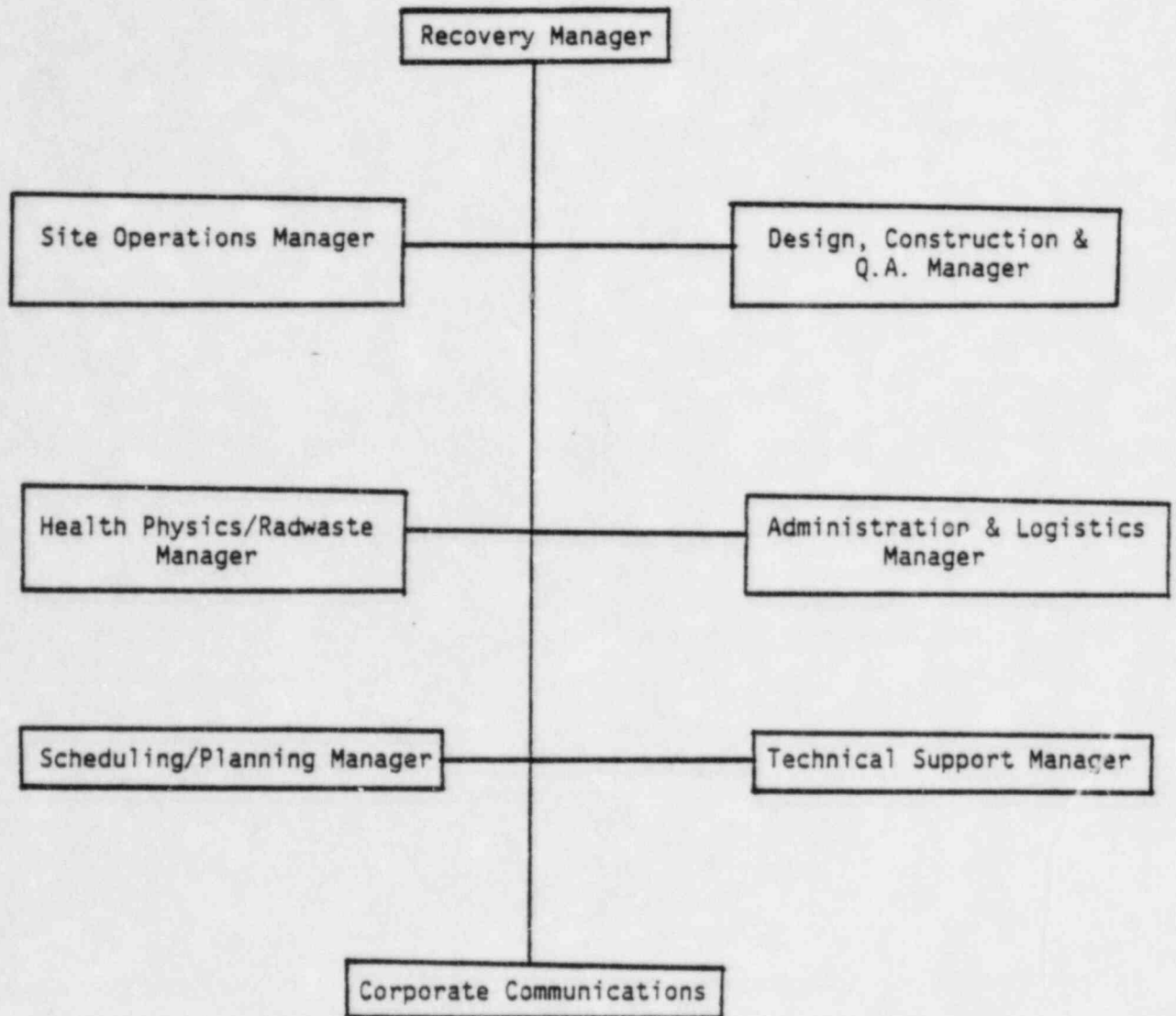
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2. Distribute the message to Function Managers, Crisis News Director, Station Emergency Coordinator, State and Local Officials, NRC and other representatives. Ask that each person inform those under his/her direction.

M.4 Total Population Exposure Estimates

The Offsite Radiological Coordination Group (or its successor in Recovery/Reentry Operations) will periodically update the estimate of total population exposure.

Figure M-1
Recommendation On
Extended Recovery Organization



N.1 EXERCISES AND DRILLS

N.1.a/N.1.b Exercises

Duke Power Company will conduct an emergency exercise at each of its Nuclear Stations once a year. These annual exercises will be as defined in 10 CFR Part 50 Appendix E and will be coordinated tests involving the Station organization, the Crisis Management Organization, the local counties, the State(s) emergency organization (full-scale only), and, when possible, Federal Agency involvement. Each exercise will test a major portion of the elements of the plans such that within a 5 year period all aspects have been tested.

The exercise scenario, data, and messages will be developed by Duke Power Company personnel in conjunction with offsite agency representatives. The event will be designed to test the integrated capability of those involved and a major portion of the basic elements existing within the plans and organizations.

The scenario for these events will be varied from year to year to allow Emergency Planners to test group response to many of the initiating conditions. The exercise will be initiated at various times of the day, but in every six year period from 1981 on, one exercise at each station will begin between 6:00 P.M. and midnight, and another between midnight and 6:00 A.M.

N.2 Drills

The Station Emergency Plans, Section N, address the conduct of periodic drills.
N.2.a Communications Drill

The Nuclear Stations will conduct communications drills with the State and local governments within the Plume Exposure Pathway Emergency Planning Force and tests with Federal Response Organizations and states within the Ingestion Pathway, as described in appropriate station procedures. CMC procedure 5.3.20 describes the monthly communications check made with NRC from the CMC.

During the annual exercise, communications between the facility, the CMC, State and local EOC's, and Field Assessment Teams will be tested.

N.2.b Fire Drills

The Nuclear Stations will conduct fire drills in accordance with the plant fire plan.

N.2.c Medical Emergency Drills

A medical emergency drill involving a simulated contaminated individual will be held on an annual basis. The drill will include provisions for response by both the transportation service and the offsite medical facility.

N.2.d Radiological Monitoring Drills

During each station's annual exercise, a drill involving onsite and offsite radiological monitoring teams will be conducted. The monitoring teams will actually collect and analyze air samples, as appropriate. Soil, water, and vegetation samples will not be taken as this is done on a weekly basis at the station. The exercise controllers will provide monitoring team members simulated analysis results indicative of contamination or plume location after the samples have been drawn and analyzed.

N.2.e Health Physics Drills

The Nuclear Station will conduct Health Physics drills as described in part N.2 of the Station plan.

N.3 Exercises and Drills: Scenarios and Objectives

The Emergency Response Coordinator is responsible for the overall development and direction of each station's annual exercise. He will appoint an Exercise Director and a key group of controllers to develop the exercise scenario, exercise messages, and simulated data for the station and offsite areas. The Exercise Director will, for each exercise, develop an Emergency Management Response Exercise Plan. This plan will include objectives of the exercise and evaluation criteria, the date, time, place, and participating organizations, the exercise scenario, a narrative summary of the event including such things as emergency classification at various times in the simulated accident, offsite assistance, some detail on plant conditions, and public information activities, and a description of the arrangements for and advance materials to be provided to official observers.

N.4 Exercise Critique

A critique will be held following each exercise. The critique will be a closed session between Duke and the Nuclear Regulatory Commission. During the critique, the Recovery Manager, each Function Manager, offsite agency representatives, the Duke Exercise Director, and the NRC will make preliminary evaluations of onsite and corporate emergency response. Participation in a public critique will be determined prior to each exercise.

N.5 Critique Action Items

The verbal evaluations made during the critique and any followup written evaluation will be compiled into a "Critique Action Item List" by the Emergency Response Coordinator. The list will be transmitted to persons designated to have lead responsibility in resolution of the items. Completion dates will be established during development of the action item list. Followup by the Emergency Response Coordinator will ensure resolution of each item. (See Table N-1)

Duke Power Company
Crisis Management Plan
Table N-1

Followup on Action Items

DRILL OR EXERCISE
DEFICIENCY SHEET

Drill or Exercise: _____

Exercise or Drill Date: _____

Deficiency No. _____ (Format-Station/Year/No.; ex. 0/81/5 or M/81/29)

Date Noted: _____

Description of Deficiency: _____

Recommendation For Resolution: _____

Corrective Action
Assigned To: _____ Dept. _____

Date for Completion: _____

Action Taken: _____

Completed By: _____ Date Completed: _____

0. RADIOLOGICAL EMERGENCY RESPONSE TRAINING

0.1.a Offsite Support Agency Training

The Nuclear Station Emergency Plan Section 0 details site specific emergency response training that will be given on an annual basis to fire, rescue, hospital, law enforcement, and governmental support groups that may be called upon to provide assistance in the event of an emergency.

0.1.b. Offsite Support Agency - Participation in Training

(See State/Local Plans)

0.2 Station Organization Training

Section 0.2 of the Station Emergency Plan addresses emergency response training of the Station Emergency Team.

0.3 First Aid Team Training

The Nuclear Station Emergency Plan, Section 0, describes training for members of the Station First Aid Teams.

0.4 Crisis Management Organization Training

Those individuals identified in the Crisis Management Organization Group Plans 5.3.1 - 5.3.7 who serve as primaries or alternates for the positions listed in the organization charts (Figures B-5 through B-10) will receive the annual emergency response overview training. Individuals working out of the General Office will receive the corporate overview program in Attachment 0-1, those at the station will receive the station program as described in part 0.2 of this section. The Recovery Manager and his alternates will receive this program.

This program will allow instruction for:

1. Directors of the Crisis Management Organization.
2. Personnel responsible for accident assessment.
3. Radiological monitoring teams and radiological analysis personnel.
4. Other headquarters support personnel.
5. Personnel responsible for transmission of emergency information.

Each group in the Crisis Management Organization will be offered one session per year for overview training and one makeup session available to all groups. Overview training will be considered complete when 90% of the total organization (Figures 3-5 through B-10) has attended a session. The training goal is 100%, however, 90% will be deemed acceptable, if the primaries have attended the session.

Specialty training in the areas of Offsite Monitoring, Role of the Duty Engineer, information transmission to outside agencies, dose assessment, and data transmission and retrieval will be provided on an annual basis.

0.5 Training - Period

Initial training for the Crisis Management Organization was given in 1980. The overview training is provided on an annual basis. Additional training in the specialty areas, identified in parts 0.2 and 0.4 of this section, is provided on an annual basis.

ATTACHMENT 0-1

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
EMERGENCY RESPONSE TRAINING PROGRAM

OUTLINE

PURPOSE:

The purpose of the Emergency Response training is to provide specific guidance to members of the Crisis Management Organization on the overall Crisis Management Philosophy of Duke Power Company and their roles in emergency situations.

