

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
IMPLEMENTING PLANS

August 15, 1984

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MNS HP/0/B/1009/06	Procedures for Quantifying High Level Radioactivity Releases During Accident Conditions
MNS HP/0/B/1009/08	Evaluation of a Reactor Coolant Leak Inside Containment
MNS HP/0/B/1009/09	Release of Radioactive Materials Through the Unit Vent
MNS HP/0/B/1009/10	Release of Liquid Radioactive Materials Exceeding Technical Specifications
ONS AP/0/B/1000/07	Procedure for Offsite Dose Calculations by Control Room Personnel or Emergency Coordinator During a Radiological Accident

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ONS HP/O/B/1009/10	Procedure for Quantifying Gaseous Releases Through Steam Relief Valves Under Post-Accident Conditions
ONS HP/O/B/1009/11	Projection of Offsite Dose From the Uncontrolled Release of Radioactive Materials Through a Unit Vent
ONS HP/O/B/1009/14	Project of Offsite Dose From Releases Other Than Through a Vent
5.3.19	Procedure for Estimating Food Chain Dose under Post-Accident Conditions
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CNS HP/O/B/1009/13	Offsite Dose Projection - Uncontrolled Release of Gaseous Radioactive Material Through the Unit Vent
CNS HP/O/B/1009/14	Offsite Dose Projection - Uncontrolled Release of Liquid Radioactive Material
CNS HP/O/B/1009/15	Offsite Dose Projection - Uncontrolled Release of Gaseous Radioactive Material Other Than Through the Unit Vent

Aug. 15, 1984

5.3.1

Recovery Manager & Immediate Staff Group Plan

Rev. 9 8/15/84

Recovery Manager and Immediate Staff Group Plan

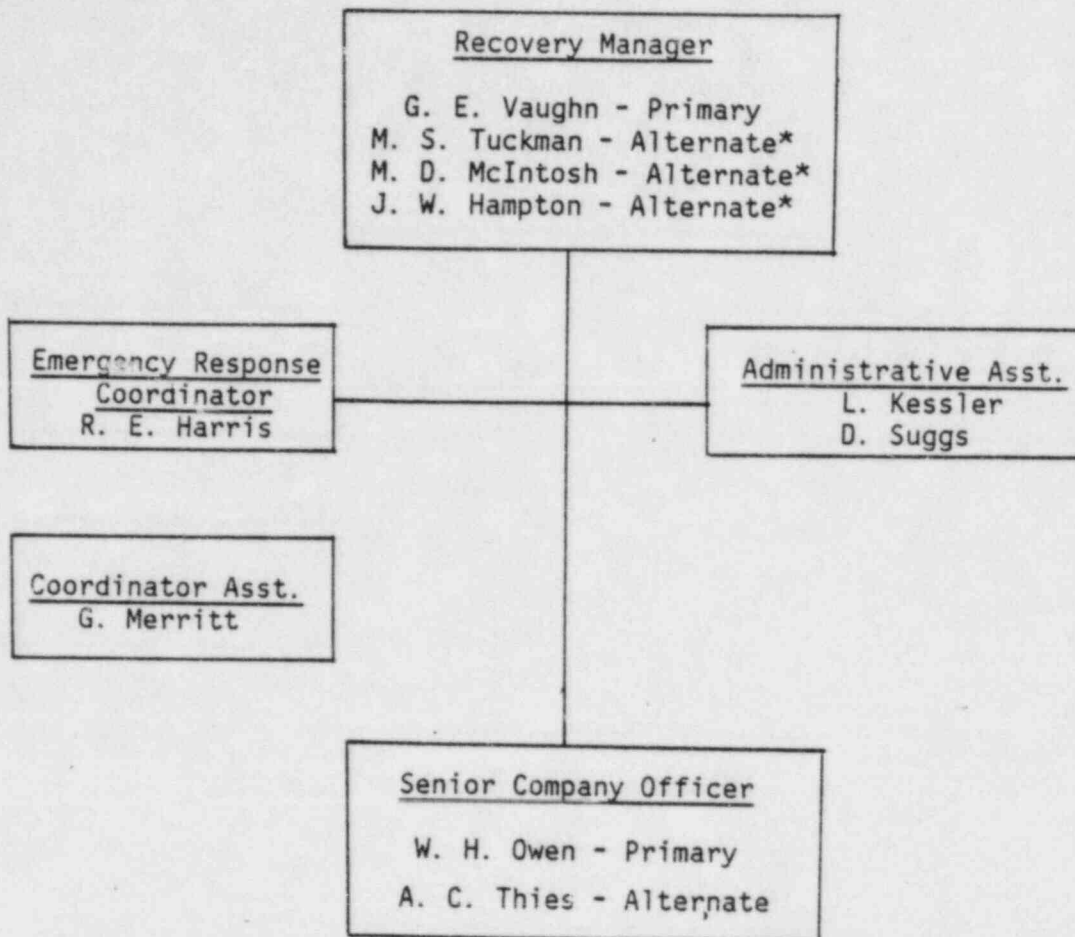
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I. SCOPE

The Recovery Manager and Immediate Staff are responsible for the overall management and recovery of nuclear station(s) emergency situations requiring activation of the Crisis Management Plan.

II. RECOVERY MANAGER AND IMMEDIATE STAFF ORGANIZATION



* - In an emergency at one of the company's nuclear stations, the station managers at the two unaffected stations will be used as alternates to the Recovery Manager and Public Spokesman. The primary Recovery Manager will decide, at the time, based upon the situation, who will be alternate Recovery Manager and who will be alternate Public Spokesman. If the Primary Recovery Manager listed above is not available at the time of the emergency, the Alternate contacted will become the Primary Recovery Manager and will make the determination of alternates.

III. FUNCTIONAL RESPONSIBILITIES

A. Recovery Manager

Reports to: Vice President - Nuclear Production Department

Supervises: Immediate Staff and All Functional Managers

Basic Function: Supervises the overall management and recovery of nuclear station emergency situations requiring activation of the Crisis Management Plan.

Primary Responsibilities:

1. Establish a direct line of communications with the Station Manager/Emergency Coordinator to be able to provide input and assistance to the station.
2. To direct the functional area managers in necessary tasks to be performed for resolution of the situation.
3. To provide a Duke Power Company management link for coordination with the NRC and other federal agencies.
4. To provide a means for management review and approval of recommended actions to resolve emergency situations.
5. To make recommendations to offsite agencies for public protective actions.

Principal Working Relationships:

1. Station Manager for status updates, system operation, and other necessary information.
2. Function Managers for distribution of work tasks.
3. NRC and other federal agencies for consultation and recommendations.
4. State and local officials for making public protective action recommendations.

B. Emergency Response Coordinator

Reports to: Recovery Manager

Supervises:

Basic Functions: Advise the Recovery Manager on the Crisis Management Plan and Station Emergency Plan relationship to the emergency situation.

Primary Responsibilities:

1. Assist the Recovery Manager in classification of emergency conditions, recommendations to offsite authorities, and in consultations with NRC and other federal agencies.

Principal Working Relationships:

1. Recovery Manager for Emergency Plan considerations
 2. Functional Managers/Administrative Assistant for work tasks
 3. NRC for Emergency Plan considerations
- C. Recovery Manager's Administrative Assistant

Reports to: Recovery Manager

Supervises:

Basic Function: To assist the Recovery Manager in assignment and distribution of work tasks, followup on specific projects, in other requests as they arise; and to maintain the official CMC log book of decisions, activities, and operations.

Primary Responsibilities:

1. To assist the Recovery Manager in resolution of nuclear facility emergencies requiring activation of the Crisis Management Plan.

Principal Working Relationships:

1. Recovery Manager for work tasks
 2. Functional Manager/Emergency Response Coordinator for resolution of tasks
- D. Senior Company Officer

Reports to: Duke Power Company President, Board of Directors

Supervises: N/A

Basic Function: This position serves as the senior management contact with the Crisis Management Center and as the focal point for questions from the Governors of North and South Carolina, other senior level management, and the Board of Directors.

Primary Responsibilities:

1. This position will make an initial "courtesy call" to the Governors of North and South Carolina, making himself/herself available for followup calls on an as-needed, informal basis. The Governor will be kept up-to-date on the specifics of the situation by his/her staff.

North Carolina Governor's office
South Carolina Governor's office

2. This position will serve as the focal point for questions from other senior level management.
3. This position will serve as the focal point for questions from the Board of Directors.
4. This position receives information on the status of the plant from the planning coordinator of the Scheduling/Planning Group.

Scheduling Coordinator Can Be Reached At:

(G.O. - [redacted] McGuire/Catawba CMC;
Oconee CMC

5. This position will receive initial notification from the Recovery Manager as shown in Part IV of this plan.

E. Coordinator's Asst.

Reports to: Emergency Response Coordinator

Supervises:

Basic Function: To assist the Emergency Response Coordinator in followup on specific projects and other requests as they arise.

Primary Responsibilities:

1. To assist the Emergency Response Coordinator in resolution of tasks.

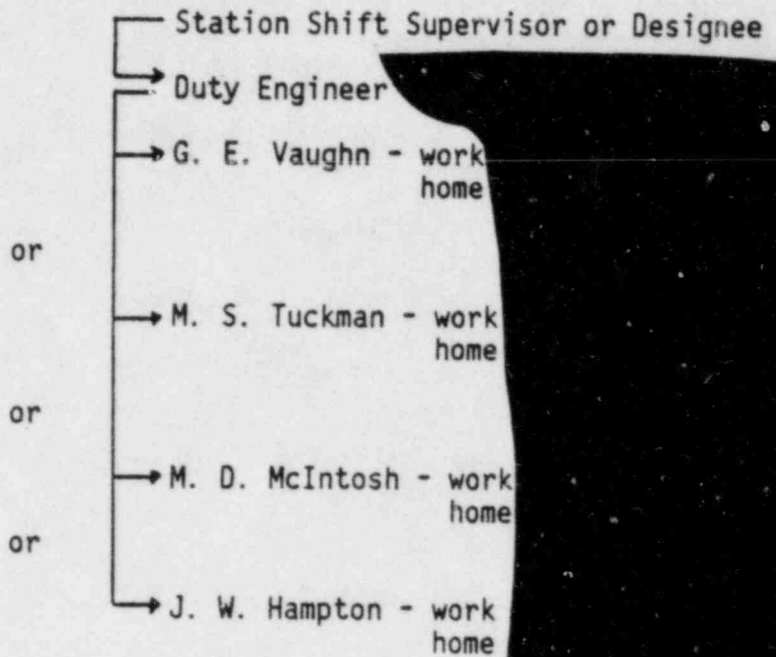
Principal Working Relationships:

1. Emergency Response Coordinator for tasks.

IV. NOTIFICATION PROCEDURE - CALL LIST

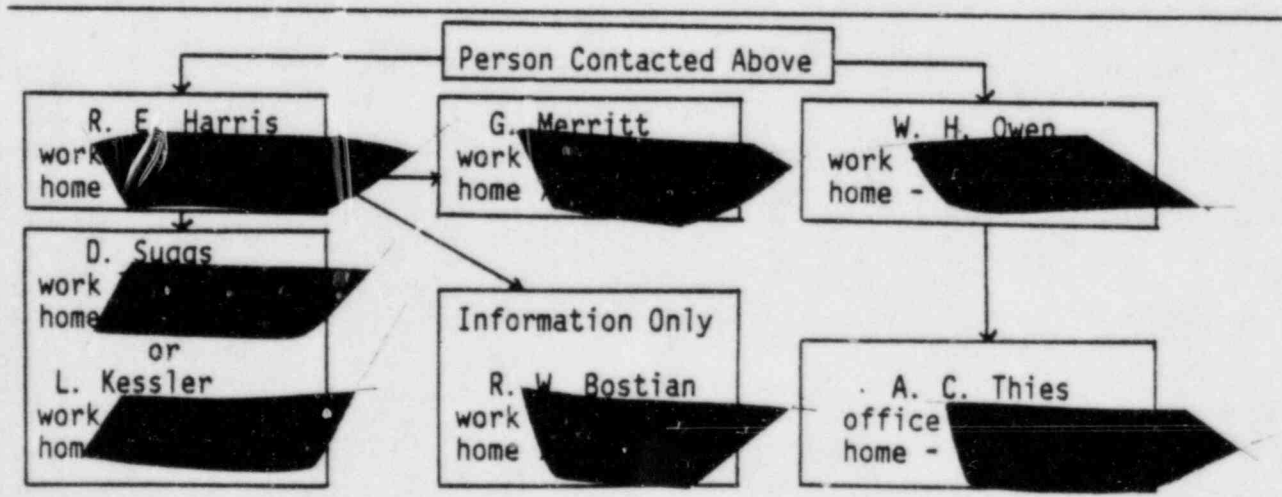
Call From Station

The person contacted by the Duty Engineer is responsible for contacting the others in this area (except for the manager of the affected station) and to make the two calls in the next section.



Facility Activation Note:

For Oconee, the quickest access in the evening hours is by automobile. In the daylight hours, one to one and one-half hours could be saved by flying a "core" group via Thurston from Charlotte to Clemson Airport.



CRISIS MANAGEMENT PLAN

IMPLEMENTING PLANS

5.3.4 - Scheduling/Planning Support Group

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5.3.4 - Scheduling/Planning Support Group

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I. SCOPE

The Scheduling/Planning Support Group performs a dual role in emergency/recovery situations. During the emergency phase of an incident, the group provides direct support to the Recovery Manager and the other Function Managers by maintaining trending displays and logs of critical plant parameters and by periodically providing an analysis and review of important changes that have occurred. In the long term recovery effort the individuals perform the functions of planning work items, scheduling the effort, and checking the progress of the work.

Further, the Scheduling/Planning function includes Operations Support. Personnel in this section support the station in their need for additional manpower, analysis, or procedures in operations.