OBJECTIVES:

Upon completion of the training the trainees will:

Have an understanding of their group and individual responsibilities during emergency conditions. And as appropriate to the individual:

1. Have an understanding of the four emergency classes, their initiating conditions, and appropriate emergency action levels.
2. Have an understanding of the nuclear station emergency organization, facilities locations (TSC & OSC), communications capabilities, data display/transfer means.
3. Have an understanding of the CMO structure, facility locations and layouts and communications capabilities.
4. Have an understanding of the offsite agency interfaces established and the frequency and type of information transmitted.
5. Have an understanding of the role of the station vs. the role of the Crisis Management Organization (CMO).
6. Have an understanding of the roles of state, county, and federal agencies. Also having an understanding of their locations, interfaces, and required information updates.
7. Have a basic understanding of the Dose Calculational Methodology (DCM) and how projected or actual offsite dose can key protective action recommendations.
8. Have an understanding of the 10 mile EPZ layouts around each station. (Brochure review)
9. Have an understanding of the requirements of both Duke and the state for facility access during an emergency.

PARTICIPANTS:

I. Crisis Management Organization

Those persons identified to perform functional requirements within each Group Plan (See Implementing Plans 5.3.1 - 5.3.7).

FREQUENCY

Annual overview training will be provided to all participants as described in Part 0.4.

PROGRAM OUTLINE:

I. Introduction

A. Speaker identification

B. Purpose of training

1. Regulatory requirement
2. To maintain Emergency Preparedness
3. To make everyone aware of the Crisis Management Program and their role in it.

II. Emergency Classification

A. Four (4) Emergency Classes

1. Notification of Unusual Event
2. Alert
3. Site Area Emergency
4. General Emergency

III. Nuclear Station Emergency Organization/Facilities

A. Station Organization Structure (as appropriate)

B. Station Emergency Facilities (as appropriate)

1. Locations (TSC and OSC)
2. Communication Capabilities
3. Data Display/Data Transmission

IV. Crisis Management Organization/Facilities

A. CMO Structure

B. CMC Facilities

1. Locations and Layouts
2. Communications Capabilities (as appropriate)

V. Interfaces Between Organizations

A. Roles

1. Station
2. CMO
3. Offsite Agencies (Role and Location)
 - a. State
 - b. County
 - c. NRC

B. Interaction

C. Offsite Information Requirements

1. Emergency Message Notification
 - a. County
 - b. State
2. Plant Status Data
 - a. NRC
 - b. NSSS Vendor
 - c. Charlotte G.O.

VI. Dose Calculational Methodology/Protective Action Recommendations (as appropriate)

A. Basic description of DCM

1. Actual Release
2. Design Leak Rate Basis

B. Protective Action Guides

C. Duke's Responsibility For Making Recommendations

VII. Public Alert/Notification

A. Regulatory Requirements

B. Alerting Methods

C. Notification Methods

VIII. Emergency Planning Zones/Ingestion Pathway Information

A. Brochure Review

IX. Company and State Facility Access During Emergency

A. Green Dot Card

B. Station ID

1. Site Specific Procedures As Appropriate

C. S.C. SLED Access Cards

P. RESPONSIBILITY FOR THE PLANNING EFFORT: DEVELOPMENT
PERIODIC REVIEW AND DISTRIBUTION OF EMERGENCY PLANS

P.1 Emergency Planner Training

The Emergency Response Coordinator is responsible for developing and maintaining the Crisis Management Plan, for coordinating the Crisis Management Plan, for coordinating the development and revision of the Crisis Management Plan Implementing Plans and for coordinating the Crisis Management Plan and Station Plans. Training for this individual will be via INPO workshops and other training/workshop sessions attended on an annual basis.

P.2 Overall Authority

The Manager of Nuclear Technical Services has the overall authority and responsibility for radiological emergency response planning. This planning effort is carried out for the Manager of Nuclear Technical Services by the Emergency Response Coordinator. The Emergency Response Coordinator is also responsible for assuring that the appropriate drills, exercises, and training sessions are conducted and documented.

P.3 Emergency Planning Coordinator

See Station Emergency Plan Section P.

P.4 Emergency Plan Review

The Emergency Response Coordinator will update the Crisis Management Plan and its Implementing Plans on at least an annual basis. This revision will include any changes necessary as identified by drills and exercises, organizational realignments, or procedural changes. Changes will be forwarded to holders of the Crisis Management Plan within 30 days of the revision date. The Emergency Response Coordinator will certify, on an annual basis, that the plan and agreements are current and up-to-date.

In 1983 and subsequent years, the Emergency Response Coordinator will, by June 30 of each year, provide each State and local organization responsible for off-site activation and protective action decision making, a copy of the nuclear station procedures appropriate for their area on emergency classification and notification. The Coordinator will request that they respond by letter within 30 days that they have reviewed the procedures and concur in the EALs used for event classification and for protective action recommendations. If they identify any problem areas, the Coordinator will ensure resolution.

P.5 Distribution of Revised Plans

Distribution of the Revised Plan will be as noted in paragraph P.4. Revisions will be marked along the right margin to show where changes have been made.

P.6 Table of Support Plans

Table P-1 lists plans in support of the Duke Power Company Crisis Management Plan, the McGuire Nuclear Station Emergency Plan, and the Oconee Nuclear Station Emergency Plan.

P.7 Implementing Plan/Procedure Cross Reference

Table P-2 lists Implementing Plans that are used for each section of the Crisis Management Plan. These plans are the means for activating and implementing the Crisis Management Organization.

P.8 Table of Contents/Cross Reference to NUREG-0654

The Crisis Management Plan contains a specific table of contents. The CMP is developed and written in the format of NUREG-0654 and as such has no cross reference to this regulatory document.

P.9 Independent Review of Emergency Preparedness Program

In the fourth quarter of each year, the Nuclear Safety Review Board Chairman will arrange an independent review of Duke Power Company's Emergency Preparedness Program. The review will be conducted by the Company's Quality Assurance Department and will include the following plans, procedures, training programs, drills/exercises, equipment, and State/local plan interfaces:

1. Crisis Management Plan
2. Crisis Management Plan Implementing Plans
3. Oconee Nuclear Station Emergency Plan
4. Oconee Nuclear Station Emergency Plan Implementing Procedures
5. McGuire Nuclear Station Emergency Plan
6. McGuire Nuclear Station Emergency Plan Implementing Procedures
7. State/Local Support Agency Training Program
8. Station/Crisis Management Organization Training Program.
9. Public & Media Training/Awareness
10. Equipment - Communications, Monitoring, Meteorological, Public Alerting
11. State/Local Plan Interface
12. Catawba Nuclear Station Emergency Plan and Implementing Procedures

The review findings will be submitted to the Recovery Manager. He and the Emergency Response Coordinator will review and evaluate the findings to develop an "action item" list. This list will be distributed to all involved in resolving the items. The Emergency Response Coordinator will assure completion/resolution of each item and make a final report to the Recovery manager upon resolution of all listed findings. The review by Q.A., the action item list, and all followup documentation will be retained for five years.

P.10 Phone Numbers Updates

Phone numbers listed in the Crisis Management Plan and Implementing Plans Documents will be updated on a quarterly basis.

Table P-1

Supporting Plans

<u>Organization</u>	Plans in support of:		
	<u>Oconee</u>	<u>McGuire</u>	<u>Catawba</u>
North Carolina		X	X
Mecklenburg County, NC		X	X
Gaston County, NC		X	X
Catawba County, NC		X	
Iredell County, NC		X	
Lincoln County, NC		X	
South Carolina	X		X
York County, SC			X
Oconee County, SC	X		
Pickens County, SC	X		
Georgia	X		
DOE-IRAP Plan	X	X	X
INPO-Fixed Facility Agreement	X	X	X
Westinghouse, Corp.		X	X
Babcock and Wilcox, Co.	X		
NRC - Region II	X	X	X

Table P-2

IMPLEMENTING PLAN CROSS REFERENCE

Procedures Required to Implement the Crisis Management Plan

Crisis Management Plan - Implementing Plans:

- 5.3.1 Recovery Manager and Immediate Staff
- 5.3.2 Oconee Crisis News Center Plan & McGuire/Catawba Crisis News Plan
- 5.3.3 Administration and Logistics Group Plan
- 5.3.4 Scheduling/Planning Group Plan
- 5.3.5 Design and Construction Support Group Plan
- 5.3.6 Nuclear Technical Services Group Plan
- 5.3.7 Nuclear Engineering Services Group Plan
- 5.3.8 (Open)

Crisis Management Plan - Implementing Procedures:

- 5.3.9 Data and Information Transmission
- 5.3.10 Oconee Crisis Phone Directory
- 5.3.11 McGuire/Catawba Crisis Phone Directory
- 5.3.12 Transmission of Followup Emergency Information to Offsite Agencies - Oconee Nuclear Station
- 5.3.13 Transmission of Followup Emergency Information to Offsite Agencies - McGuire Nuclear Station/Catawba Nuclear Station
- 5.3.14 Environmental Monitoring For Emergency Conditions - McGuire Nuclear Station
- 5.3.15 Environmental Monitoring For Emergency Conditions - Oconee Nuclear Station
- 5.3.16 Quarterly Inventory
- 5.3.17 OAC Data Available In An Emergency
- 5.3.18 Environmental Monitoring For Emergency Conditions-Catawba Nuclear Station
- 5.3.19 Procedure For Estimating Food Chain Dose Under Post Accident Conditions
- 5.3.20 Procedure For Monthly Communications Tests

Procedures Used by CMC Dose Assesment Group
(Controlled Copies Maintained By Emergency Response Coordinator)

McGuire

- | | |
|----------------|--|
| HP/O/B/1009/04 | Procedure For Estimating Food Chain Doses Under Post-Accident Conditions |
| HP/O/B/1009/05 | First Response Evaluation of a Reactor Coolant Leak Inside Containment |
| HP/O/B/1009/06 | Procedure For Quantifying High Level Radioactivity Releases During Accident Conditions |
| HP/O/B/1009/08 | Evaluation of a Reactor Coolant Release Inside Containment |

Table P-2 (cont'd)

IMPLEMENTING PLAN CROSS REFERENCE

Procedures Used by CMC Dose Assessment Group
(Controlled Copies Maintained By Emergency Response Coordinator) (cont'd)

McGuire (cont'd)

- HP/O/B/1009/09 Release of Radioactive Materials Thru the Unit Vent Exceeding Technical Specifications
- HP/O/B/1009/010 Releases of Liquid Radioactive Materials Exceeding Technical Specifications

Oconee

- AP/O/B/1000/07 Offsite Dose Calculations By Control Room Personnel During a LOCA
- HP/O/B/1009/10 Procedure For Quantifying Gaseous Releases Through Steam Relief Valves Under Post-Accident Conditions
- HP/O/B/1009/11 Projection of Offsite Dose From The Uncontrolled Release of Radioactive Materials through a Unit Vent
- HP/O/B/1009/14 Projection Offsite Dose From Releases Other Than The Unit Vent

Sections of the CMP implemented by these plans/procedures:

<u>Plan/Procedure</u>	<u>CMP Section Implemented</u>
5.3.1	B.7, C., D., E., F.
5.3.2	B.7
5.3.3	B.7
5.3.4	B.7
5.3.5	B.7
5.3.6	B.7
5.3.7	B.7
5.3.8	(open)
5.3.9	E., F.
5.3.10	F
5.3.11	F
5.3.12	E
5.3.13	E
5.3.14	I
5.3.15	I
5.3.16	P
5.3.17	I
5.3.18	I
Dose Assessment	I

Q. APPENDICES

This section of the Crisis Management Plan contains the following:

Appendix 1	Definitions
Appendix 2	Meteorological Systems
Appendix 3	Alert and Notification System Plan
Appendix 4	Evacuation Time Estimates
Appendix 5	Agreement Letters
Appendix 6	Distribution List For the Crisis Management Plan

Appendix 1

DEFINITIONS

ASSESSMENT ACTIONS

Those actions taken during or after an accident to obtain and process information that is necessary to make decisions to implement specific emergency measures.