II. FUNCTIONAL RESPONSIBILITIES

A. Scheduling/Planning Support Group Manager

Reports to: Recovery Manager

Supervises: Scheduling/Planning Staff functions of Planning Coordinator, Scheduling Coordinator and Performance Monitor

Basic Functions:

This individual is responsible, in the emergency phase of an incident, for maintaining and updating plant status information in the nearsite Crisis Management Center (CMC) and to provide an informed contact for upper level management. In the recovery phase of an incident, this individual is responsible for formulating, coordinating, and expediting plans and schedules for the Recovery Manager.

Primary Responsibilities:

1. During the emergency phase of an incident:
 - a. Distribute updated plant status sheets and other information to CMC personnel.
 - b. Update and maintain trends of critical parameters in Recovery Manager's office.
 - c. Provide a contact for upper-level management. This contact will be knowledgeable of plant systems and the emergency situation.
 - d. Provide a contact for NRC and INPO in the CMC.
2. During the recovery phase of an incident:
 - a. Meet with and evaluate reports developed by the Planning Coordinator, Scheduling Coordinator, and Performance Monitor.
 - b. Formulate plans and schedules for the upcoming work periods based on Coordinator and monitor recommendations and report evaluations.
 - c. Meet with the Recovery Manager as required. Present concise progress reports, activity schedules, and overall progress review meeting agendas.

B. Planning Coordinator

Reports to: Scheduling/Planning Support Group Manager

Supervises: N/A

Basic Functions:

In the emergency phase of an incident this position serves as the contact for upper level management and provides support in the update and maintenance of plant status information. Further, this individual, through the Scheduling/Planning Manager, keeps the Recovery Manager and Staff aware of critical parameters and status of the event.

In the recovery phase of an incident, 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 on recovery operations. This position prepares the agenda for and keeps minutes of progress review meetings.

Primary Responsibilities:

1. In the emergency phase of an incident:
 - a. Serve as information contact for upper-level management (primary).
 - b. Maintains awareness of the situation, provides updates to the Recovery Manager, and considers the potential release pathways in determining critical parameters.
 - c. Update INPO at [REDACTED] on a periodic basis.
 - d. Update NRC via the "Red Phone" on a periodic basis. (Hdqtrs. [REDACTED] Region II [REDACTED])
 - e. Works with Crisis News Director to prepare Nuclear Network entries on the situation. An entry will be prepared, will be approved by the Recovery Manager, and will be logged onto Nuclear Network by either support personnel in Scheduling/Planning or G.O. staff normally responsible for this activity.
2. In the recovery phase of an incident:
 - a. Provide 24 hour coverage throughout the incident for this function.

3. Core Physics Coordinator regarding required operating procedures to protect the core.

III. SCHEDULING/PLANNING SUPPORT GROUP ACTIVATION

1. Once it has been determined that an Alert or higher classification event has occurred requiring the activation of the Crisis Management Center, the Nuclear Production Duty Engineer will contact the Scheduling/Planning Support Group Manager. This contact will be made according to the format of Figure E-2 of the Crisis Management Plan (CMP).
2. The Scheduling/Planning Support Group Manager will initiate activation of the group as described in Figure 2.
3. The group will report as noted on the initial callout.

IV. EMERGENCY FACILITIES - EQUIPMENT AND RESOURCES

A. Facilities

The Scheduling/Planning Support Group Manager is located in the Recovery Manager's office in the Crisis Management Center. For Oconee, the Recovery Manager is located in the Oconee Training Center. For McGuire and Catawba, Scheduling and Planning personnel are to report to WC-1010.

B. Equipment and Resources

1. Communication

Communication is by phone. See procedures 5.3.10 "Oconee Crisis Phone Directory" and 5.3.11 "McGuire/Catawba Crisis Phone Directory" for listings.

2. Equipment and Supplies

Status boards and 10 mile EPZ maps are stored at the Oconee Training Center in the Wachovia Building, 10th floor. These will be used as needed.

Figure 5

Crisis Management Center (CMC)
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 retrun a copy of this completed format to the Emergency Response Coordinator.

CRISIS MANAGEMENT PLAN

IMPLEMENTING PLANS

5.3.6 - Nuclear Technical Services Group

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IV. FACILITIES, EQUIPMENT, AND RESOURCES

A. Facilities - The Nuclear Technical Services Manager is located in the Crisis Management Center (location as specified by the Recovery Manager upon initial notification). This center is the headquarters of the Recovery Manager and his staff and from here all emergency and recovery activities will originate. The near-site and backup CMC for Oconee Nuclear Station are the Oconee Training Center and Liberty Retail Office, respectively. The CMC location for McGuire and Catawba Nuclear Stations is in the General Office. The Recovery Manager is in Room WC-1010. The Technical Services Support Section will operate out of Wachovia Center 2390. The Offsite Radiological Coordinator and his section will operate out of room WC-1222 for McGuire and Catawba and at the Oconee Training Center for Oconee.

B. Equipment and Resources

1. Communication

- a. Crisis Management Center - redundant two-way communications with the Emergency Operation Center, the Control Room, other appropriate off-site agencies and telephone.
- b. Alternate Crisis Management Center - Has some communications capability as described for Crisis Management Center.
- c. Support Group Personnel at Site - Telephone connections with Crisis Management Center and Alternate Crisis Management Center, and with the station.
- d. Personnel at General Office - Telephone, public or private.

2. Technical and Professional Personnel

a. Health Physics

(1) Coordinator - 1

(2) ALARA Planning/Engineering

For HP Organization: (a) D. T. Parsons
(b) 1 Vendor supplied engineer/
professional

For Oconee: (a) R. L. Clemmer
(b) J. G. Weinbaum
(c) 2 Vendor supplied engineer/
professionals

For Catawba: (a) G. Terrell
(b) 2 Vendor supplied engineer/
professionals

For McGuire: (a) M. D. Thorne
(b) 2 Vendor supplied engineer/
professionals

(3) Dosimetry Service

- (a) 1 Technician Oconee or McGuire supplied
- (b) 3 Clerks Oconee or McGuire supplied
- (c) 2 Clerks Vendor supplied

(4) Training and Respiratory Fitting

- (a) 3 Technicians Oconee, Catawba, or McGuire supplied

(5) Instrument Calibration (long term)

- (a) 2 Technicians Oconee, Catawba, or McGuire supplied.

b. Radwaste

(1) Coordinator - 1

(2) Planning/Engineering

For Oconee (a) D. L. Vaught
(b) M. S. Terrell

For McGuire (a) D. L. Vaught
(b) D. J. Homce
(c) B. Wood

For Catawba (a) D. L. Vaught
(b) M. S. Terrell
(c) D. J. Homce

(3) Offsite Releases

- (a) J. M. Stewart
- (b) H. J. Dameron
- (c) Jim Thornton

(4) Vendor Interfaces - 1

- (a) Vendor Representative

(5) Shipping/Receiving

- (a) M. G. Kriss
- (b) C. F. Lan
- (c) 2 Technicians Oconee or McGuire supplied

c. Chemistry

(1) Coordinator - 1

(2) Sample Collection

(a) 10 Technicians Oconee, Catawba, or McGuire supplied

(b) 7 alternates: P. W. Downing
C. L. Hathcock
W. M. Funderburke
S. Biswas
T. P. Lee
M. Neill
G. Barker

(3) Data Evaluation

(a) R. Clark (Nuclear Engineering Services)
(b) 1 Westinghouse representative for McGuire
(c) 1 B&W representative for Oconee

(4) Special Projects

(a) W. M. Funderburke
(b) C. L. Hathcock
(c) J. C. Morcock
(d) P. W. Downing
(e) S. Biswas
(f) T. P. Lee
(g) M. Neill
(h) G. Barker

3. Equipment and Supplies

- a. Computer input/output capability including dedicated phone lines
- b. Calculators - batteries, chargers
- c. Stationery Supplies
- d. Recorders - extra tapes, batteries, chargers
- e. Floor plans of station - projected radiation levels
electrical outlets
breathing air header outlets
instrument air header outlets
demineralized water outlets
sampling locations
radiation monitor location
high radiation area doors
- f. Flow Diagrams of Processing Capabilities including storage capacity

VI. PROCEDURE REFERENCE

The following procedures are carried out by the referenced coordinators during an incident:

Special Assistance Coordinator

- 5.3.12 - "Initial and Followup Emergency Messages - Oconee"
- 5.3.13 - "Initial and Followup Emergency Messages - McGuire and Catawba"

Field Monitoring Coordinator

- 5.3.14 "Crisis Management Center Environmental Monitoring For Emergency Conditions Within The Ten Mile Radius of McGuire Nuclear Station"
- 5.3.15 "Crisis Management Procedure - Environmental Monitoring - Oconee Nuclear Station"
- 5.3.18 "Environmental Monitoring For Emergency Conditions Within The Ten Mile Radius of Catawba Nuclear Station"

Dose Assessment Coordinator

- Oconee Procedures: HP/O/B/1009/10 "Quantifying Releases Through Steam Relief Valves"
HP/O/B/1009/11 "Releases Via The Vent"
HP/O/B/1009/14 "Releases Other Than The Vent"
AP/O/B/1000/07 "Control Room Dose Assessment"
- McGuire Procedures: HP/O/B/1009/06 "Qualifying High Level Releases"
HP/O/B/1009/08 "Reactor Coolant Leak Inside Containment"
HP/O/B/1009/09 "Release Via The Vent"
HP/O/B/1009/10 "Liquid Release"
HP/O/B/1009/05 "Control Room Dose Assessment"
- Catawba Procedures: HP/O/B/1009/06 "Alternative Method For Dose Rate Calc. Inside Containment"
HP/O/B/1009/12 "Quantifying Release Through Steam Relief Valves"
HP/O/B/1009/13 "Releases via The Vent"
HP/O/B/1000/14 "Liquid Release"
HP/O/B/1009/15 "Releases Other Than The Vent"
RP/O/A/1000/11 "Protective Action Recommendations Without the OAC"
- CMC Procedures 5.3.19 "Ingestion Pathway Dose Projections"

TABLE 2

NUCLEAR TECHNICAL SERVICES GROUP PERSONNEL

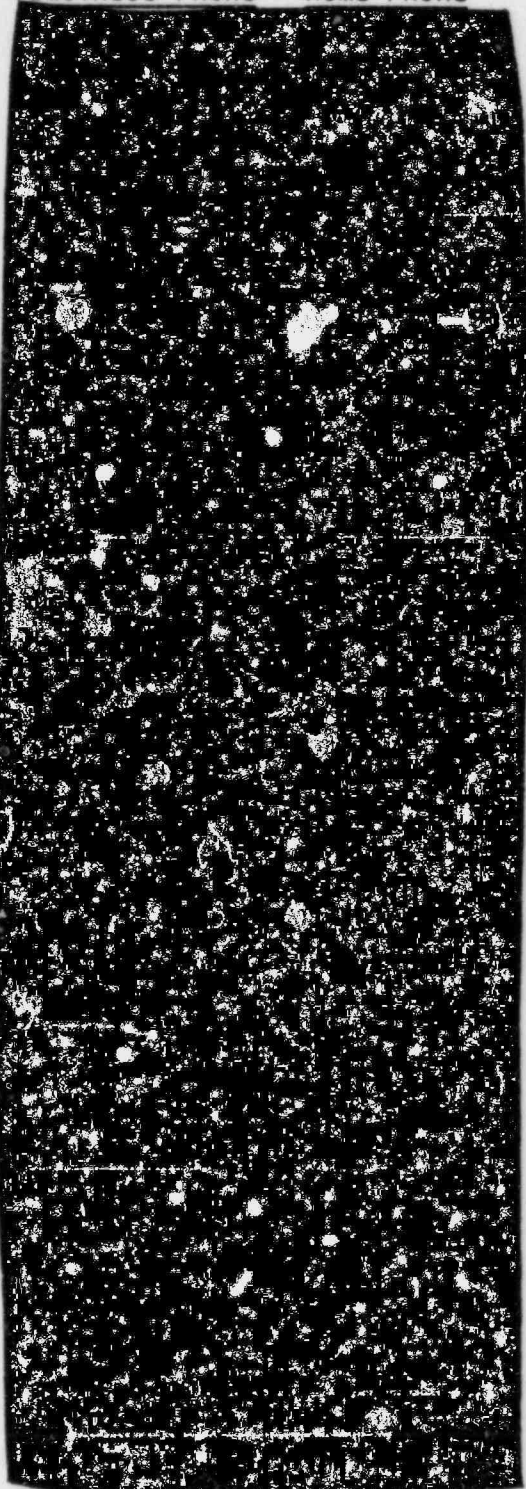
<u>Position</u>	<u>Name</u>	<u>Business Phone</u>	<u>Home Phone</u>
Manager	W. A. Haller		
	R. C. Futrell		
	L. Lewis		
Technical Services Support Director	R. T. Simril		
	J. E. Cole		
	Resource Coordination			J. I. Wyant
R. B. Baker			
Health Physics Coordinator	C. L. Thames		
	D. T. Parsons		
	J. G. Weinbaum		
Radwaste Coordinator	G. P. McCranie		
	M. L. Birch		
	D. L. Vaught		
	R. M. Propst		
	H. J. Dameron		
	M. S. Terrell		
	C. F. Lan		
	J. M. Stewart		
Chemistry Coordinator	R. W. Eaker		
	S. Biswas		
	W. M. Funderburke		
	P. W. Downing		
	G. M. Barker		

TABLE 2 (cont'd)

NUCLEAR TECHNICAL SERVICES GROUP PERSONNEL

<u>Position</u>	<u>Name</u>	<u>Business Phone</u>	<u>Home Phone</u>
Health Physics Support			
	R. L. Clemmer		
	M. D. Thorne		
	Gary Terrell		
Radwaste Support			
	B. Wood		
	J. Thornton		
	M. G. Kriss		
Chemistry Support			
	C. L. Hathcock		
	J. C. Morcock		
	T. P. Lee		
	M. W. Neil		
Resource Coordination Support			
	J. C. Wimbish		
	L. Moss		
Off-Site Radiological Coordinator			
Primary:	L. Lewis (A11)		
	F. G. Hudson (A11)		
Alternates:	W. P. Deal (MNS or ONS)		
	C. T. Yongue (MNS or CNS)		
	T. J. Keane (ONS or CNS)		