CORRECTIVE ACTIONS

Emergency measures taken to ameliorate or terminate an emergency situation at or near the source of problem to prevent an uncontrolled release of radioactive material or to reduce the magnitude of the release, e.g., shutting down equipment, fire-fighting, repair and damage control.

PROTECTIVE ACTIONS

Those emergency measures taken after an uncontrolled release of radioactive materials has occurred for the purpose of preventing or minimizing radiological exposures to persons that would be likely to occur if the actions were not taken.

POPULATION-AT-RISK

Those persons for whom protective actions are being or would be taken.

AFFECTED PERSONNEL

Persons who have received radiation exposure or have been physically injured as a result of an accident to a degree requiring special attention as individuals, e.g., decontamination, first aid, or medical services.

RECOVERY ACTIONS

Those actions taken after the emergency to restore the station as nearly as practicable to its pre-emergency condition.

PROTECTIVE ACTION GUIDES (PAG)

Projected radiological dose or dose-commitment values to individuals in the general population that warrant protective action following a release of radioactive material. Protective actions would be warranted provided the reduction in individual dose expected to be achieved by carrying out the preventive action is not offset by excessive risks to individual safety in taking the protective action.

EMERGENCY ACTION LEVELS

Radiological doses or dose rates; specific contamination levels of airborne, waterborne, or surface-deposited concentrations of radioactive materials; or specific instrument indications (including their rate of change) may be used as thresholds for initiating such specific emergency measures as designating a particular class of emergency initiating a notification procedure, or initiating a particular protective action.

Appendix 1 (continued)

SITE

That part of the nuclear station property consisting of the Reactor, Auxiliary, Turbine, and Service Buildings and grounds, contained within the owner controlled area fence.

EXCLUSION AREA

The area around the nuclear station, including the site, out to a radius of 2500 feet (5280 feet for Ocone).

PLUME EXPOSURE PATHWAY

The principal exposure sources from this pathway are (a) whole body external exposure to gamma radiation from the plume and from deposited material and (b) inhalation exposure from the passing radioactive plume. The time of potential exposure could range from hours to days.

INGESTION EXPOSURE PATHWAY

The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk or fresh vegetables. The time of potential exposure could range in length from hours to months.

EMERGENCY PLANNING ZONE (EPZ)

The area for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident. The plume exposure EPZ is about 10 miles in radius and the ingestion exposure EPZ is about 50 miles in radius.

TECHNICAL SUPPORT CENTER (TSC)

The Technical Support Center is utilized for evaluation of plant status by knowledgeable personnel in support of operations during an emergency situation.

OPERATIONAL SUPPORT CENTER (OSC)

The Operational Support Center is the place designated for operations support personnel to report in an emergency situation.

CRISIS MANAGEMENT CENTER (CMC) OR (EOF)

The Crisis Management Center is the facility utilized for direction and control of all emergency and recovery activities with emphasis on the coordination of offsite activities such as dispatching mobile emergency monitoring teams, communications with local, State and Federal agencies, and coordination of corporate and other outside support. Frequently referred to as the Emergency Operation Facility (EOF).

Appendix 1 (continued)

PROTECTED AREA

An area encompassed by physical barriers and to which access is controlled.

VITAL AREA

Any area which contains vital equipment.

DRILL

A drill is a supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation.

EXERCISE

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations.

Appendix 2

McGuire Nuclear Station

Meteorology and Offsite Dose Assessment Program Description

This appendix provides information on McGuire's Meteorology and Offsite Dose Assessment Programs and how these programs meet the requirements of NUREG-0654, Appendix 2, Rev. 1. The first section describes the facilities McGuire personnel will use to obtain real time meteorological data. The second section describes how actual plant and meteorological conditions are utilized in obtaining a calculated offsite dose.

I. Meteorological Facilities

A description of the McGuire primary meteorological measurement facility is found in Section 2.3.3 of the McGuire FSAR. The basic meteorological parameters are displayed in the control room. McGuire's meteorology system will be upgraded and the Class A model in place on July 31, 1983. Prior to that time, compensating measures are being taken. Compensating actions being taken are as follows:

- A. A monthly telephone contact, initiated by plant personnel, with the NWS office at the Douglas Municipal Airport will be established to insure that this basic meteorological information can be accessed. This call will be made by plant personnel responsible for making offsite dose projections. See procedure PT/O/A/4600/11.
- B. Onsite meteorological instruments will be calibrated at a frequency no less than quarterly while this alternative is employed. During calibration periods, basic meteorological data, characteristic of site conditions, will be accessible from the NWS at Douglas Municipal Airport. These instruments will be calibrated in accordance with approved procedures.
- C. During periods of primary system unavailability, an alternate source of meteorological data is established as the NWS office at Douglas Municipal Airport. Access to this facility's data will be provided through the means described above. Wind direction and speed are from standard NWS instrumentation at conventional heights.

Wind direction at the Douglas Airport can replace the tower (40 m) wind direction. Wind speed at the Douglas Airport can replace the lower tower (10 m) wind speed for dose calculational purposes and for use in the 15 mph wind speed criterion discussed below; it can also replace the tower (40 m) wind speed for transport speed considerations.

Appendix 2 (Continued)

- D. The following field checks will be performed each week by plant personnel:

Wind Direction

- 1) Recorder Time Accuracy
- 2) Recorder Zero
- 3) Translator Zero*
- 4) Translator Full Scale*

Wind Speed

- 1) Recorder Time Accuracy
- 2) Recorder Zero
- 3) Translator Zero*

Delta - Temperature

- 1) Recorder Time Accuracy

*Note: These actions cannot be taken with present equipment but will be performed after the upgrade.

- E. McGuire Nuclear Station's Technical Specification 3.3.3.4, "Reporting Requirements" exceeds the reportable occurrence guidance in proposed Rev. 1 to Regulatory Guide 1.23. Thus, the Technical Specification reporting requirements will be followed.

Instituting these compensating actions has ensured that McGuire personnel will have actual site meteorological data available.

II. Offsite Dose Assessment

The purpose of offsite dose procedures at McGuire is to utilize existing plant and meteorological conditions in the calculation of a realistic dose to the public (under actual release or potential release conditions). This purpose is accomplished by the use of two dose assessment methodologies. The philosophy is to provide a quick and simplified, and therefore slightly conservative, methodology for use in the control room and a more realistic methodology for use in the Technical Support Center (TSC) and the Crisis Management Center (CMC). This philosophy allows control room personnel to make timely assessment of potential offsite dose consequences without impairing their activities to maintain the station in a safe condition (during the first 30 to 60 minutes of an incident). Activation of the TSC and CMC assures the arrival of radiation analysis professionals whose educational background and experience is conducive to the more detailed, and therefore more realistic, analyses performed under the second methodology. These two methodologies are described in more detail below.

Appendix 2 (Continued)

A. Control Room Procedures

Procedure HP/O/B/1009/05 provides the H.P. Shift Technician with a conservative method of determining offsite dose potential within 15 minutes. The procedure involves the use of a number of short calculations and references to precalculated tables for protective action recommendations.

Data needed by the operator for this assessment includes:

1. Present Time and Date
2. Time of Trip/Shutdown
3. Wind Direction
4. Wind Speed
5. ΔT
6. Reactor Building Dose Rate
7. Vent Iodine and Noble Gas Dose Rates/CPM
8. Vent Flow

This is available on the OAC or via logbook entries.

B. TSC and CMC Procedures

Procedures HP/O/B/1009/08 and HP/O/B/1009/09 provide TSC and CMC personnel with methods of calculating realistic offsite doses based on either the unit vent radiation monitors or the containment radiation monitors. Procedure HP/O/B/1009/08 has the capability of providing dose projections on a scoping basis, relating releases from a design leak rate basis to larger releases based on containment pressure and a "hole" size. Procedure HP/O/B/1009/09 is based on actual release rates, source term, and meteorology for a vent release.

Average centerline concentrations of noble gases and iodines are calculated at distances varying from 0.5 to 10 miles from the site. Transport and diffusion within the plume is treated by a straight line gaussian model with 15 minute averages of windspeed and ΔT as input. The 15 minute average of wind direction is used to determine the plume direction. Meteorological conditions are assumed to persist for two hours. All dose conversion factors are obtained from Regulatory Guide 1.109. Both procedures are computerized with manual methods included in the event that the company computer system is not available.

In the event of a release of radioactivity, procedure HP/O/B/1009/09 would be used. In addition to the characteristics described above, this procedure calculates the unit vent release rate of noble gases and iodines based on readings of the unit vent radiation monitors and flow monitors. Sensitivities of the radiation monitors are accounted for. If unit vent grab samples are available, actual sample analyses can be substituted for the radiation monitor readings.

Appendix 2 (Continued)

If a release of radioactivity occurred within containment, but not to the environment, procedure HP/O/B/1009/08 would be used to determine the potential offsite dose. This procedure determines the fraction of core noble gases and iodines released to containment by comparing the actual containment radiation monitor readings to a pre-calculated time dependent dose rate. The design basis containment leak rate is used as a default value for containment leakage. However, if plant conditions indicate that this is an overly conservative value, more realistic leakage terms can be input. Also as discussed previously, greater release rates can be input for scoping analyses. Other characteristics of the code are as discussed earlier in this section.

C. Alternate Methodology Data

When the Douglas Airport backup data source is being used, no attempt is made to deduce detailed turbulence information. Time of day is used to index the dividing line between unstable and stable stratification. From 10:00 A.M. to 4:00 P.M. local time, a Pasquill Stability Class D is assumed (vertical temperature difference (100 ft.) -0.4 to -0.2°C). From 4:00 P.M. to 10:00 P.M. local time, if the wind speed at the Douglas Airport is greater than 15 mph, a Pasquill Stability Class E is assumed (vertical temperature difference (100 ft.) -0.1 to $+0.4^{\circ}\text{C}$). If the Douglas windspeed is less than or equal to 15 mph, and the local time is between 4:00 P.M. and 10:00 A.M., then a Pasquill Stability Class G is assumed (vertical temperature difference (100 ft.) $+1.2$ to $+13.9^{\circ}\text{C}$).

The dose calculation methodologies described above remain unchanged.

D. Telephone Access

Telephone access to offsite NRC dose assessment personnel is through the automated ringdown Health Physics network phone system installed by the NRC. Duke Power Company Dose Assessment personnel man the TSC in Health Physics and the CMC in the offsite Radiological Coordinator's section. Each area has specific procedures for activation of their staff.

Appendix 2

Oconee Nuclear Station

Meteorology and Offsite Dose Assessment Program Description

This submittal provides information on Oconee's Meteorology and Offsite Dose Assessment Programs and how these programs meet the requirements of NUREG-0654, Appendix 2, Rev. 1. The first section describes the facilities Oconee personnel will use to obtain real time meteorological data. The second section describes how actual plant and meteorological conditions are utilized in obtaining a calculated offsite dose.

I. Meteorological Facilities

A description of the Oconee primary meteorological measurement facility is found in Section 2.3.3 of the Oconee FSAR. These basic meteorological parameters are displayed in the control room. Oconee's meteorology system will be upgraded and the Class A model in place in accordance with NUREG-0737 Supplement 1 agreements. Prior to that time, compensating measures are being taken. Compensating actions being taken are as follows:

- A. A monthly telephone contact, initiated by plant personnel, with the NWS office at the Greenville-Spartanburg Airport will be established to insure that this basic meteorological information can be accessed. This call will be made by plant personnel responsible for making offsite dose projections. See procedure HP/O/B/1009/13.
- B. Onsite meteorological instruments will be calibrated at a frequency no less than quarterly while this alternative is employed. During calibration periods, basic meteorological data, characteristic of site conditions, will be accessible from the NWS at Greenville-Spartanburg Airport. These instruments will be calibrated in accordance with approved procedures.
- C. During periods of primary system unavailability, an alternate source of meteorological data is established as the NWS office at Greenville-Spartanburg Airport. Access to this facility's data will be provided through the means described above. Wind direction and speed are from standard NWS instrumentation at conventional heights.

Wind direction at the Greenville-Spartanburg Airport can replace the tower (46 m) wind direction. Wind speed at the Greenville-Spartanburg Airport can replace the lower tower (10 m) wind speed for dose calculational purposes and for use in the 15 mph wind speed criterion discussed below; it can also replace the tower (46 m) wind speed for transport speed considerations.

Appendix 2 (Continued)

- D. The following field checks will be performed each week by plant personnel:

Wind Direction

- 1) Recorder Time Accuracy
- 2) Recorder Zero
- 3) Translator Zero*
- 4) Translator Full Scale*

Wind Speed

- 1) Recorder Time Accuracy
- 2) Recorder Zero
- 3) Translator Zero*

Delta - Temperature

- 1) Recorder Time Accuracy

Instituting these compensating actions has ensured that Oconee personnel will have actual site meteorological data available.

* Note: These actions cannot be taken with existing equipment, but will be performed after the upgrade.

II. Offsite Dose Assessment

The purpose of offsite dose procedures at Oconee is to utilize existing plant and meteorological conditions in the calculation of a realistic dose to the public (under actual release or potential release conditions). This purpose is accomplished by the use of two dose assessment methodologies. The philosophy is to provide a quick and simplified, and therefore slightly conservative, methodology for use in the control room and a more realistic methodology for use in the Technical Support Center (TSC) and the Crisis Management Center (CMC). This philosophy allows control room personnel to make timely assessment of potential offsite dose consequences without impairing their activities to maintain the station in a safe condition (during the first 30 to 60 minutes of an incident). Activation of the TSC and CMC assures the arrival of radiation analysis professionals whose educational background and experience is conducive to the more detailed, and therefore more realistic, analyses performed under the second methodology. These two methodologies are described in more detail below.

Appendix 2 (Continued)

A. Control Room Procedures

Station Procedure AP/O/B/1000/07 provides the H.P. Shift Technician a conservative method of determining offsite dose potential within 15 minutes. The procedure involves the use of a number of short calculations and references to precalculated tables for protective action recommendations.

Data needed by the operator for this assessment includes:

1. Present Time and Date
2. Time of Trip/Shutdown
3. Wind Direction
4. Wind Speed
5. ΔT
6. Reactor Building Dose Rate
7. Vent Noble Gas and Iodine Dose Rates and CPM
8. Vent Flow

This is available on the OAC or via logbook entries.

B. TSC and CMC Procedures

Procedures HP/O/B/1009/11, HP/O/B/1009/14, and HP/O/B/1009/10 provide TSC and CMC personnel with methods of calculating realistic offsite doses based on either the unit vent radiation monitors or the containment radiation monitors. Procedure HP/O/B/1009/11 is based on actual release rates, source term, and meteorology for a vent release.

Average centerline concentrations of noble gases and iodines are calculated at distances varying from 0.5 to 10 miles from the site. Transport and diffusion within the plume is treated by a straight line gaussian model with 15 minute averages of windspeed and ΔT as input. The 15 minute average of wind direction is used to determine the plume direction. Meteorological conditions are assumed to persist for two hours. All dose conversion factors are obtained from Regulatory Guide 1.109. Both procedures are computerized with manual methods included in the event that the company computer system is not available.

In the event of a release of radioactivity, procedure HP/O/B/1009/11 would be used. In addition to the characteristics described above, this procedure calculates the unit vent release rate of noble gases and iodines based on readings of the unit vent radiation monitors and flow monitors. Sensitivities of the radiation monitors are accounted for. If unit vent grab samples are available, actual sample analyses can be substituted for the radiation monitor readings.

Appendix 2 (Continued)

If a release of radioactivity occurred within containment, but not to the environment, procedure HP/O/3/1009/11 would be used to determine the potential offsite dose. This procedure determines the fraction of core noble gases and iodines released to containment by comparing the actual containment radiation monitor readings to a pre-calculated time dependent dose rate. The design basis containment leak rate is used as a default value for containment leakage. However, if plant conditions indicate that this is an overly conservative value, more realistic leakage terms can be input. Also greater release rates can be input for scoping analyses. Other characteristics of the code are as discussed earlier in this section.

C. Alternate Methodology Data

When the Greenville-Spartanburg Airport backup data source is being used, no attempt is made to deduce detailed turbulence information. Time of day is used to index the dividing line between unstable and stable stratification. From 10:00 A.M. to 4:00 P.M. local time, a Pasquill Stability Class D is assumed (vertical temperature difference (100 ft.) -0.4 to -0.2°C). From 4:00 P.M. to 10:00 P.M. local time, if the wind speed at the Greenville-Spartanburg Airport is greater than 15 mph, a Pasquill Stability Class F is assumed (vertical temperature difference (100 ft.) -0.1 to $+0.4^{\circ}\text{C}$). If the Greenville-Spartanburg windspeed is less than or equal to 15 mph, and the local time is between 4:00 P.M. and 10:00 A.M., then a Pasquill Stability Class G is assumed (vertical temperature difference (100 ft.) $+1.2$ to $+13.9^{\circ}\text{C}$).

The dose calculation methodologies described above remain unchanged.

D. Telephone Access

Telephone access to offsite dose assessment personnel is through the automated ringdown Health Physics network phone system installed by the NRC.

Appendix 3

DUKE POWER COMPANY McGuire Nuclear Station ALERT AND NOTIFICATION SYSTEM DESCRIPTION

GENERAL DESCRIPTION

The Alert and Notification System for McGuire Nuclear Station consists of an acoustic alerting signal and notification of the public by commercial broadcast (EBS). The system is designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1.

An engineering study of the William B McGuire Nuclear Station alerting system was prepared by the system's designer and manufacturer, Federal Signal Corporation (FSC). This study was included in its entirety in Revision 1 of this plan and is now edited to only include parts relevant to the CMP. Those parts of the study included in this revision include siren locations and anticipated coverages.

The Emergency Plans of Duke Power Company, the State of North Carolina, and the counties of Mecklenburg, Iredell, Lincoln, Gaston, and Catawba include the organizations and individuals, by title, who will be responsible for decision-making as regards the alert and notification system. (See State/County Plan reference number 1) The county locations from which the sirens would be activated and, potentially, the request for an EBS message would come are manned 24 hours per day. Each organization's plan describes provisions for use of public communications media or other emergency instructions to members of the public. (See State/County Plan reference number 2) The plan of the State of North Carolina includes a description of the information that would be communicated to the public under given circumstances.

A. Concept of Operations

A system of 50 fixed sirens is installed and operational in the 10 mile area around McGuire Nuclear Station. A backup means of alerting and notification is described in the State and County Plans. This backup method includes area-wide emergency service vehicles traversing the area and giving both an alerting signal and notification message.

At any "Alert" or higher emergency classification, the Common Program Control Station (CPCS-1) station (WEZC-FM) in Charlotte, North Carolina would be placed in readiness for any necessary transmission by the local or state organizations.

Each county will control the activation of the sirens within its boundaries. (Except for Catawba County - Their one siren will be activated by Lincoln County).

B. Criteria for Acceptance

The alert and notification system for the McGuire Nuclear Station provides an alerting signal and an informational or instructional message to the population (via the EBS) on an area wide basis throughout the 10 mile EPZ

within 15 minutes from the time the cognizant offsite agencies have determined the need for such alerting exists. The emergency plan of the state of North Carolina (Annex E) includes evidence of EBS preparation for emergency situations and the means for activating the system.

The map of area wide coverage within the EPZ indicates an alerting signal sound levels at or above the standards set in NUREG-0654, Appendix 3 (See Figure Q-1).

To assure that the public is aware of the alerting signal of the meaning of the prompt notification message, and that they have emergency information (brochure-section G) available, Duke Power Company will, during full-scale exercises, cooperate with FEMA in statistical sampling of the public. If sampling of the public indicates that one or more of the items above are lacking, corrective measures will be taken to resolve the problem.

C. Physical Implementation

1. The activation of this alert and notification system requires procedures and relationships between both Duke Power Company and the offsite agencies that support Duke and McGuire Nuclear Station. When an incident is determined to have reached the level requiring public protective actions, Duke contacts the cognizant offsite agency via the "ringdown" phone system and provides its recommendations. This system is available for use 24 hours per day and links the control room, TSC, CMC, SERT headquarters (Air National Guard Armory - Charlotte), the county warning points, and the county EOCs.
2. Control of the alert and notification system is vested with the North Carolina Department of Crime Control and Public Safety. In a developing emergency the state would control activation of the system including development of an appropriate EBS message. If protective actions are required when the SERT team is not operational, the counties take the lead with Mecklenburg County providing the EBS message to radio station WEZC in Charlotte. In both situations the counties would physically activate the system as the tone encoders are located at their warning point facilities.
3. The alert and notification system has multipurpose use built into it. The sirens are capable of producing a three minute steady signal for the nuclear plant emergency as a three minute wailing signal for natural disasters or nuclear attack. Procedures exist at the warning points to allow activation of either signal.

The expected performance of the sirens used in this system is described in Figure Q-2. These sirens complement existing alerting systems. The ambient background sound level in the McGuire area is taken to be 50 db as provided for in Appendix 2 for areas of "less than 2000 persons/per square mile." On this basis, the siren coverages are designed to provide a signal 10 db above the average daytime ambient background (i.e., 60 db). Furthermore, the sirens have been located to assure that the maximum sound levels received by any member of the public should be lower than 123 db.