TABLE 2 (cont'd)

NUCLEAR TECHNICAL SERVICES GROUP PERSONNEL

<u>Position</u>	<u>Name</u>	<u>Business Phone</u>	<u>Home Phone</u>
Field Monitoring Coordinator			
Primary:	J. M. Ferguson (A11)		
Alternates:	J. J. Sevic (Oconee)		
	C. V. Wray (Catawba)		
Laboratory Analyses Coordinator			
Primary:	J. S. Isaacson (A11)		
Alternates:	G. T. Mode (ONS or MNS)		
	W. F. Byrum (ONS or CNS)		
Technicians:	B. A. Broadway (A11)		
	Jesse Arias (A11)		
	Linda McDermid (A11)		
Dose Assessment Coordinator			
Primary:	R. E. Sorber (A11)		
	H. D. Brewer (A11)		
	M. J. Geer (A11)		
	L. J. Azzarello (A11)		
Alternates:	D. J. Berkshire (MNS or CNS)		

TABLE 2 (cont'd)

NUCLEAR TECHNICAL SERVICES GROUP PERSONNEL

<u>Position</u>	<u>Name</u>	<u>Business Phone</u>	<u>Home Phone</u>
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Dose Assessment Coordinator (cont'd)

Alternates:

G. L. Courtney
(MNS or ONS)

S. A. Coy
(MNS or CNS)

C. L. Harlin
(MNS or CNS)

R. D. Kinard
(MNS or ONS)

W. B. McRee
(All)

Cathy Crupa

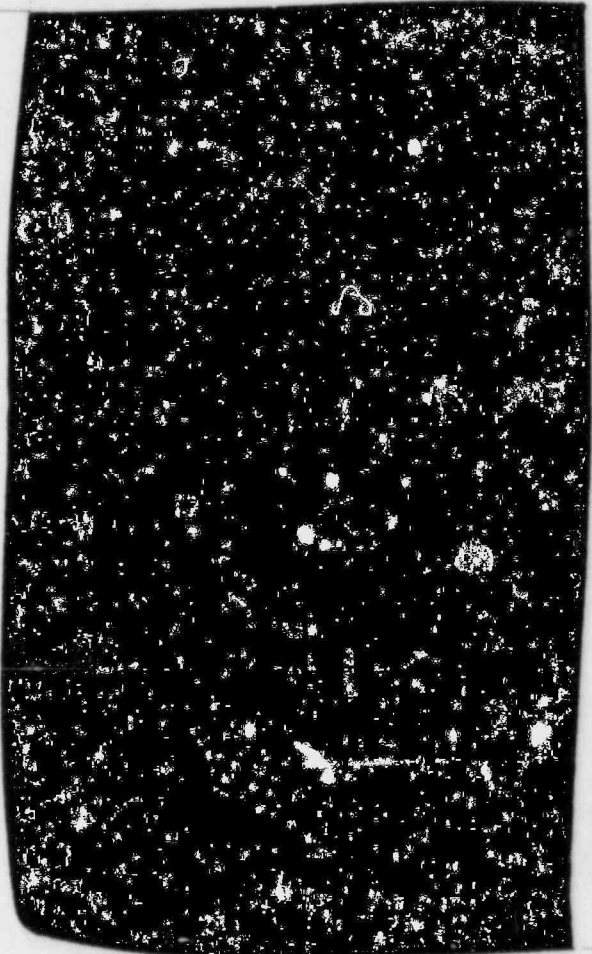
P. N. McNamara
(ONS or MNS)

Cindi Martinec

Consultants:

S. T. Apple
(All)

M. A. Casper
(All)



NOTE: Each shift requires 3 dose assessment staff members.

Special Assistance Coordinator

Primary:

S. T. Rose

J. Crumpler

W. C. Barker

Alternates:

J. W. Cox
(ONS or MNS)

M. Sample
(ONS or CNS)

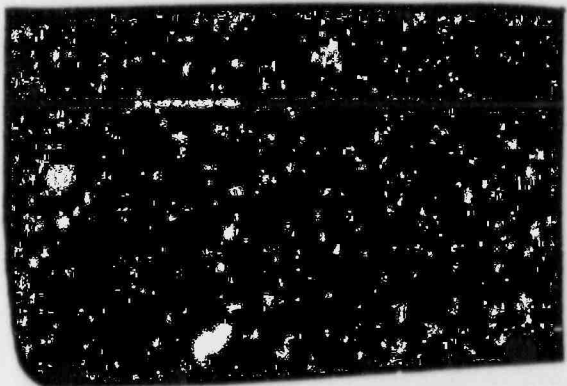
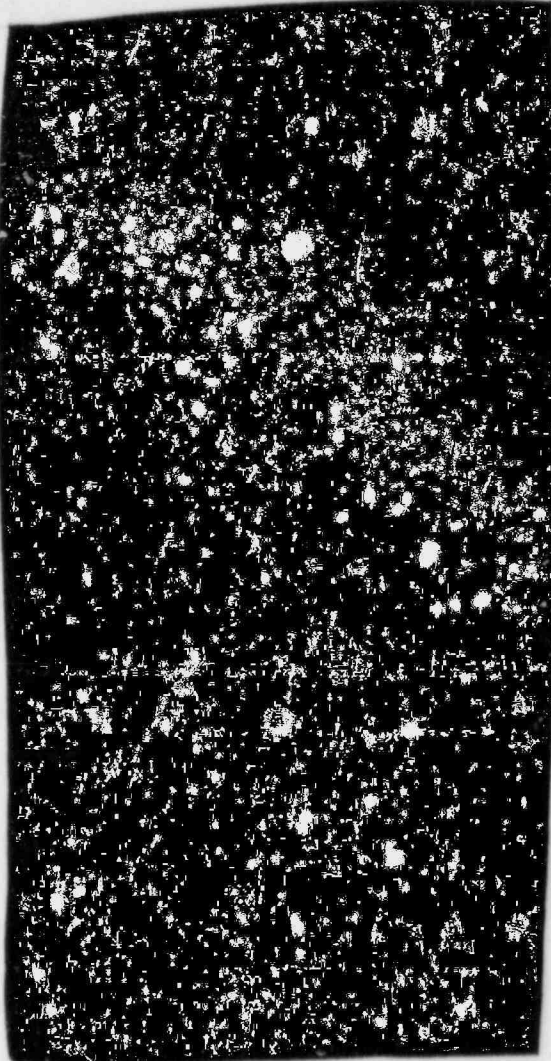


TABLE 2 (cont'd)

NUCLEAR TECHNICAL SERVICES GROUP PERSONNEL

<u>Position</u>	<u>Name</u>	<u>Business Phone</u>	<u>Home Phone</u>		
Special Assistance Coordinator (cont'd)					
	F. N. Mack (ONS or MNS)				
	E. Estep (ONS or CNS)				
Alternates:	R. T. Bond (MNS or CNS)				
Radio Operator					
Primary:	J. Painter				
	S. A. Gewehr				
	R. Ouellette				
Alternates:	R. L. Rivard (ONS or MNS)				
	G. Sain (MNS or CNS)				
	J. Head (MNS or CNS)				
	S. E. LeRoy (ONS or CNS)				
	G. M. Harrison (ONS or CNS)				

Crisis Management Plan

Implementing Plans

5.3.7 - Nuclear Engineering Services Group

Rev. 9

Revision Number

August 15, 1984

Date

5.3.7 - Nuclear Engineering Services Group

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 - 7. Generating Station Support - McGuire
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 - 9. Westinghouse Emergency Response Plan Site Team

Figure 1

Crisis Management Center (CMC)
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 2

NUCLEAR ENGINEERING SERVICES GROUP
Telephone List

<u>Position</u>	<u>Name</u>	<u>Office</u>	<u>Home</u>
Manager	K. S. Canady		
	R. M. Koehler		
	H. T. Snead		
Administrative Supervisor	J. W. Simmons		
	J. A. Reavis		
Data Facility Supervisor	R. C. Pacetti		
	G. C. Rogers		
	M. F. Simpson		
	G. A. Frix		
Licensing Support Coordinator	N. A. Rutherford		
	R. L. Gill (McGuire)		
	R. O. Sharpe (Catawba)		
	P. R. Guill		
System Analysis Coordinator	P. M. Abraham		
	S. D. Alexander		
	D. L. Canup (McGuire)		
	R. M. Gribble		
Core Physics Coordinator	R. H. Clark		
	L. H. Flores		
	J. H. Randles		
	G. P. Horne		
	R. P. Wood		
	J. L. Eller		
Staff Support	H. J. Lee		
	S. P. Nesbit		
	J. F. Norris		

Figure 2

NUCLEAR ENGINEERING SERVICES GROUP
Telephone List

<u>Position</u>	<u>Name</u>	<u>Office</u>
Nuclear Engineering Services Group Emergency Phones (WC-1704)		
Technical Services (WC-2390)		
Design/Construction (EC3-32)		
Scheduling/Planning (WC-1010) - MNS/CNS		
Offsite Radiological Coordinator - WC-1222		
Nuclear Engineering Services Manager WC-1010		

Figure 6

Transmission Department
Substation Division
PERSONNEL TO BE CALLED IN CASE OF TROUBLE AT
CATAWBA NUCLEAR STATION
GENERATING STATION SUPPORT SECTION

First, call

Office

Home

Jeff Ashe (Jeff)

For trouble on any equipment for which the Substation Division is responsible, if he is not available then call:

For Generators, Motors, Generator Bus

First - L. M. Simms (Louie)
Second - Roscoe White (Roscoe)
Third - H. K. Reid (Hugh)

SUBSTATION MAINTENANCE

For Circuit Breakers, Capacitors, Switchgear

First - H. L. Thrower (Bill)
Second - J. G. Nunn (John)
Third - W. R. Gill (Bill)

For Transformers

First - J. G. Nunn (John)
Second - H. L. Thrower (Bill)
Third - W. R. Gill (Bill)

For Test Crews, Doble and Ground Testing

First - W. R. Gill (Bill)
Second - H. L. Thrower (Bill)
Third - J. G. Nunn (John)

For Metering & Supervisory Control (E-A Recorders, Oscillographs, SER's, AOC & SOC, Analog & Digital Telemetry, Voltmeters, Ammeters & Watthour Meters)

First - R. D. Clutz (Doug)
Second - G. W. Simms (George)

For Relaying, (Protective Relays, Carriers, Pilotwire, Batteries & Chargers)

First - G. W. Simms (George)
Second - R. D. Clutz (Doug)

If unable to contact persons listed above, call:

First - F. L. Tatum, Jr. (Lee)
Second - R. E. Holmes, Jr. (Roy)

SUBSTATION CONSTRUCTION

For Structures, Power Circuits (Bus, Wiring, Insulators, Disconnect Switches, Gang Switches, Circuit Switchers)

First - J. N. Slayton (Jerry)
Second - H. N. Smith (Harold)
Third - J. R. Whitaker (Whit)

Figure 6 (cont'd)

Transmission Department
Substation Division
PERSONNEL TO BE CALLED IN CASE OF TROUBLE AT
CATAWBA NUCLEAR STATION

GENERATING STATION SUPPORT SECTION

For Controls

First - Wayne Wilcox (Wayne)
Second - W. J. Potter (Joe)
Third - T. L. Stroupe (Tim)

If unable to contact persons listed above, call

First - C. W. Wilkins (Windell)
Second - R. H. McCarn (Richard)

Figure 7

Transmission Department
Substation Division
PERSONNEL TO BE CALLED IN CASE OF TROUBLE AT
McGUIRE NUCLEAR STATION

GENERATING STATION SUPPORT SECTION

First, call

Office

Home

Cleve Church (Cleve)

For trouble on any equipment for which the Substation Division is responsible, if he is not available, then call:

For Generators, Motors, Generator Bus

First - L. M. Simms (Louie)
Second - Roscoe White, JR. (Roscoe)
Third - H. K. Reid (Hugh)

SUBSTATION MAINTENANCE

For Circuit Breakers, Capacitors

First - H. L. Thrower (Bill)
Second - J. G. Nunn (John)
Third - W. R. Gill (Bill)

For Transformers

First - J. G. Nunn (John)
Second - H. L. Thrower (Bill)
Third - W. R. Gill (Bill)

For Test Crews

First - W. R. Gill (Bill)
Second - H. L. Thrower (Bill)
Third - J. G. Nunn (John)

For Metering & Supervisory Control

First - R. D. Clutz (Doug)
Second - G. W. Simms (George)

For Relaying, Batteries and Chargers

First - G. W. Simms (George)
Second - R. D. Clutz (Doug)

If unable to contact persons listed above, call:

First - F. L. Tatum, (Lee)
Second - R. E. Holmes, Jr. (Roy)

SUBSTATION CONSTRUCTION

For Structures, Power Circuits (Bus, Wiring, Insulators, Disconnect Switches, Gang Switches, Circuit Switchers)

First - J. N. Slayton (Jerry)
Second - H. N. Smith (Harold)
Third - J. R. Whitaker (Whit)

Figure 7 (cont'd)

Transmission Department
Substation Division
PERSONNEL TO BE CALLED IN CASE OF TROUBLE AT
CATAWBA NUCLEAR STATION

GENERATING STATION SUPPORT SECTION

For Controls

First - Wayne Wilcox (Wayne)

Second - W. J. Potter (Joe)

Third - T. L. Stroupe (Tim)

If unable to contact persons listed above, call

First - C. W. Wilkins (Windell)

Second - R. H. McCarn (Richard)