Duke Power Company is installing this system without a field survey of ambient conditions. The basis for our selection of the 60 db(c) criteria is documented as follows:

Population densities - See Table J-28

Location of major transportation routes - Table J-22

Location of heavy industry - There is no "heavy industry" in the McGuire 10 mile EPZ.

Attenuation factors with distance - 10 db loss per distance doubled
(See Figure Q-2)

Siren output db(c) at 100 ft vs. - Thunderbolt 125 ± 1.0 db at 100 feet
assumed range and acoustic STH10 113 ± 1.0 db at 100 feet
frequency spectra

Assumed ranges per Table Q-2, 10 db loss column

Frequency Spectra:

Thunderbolt : top frequency 700Hz

STH-10 : top frequency 694Hz

Maps showing siren location, size - See Figure Q-1

Mounting height of sirens - 50 feet (approximate)

Special weather condition - None
considerations (such as
expected heavy snow)

The siren system will produce a 3 minute steady signal and is capable of repetition.

The siren system will be tested and maintained in accordance with the following schedule:

<u>Test or Maintenance</u>	<u>Period</u>
Silent Test	Every two weeks-log entry
Growl Test	Quarterly and when Preventative Maintenance is performed
Complete Cycle Test	Annually in conjunction with formal exercises
Preventative Maintenance	At least annually

The silent test will be performed by county personnel. The quarterly test will be performed by Duke and the counties. During this test, a review of the activation counter will be made to assure the siren has received the silent test signals. The annual test will be a cooperative effort of all involved. Preventative maintenance of the sirens will be done by Duke Power Company personnel. Maintenance of the radio controls will be performed by those organizations who maintain the county radio system.

4. The EBS system is the primary notification system. Backups include the use of county vehicles with audio equipment and other media communications. As described previously, WEZC-FM is the CPCS-1 for the EPZ area of McGuire Nuclear Station.

This method of operations for EBS in the McGuire area meets the guidance of this section.

NOAA, telephone automatic dialers, and aircraft with loudspeakers are not planned for use as the present system is able to meet the criteria.

State/County Plan Reference Number 1

Organizations and individuals by title who will be responsible for notifying response organizations (offsite) and the affected population:

Catawba County:	Chapter V Part H.1 pages 54-57
Gaston County:	Chapter V Part H.1 pages 63-64 & 66-69
Lincoln County:	Chapter V Part H.1 pages 53-56
Mecklenburg County:	Chapter V Part H.1 pages 47-50
Iredell County:	Chapter V Part H.1 pages 50-52
North Carolina:	Chapter V Part H.1 pages 55-60

State/County Plan Reference Number 2

Provisions for the use of public communications media or other methods for issuing emergency instructions to the public:

Catawba County:	Chapter VII Parts B-H pages 80-89
Gaston County:	Chapter VII Parts B-H pages 101-112
Iredell County:	Chapter VII Parts B-H pages 80-88
Lincoln County:	Chapter VII Parts B-H pages 81-90
Mecklenburg County:	Chapter VII Parts B-H pages 72-83
North Carolina:	Chapter VI Part L Pages 72-76 & Chapter VII Part B pages 77-80

Appendix 3

DUKE POWER COMPANY Oconee Nuclear Station ALERT AND NOTIFICATION SYSTEM DESCRIPTION

GENERAL DESCRIPTION

The Alert and Notification System for Oconee Nuclear Station will include an acoustic alerting signal and notification of the public by commercial broadcast (EBS). The system is designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1.

An engineering study of the Oconee Nuclear Station alerting system was prepared by the system's designer and manufacturer, Federal Signal Corporation (FSC). This study was included in its entirety in Revision 1 of this plan and is now edited to only include parts relevant to the CMP. Those parts of the study included in this revision include seven locations and anticipated coverages.

The Emergency Plans of Duke Power Company, the State of South Carolina, and the counties of Oconee and Pickens include the organizations and individuals, by title, who will be responsible for decisionmaking as regards the alert and notification system. The county locations from which the sirens would be activated and, potentially, the request for an EBS message would come are manned 24 hours per day. Each organization's plan describes provisions for use of public communications media or other emergency instructions to members of the public. The plan of the State of South Carolina includes a description of the information that would be communicated to the public under given circumstances.

A. Concept of Operations

A system of 50 fixed sirens is installed in the 10 mile area around Oconee Nuclear Station. A backup means of alerting and notification is described in the State and County Plans. This backup method includes area-wide emergency service vehicles traversing the area and giving both an alerting signal and notification message.

At any "Alert" or higher emergency classification, the Common Program Control Station (CPCS-1) station (WFBC) in Greenville, South Carolina would be placed in readiness for any necessary transmission by the local or state organizations.

Each county will control the activation of the sirens within its boundaries.

B. Criteria for Acceptance

The alert and notification system for the Oconee Nuclear Station provides an alerting signal and an informational or instructional message to the population (via the EBS) on an area wide basis throughout the 10 mile EPZ within 15 minutes from the time the cognizant offsite agencies have determined the need for such alerting exists. The emergency plan of the state of South Carolina includes evidence of EBS preparation for emergency situations and the means for activating the system.

The map of area wide coverage within the EPZ indicates an alerting signal sound levels at or above the standards set in NUREG-0654, Appendix 3 (See Figure Q-3).

To assure that the public is aware of the alerting signal of the meaning of the prompt notification message, and that they have emergency information (brochure-section G) available, Duke Power Company will, during full-scale exercises, cooperate with FEMA in statistical sampling of the public. If sampling of the public indicates that one or more of the items above are lacking, corrective measures will be taken to resolve the problem.

C. Physical Implementation

1. The activation of this alert and notification system requires procedures and relationships between both Duke Power Company and the offsite agencies that support Duke and McGuire Nuclear Station. When an incident is determined to have reached the level requiring public protective actions, Duke contacts the cognizant offsite agency via the "ringdown" or other phone system and provides its recommendations. This system is available for use 24 hours per day and links the control room, TSC, CMC, S.C., FEOC (Clemson Armory), the county warning points, and the county EOCs.
2. Control of the alert and notification system is vested with the South Carolina Emergency Preparedness Division. In a developing emergency the state would control activation of the system including development of an appropriate message. If protective actions are required when the FEOC team is not operational, the counties take the lead with Pickens County providing the EBS message to radio station WFBC in Greenville, S.C. In both situations the counties would physically activate the system as the tone encoders are located at their warning point facilities.
3. The alert and notification system has multipurpose built into it. The sirens are capable of producing a three minute steady signal for the nuclear plant emergency as a three minute wailing signal for natural disasters or nuclear attack. Procedures exist at the warning points to allow activation of either signal.

The expected performance of the sirens used in this system is described in Figure Q-2. These sirens complement existing alerting systems. The ambient background sound level in the Oconee

area is taken to be 50 db as provided for in Appendix 3 for areas of "less than 2000 persons/per square mile." On this basis, the siren coverages are designed to provide a signal 10 db above the average daytime ambient background (i.e., 60 db). Furthermore, the sirens have been located to assure that the maximum sound levels received by any member of the public should be lower than 123 db.

Duke Power Company is installing this system without a field survey of ambient conditions. The basis for our selection of the 60 db(c) criteria is documented as follows:

Population densities - See Table J-12

Location of major transportation routes - See Table J-6

Location of heavy industry - There is no "heavy industry" in the Oconee 10 mile EPZ.

Attenuation factors with distance - 10 db loss per distance doubled
(See Figure Q-2)

Siren output db(c) at 100 ft vs. - Thunderbolt 125 ± 1.0 db at 100 feet
assumed range and acoustic STH10 113 ± 1.0 db at 100 feet
frequency spectra

Assumed ranges per Figure Q-2

Frequency Spectra:

Thunderbolt : top frequency 700Hz
STH-10 : top frequency 694Hz

Maps showing siren location, size - See Figure Q-3

Mounting height of sirens - 50 feet (approximate)

Special weather condition - None
considerations (such as
expected heavy snow)

The siren system will produce a 3 minute steady signal and is capable of repetition.

The siren system will be tested and maintained in accordance with the following schedule:

<u>Test or Maintenance</u>	<u>Period</u>
Silent Test	Every two weeks-log entry
Growl Test	Quarterly and when Preventative Maintenance is performed

Complete Cycle Test

Annually in conjunction with formal exercises

Preventative Maintenance

At least annually

The silent test will be performed by county personnel. The quarterly test will be performed by Duke and the counties. During this test, a review of the activation counter will be made to assure the siren has received the silent test signals. The annual test will be a cooperative effort of all involved. Preventative maintenance of the sirens will be done by Duke Power Company personnel. Maintenance of the radio controls will be performed by those organizations who maintain the county radio system.

4. The EBS system is the primary notification system. Backups include the use of county vehicles with audio equipment and other media communications. As described previously, WFBC is the CPCS-1 for the EPZ area of Oconee Nuclear Station.

This method of operations for EBS in the Oconee area meets the guidance of this section.

NOAA, telephone automatic dialers, and aircraft with loudspeakers are not planned for use as the present system is able to meet the criteria.

FIGURE Q-2
SIREN RANGE IN FEET

FOR TWO TYPES OF SIREN FIGURED AT 12 AND 10dB LOSS PER DISTANCE DOUBLED

MINIMUM LEVEL COVERAGE IN dB	125dB(C) SIREN		113dB(C) SIREN	
	<u>12</u>	<u>10</u>	<u>12</u>	<u>10</u>
85	1000	1600		
80	1350	2250	650	1000
75	1800	3200	900	1400
73	2000	3700	1000	1600
70	2400	4500	1200	2000
68	2700	5200	1350	2250
65	3200	6400	1600	2800
60	4250	9050	2150	3950