Figure 8

Transmission Department
Substation Division
PERSONNEL TO BE CALLED IN CASE OF TROUBLE AT
OCONEE NUCLEAR STATION

GENERATING STATION SUPPORT SECTION

First, call

Office

Home

Gary Edens (Gary)

For trouble on any equipment for which the Substation Division is responsible, if he is not available, then call the appropriate person listed below:

For Generators, Motors, Generator Bus

First - L. M. Simms (Louie)
Second - Roscoe White (Roscoe)
Third - H. K. Reid (Hugh)

SUBSTATION MAINTENANCE

For Relays (Protective Relays, Carriers, Pilotwire, Batteries and Chargers)

First - H. D. Fields (Doug)
Second - C. D. Wilson (Donnie)
Third - F. M. Horton (Fay)

For Metering (E-A Recorders, Oscillographs, SER's, AOC & SOC, Analog & Digital Telemetering, Voltmeters, Ammeters, Watthour Meters) and Supervisory Control

First - C. D. Wilson (Donnie)
Second - H. D. Fields (Doug)
Third - F. M. Horton (Fay)

For Power Apparatus (Circuit Breakers, Transformers, Capacitors, Switchgear, Doble and Ground Testing)

First - F. M. Horton (Fay)
Second - H. D. Fields (Doug)
Third - C. D. Wilson (Donnie)

If unable to contact persons in Substation Maintenance listed above, call

First - C. J. Petty, Jr. (Jenks)
Second - R. E. Holmes, Jr. (Roy)

SUBSTATION CONSTRUCTION

For Structures, Power Circuits (Bus, Wiring, Insulators, Disconnect Switches, Gang Switches, Circuit Switchers)

First - C. C. Allred (Carl)
Second - B. L. Rosa ("Yank")
Third - J. A. Hawkins ("Red")
Fourth - J. R. Woodruff (John)

For Controls

First - C. C. Allred (Carl)
Second - M. E. Ramsey (Mike)
Third - Wayne Wilcox (Wayne)

If unable to contact persons listed above, call

First - T. L. Stroupe (Tim)
Second - C. W. Wilkins (Windell)
Third - R. H. McCarn (Richard)

Figure 9

WESTINGHOUSE PROPRIETARY CLASS 2
EMERGENCY RESPONSE PLAN SITE RESPONSE TEAM

<u>Title</u>	<u>Name</u>	<u>Beeper #</u>	<u>Office</u>	<u>Home</u>
SRT Leader	Dave Woodward			
1st Alternate	Bernie Haertjens			
2nd Alternate	Pat Walker			
Operations Support	Jim Evans			
1st Alternate	Jeffrey B. Simon			
2nd Alternate	John E. Hevlon			
Health Physics Support	Jim Flanigan			
1st Alternate	Craig Wilson			
2nd Alternate	John Muskanick			

One of the following Operating Plant Regional Managers, as appropriate, will accompany the SRT to the affected site:

		<u>Beeper #</u>	<u>Office</u>	<u>Home</u>	<u>HHL</u>
New England Area Mgr.	Steve Swigart				
1st Alternate	George Dillon				
2nd Alternate	Steve Craft				
New York Area Mgr.	Onno Meeuwis				
1st Alternate	George Dillon				
2nd Alternate	Jim Gasperini				
Mid-Atlantic Area Mgr.	John Triggiani				
1st Alternate	George Dillon				
2nd Alternate	Jack Tobin				
Virginia Area Mgr.	Don Beynon				
1st Alternate	Joe Leblang				
2nd Alternate	Dick Kent				
Mid-South Area Mgr.	Bob Howard				
1st Alternate	Joe Leblang				
2nd Alternate	Dave Richards				
Southern Area Mgr.	Dave Richards				
1st Alternate	Joe Leblang				
2nd Alternate	Ken Voytell				
Alabama Power Company Mgr.	John Miller				
1st Alternate	Joe Leblang				
2nd Alternate	Lonnie Benson				
Central Area Mgr.	Bill Johnson				
1st Alternate	Bob Stokes				
2nd Alternate	Tony Suda				

Figure 9 (cont'd)

WESTINGHOUSE PROPRIETARY CLASS 2
EMERGENCY RESPONSE PLAN SITE RESPONSE TEAM

<u>Title</u>	<u>Name</u>	<u>Beeper #</u>	<u>Office</u>	<u>Home</u>
Mid-West Area Mgr.	Ed Somers			
1st Alternate	Bob Stokes			
2nd Alternate	Chuck Rowland			
Western Area Mgr.	Gil Kubancsek			
1st Alternate	Bob Stokes			
2nd Alternate	Dave Campbell			

NOTE: Unless indicated otherwise, all phone numbers are area code

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
IMPLEMENTING PROCEDURE 5.3.10

OCONEE NUCLEAR STATION-CRISIS
TELEPHONE DIRECTORY

Rev. 7
August 15, 1984

EMERGENCY TELEPHONE NUMBERS

This enclosure provides a listing of telephone numbers for various personnel and agencies that may have a part in dealing with an emergency situation or providing other assistance as needed at Oconee Nuclear Station.

EMERGENCY TELEPHONE NUMBERS

This directory provides a listing of telephone numbers for various personnel and agencies that may have a part in dealing with an emergency situation or providing other assistance as needed at Oconee Nuclear Station.

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DUKE POWER COMPANY
OCONEE NUCLEAR STATION

NUMBER CODE FOR IDENTIFYING PERSONNEL/ACTIVITIES TO BE NOTIFIED

CODE

1. NUCLEAR REGULATORY COMMISSION by Red Phone within one hour.
2. UNIT COORDINATOR/OPERATIONS DUTY ENGINEER who will notify:
 - A. Superintendent of Operations
 - B. Station Manager/Emergency Coordinator (or alternate as listed in number 11.)
 - C. Nuclear Production Duty Engineer who will notify:
 1. Corporate Communications
 2. Crisis Management Organization
3. STATION MANAGER
M. S. Tuckman, Office
Home
4. BABCOCK AND WILCOX RESIDENT ENGINEER
Bill Street, Office
Home
(If Bill Street cannot be reached, call)
L. H. Williams, Office
Home
5. STATION HEALTH PHYSICIST/DUTY HEALTH PHYSICIST
C. T. Yongue, Office
Home

6. SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL,
(Warning Point State of South Carolina)

Bureau of Radiological Health (0800-1700)
Answering Service after hours, weekends, holidays

*State Emergency Operations Center, Columbia, S. C.

*Forward Emergency Operations Center, Clemson, S. C. . Duke Ringdown

Alternate Number

*NOTE: These number are to be used once the State
has established their Emergency Operations.

7. COUNTY EMERGENCY PREPAREDNESS AGENCIES

Oconee County Emergency Preparedness Duke
Alternate Number - 24 hour, page 251
Alternate Number - 24 hour, page 251

Pickens County Emergency Preparedness Duke
Alternate Number - (0830-1700)
Alternate Number - 24 hour, page 77

8. COUNTY SHERIFF'S DEPARTMENT

Oconee County (24 hours) Duke
Alternate Number

Pickens County (24 hours) Duke
Alternate Number
Alternate Number
Alternate Number

9. MEDICAL ASSISTANCE

Oconee Memorial Hospital Ambulance Service

Oconee Memorial Hospital Switchboard/Supervisor of Nursing.

Additional Medical assistance may be provided through the
following institutions:

Pickens County Ambulance Service

Cannon Memorial Hospital/Supervisor of Nursing

Easley Baptist Hospital/Supervisor of Nursing

10. FIRE ASSISTANCE

Oconee County Rural Fire Protection Association

Woods or Forest Fire (Oconee County, Oakway Tower)

Woods or Forest Fire (Pickens County, Woodall Mt. Tower).

11. EMERGENCY COORDINATOR AND ALTERNATES (TSC Activation)

(If the first person cannot be reached, go to the next person down the list until one person is contacted)

Assistant Station Management

Superintendent of Technical Services

T. S. Barr, Office
Home

Superintendent of Maintenance

J. M. Davis, Office
Home

Superintendent of Operations

J. N. Pope, Office
Home

Operations Duty Engineer

12. WATER DEPARTMENTS

Should releases of radioactive effluent into Lake Keowee or Lake Hartwell potentially effect municipal water intakes or exceed technical specifications. Contact the appropriate authorities as indicated below:

Lake Keowee

Seneca, H. J. Balding, Office
Home

Lake Hartwell

City of Clemson

Mayor of Clemson, Office
Home

(If the mayor cannot be reached, call one of the following)

Clemson Administrator's Office
Home

Clemson Filter Plant (0700-1700)

Clemson University

President's Office
Home

Security - Police (24 hours)
(If the President cannot be reached, call)
Clemson University Physical Plant (0800-1630)

Anderson Water Works (24 Hr. Number)

AGENCIES THAT MAY RESPOND TO AN EMERGENCY AT THE OCONEE NUCLEAR STATION

LAW ENFORCEMENT (24-hour numbers)

S. C. Highway Patrol (Greenville, S. C.)

S. C. Enforcement Division (Columbia, S. C.)

FBI (Columbia, S. C.)

BOMB DISPOSAL

Explosives Ordinance Disposal Control (24-hour)
(Fort Jackson, Columbia, S. C.)

RADIATION AND CONTAMINATION

REACTS, Department of Energy (Oak Ridge, Tennessee)
(24 hr. number - after 1700 ask for Beeper number)

DOE Emergency Radiological Monitoring Team (Aiken, S. C.)

N. C. Division of Emergency Management
(Warning Point - State of North Carolina)

Georgia Department of Natural Resources
Environmental Radiation Program
(Warning Point - State of Georgia)

NUCLEAR REGULATORY COMMISSION

NRC Operations Center (via Bethesda Central Office)

NRC Operations Center (via Silver Spring Central Office)

Health Physics Network to NRC Operations Center
Health Physics Network to NRC, Region II

US NRC, Region II

US NRC, Region II (Operations Center)

US NRC, Oconee Resident Inspectors

Jack Bryant Home

BUS TRANSPORTATION

Anderson Retail Office (24 hour number)
(Contact John Holland, Jerry Whitfield)

NATIONAL WEATHER SERVICE - METEOROLOGICAL BACK-UP SOURCE

Greenville-Spartanburg Weather Service . . . (24 hour)

FEDERAL AERONAUTICS AGENCY

PRIVATE AIRCRAFT

Flight Standards District Office (0800-1700)

Flight Service Station (After hours, weekends, holidays)

MILITARY AIRCRAFT

Air Station Mgr. (Shaw AF Base)

OCONEE NUCLEAR STATION
CRISIS COMMUNICATIONS DIRECTORY

The crisis directory is intended for use should the Oconee Emergency Plan require implementation. Both station and corporate level telephone numbers are provided. The station's emergency organization will operate from the Technical Support Center near the Units 1 and 2 Control Room. The corporate emergency organization will operate from the Crisis Management Center located in the Visitors Center and Oconee Training Center.

EMERGENCY FACILITY LOCATIONS

Technical Support Center - Control Rooms 1 and 2

Operational Support Center - Control Room 3

Crisis Management Center - Oconee Training Center

Alternate Location: Liberty Retail Office

Crisis News Center - Keowee-Toxaway Visitors Center

Alternate Location: Liberty Retail Office

OCONEE NUCLEAR STATION
TELEPHONE DIRECTORY

Seneca Lines
(803)

Easley Lines
(803)

Anderson Line
(803)

Six Mile Line
(803)

Dial Code
(Micro-Wave)

(Charlotte General Office)

(Catawba)

(McGuire)

Attendant (To access Bell
Line)

Seneca

Easley

Anderson

Six Mile

OCONEE NUCLEAR STATION
CRISIS PHONE DIRECTORY
TECHNICAL SUPPORT CENTER

<u>POSITION/NAME</u>	<u>Telephone Number</u>	
	<u>Outside Line</u>	<u>Station Number</u>
Emergency Coordinator	882-7076	
Supt. of Operations		
Supt. of Technical Services		
Supt. of Maintenance		
Supt. of Administration		
NRC Resident Engineer FTS		
B&W Resident Engineer		
Station Health Physicist		
<u>HEALTH PHYSICS CENTER</u>		
Field Monitoring Coordinator		
Data Report Coordinator (Off-Site Dose Projection)		
Dose Coordination to CMC		
FTS Line to NRC		

	<u>Telephone Number</u>	
	<u>Outside Line</u>	<u>Station Number</u>
<u>TECHNICAL SERVICES GROUP</u> (Located in Computer Room CR 1&2)		
Performance		
Compliance		
Chemistry		
<u>OPERATIONAL SUPPORT CENTER</u>		
(Support group consists of Health Physics, Chemistry, Maintenance, Safety Operations group)		
Operational Support Center Coordinator		
Mechanical Maintenance Engineer		
Mechanical Maintenance Supervisor		
I & E Engineer		
I & E Supervisor		
Health Physics Support		
Dose Control		
S & C Coordinator		
Support Function Coordinator		
Chemistry Support		
Medical Support		
OSC Communicator		
Operations Group		
Unit #3 Operations Offices		
Nuclear Equipment Operators (Unit 1 & 2 Emergencies)		
Nuclear Equipment Operators (Unit 3 Emergencies)		

CONTROL ROOM

- Unit 1
- Unit 2
- Unit 3
- Shift Supervisor (Unit 1 & 2)
- Unit 3

COMMUNICATIONS COORDINATION

- Data Transmission Coordinator
- Data Release (Vax Computer Program)

- Telecopier (Technical Support Center)
- Offsite Communicator
- TSC Clerical Support
- Emergency Response

EMERGENCY COUNT ROOM (Located in Visitor's Center)



OCONEE NUCLEAR STATION
CRISIS PHONE DIRECTORY
CRISIS MANAGEMENT CENTER

PRIVATE
LINE

ONS
SWITCHBOARD

POSITION/NAME

RECOVERY MANAGER

State of S.C. (FEOC Line)
(Duke Line)

SCHEDULING/PLANNING

TECHNICAL SERVICES SUPPORT

S.C. Bureau of Radiological Health (Duke Line)
(FEOC Line)

OFFSITE RADIOLOGICAL COORDINATOR

NUCLEAR ENGINEERING SERVICES

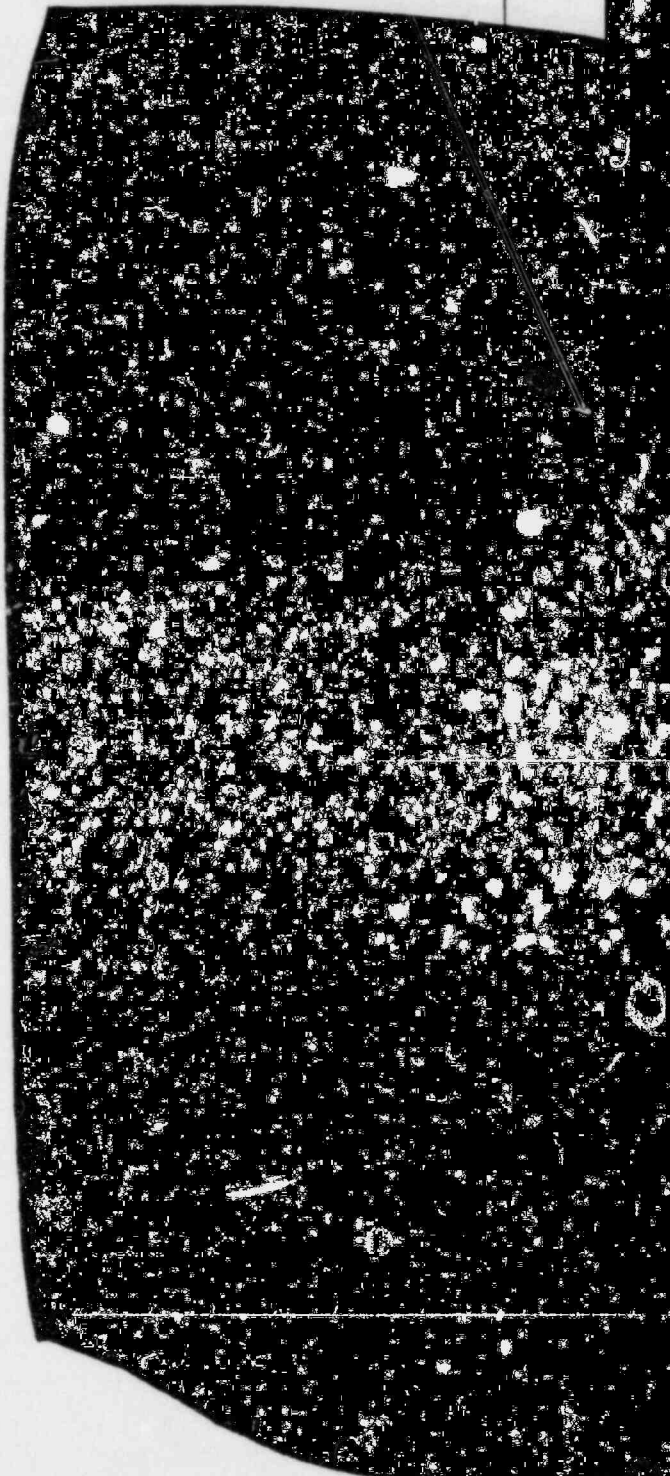
DESIGN AND CONSTRUCTION SUPPORT

ADMINISTRATION AND LOGISTICS

DATA COORDINATION
TELECOPIER
.
.

ADVISORY SUPPORT
NUCLEAR REGULATORY COMMISSIONFTS.

BABCOCK & WILCOX (NSSS SUPPLIER)



OCONEE NUCLEAR STATION
CRISIS PHONE DIRECTORY
GENERAL OFFICE SUPPORT CENTER

CORPORATE HEADQUARTERS
(Contact with the Governor)

A. C. Thies

W. H. Owen

WACHOVIA CENTER

RECOVERY MANAGER (Room 1010) (Speaker Phone)
(Dedicated line to State Director)

NRC

SCHEDULING/PLANNING (Room 1010)

TECHNICAL SERVICES SUPPORT (Room 2390)

OFFSITE RADIOLOGICAL COORDINATOR (Room 1222)

NRC FTS LINE

NUCLEAR ENGINEERING SERVICES STAFF (Room 1704)

ADMINISTRATION AND LOGISTICS (Room 0925)

NUCLEAR REGULATORY COMMISSION (Room 1488)

ELECTRIC CENTER

DESIGN AND CONSTRUCTION SUPPORT (Room 32, 3rd Floor)

CHARLOTTE SUPPLY BUILDING

CRISIS NEWS GROUP - DUKE (3rd Floor)

S.C. PUBLIC INFORMATION OFFICERS (Room 215)

NRC NEWS STAFF (Room 215)

FEMA PUBLIC INFORMATION OFFICES (Room 215)

*Dedicated line to State Center

OCONEE NUCLEAR STATION
CRISIS PHONE DIRECTORY
BACKUP CRISIS MANAGEMENT CENTER
LIBERTY RETAIL OFFICE, LIBERTY, S.C.

AREA CODE
Telephone Number

RECOVERY MANAGER

SCHEDULING/PLANNING

PUBLIC INFORMATION OFFICERS*

State of South Carolina
Oconee County
Pickens County

DESIGN AND CONSTRUCTION

NUCLEAR ENGINEERING SERVICES

OFFSITE RADIOLOGICAL COORDINATOR

ADMINISTRATION AND LOGISTICS













TECHNICAL SERVICES SUPPORT

GOVERNMENT AGENCIES*

NRC
State of South Carolina
Oconee County
Pickens County

*NOTE: Call any one of the numbers listed to reach the desired representative.

OCONEE NUCLEAR STATION
CRISIS PHONE DIRECTORY
CRISIS NEWS CENTER
KEOWEE-TOXAWAY VISITORS' CENTER

<u>Position/Name</u>	<u>Private Line</u>	<u>Telephone Number</u> ONS <u>Switchboard</u>
<u>CRISIS NEWS DIRECTOR</u> Mary Cartwright		
<u>COMMERCIAL NEWS MEDIA</u> (Active Numbers) For drill purposes only		
<u>COMMERCIAL NEWS MEDIA</u> (Inactive Numbers) Activated only during an actual emergency		
<u>NRC/STATE/COUNTY PUBLIC INFORMATION OFFICERS (PIO'S)</u>		
NRC Oconee County Pickens County		
State of S.C. (FEOC Line) (Duke Line)		

*Note: NRC, Oconee County or Pickens County may be reached on any one of these phones.

NRC HEALTH PHYSICS NETWORK TELEPHONES

The NRC's Health Physics Network (HPN or Black Phone) connects all Nuclear Power Plants and Fuel Facilities to NRC Regional Offices and to NRC Headquarters Operations Center. The phone is intended to support Health Physics Operations in an emergency but can be used for daily voice traffic and facsimile transmittal.

The Station has jacks for the HPN phones in the Performance Office (Control Room 1 & 2) and in the Oconee Training Center.

The phone is used normally with the exception; NO DIAL TONE OR RINGING IS HEARD. In addition, ringing only lasts 30 seconds, so after 30 seconds if the party has not answered, you must hang up and redial.

For convenience, the codes most often used are listed below:

<u>HPN Phone</u>	<u>Code</u>
1. NRC region 2 (Atlanta) office	23
2. NRC headquarters (24 hours)	22
3. B&W Research Center	83
4. Oconee NRC Resident Inspector	72
5. Oconee Nuclear Station	73
6. <u>All</u> NRC region 2 Resident Inspectors	26
7. <u>All</u> region 2 Operating Nuclear Plants	25

In addition, the calling party may "conference" any phones during conversation by simply dialing the appropriate code(s). Any number of stations may be added in this manner.

OCONEE NUCLEAR STATION EMERGENCY RADIO

The call letters identify the Emergency Radio frequency. The following is a listing of radio locations, unit call letters, and identifiers. Use identifiers to begin a transmission and the call letters to close out the radio transmission. (For example: Oconee Nuclear Station Control Room to Pickens County Law Enforcement Center. Close out with [redacted] off.)

ONS Base Station Remotes

<u>Location</u>	<u>Unit Call Letters</u>	<u>Identifier</u>
1. Unit 1&2 Control Room	[redacted]	Oconee Control Room
2. Crisis Management Center	[redacted]	Oconee CMC
3. Technical Support Center	[redacted]	Oconee TSC

Coded Squelch Radios

<u>Location</u>	<u>Encode</u>	<u>Unit Call Letters</u>	<u>Identifier</u>
4. Pickens LEC	[redacted]	[redacted]	Pickens LEC
Pickens EOC	[redacted]	[redacted]	Pickens EOC
Pickens EPD	[redacted]	[redacted]	Pickens EPD
5. Oconee LEC	[redacted]	[redacted]	Oconee LEC
6. State FEOC - (Clemson)	[redacted]	[redacted]	State FEOC

ALL ABOVE RADIOS MAY BE ACTIVATED BY ENCODING NO. 30

Field Monitoring Teams

<u>Location</u>	<u>Unit Call letters</u>	<u>Identifier</u>
8. Field Monitor Coordinator	[redacted]	Leader
9. Field Monitor Team	[redacted]	Alpha
10. Field Monitor Team	[redacted]	Bravo
11. Field Monitor Team	[redacted]	Charlie
12. Field Monitor Team	[redacted]	Delta
13. Field Monitor Team	[redacted]	Echo
14. Field Monitor Team	[redacted]	Foxtrot

TO COMMUNICATE BETWEEN BASE STATION REMOTES (1, 2, 3), THE INTERCOM MUST BE USED! The following procedure must be used.

1. Push INTERCOM button and hold
2. Push MIKE button and hold
3. Send message (example, CMC to TSC)
4. Release both buttons to receive a response.

EMERGENCY OPERATION CENTER

Pickens County

Primary Number

EXECUTIVE GROUP*

Emergency Preparedness
County Administrator
County Council
Legal Officer

OPERATIONS GROUP*

Law Enforcement
Rescue Squad
EMS

Fire Service
Medical Service
Health Service
Dept. of Public Works

ASSESSMENT*

Transportation
Emergency Welfare Service
Shelter Service
Red Cross

Public Information
RADEF

Mental Health
Damage Assessment
Supply and Procurement

ALTERNATE NUMBER (to any group)

PUBLIC INFORMATION OFFICER

CRISIS NEWS CENTER-ONS*

State of South Carolina
Oconee County
Pickens County
NRC

CRISIS NEWS CENTER LIBERTY RETAIL OFFICE*

State of South Carolina
Oconee County
Pickens County
NRC

*Call any one of the listed numbers to reach group desired.

EMERGENCY OPERATION CENTER

Oconee County

Primary Numbers (24-hour)

OPERATIONS*

Fire Protection

Police

Public Roads

Emergency Medical Services

Rescue Squads

ASSESSMENT*

Emergency Welfare Services

Radiological Defense

Damage Assessment

EXECUTIVE GROUP*

Supervisor/Chairman County Council

EOC Director

Financial Officer

FNF Representative

PUBLIC INFORMATION OFFICER

CRISIS NEWS CENTER-ONS

State of South Carolina
Oconee County
Pickens County
NRC

CRISIS NEWS CENTER LIBERTY RETAIL OFFICE

State of South Carolina
Oconee County
Pickens County
NRC

*Call any one of the listed numbers to reach group desired.

DUKE POWER COMPANY
CRISIS MANAGEMENT PLAN
IMPLEMENTING PROCEDURE 5.3.11

MCGUIRE/CATAWBA CRISIS
TELEPHONE DIRECTORY

OTHER CRISIS MANAGEMENT CENTER PERSONNEL

Offsite Radiological Coordinator (Wachovia 1222) -----
State Representative(s) with Offsite Radiological Group (WC-1222) -
Dedicated Dose Assessment Line to TSC Health Physics (WC-1222) ----
NRC FTS Line (Temporarily not installed) -----
Administration and Logistics Staff (Wachovia Room 0925) -----

Design and Construction Staff (Electric Center 3-32) -----

Technical Services Support Staff (Wachovia 2390) -----

Nuclear Engineering Services Staff (Wachovia 1704) -----

NRC, States, and Counties (Wachovia 1488) -----

McGuire Offsite Agency Telephone List

Counties

Mecklenburg Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]
Gaston Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]
Iredell Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]
Catawba Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]
Lincoln Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]
Cabarrus Warning Point	Ringdown, or	[REDACTED]	or Emergency Radio Code	[REDACTED]

NOTE: Radio Code activates all county radio units

States

N.C. (E.O.C. Raleigh)

N.C. Warning Point

N.C. (SERT Headquarters, Air National Guard Armory)

[REDACTED]
Ringdown Phone or
Emergency Radio (no code required)

S.C. Emergency Operations Center - Columbia

S.C. Warning Point-Department of Health and Environmental Control

[REDACTED]
(8:30 A.M.-5:00 P.M. weekdays)
(After hours and weekends/
holidays)

DOE - Savannah River

NRC - Operation Center-Washington
-Region II

American Nuclear Insurers

INPO

Special "Open Bell Lines" at SERT Headquarters - Air Guard Armory

1. Recovery Manager open line to State Director
2. Duke Special Assistance Coord. line to State Rad. Health
3. N.C. PIO at News Center to N.C. PIO at SERT
4. Direction & Control Line (State to Counties)

CATAWBA OFFSITE AGENCY TELEPHONE LIST

Counties

York County Warning Point Ringdown, or or Emergency Radio Code
Gaston County Warning Point Ringdown, or or Emergency Radio Code
Mecklenburg County Warning Point Ringdown, or or Emergency Radio Code
(Radio Code activates all units)

York County EOC-Rock Hill City (Ringdown NOT
Hall Basement yet Installed)
Gaston County EOC-Gastonia, N.C. (See Ringdown List)
Mecklenburg County EOC-County (See Ringdown List)
Police Office - Charlotte, N.C.