NOTE: ALL RANGE FIGURES ARE ROUNDED OFF TO NEAREST 50 FEET

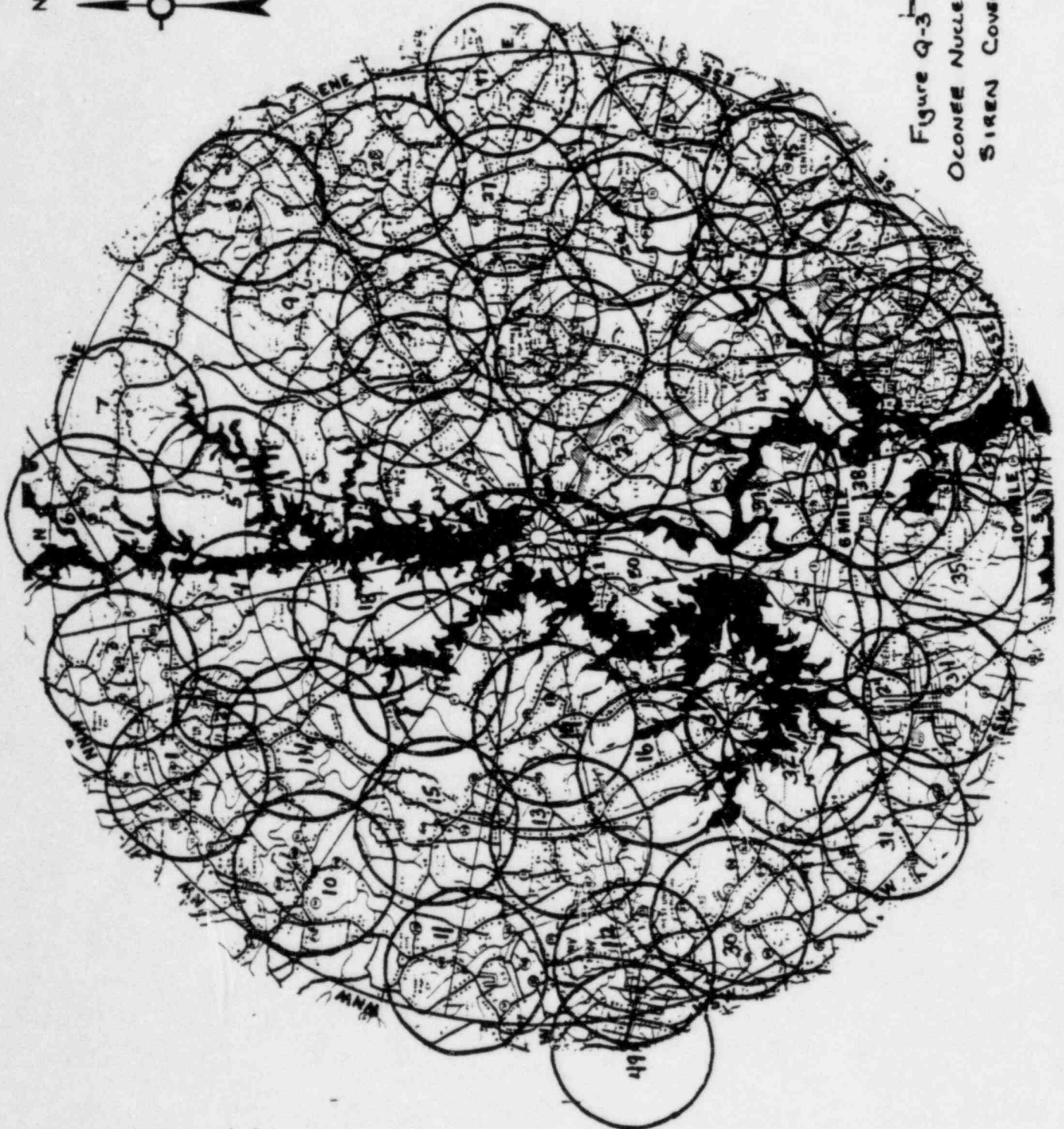


Figure Q-3
 Oconee Nuclear Station
 Siren Coverage Map

Appendix 3

DUKE POWER COMPANY Catawba Nuclear Station ALERT AND NOTIFICATION SYSTEM DESCRIPTION

GENERAL DESCRIPTION

The Alert and Notification System for Catawba Nuclear Station consists of an acoustic alerting signal and notification of the public by commercial broadcast (EBS). The system is designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1.

An engineering study of the Catawba Nuclear Station alerting system was prepared by Duke Power Company and was submitted February , 1983. This is a annotated version of that study.

The Emergency Plans of Duke Power Company, the States of North Carolina and South Carolina, and the counties of Mecklenburg, Gaston, and York include the organizations and individuals, by title, who will be responsible for decision-making as regards the alert and notification system. (See State/County Plan reference number 1.) The county locations from which the sirens would be activated and, potentially, the request for an EBS message would come are manned 24 hours per day. Each organization's plan describes provisions for use of public communications media or other emergency instructions to members of the public. (See State/County Plan reference number 2.) The plans of both States include a description of the information that would be communicated to the public under given circumstances.

A. Concept of Operations

A system of 63 fixed sirens will be installed and operational in the 10 mile area around Catawba Nuclear Station by 1-1-84. A backup means of alerting and notification is described in the State and County Plans. This backup method includes area-wide emergency service vehicles traversing the area and giving both an alerting signal and notification message.

At any "Alert" or higher emergency classification, the Common Program Control Station (CPCS-1) station (WEZC-FM) in Charlotte, North Carolina would be placed in readiness for any necessary transmission by the local or state organizations.

Each county will control the activation of the sirens within its boundaries.

B. Criteria for Acceptance

The alert and notification system for the Catawba Nuclear Station provides an alerting signal and an informational or instructional message to the population (via the EBS) on an area wide basis throughout the 10 mile EPZ within 15 minutes from the time the cognizant offsite agencies have determined the need for such alerting exists. The emergency plans of each

Appendix 3 (Continued)

State include evidence of EBS preparation for emergency situations and the means for activating the system.

The map of area wide coverage within the EPZ indicates an alerting signal sound levels at or above the standards set in NUREG-0654, Appendix 3 (See Figure Q-3).

To assure that the public is aware of the alerting signal of the meaning of the prompt notification message, and that they have emergency information (brochure-section G) available, Duke Power Company will, during full-scale exercises, cooperate with FEMA in statistical sampling of the public. If sampling of the public indicates that one or more of the items above are lacking, corrective measures will be taken to resolve the problem.

C. Physical Implementation

1. The activation of this alert and notification system requires procedures and relationships between both Duke Power Company and the offsite agencies that support Duke and Catawba Nuclear Station. When an incident is determined to have reached the level requiring public protective actions, Duke contacts the cognizant offsite agency via the "ringdown" phone system and provides its recommendations. This system is available for use 24 hours per day and links the control room, TSC, CMC, SERT headquarters (Air National Guard Armory - Charlotte) S.C. FEOC (Clover Armory), the county warning points, and the county EOCs.
2. Control of the alert and notification system is vested with the offsite agencies. In a developing emergency, the states would control activation of the system including development of an appropriate EBS message. If protective actions are required when the states are not operational, the counties take the lead with Mecklenburg County providing the EBS message to radio station WEZC in Charlotte. In both situations the counties would physically activate the system as the tone encoders are located at their warning point facilities.
3. The alert and notification system has multipurpose use built into it. The sirens are capable of producing a three minute steady signal for the nuclear plant emergency as a three minute wailing signal for natural disasters or nuclear attack. Procedures exist at the warning points to allow activation of either signal.

The expected performance of the sirens used in this system is described in Figure Q-2. These sirens complement existing alerting systems. The ambient background sound level in the Catawba area is taken to be 50 db as provided for in Appendix 2 for areas of "less than 2000 persons/per square mile" and 60 db for areas above this density. On this basis, the siren coverages are designed to provide a signal 10 db above the average daytime ambient background.

Appendix 3 (Continued)

Furthermore, the sirens have been located to assure that the maximum sound levels received by any member of the public should be lower than 123 db.

Duke Power Company is installing this system without a field survey of ambient conditions. The basis for our selection of the 60 db(c) and 70 db(c) criteria is documented as follows:

Population densities - See Table J-28

Location of major transportation routes - Table J-22

Location of heavy industry - There is no "heavy industry" in the Catawba 10 mile EPZ.

Attenuation factors with distance - 10 db loss per distance doubled
(See Figure Q-2)

Siren output db(c) at 100 ft vs. - Thunderbolt 124 ± 1.0 db at 100 feet
assumed range and acoustic STH10 113 ± 1.0 db at 100 feet
frequency spectra

Assumed ranges per Table Q-2, 10 db loss column

Frequency Spectra:

Thunderbolt : top frequency 700Hz

STH-10 : top frequency 694Hz

Maps showing siren location, size - See Figure Q-3

Mounting height of sirens - 50 feet (approximate)

Special weather condition - None
considerations (such as
expected heavy snow)

The siren system will produce a 3 minute steady signal and is capable of repetition.

The siren system will be tested and maintained in accordance with the following schedule:

<u>Test or Maintenance</u>	<u>Period</u>
Silent Test	Every two weeks-log entry
Growl Test	Quarterly and when Preventative Maintenance is performed
Complete Cycle Test	Annually in conjunction with formal exercises
Preventative Maintenance	At least annually

Appendix 3 (Continued)

The silent test will be performed by county personnel. The quarterly test will be performed by Duke and the counties. During this test, a review of the activation counter will be made to assure the siren has received the silent test signals. The annual test will be a cooperative effort of all involved. Preventative maintenance of the sirens will be done by Duke Power Company personnel. Maintenance of the radio controls will be performed by those organizations who maintain the county radio system.

4. The EBS system is the primary notification system. Backups include the use of county vehicles with audio equipment and other media communications. As described previously, WEZC-FM is the CPCS-1 for the EPZ area of Catawba Nuclear Station.

This method of operations for EBS in the Catawba area meets the guidance of this section.

NOAA, telephone automatic dialers, and aircraft with loudspeakers are not planned for use as the present system is able to meet the criteria.

State/County Plan Reference Number 1

Organizations and individuals by title who will be responsible for notifying response organizations (off-site) and the affected population:

York County		Later (Rev. 10)
Gaston County		
Mecklenburg County		
North Carolina		
South Carolina		

State/County Plan Reference Number 2

Provisions for the use of public communications media or other methods for issuing emergency instructions to the public:

York County		Later (Rev. 10)
Gaston County		
Mecklenburg County		
North Carolina		
South Carolina		