States

N.C. EOC Raleigh
N.C. Warning Point
N.C. SERT Headquarters
Ringdown Phone or Emergency Radio (No Code)
or: State Director
State Rad. Health
State PIO

S.C. EOC Columbia

S.C. Warning Point

(After hours/weekends/holidays)

S.C. FEOC - Clover Armory

Ringdown Phone or Emergency Radio (Code
or: State Director
State Rad. Health
State PIO

Others

DOE - Savannah River
NRC - Operation Center-Washington
American Nuclear Insurers
INPO
NRC - Operations Center-Region II

*NOTE: See Page 9 for instructions on operation of the Selective Signalling System.

OPERATION OF THE SELECTIVE SIGNALING SYSTEM FOR
CATAWBA

To operate the system

1. Pick up the receiver - you will not hear a dial tone.
2. Dial the number for the party you wish to speak with. If you desire more than one party dial the group number shown or dial each individual number to tie them on.

LOCATION

PHONE NO.

Catawba Control Room

Catawba TSC

Crisis Management Center

York County Warning Point



Clover Armory

Gaston County (EOC & Warning Point)

Mecklenburg County (EOC & Warning Point)

N.C. Air Guard Armory

NOTE: The Selective Signaling System (SSS) is used for contacting the counties prior to arrival of the States. Once the States have set up their centers, they use the SSS to call the counties and we contact the States on the dedicated Bell lines.

To cancel a ring initiated by a call to one of these numbers dial or  depending upon the number initially called. 

CRISIS MANAGEMENT PLAN

IMPLEMENTING PROCEDURE

5.3.14

"Environmental Monitoring for Emergency Conditions
Within the Ten Mile Radius of McGuire Nuclear Station"

Rev. 9
Aug. 15, 1984

ENVIRONMENTAL MONITORING FOR EMERGENCY CONDITIONS
WITHIN THE TEN MILE RADIUS OF McGUIRE NUCLEAR STATION
CRISIS MANAGEMENT PLAN

PURPOSE

- 1.0 Upon receiving a call to activate the Crisis Management Center (CMC), for a problem at McGuire, the Field Monitoring Coordinator (FMC) will notify the CMC Field Monitoring Organization for McGuire (See Enclosure 1) and have them report to Trailer #7 at McGuire. The FMC will report to Room WC-1222. The CMC Teams will assume the responsibility of offsite sampling at the earliest convenient time to allow the Station monitoring teams to return to the Station.
- 2.0 The FMC, from Room WC-1222, will direct the Field Teams as described in the attached Section 18.2 of the Station H.P Manual and by using the attached map showing all TLD, air sample, and pre-selected monitoring points. The FMC will advise the Offsite Radiological Coordinator, the Special Assistance Coordinator, Dose Assessment Coordinator, and TSC HP Staff of results of field measurements. The FMC will ensure adequate continued staffing of the field teams. The FMC will confer periodically (every hour) with the State Field Team Coordinator to compare findings.
- 3.0 The CMC Field Teams will survey and sample the area as described in the attached Section 18.2 of the Station H.P. Manual and as directed by the FMC. In addition, they shall place TLD's at locations designated by the FMC and record the time placed, collect TLD's and air samples (see attached Section 18.2 of Station H.P. Manual), and will review their received doses (on pocket dosimeters) at times appropriate to prevailing dose rates.

ENCLOSURE 1
IMPLEMENTING PROCEDURE 5.3.14
FIELD MONITORING ORGANIZATION

LABORATORY
ANALYSIS
COORDINATOR

FIELD
MONITORING
COORDINATOR

DOSE
ASSESSMENT
COORDINATOR

SURVEY
TEAM
Alpha

SURVEY
TEAM
Bravo

SURVEY
TEAM
Charlie

SURVEY
TEAM
Delta

SURVEY
TEAM
Echo

SURVEY
TEAM
Foxtrot

Catawba Nuclear Station Personnel

Phillip Deal, Station Health Physicist Office

Home Office

Home Office

Maurice McClettie

Rick Green

Rick Dove

Jerry Mode*

John Threatt

Rich Wright

Tim O'Donohue

Ron Rivard

Mike Moses

Steve Jones

Scott Ledford

Henry Cuthbertson

Doug Parrott

Gloria Waddell

Robin Williams

Fletch Wilson

Tammie Hindman

Robert Deshazo

Grady Lane

Barry Kimray

Cue Williamson

Sam Powell

Doug Baysinger

Nancy Strickland

Harold McCullough

Brenda Wells

Linda Thompson

Alton Johnson

Eddie Benfield

Barbara Jones

*Alternate Field Monitoring Coordinator

Note: All office numbers may be reached thru the microwave at
outside lines they may be reached thru the station operator at

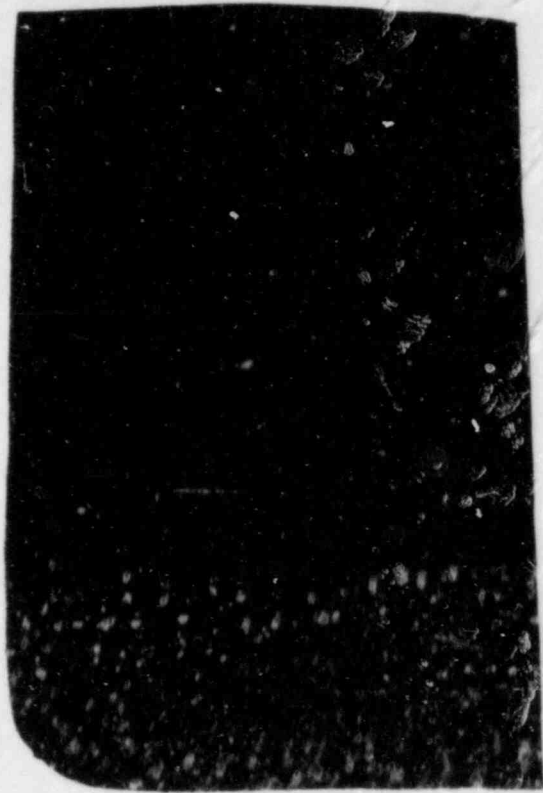
From

ENCLOSURE 1 (Cont'd)
SYSTEM
ENVIRONMENTAL LABORATORY
PERSONNEL

Home

Office

Jan Williams
Bill Foris
Pauline Whitcomb
Aileen Lockhart
Steve Johnson
Larry Miller
Jerry Harris
Herb Magill
Wayne Harden
Paul White
Cindy Knox
Tom Yocum



Note: All office numbers may be reached thru the Environmental Lab operator at

APPROVAL K. J. Taylor McConnell

REV. 8 DATE 8/9/88

SECTION 18.2 ENVIRONMENTAL MONITORING FOR EMERGENCY CONDITIONS

1.0 Purpose

1.1 To provide environmental monitoring following an accidental release of radioactive material in excess of technical specifications to the environment.

2.0 References

- 2.1 Station Directive 3.8.1 (Site Assembly and Evacuation).
- 2.2 HP/O/B/1009/09, Release of Radioactive Materials thru the Unit Vent Exceeding Technical Specifications.
- 2.3 HP/O/B/1009/10, Release of Liquid Radioactive Materials Exceeding Technical Specifications.
- 2.4 RP/O/A/5700/02, Alert.
- 2.5 RP/O/A/5700/03, Site Area Emergency.
- 2.6 RP/O/A/5700/04, General Emergency.
- 2.7 Offsite Dose Calculation Manual (ODCM).

3.0 Precautions and Limitations

- 3.1 Environmental sampling during emergency conditions shall not replace, but rather supplement normal environmental monitoring.
- 3.2 If survey teams expect to be exposed to airborne particulate activity $> 3 \times 10^{-9}$ $\mu\text{C}/\text{ml}$ gross $\beta\gamma$, or $> 6 \times 10^{-13}$ $\mu\text{C}/\text{ml}$ α , they shall don particulate masks.
- 3.3 If survey teams expect to be exposed to Iodine-131 in excess of 10 x MPC, they shall ingest 130 milligrams (1 tablet) of potassium iodine.
- 3.4 If survey teams expect to be exposed to contamination levels > 1000 $\text{dpm}/100\text{cm}^2$ $\beta\gamma$, > 20 $\text{dpm}/100\text{cm}^2$ α , they shall don protective clothing.
- 3.5 Survey teams shall wear high range personnel dosimetry provided in the kits when entering areas where suspected radiation levels may warrant.
- 3.6 The team(s) equipped for Iodine analysis shall be kept out of the plume whenever possible.

3.7 Teams in or around the plume shall be kept moving.

4.0 Procedure

4.1 Upon request for offsite monitoring, Health Physics shall dispatch predesignated emergency environmental survey teams (at least two technicians/team) to their predesignated emergency vehicles/boat as necessary.

4.2 Each survey team shall be equipped with an emergency kit containing as a minimum, the following:

4.2.1 Eberline E-520 with H.P. 260 probe and Xetex Mod 305A (or equivalent instruments).

4.2.2 Portable air sampler with Silver Zeolite (CP-100/GY-130 or equivalent) filter cartridges and particulate filters.

4.2.3 12VDC to 120VAC powerverter or Gasoline Powered Generator.
NOTE: 12VDC to 120 VAC powerverter is for use in the emergency boat only.

4.2.4. One Norton 7600 or MSA dual side cartridge type particulate mask per team member.

4.2.5 Emergency TLDs and high range personnel dosimeter.

4.2.6 Emergency radio transmitter/receiver.

4.2.7 Stopwatch.

4.2.8 Flashlight.

4.2.9 Protective clothing.

4.2.10 Assorted poly bags.

4.2.11 Sample bottles.

4.2.12 Limnological samplers.

4.2.13 Smears.

4.2.14 Survey forms.

4.2.15 Potassium Iodine tablets.

4.2.16 Small change for telephone to station.

4.2.17 A copy of Station Health Physics Manual, 18.2, Environmental Monitoring for Emergency Conditions.

4.2.18 Map of Ten Mile Zone Sectors.



4.3 In addition to the items above at least one team shall be equipped with a SAM-2 with a RD-22 probe (or equivalent) for Iodine analysis.

4.4 Emergency environmental survey teams shall obtain keys to their respective vehicles at Trailer #7 or the South PAP, and before leaving the site shall ensure the following:

- 4.4.1 Verify communications with the Control Room or Technical Support Center dispatcher.
 - 4.4.2 Ensure DC/AC powerverter, Gasoline powered generator, and air sampler run satisfactorily.
 - 4.4.3 Ensure stopwatch and flashlight are in working order.
 - 4.4.4 Battery check survey instruments and response check if applicable.
 - 4.4.5 Ensure vehicle is fueled to maximum. (If the teams are assembled but not immediately dispatched they shall inventory the kits and fuel all vehicles.
- 4.5 Upon ensuring that their equipment is in satisfactory working order, the survey teams shall proceed to the predetermined survey points within the sectors designated by the Control Room or Technical Support Center dispatcher.
- 4.6 The survey teams shall maintain open communications with the Control Room or Technical Support Center dispatcher informing him of sample results at each predetermined survey point.
- 4.7 At each survey point, the survey teams shall perform the type sampling directed by the OSC/TSC dispatcher.
- 4.7.1 To determine Iodine concentration using the SAM-2/RD-22 see enclosure 5.1.
 - 4.7.2 To estimate ground contamination using a count rate meter with an HP-210 or 260 probe see enclosure 5.2.
 - 4.7.3 Retain all samples for future analysis.
- 4.8 In the course of their monitoring, the survey teams may be utilized to inform unknowing persons they come across, should area evacuations become imminent.
- 4.9 Once the extent of the release is known, survey teams shall continue to monitor survey points as directed by the Control Room or the Technical Support Center dispatcher in order to observe changes in radiation/contamination levels or locations.
- 4.10 The emergency environmental survey teams shall be supplemented, relieved, or secured as directed by the Station Health Physicist.
- 4.10.1 The Environmental Survey Teams designations and vehicles are:
 - ALPHA - Chemistry Vehicle - #8480

BRAVO - Health Physics Vehicle - #7632
CHARLIE - Station Manager's Vehicle - #8937
DELTA - Planning Pickup (Spare) - #8031
ECHO - Health Physics Boat

NOTE: Upon notification by the Crisis Management Center that members of the Crisis Management Center (CMC) survey teams have assembled, the assigned emergency environmental monitoring survey teams from the station shall report in to the FMC at the CMC to turn over the offsite sampling responsibilities at the earliest convenient time.

4.11 If the radio equipment becomes inoperable contact the TSC or CMC by
phone: TSC 
CMC - 

5.0 Enclosures

- 5.1 Determination of Iodine Activity with SAM2/RD-22
- 5.2 Estimation of Ground Contamination
- 5.3 Designated Limnological Sample Points
- 5.4 Standard (Tech Spec) Environmental Monitoring Points

DETERMINATION OF IODINE ACTIVITY
WITH SAM2/RD-22

$$\frac{(\text{Corrected Counts}) (\text{Eff Factor}) (4.5 \text{ E-7})}{(\text{Count Time in Min}) (\text{Volume in ml})} = \mu\text{Ci/ml}$$

or

$$\frac{(\text{Corrected Counts}) (4.5 \text{ E-7})}{(\text{Count Time in Min}) \left(\frac{1}{\text{Eff.}} \right) (\text{Vol. in ml})} = \mu\text{Ci/ml}$$

NOTE: The efficiency or the efficiency factor is taken from the instrument tag.

ESTIMATION OF GROUND CONTAMINATION
USING HP-210/260 and COUNT RATE METER

1. Determine background on HP-210 or HP-260 probe by holding the probe overhead and pointing it up.
2. Survey two inches above ground or ground vegetation (grass) moving probe to average over a large area. Be aware that heavy vegetation will cause contamination to be underestimated.
3. Determine corrected counts per minute (ccpm) by subtracting background from gross counts per minute.
4. Compute ground contamination, D.

$$D \text{ } \mu\text{Ci/m}^2 = \text{ccpm} \times 0.002$$

LIST OF DESIGNATED LIMNOLOGICAL SAMPLE POINTS

Huntersville Intakes - Sector D (East-Northeast) 2-3 miles.

Sample elevation - 742'

Accessible by land on SR 2145 (Norman Island Road)

Davidson Intakes - Sector B (North-Northeast) 5-6 miles

Sample elevation - 736'

Accessible by land on SR 2195 (Torrence Church Road)

Charlotte Intakes - Section I (South) 5-6 miles

Sample elevation 635' - Unit 1 intake

640 - Unit 2 intake

637' - Unit 3 intake

Accessible by land on SR 2004 (Mt. Holly-Huntersville Road)

NOTE: 1. Full lake elevation is 760'.

2. Catawba River spillway elevation (for Charlotte intakes) is 647'6"

DETAILED GUIDE TO ALL SAMPLE LOCATIONS

This enclosure is meant to provide a guide to one who is not familiar with the environmental TLD sample route. Appropriate deviations from this sequence and route may be made as necessary.

A. Sample location numbers:

- 143 - Point of land north of intake pumps.
- 144 - On the fence, at air sampling site #120, near H.P. Boat House.
- 145 - On the fence, at air sampling site #121, near guard house at Training and Technology Center.
- 146 - Shoreline of discharge canal, below the bridge.
- 147 - On the fence, at the Training and Technology Center, Environmental Laboratory.
- 148 - Second utility pole on the right-hand side of McGuire Construction Entrance.
- 149 - Near site fence, 200 feet east of McGuire overlook.
- 150 - On the site fence, west of McGuire overlook.
- 151 - Fence east side inside O.C. (Owner Controlled) Gate #2.
- 152 - Near railroad tracks west of N.P. (Nuclear Production) entrance.
- 153 - Clearing on the left, inside O.C. (Owner Controlled) Gate #4 (S. River Gate).
- 154 - Edge of river bank, access O.C. (Owner Controlled) Gate #5 (Lower Dam Access).
- 155 - Bottom of earthen dam embankment, access O.C. (Owner Controlled) Gate #6 (lower Dam Access).
- 156 - Top of earthen dam, access O.C. (Owner Controlled) Gate #7.
- 157 - Williamson access area sign on the Mecklenburg Neck.
- 158 - End of state maintained Road #2189 (Bethel Church Road).
- 159 - Anchorage Marine Shipyard at Holiday Harbor Marina.
- 160 - On the fence, at Anchorage Marine Showroom.
- 161 - Main power pole at the intersection of Hwy. #21 and Sam Furr Road.
- 162 - First power pole at the intersection of Gilead Road and State Road #2139.

- 163 - Duke Power substation at the intersection of Hambright Road and McCoy Road (State Road #2138).
- 164 - Power pole at the intersection of Beatties Ford Road and Hambright Road.
- 165 - Approximately 2 miles down power plant road from River Bend Steam Station.
- 166 - Water tank across from River Bend Steam Station.
- 167 - Behind Lucia Volunteer Fire Department.
- 168 - Power pole at State Road #1511 at Killiam Creek.
- 169 - Last power pole on Kincaid Road.
- 170 - Second utility pole on right from intersection of Hwy. #73 and State Road #1386.
- 171 - Utility pole at Triangle Hardware.
- 172 - Power pole at the home of T.L. McConnell.
- 173 - Power pole at the home of M.S. Glover.
- 174 - On the fence, at air sampling site #134, near East Lincoln Junior High School.
- 175 - Utility pole at the home of G.F. Terrell.
- 176 - Behind the home of R.G. McGee, on cedar post.
- 177 - Power pole at the home of J.R. Leonard.
- 178 - Duke Power Substation at Florida Steel Corporation.
- 179 - Power pole at the home of Dan Rains.
- 180 - Mooresville Water Treatment Plant.
- 181 - Davidson Water Treatment Plant.
- 182 - On the fence, at air sampling site #133, at Cornelius substation.
- 183 - Intake pumping station for Charlotte drinking water, Gar Lake.

B. Directions to sampling locations:

NOTE: Contact Security at Ext. 4460 to open all O.C. (Owner Controlled Gates).

- Location #156 Proceed to the McGuire Nuclear Station main entrance and then follow the black topped road to behind the paved parking lots. Continue on this road until it becomes a dirt road then turn onto the first dirt road on the right. At the end of this road, turn right again and proceed up the incline to the right. At the top of the incline, make a sharp left turn and follow to the top of the dam embankment. Enter O.C. Gate #7 and travel the length of the dam, until you reach the concrete dam portion of Cowan's Ford Dam. The TLD will be on your left near the base of the cement barrier.
- Location #154 (WSW) Return to the place where the dirt road becomes a black topped road and turn onto the dirt road on the right. Follow the dirt road to the SMS Supply Shelter and turn right. Continue until you enter O.C. Gate #5 then follow the dirt/grass path. As the path bends to the right, there is a grassy embankment on the left. The TLD is located in a plastic bag tied to a stake beside a rocky area \cong 400 feet from the top of the embankment.
- Location #155 (W) From the grassy embankment, return to the dirt/grass path and proceed to the end of the path. The TLD is located on the right in a plastic bag tied to a stake.
- Location #153 (SW) Exit O.C. Gate #5. Return to road in front of Chemistry Waste Treatment Building. Bear to the right and proceed to O.C. Gate #4. Go through O.C. Gate #4 to a clearing on the left (approximately halfway down the road toward the continuous water sampler). The TLD is located in the clearing near the edge of the embankment in a plastic bag.
- Location #151 (S) The TLD is located on the left as you leave O.C. Gate #2 approximately 50 feet on the left across the cement drainage pipe just before the S.P. entrance.
- Location #152 (SSW) Exit past the McGuire entrance and turn right onto Hwy. #73. The TLD is located at the RR right-of-way approximately 200 feet west of the S.P. entrance, in a clear bag.
- Location #150 (SSE) Drive east of Hwy. #73. The TLD is located on the double gates at the site fence in a plastic bag.
- Location #149 (SE) The TLD is located near the site fence approximately 25 feet off Hwy. #73 and approximately 300 feet east of Location #150 between two stakes under some pine trees.
- Location #148 (ESE) Drive east on Hwy. #73. Turn left at the Construction Entrance. The TLD is located on the second utility pole holding the overhang direction sign on the right side of the road.

- Location #147
(E) Continue toward the McGuire Construction entrance. Turn right into the Environmental Laboratory. The TLD is located on the fence, on the right near the small blue storage building.
- Location #146
(ENE) Turn right into the Training and Technology Center. The TLD is located on a utility pole on the right just before you cross the bridge.
- Location #145
(NE) Proceed to the guard house at the Training and Technology Center. The TLD is located to the right of the guard house on the knoll. It is attached to the fence at air sampling site #121.
- Location #143
(N) Proceed past the guard house and Training Center. Bear left on the first dirt road you come to, then right on the second gravel road you come to. Follow this road to the point. The TLD is in a clear bag at the very end of the island.
- Location #144
(NNE) Return from the point and turn left where the two dirt roads intersect. Follow this road until it intersects the main road and turn left. The TLD is located on your left, on the fence at air sampling site #120 near Health Physics boathouse.
- Location #158
(NNE) Return to Hwy. #73 and turn left. At the intersection of Bethel Church Road. (S.R. #2189) and Hwy. #73 turn left. The TLD is on the last power pole on the left of Bethel Church Road. (corner of Lola and Bethel Church Road.).
- Location #159
(NE) Return to Hwy. #73, turn left, and turn left on Henderson Road leading to Anchorage Marine shipyard at Holiday Harbor Marina. Follow this road to marina area. The TLD is on the power pole behind the shipyard warehouse.
- Location #160
(ENE) Return to Hwy. #73, turn left and follow Hwy. #73 until it crosses over I-77. Take the first right after crossing I-77. Follow Hwy. #21 until it intersects S.R. #2147. Anchorage Marine Showroom will be on the left. The TLD is on the fence surrounding the showroom.
- Location #161 *
(E) Return to Hwy. #21 and proceed south. The TLD is located on the right on the main power pole that feeds the meter pole at the intersection of Hwy. #21 and Sam Furr Road.

- Location #178
(SE) Follow Hwy. #21 until it intersects Gilead Road. and turn left. Follow Gilead Road. until it intersects Hwy. #115S (Old Statesville Hwy.) and turn to the right. Follow Hwy. #115S until you come to Florida Steel in the Croft Community. The TLD is on the fence inside the Duke Power substation to the right of Florida Steel, as you approach the plant.
- Location #179
(ESE) Return to Hwy. #115 and turn left. Follow Hwy. #115N until it is joined by Eastfield Road. Turn right on Eastfield Road. Follow Eastfield Road. until it intersects Prosperity Church Road. Turn right on Prosperity Church Road. The TLD is located approximately 2 miles down the road on the right, on the telephone pole across from a 'red barn' house.
- Location #163
(SE) Return to Hwy. #115 and turn right. Proceed to Hambright Road (S.R. #2117) and turn left. Proceed to McCoy Road (S.R. #2120) and turn left. The TLD is on the right, inside the fence at the Duke Power substation at the right back leg of the transformer.
- Location #164
(SSE) From Hwy. #115 turn left onto Hambright Road. Follow Hambright Road. until it intersects Beatties Ford Road. The TLD is located on the left on the power pole where these two roads intersect.
- Location #162
(ESE) Turn right onto Beatties Ford Road and follow it until it intersects Gilead Road. Turn right onto Gilead Road. Follow Gilead Road to Ramson Road (S.R. #2139) and turn left. The TLD is located on the left on a power pole in front of the David Young residence.
- Location #182
(ENE) Return to Hwy. #115 and turn left. Follow Hwy. #115N into Cornelius. Turn right off to Hwy. #115N, just past the First Union National Bank in front of Fred's Shoe Shop, then left on Zion Street. The next TLD is located on the right, inside the Duke Power substation, at air sampling site #133.
- Location #181
(NE) Return to Hwy. #115, and turn right. Follow Hwy. #115N until it intersects with Potts Street (street just before railroad overpass) and turn left. Follow Potts Street until it intersects with W. Walnut Street and turn left. The TLD is located on the power pole at the rear of the Davidson Water Works Building. The Davidson Water Works Building will be the first building on the right after turning onto W. Walnut Street.
- Location #157
(N) Proceed to the end of Walnut Street and turn left onto Gamble Road. There will be a Day Care area in front of you. Turn right at the end of this road onto Jetton Road. Follow this road until it ends and turn left.

- Location #157
(cont'd) You will see I-77. Go north on I-77. Take exit #33 off I-77, turn left, cross back over I-77. Follow this road until it intersects S.R. #1100 (Brawley School Road). turn left on S.R. #1100 and follow this road until it intersects S.R. #2160. Follow S.R. #2160 until you see the Duke Power sign at the Williamson Access area. The TLD is in a clear bag on the sign post.
- Location #180 Return to Brawley School Road and follow to stop sign. Continue straight toward Mooresville. Turn left onto Hwy. #21N. Follow Hwy. #21N. The Mooresville Water Treatment Plant is in the left approximately .5 mile up Hwy. # 21N. The TLD is on the telephone pole near the parking lot on the right.
- Location #173
(N) Return to Hwy. #150 and turn right. Follow Hwy. #150W to the Grey-Seal Paint store and turn left. Proceed to the caution light in Denver and turn left. Follow Campground Road (into Catawba County) until it intersects S.R. #1899 (just before Barkley's Mini Market) and turn left. Follow S.R. #1899 to S.R. #1845 and turn left. Follow S.R. #1845 until it intersects S.R. #1981 and turn left. The TLD is located on the first power pole on your left.
- Location #172
(NNW) Return to Campground road and turn left toward Denver. Pass Barkley's Mini-Mart on the right. Proceed to Fairfield Drive in the Westport Community. Turn left onto Fairfield Road and follow until it intersects S.R. #1389 to Lake Shore. Turn left onto Golf Course Lane. The TLD is located on the telephone pole in the front yard of house number 625.
- Location #171
(NW) Return to Hwy. #16 south. The TLD is located at the south side of the Triangle Hardware Store on the utility pole.
- Location #170
(WNW) Return to Hwy. #16 south. Follow Hwy. #16S until it intersects Hwy. #73. Turn right onto Hwy. #73. Follow Hwy. #73 until it intersects S.R. #1386. Turn left on S.R. #1386. The TLD is located up an embankment on the second utility pole on the right from the intersection.
- Location #174
(WNW) Return to Hwy. #73W. The TLD is located at East Lincoln Junior High, west of the main campus beside the well house. The TLD is on the fence at the air sampling site #134.
- Location #175
(WNW) Return to Hwy. #73, turn right and follow Hwy. #73 until it joins Hwy. #27. Follow Hwy. #27 into Boger City. At the intersection of Hwy. #27 and S.R. #1003 (in front of Carolina Shopping Center) turn back to the right. Follow S.R. #1003 until it intersects S.R. #1332 and turn left. Follow S.R. #1332 until it

- Location #175
(cont'd) intersects S.R. #1500 and turn right. The TLD is located on the telephone pole in the back yard at the home of G.F. Terrell. This is the 8th house on the right on S.R. #1500.
- Location #176
(SW) Return to Hwy. #27 and turn left. Follow Hwy. #27E through Stanley. At the intersection of Hwy. #27E and E. Dallas Road turn to the right. Follow E. Dallas Road, until it intersects S. Main Street and turn left. Follow Hwy. #275 (to the right of Nichol's Service Station and Grocery) until it intersects S.R. #2001 (dirt road) and turn left. Follow S.R. #2001 until it intersects S.R. #2393 (hard surface road) and turn left. The TLD is located on a cedar post in the back yard at the home of R.G. McGee. This is the 9th house on the left of S.R. #2393.
- Location #168
(WSW) Return to Hwy. #16 and turn left. Continue north on Hwy. #16 until it intersects Old Plank Road (S.R. #1511) and turn left. The TLD is located on the left on the last power pole before crossing Killiam Creek.
- Location #169
(W) Return to Hwy. #16 and turn left. Follow Hwy. #16 until it intersects Kincaid Road. (Kincaid Road is the road immediately north of Hills Chapel United Methodist Church on Hwy. #16). Turn left on Kincaid Road. The TLD is located on the last power pole on the right at the end of the road.
- Location #167
(SW) Return to Hwy. #16 and turn right. The next TLD is located on the left hand side of the road behind the Lucia Volunteer Fire Department Building. It is in a clear bag at the edge of the trees.
- Location #166
(SSW) Turn left onto Hwy. #16 and proceed to Power Plant Road. The next TLD is located on your right, on the water tank across from River Bend Steam Station.
- Location #165
(S) Proceed down Power Plant Road for approximately 2 miles. The TLD is on the fence post on the right at the sharp bend (90°) in the road.
- Location #177
(S) Return to Hwy. #16 and turn left. Follow Hwy. #16S until it intersects Kentberry Drive in the Coulwood Community and turn to the right. Turn left at the intersection of Kentberry and Belmorrow Drive. The TLD is located on the power pole in the front yard of J.R. Leonard at 908 Belmorrow Drive.
- Location #183
(S)
(control) Return to Hwy. #16 and turn left. Turn right at the intersection of Mt. Holly-Huntersville Road (S.R. #2004). Follow Mt. Holly-Huntersville Road to Pump Station Road (S.R. #2001) and turn right. Follow Pump House Road until it dead ends. The TLD is located along the river bank just at the edge of the tall grass in a clear bag.