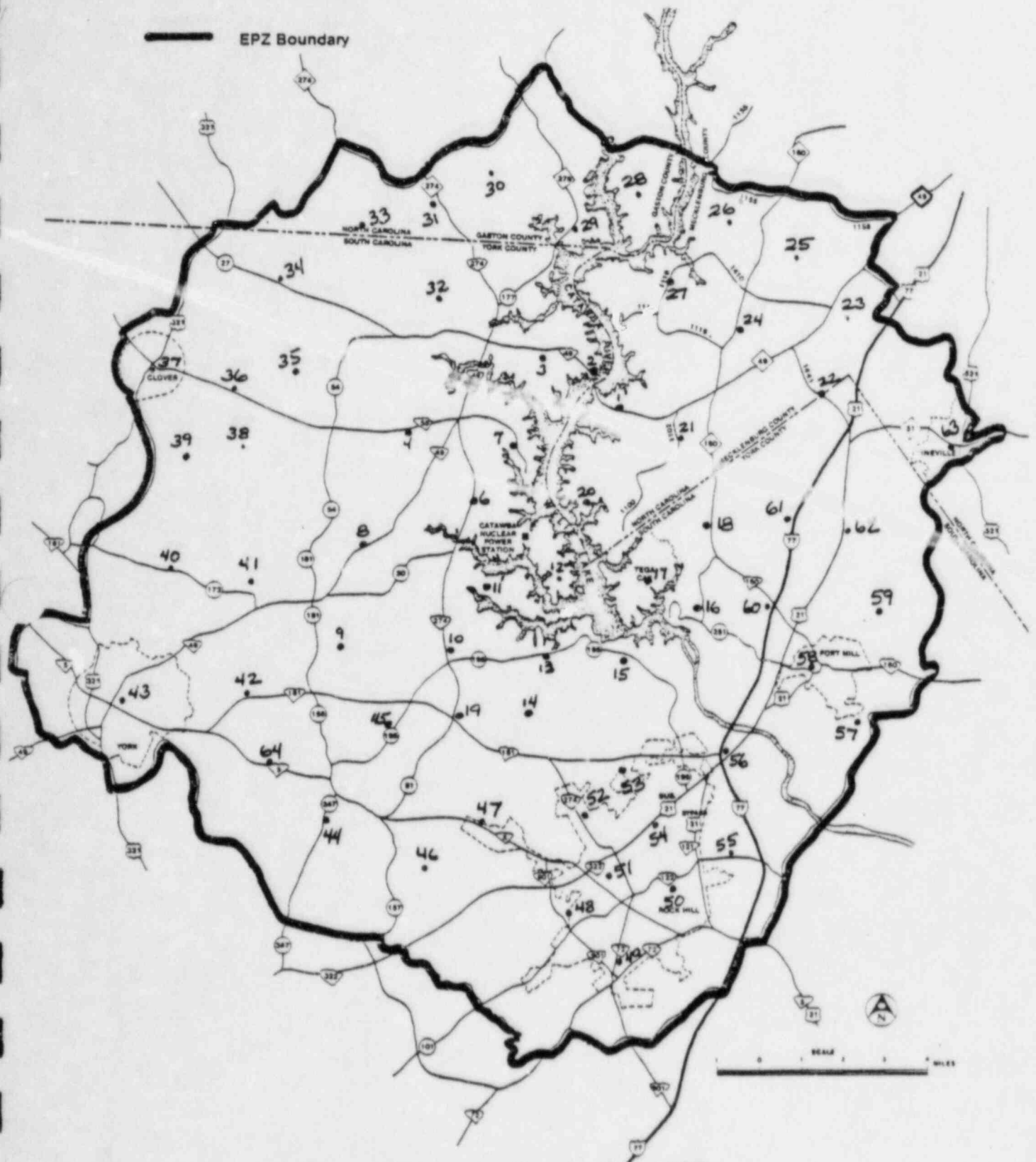


Figure Q4 Emergency Planning Zone (EPZ)
for the Catawba Nuclear Power Station - Siren Coverage

Appendix 4

Evacuation Time Estimates

The evacuation time estimates described in part J of this plan for Oconee and McGuire were prepared in 1981 for Duke Power Company by the PRC-Voorhees Company of McLean, Virginia. The Catawba Study was completed in March 1983. The studies were submitted for regulatory review and made available to the state, and local planners for their use.

The method used for estimating the evacuation times was as follows. The population is divided into three segments: (1) permanent resident population, (2) transient population, and (3) special facility (schools, hospitals, prisons, etc.) population. For each population segment, a series of discrete steps are identified, and the completion time for each step determined.

The time for completing each step is then linked together statistically to yield the total evacuation time for that population segment.

The apparent advantage of this method is that travel time is estimated for each individual step of the evacuation sequence (for which data are readily available) rather than for the entire evacuation as a single entity (for which data are non-existent).

Two cases of evacuation time estimates are made: (1) for normal weather conditions; and (2) under severe winter weather conditions. For both cases, estimates are made for a weekday on which schools are in session, reflecting conditions of greatest difficulty in evacuating the EPZ population.

Appendix 5

Agreement Letters

The following agreement letters support the Crisis Management Plan and are attached:

1. REACTS
2. Civil Air Patrol - N.C. Wing
3. DOE - Savannah River
4. INPO - Fixed Nuclear Facility Voluntary Assistance Agreement
5. North Carolina
6. South Carolina



Department of Energy
Oak Ridge Operations
P.O. Box E
Oak Ridge, Tennessee 37830

August 21, 1981

Mr. H. B. Tucker, Manager
Nuclear Production Division
Steam Production Department
Duke Power Company
P. O. Box 33189
Charlotte, N. C. 28242

Dear Mr. Tucker:

RADIATION EMERGENCY ASSISTANCE CENTER TRAINING SITE (REACTS)

This letter is in response to Mr. R. M. Glover's request that we provide to you a letter agreement concerning the availability of REACTS support to Duke Power Company.

We are pleased to inform you that the REACTS facility and staff are available to provide backup capability and assistance to Duke Power Company's emergency response capabilities in the event of a radiological emergency occurring at the Oconee or McGuire Nuclear Stations.

The REACTS facility is operated by the Oak Ridge Associated Universities (ORAU) for the U.S. Department of Energy (DOE). Dr. Karl F. Pubner is the Director of REACTS. The REACTS facility and team are part of a continuing DOE program and the availability over a long period of time is dependent on continuing federal appropriations.

The REACTS provides very modern facilities for handling radiation accident patients. The REACTS staff, in conjunction with the Oak Ridge Hospital of the United Methodist Church Disaster Team and staff, is prepared to treat radiation victims quickly and competently and to provide advice and assistance when radiation accidents

Mr. H. B. Tucker

-2-

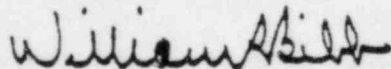
August 21, 1981

occur outside the Oak Ridge area. Following initial emergency treatment in REACTS, the patient(s) can be transferred to local hospitals in accordance with usual admission procedures for conventional medical and surgical followup, if necessary. Since radiation accidents are infrequent, the REACTS staff is involved on a daily basis in training programs and radiation exposure studies utilizing the facility to assure its constant readiness. REACTS is also a source of information on the epidemiological aspects of human exposure to radiation. A computerized data bank of human radiation effects from accidental and medical exposures has been established and serves as a basis for epidemiological studies as well as providing timely data to those involved in handling radiation accidents.

No fee or retainer is required for the provision of backup services by REACTS. However, should you desire to utilize the accident handling and treatment capabilities and services of REACTS, we would expect to recover those costs which could reasonably be related to handling such an incident including all charges billed to DOE or ORAU by hospitals and private physicians. You are free to inform the Nuclear Regulatory Commission that REACTS is available as a support facility to your ongoing program. We do ask that you inform all members of your staff with the mechanisms and appropriateness of seeking REACTS assistance. This can best be facilitated by direct contact with the REACTS Director, Dr. Karl F. Hubner, Oak Ridge Associated Universities, Post Office Box 117, Oak Ridge, Tennessee 37830 or telephone (615) 576-3098.


We trust this information is adequate for your needs.

Sincerely,



William R. Bibb, Director
Research Division

ER-13:REB

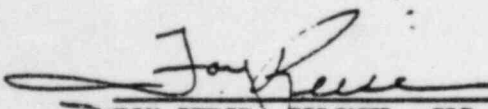
cc: R. M. Glover, Duke Power Co. 
C. C. Lushbaugh, ORAU
K. F. Hubner, ORAU
C. W. Edington, EV-30, HQ, Room F-208, GTN
J. W. Thiessen, EV-32, HQ, Room F-228, GTN
W. P. Snyder, CC-10, ORO
H. W. Hibbitts, SE-33, ORO
J. W. Range, M-4, ORO

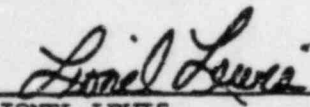
Lionel Lewis
System Health Physicist
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

AGREEMENT

In case of an extraordinary radiological emergency situation at any of Duke Power Company's (DPC) nuclear power plants, the North Carolina Wing, Civil Air Patrol will assist members of the DPC Emergency Plan Team in performing radiological surveillance with DPC portable radiological monitoring equipment and/or provide such monitoring themselves with their equipment. In the latter case, any independent surveillance measurements made by Civil Air Patrol during the emergency will be made available as soon as practicable to authorized DPC personnel. This agreement also allows selected DPC personnel to participate as passengers on CAP aircraft.

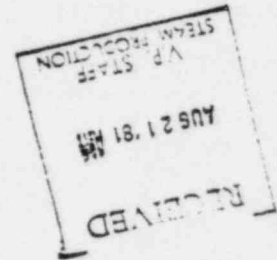
It is understood that Duke Power Company will reimburse N. C. Wing, CAP for the actual costs incurred for all operations which it authorizes.


JOY REESE, COLONEL, CAP 12/30/80
NC WING COMMANDER DATE


LIONEL LEWIS 1/9/81
SYSTEM HEALTH PHYSICIST DATE
DUKE POWER COMPANY



Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29801



AUG 20 1981

Mr. H. B. Tucker, Manager
Nuclear Production Division
Steam Production Department
Duke Power Company
P. O. Box 33189
Charlotte, NC 28242

TEP-80-1

Dear Mr. Tucker:

In response to Mr. Glover's letter dated July 29, 1981 assurance is hereby given that the Department of Energy (DOE) will respond to requests for radiological assistance from licensees, federal, state and local agencies, private organizations, or individuals involved in or cognizant of an incident believed to involve source, byproduct, or special nuclear material, as defined by the Atomic Energy Act of 1954, as amended, or other ionizing radiation sources. Assistance as indicated above would be made available to the Duke Power Company, with respect to incidents that may occur at McGuire or Oconee Nuclear Stations, upon request, and provided in consonance with response activities conducted by state, local and private industry preparedness personnel.

Unless the DOE or a DOE contractor is responsible for the activity, ionizing radiation source, or radioactive material involved in an incident, DOE radiological assistance will be limited to advice and emergency action essential for the control of the immediate hazards to health and safety. Radiological emergency assistance will be terminated as soon as the emergency situation is under control. Therefore, responsibility for postincident recovery, including further action for the protection of individuals and the public health and safety, should be assumed by the appropriate responsible federal, state or local government agency or private authority as soon as the emergency conditions are stabilized.

Requests for DOE emergency radiological assistance may be made on a twenty-four hour basis to the Savannah River Plant Duty Officer, 803-725-3333.

Mr. H. B. Tucker

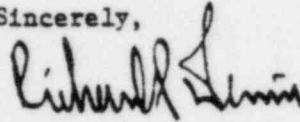
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AUG 20 1981

TEP-81-2

This letter supports separate agreements established with Duke Power Company's McGuire (July 30, 1980) and Oconee (June 1, 1981) Nuclear Stations.

Sincerely,



Richard P. Denise
Deputy Manager

cc: L. J. Deal, OES, DOE, HQ, EV-131
R. E. Trojanowski, NRC, Region II

Fixed Facility Emergency Response
Voluntary Assistance Agreement

(Note: Signature Page is shown.
A copy of the agreement is available
From the Emergency Response Coordinator)

Dated: July 1, 1982

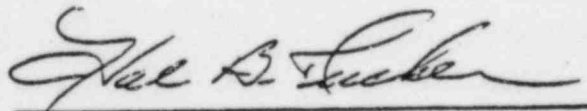
COUNTERPART SIGNATURE PAGE

The undersigned company hereby agrees to become a Party to the Nuclear Power Plant Emergency Response Voluntary Assistance Agreement dated July 1, 1982.

Date October 5, 1982

Company DUKE POWER COMPANY

By



Corporate Officer Signature

Hal B. Tucker

Vice President

Nuclear Production Department

Duke Power Company

MEMORANDUM OF UNDERSTANDING
BETWEEN THE STATE OF NORTH CAROLINA
AND DUKE POWER COMPANY

1. Purpose

This Memorandum of Understanding establishes an agreement between the State of North Carolina and Duke Power Company relative to planning and exercising for and responding to an incident at the McGuire or Catawba Nuclear Stations that might affect the health and safety and property of the citizens of North Carolina and/or give cause for public concern.

2. Authority

- a. North Carolina General Statutes 143B-476 et seq
- b. North Carolina General Statutes 166A-1 et seq

3. Background

Duke Power Company has two nuclear power plants operating or under construction that are required by the Nuclear Regulatory Commission to have detailed off-site contingency plans for response to events or emergencies which may affect the citizens of North Carolina. In the case of an incident the successful implementation of these plans will require a coordinated effort of local and state governments, and Duke Power Company. Under North Carolina General Statutes the responsibility for this planning and the authority to direct the State response lies with the Secretary of the Department of Crime Control and Public Safety.

4. Agreement

- a. It is understood that the State of North Carolina, with the assistance of Duke Power Company, will:

- Prepare and maintain both state and county contingency plans as required by the Nuclear Regulatory Commission and the Federal Emergency Management Agency;

- Periodically exercise these plans in accordance with federal requirements;

- Maintain a 24-hour alert, notification, and response capability; and

- Respond with all available and necessary Resources in case of an actual emergency at the plants.

b. It is also understood that Duke Power Company, with the assistance of the State, agrees to:

- Promptly advise the State and local governments of any incidences that might affect or cause concern to the citizens of North Carolina;

- Cooperate with the State in the development, exercising, and implementation of emergency plans to protect the health and safety of the public in the event of a nuclear accident.

- Permit the State to periodically review environmental radioactive monitoring programs; and

- Make equipment and personnel available to assist the Radiation Protection Section of the Department of Human Resources in its radiation assessment and monitoring responsibilities.

This agreement shall commence with the signing of this Memorandum of Understanding and shall continue until expressly revoked.

5/25/83

Date

Simon R. Clarke

Secretary

Dept. of Crime Control and
Public Safety

Glenn B. Tucker

Utility Representative

Vice President, Nat. Prod.

5/13/83

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE SOUTH CAROLINA EMERGENCY PREPAREDNESS DIVISION,
THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL,
AND
DUKE POWER COMPANY

I. PURPOSE

This Memorandum of Understanding establishes an agreement between the South Carolina Emergency Preparedness Division, the South Carolina Department of Health and Environmental Control, and Duke Power Company pertaining to the Oconee and Catawba Nuclear Stations (ONS & CNS). It establishes the overall responsibilities relating to emergency preparedness planning, training, coordination, notification, hazard assessment and technical support in the event of a radiological incident at Oconee or Catawba Nuclear Stations that might affect the health, safety and property of the citizens of South Carolina and/or give cause for public concern.

II. AUTHORITY

- A. Act 223, 1967 - South Carolina Atomic Energy and Radiation Control Act as amended.
- B. South Carolina Act number 199, dated July 30, 1979.

III. AGREEMENT

In accordance with Act 223, 1967; Act 199, 1979; and this Memorandum, the three agencies/organizations listed above agree with the following:

- A. Emergency Preparedness Division (EPD) will:
 - 1. Prepare and maintain State Operational Radiological Emergency Response (RER) Plans.
 - 2. Coordinate with DHEC, Duke Power, and local government in the development of RER Plans.
 - 3. Prepare and maintain site specific plans for HBR.
 - 4. Assist local governments in preparing and maintaining local RER Plans.
 - 5. Establish and direct State Emergency Operations Center (SEOC) and Forward Emergency Operations Center (FEOC) when directed by the Governor.

6. Coordinate off-site support from state, federal, and other support agencies.
 7. Recommend and direct protective actions to include evacuation as well as recovery re-entry operations in coordination with DHEC.
 8. Provide for a 24-hour notification capability with DHEC, other state RER support agencies, affected counties, Duke Power, and the state of North Carolina and insure notification is made as appropriate.
 9. Participate with DHEC, Duke Power, and local government, in the development of Exercise scenarios.
 10. Conduct RER drills and exercises for Duke Power as specified in 10CFR50 Appendix E.
 11. Maintain close liaison with the nuclear industry to assure that State and Duke Power RER procedures are compatible.
 12. Coordinate public meetings for an emergency preparedness exercise when required.
 13. Coordinate and conduct off-site evaluation critiques for each ONS or CNS exercise.
 14. Prepare off-site after-action reports for each ONS or CNS exercise.
 15. Secure and maintain appropriate letters of agreement.
 16. Coordinate all information on the status of Emergency Operations and Radiological Hazards through the News Media Center, if established, or the Governor's Public Information Office, for release to the public.
 17. Coordinate with DHEC and Duke Power for the RER training of state and local government personnel.
- B. Department of Health and Environmental Control (DHEC) will:
1. Provide for 24-hour accident notification capability with Duke Power and EPD and insure notification is made.
 2. Prepare and maintain State Technical Radiological Emergency Response plan.
 3. Participate with DPD, Duke Power, and local government in the development of RER Plans.

4. Maintain a radiological hazard assessment capability and provide radiological technical support, coordination and guidance for the state and local government.
5. Conduct and/or coordinate off-site radiological surveillance and monitoring in coordination with the Duke Power off-site monitoring group.
6. Make recommendations to EPD for protective actions as well as recovery and re-entry guidelines.
7. Provide representatives at the SEOC, FEOC, and Crisis Management Center.
8. Obtain and coordinate radiological assistance resources from the federal government, other states, and the nuclear industry as required.
9. Provide RER training to state agencies and local governments.
10. Participate in training programs given by Duke Power for Radiological Monitoring Teams.
11. Participate with EPD and Duke Power in the development of exercise scenarios.
12. Participate in ONS and CNS exercises and drills.
13. Secure and maintain appropriate letters of agreement.
14. Coordinate all information on the status of emergency operations and radiological hazards through the News Media Center, if established, or the Governor's Public Information Office, for release to the public.
15. Maintain close liaison with the nuclear industry to assure that state and Duke Power RER procedures are compatible.

C. Duke Power Company will:

1. Prepare and maintain on-site Radiological Emergency Response Plans in accordance with Nuclear Regulatory Commission Rules and Regulations.
2. Maintain the ability for 24-hour communications with DHEC and with local governments in the 10-Mile EPZ during emergency
3. Notify DHEC of an accident consistent with approved emergency procedures.

4. Recommend protective actions directly to affected counties when an immediate General Emergency occurs.
5. Conduct off-site radiological assessment/monitoring capabilities in coordination with DHEC.
6. Provide Media Center facilities and communications.
7. Be prepared to assist DHEC at other fixed nuclear facility accidents upon availability.
8. Provide liaison to the FEOC.
9. Provide RER training for site personnel.
10. Assist with technical response training for off-site response personnel as necessary.
11. Secure and update letters of agreement with local government emergency services that will provide on-site assistance.
12. Provide annual training/information briefing of local news media.
13. Participate with DHEC, EPD, and local government in the development of exercise scenarios.
14. Conduct required ONS and CNS exercises and drills.
15. Prepare and update a public information brochure to be distributed throughout the 10-Mile EPZ on an annual basis.
16. Provide authentication code words to the state and to local warning points.
17. Maintain close liaison with the state and local governments to assure procedures are compatible.

IV. IMPLEMENTATION

This agreement will commence with the signing of this Memorandum of Understanding by the South Carolina Emergency Preparedness Division, the South Carolina Department of Health and Environmental Control, and Duke Power Company and supersedes all previous agreements, relating to Radiological Incident responsibilities, between the aforementioned agencies/organizations.

Copies of this agreement will be made available to the nuclear industry.

April 20, 1983

DATE

Joshua P. Wilson

Director
FOR SOUTH CAROLINA EMERGENCY PREPAREDNESS
DIVISION

April 20, 1983

DATE

Raymond H. Shively

BUREAU OF RADIOLOGICAL HEALTH
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

May 2, 1983

DATE

Eric B. Tucker

FOR DUKE POWER COMPANY
VICE-PRESIDENT, NUCLEAR PRODUCTION DEPARTMENT

Appendix 6

Distribution List - Crisis Management Plan

Recovery Manager and Immediate Staff

- 1. R. B. Tucker
- 4. R. E. Harris
- 78. R. E. Harris
- 13. W. H. Owen
- 16. Open
- 63. G. E. Vaughn
- 67. M. D. McIntosh
- 70. A. C. Thies
- 71. W. S. Lee

Scheduling/Planning

- 5. P. H. Barton
- 6. S. A. Holland
- 7. G. W. Hallman
- 83. R. W. Rasmussen
- 84. R. W. Rasmussen
- 85. R. W. Rasmussen

Administrative & Logistics

- 8. J. T. Moore
- 9. R. F. Smith
- 10. Open
- 69. Sharon Friday
- 73. E. D. Morton
- 74. S. M. Kessler
- 75. R. N. Johnson

Crisis News

- 3. Open
- 11. Mary Cartwright
- 12. J. S. Lay (Catawba Document Control)
- 14. M. Dembeck

Nuclear Engineering Services

- 2. R. M. Koehler
- 15. K. S. Canady
- 17. J. W. Simmons
- 18. H. T. Snead

Design & Construction

- 19. J. L. Elliott
- 20. S. K. Blackley

Design & Construction (cont'd)

- 21. A. R. Hollins
- 22. S. B. Hager
- 23. C. J. Wylie
- 77. L. C. Dail
- 79. J. Effinger
- 81. C. D. Jennings
- 82. C. D. Jennings

Nuclear Technical Services

- 25. W. A. Haller
- 26. R. T. Simril
- 27. M. L. Birch
- 80. R. C. Futrell
- 87. Open

Offsite Radiological Coordinator

- 28. L. Lewis
- 29. W. P. Deal
- ~~30. M. S. Tuckman~~
- 76. ~~R. Casler~~

RF Wardell

B&W

- 31. Jerry G. Brown

Westinghouse

- 32. Ms. L. M. Richman
- 86. John A. Kolano

NRC

- 33. thru 36 (4 copies)
- 37. thru 45 (Open)

North Carolina

- 46. Jayne Brown
- 47. J. L. Self
- 48. J. T. Pugh
- 49. Joe Myers

South Carolina

- 50. Paul Lunsford
- 51. Heyward Shealy
- 52. J. Moore

Oconee County, S.C.

53. Walter B. Purcell

Pickens County, S.C.

54. Don Evett

Mecklenburg County, N.C.

55. W. Broome

Catawba County

56. D. A. Yount

Gaston County

57. Bob Phillips

Lincoln County

58. Robert Willis

Iredell County

59. John Fleming

Cabarrus County

24. B. Mabrey

INPO

60. Mgr., Emergency Preparedness Dept.

Nuclear Production Duty Engineers

61. T. E. Holland

62. C. W. Trezise

64. Open

Oconee Nuclear Station

66. C. C. Jennings

McGuire Nuclear Station

68. M. S. Glover

Catawba Nuclear Station

30

- ~~62.~~ J. W. Cox
- 65. Judi Butterfield - Document Control
- 88. M. E. Bolch

72. Lee Hartzell

All 4 copies to Document
Control ?