CRISIS MANAGEMENT PLAN
IMPLEMENTING PROCEDURE

5.3.15

"Environmental Monitoring for Emergency Conditions
Within the Ten Mile Radius of Oconee Nuclear Station"

Rev. 4
August 15, 1984

DUKE POWER COMPANY
PROCEDURE PREPARATION
PROCESS RECORD

(1) ID No: C2/O/B/4003/0
Change(s) n/a to
 Incorporated

- (2) STATION: OCONEE
- (3) PROCEDURE TITLE: Procedure for Environmental Surveillance Following a Large Unplanned Release of Gaseous Radioactivity

(4) PREPARED BY: M. P. Killworth DATE: 04/17/84

(5) REVIEWED BY: Jimmy J. Love DATE: 4/18/84

Cross-Disciplinary Review By: _____ N/R: JA

- (6) TEMPORARY APPROVAL (IF NECESSARY):

By: _____ (SRO) Date: _____

By: _____ Date: _____

(7) APPROVED BY: JA Ban Date: 4/18/84

- (8) MISCELLANEOUS:

Reviewed/Approved By: John W. Cicin Date: 1E 4/25/84

Reviewed/Approved By: 16 Date: 4/18/84

DUKE POWER COMPANY
OCONEE NUCLEAR STATION
EMERGENCY PLAN/CRISIS MANAGEMENT PLAN
PROCEDURE FOR ENVIRONMENTAL SURVEILLANCE FOLLOWING A LARGE
UNPLANNED RELEASE OF GASEOUS RADIOACTIVITY

1.0 Purpose

To provide a procedure for identifying gaseous plumes and obtaining field data indicative of the radiation exposure to the general public following an unplanned release of gaseous activity in excess of the limits established by Section 20.403(b)(2) of 10CFR20.

2.0 Limits and Precautions

- 2.1 The Field Monitoring Coordinator (FMC) or Environmental Surveillance Coordinator shall report to the Station Health Physicist (Technical Support Center) once the Emergency Plan has been implemented.
- 2.2 The FMC shall report to the Off-Site Radiological Coordinator (System Health Physicist or designee) once the Crisis Management Center has been established.
- 2.3 The FMC or designee shall call the Field Monitoring Supervisor(s) and team members to report to the Environmental Lab once the Emergency Plan has been implemented. The names and telephone numbers of these individuals are listed in Enclosure 5.1.
- 2.4 The field monitoring teams shall use particulate masks and protective clothing whenever activity (measured with the Eberline E-120 or PIC 6A) significantly exceeds normal background or when directed by the FMC.
- 2.5 If the team members expect to be exposed to ^{131}I in excess of 10 MPC (9×10^{-8} $\mu\text{C}/\text{ml}$), or if directed by the FMC each team member shall ingest a 130 milligram tablet of potassium iodide.
- 2.6 Environmental sampling during emergency conditions shall not replace, but rather supplement normal environmental monitoring.
- 2.7 The Nuclear Data ND-6 multichannel analyzers shall be calibrated and source checked monthly (CP/O/B/4003/05). The ND-6 shall also be source checked prior to field use.
- 2.8 The Eberline Geiger Counters (E-120 with HP-270 detector), PIC 6As, and Portable Air Samplers (RADeCC H-809 F) shall be calibrated quarterly (CP/O/B/4003/06).
- 2.9 An inventory of the emergency kits shall be conducted quarterly to ensure that all items needed are readily available (CP/O/B/4003/06).

- 2.10 Personnel shall adhere to all company safety rules regarding driving of vehicles or boats.
- 2.11 Annual training in the use of this procedure and the associated equipment and instrumentation shall be conducted. Upon completion of the training, documentation of training will be accomplished by completing a Training Content Summary Form, which will be forwarded to the Training and Safety Section.

3.0 Procedure

- 3.1 Upon request for off-site environmental monitoring by the Station Health Physicist and/or the Off-Site Radiological Coordinator, the FMC shall report to the Technical Support Center (TSC). The Field Monitoring Supervisor(s) and members of the six (6) field teams, including one (1) Mobile ND-6 team, shall report to the Environmental Lab to obtain the emergency kits and to initiate surveillance requirements.
- 3.2 One mobile ND-6 team (Alpha), three land field teams, (Bravo, Charlie, Delta) and one boat team (Echo) consisting of 2 technicians each and one helicopter team (Foxtrot) consisting of 1 technician shall be formed as follows:

<u>Team Call Sign</u>	<u>Transportation *</u>
"Alpha"	Environmental Vehicle #8191 (1980 Ford Bronco)
"Bravo"	Admin. Services Vehicle #6888 (1978 Ford Bronco)
"Charlie"	Admin. Services Vehicle #4205 (1974 Chevy Blazer)
"Delta"	Maintenance Vehicle #7770 (1979 Ford Pickup-Blue)
"Echo"	Maintenance Vehicle #8134 (1980 Ford Pickup-White)
"Foxtrot"	Administrative Vehicle #7103 (1978 Ford Station Wagon-White)
	Administrative Vehicle #7104 (1978 Ford Station Wagon-Blue)

*Pool of transportation - vehicles not limited to specific teams.

- 3.3 The field teams upon obtaining their emergency kits and emergency vehicles shall before leaving the site:
- 3.3.1 Verify radio communications with the Technical Support Center or Crisis Management Center Base Station using proper radio procedures (Procedure CP/O/B/4003/03).
- 3.3.2 Ensure the Portable Power Generators are operational and fully fueled.
- 3.3.3 Battery and source (Cs-137) check Eberline E-120 survey instrument, PIC 6A, and ND-6 for proper operation.
- 3.3.4 Ensure vehicle and spare gas can (for portable generator) are fueled to maximum capacity.

3.4 Action Plan

- 3.4.1 The Field Monitoring Coordinator's group (Enclosure 5.1) shall consist of the FMC, two alternates, three supervisors, six radio operators and twenty field monitoring team members (including two of the four radio operators).
 - 3.4.1.1 The radio operator(s) shall set up the communications equipment in the TSC and maintain communications with the Field Teams using proper radio procedures (Procedure CP/O/B/4003/03).
- 3.4.2 Coordinator Action
 - 3.4.2.1 The FMC shall be located in the Technical Support Center (TSC) and report to the Station Health Physicist once the TSC is established. Once the Crisis Management Center is established the FMC will report to the Off-Site Radiological Coordinator.
 - 3.4.2.2 Plume direction and sector(s) to be monitored shall be determined by the FMC using CP/O/B/4003/02.
 - 3.4.2.3 The FMC shall direct the efforts of the Field Teams in obtaining pertinent field measurements and implement monitoring strategies and sample collection requirements.
 - 3.4.2.4 The FMC shall advise the Dose Assessment Coordinator of results of field measurements.
 - 3.4.2.5 The FMC shall assure adequate staffing and resources for the Field Teams.
 - 3.4.2.6 The FMC shall assimilate all the data accumulated during the emergency event to facilitate report preparations.
- 3.4.3 Supervisor Action
 - 3.4.3.1 The Field Monitoring Supervisor shall assist the FMC and be prepared to serve as the FMC in his absence.
 - 3.4.3.2 The Field Monitoring Supervisor shall obtain meteorological information from the Station Health Physicist in the Technical Support Center or the Unit 1 Control Room. When the Crisis Management Center is established meteorological information shall be obtained from the Off-Site

Radiological Coordinator. Meteorological conditions shall be reviewed approximately every 15 minutes for possible changes that would affect the plume direction and the sector(s) to be monitored (CP/O/B/4003/02).

- 3.4.3.3 The Supervisor shall dispatch Field Teams to predetermined survey points within the designated (downwind) sector(s). Predetermined sampling locations are located by using Enclosure 5.2 and the map in each kit.

NOTE: The predetermined sampling locations are reference points only. Teams should cruise back and forth across sectors to pin-point the radioactive plume using the Eberline E-120 (primary) or PIC 6A. Once the plume is located then ^{131}I activity should be determined.

- 3.4.3.4 The supervisor shall direct the teams as required to expedite analysis of air samples for ^{131}I .

- 3.4.3.5 Field Teams E and F may or may not be dispatched immediately. Team E, the boat team, will be used to monitor plume activity over Lake Keowee. Team F is the helicopter team and will monitor the plume from the air if determined feasible by the Offsite Radiological Coordinator. Enclosure 5.3 outlines the procedure for obtaining the use of the helicopter.

- 3.4.3.6 The Supervisor or Radio Operator shall record all team data as received on Enclosure 5.4 such as:

3.4.3.6.1 Location and status of team.

3.4.3.6.2 Location and time of sample.

3.4.3.6.3 Dose Rates in mR/hr [Eberline E-120 (primary) or PIC 6A].

3.4.3.6.4 Air Sampling Results in $\mu\text{Ci/ml}$ of ^{131}I (ND-6)

3.4.3.6.5 Additional Samples Collected (Smears, Water Samples, etc.)

- 3.4.3.7 Illustrate and maintain up-to-date locations of teams on the 10 mile radius maps.

- 3.4.3.8 Instruct teams to collect and replace TLD's and the CP-100 Charcoal Cartridges and particulate filters from air samplers located in the environment as part of the normal environmental monitoring

program (Procedures CP/O/B/4005/13 and CP/O/B/4005/05, respectively). Collect only those air samples and TLD's which are necessary for plume detection. Locations of TLD's and Air Samplers are listed in Enclosure 5.5.

3.4.4 Team Action

- 3.4.4.1 One Field Team shall be designated as the Mobile ND-6 Team. This team will have a ND-6 and be responsible for analyzing air samples from all teams for ^{131}I . A second ND-6 shall be designated for the boat team or another land team based on conditions and need.
- 3.4.4.2 Upon verification that all equipment is operating satisfactorily, the Field Teams shall proceed as directed their predetermined survey points (Enclosure 5.2) within the sector(s) designated by the Field Monitoring Coordinator or Supervisor.
- 3.4.4.3 The Field Teams shall maintain open communications with the Field Monitoring Coordinator or Supervisor, providing sample results as required at each of the sampling locations.
- 3.4.4.4 As directed by the FMC or Supervisor the teams shall travel back and forth between predesignated sample locations:
 - 3.4.4.4.1 Using the Eberline E-120 with HP-270 detector or PIC 6A, perform a general area Beta-Gamma survey to determine noble gas concentrations in mR/hr. Record date, time, location and dose rate (mR/hr) on Field Monitoring Data Sheet (Enclosure 5.6) and report this information to the FMC.
 - 3.4.4.4.2 Teams may be directed to take an air sample ($\geq 10^6$ ml) using the RADeCO Portable Air Sampler equipped with a Silver Zeolite Cartridge and particulate filter. Use Enclosure 5.7 to ascertain sample time [based on the calibrated flow rate (CFM) of the Air Sampler] for obtaining a minimum sample volume ($\geq 10^6$ ml). Use the stopwatch to ensure correct number of minutes for an adequate sample. Record Date/Time/

location of sample, sample run time (min.) and calibration sticker air flow (cfm) on Enclosure 5.8, Column "A", "B", and "C", respectively. Calculate the sample volume in milli-liters (must be $\geq 10^6$ ml) as follows:

$$\text{Sample Volume (ml)} = \text{Calibrated Flow Rate (CFM)} \times \text{Sample Run Time (min)} \times 2.83 \times 10^4 \text{ ml/ft}^3$$

Record Sample Volume (ml) on Enclosure 5.8, Column "H".

- 3.4.4.4.3 Place the silver zeolite cartridge in a poly sample bag and label the bag.
- 3.4.4.4.4 At the direction of the Field Monitoring Supervisor meet the Mobile ND-6 Team and have the sample counted as per procedure No. CP/O/B/4003/04. Record CPM on Enclosure 5.8, Column "E".
- 3.4.4.4.5 Calculate ^{131}I Activity ($\mu\text{Ci/ml}$) as directed in Enclosure 5.8 and record under Column "I".
- 3.4.4.4.6 Report results of ^{131}I measurement (Column "I", Enclosure 5.8) to the FMC in $\mu\text{Ci/ml}$.
- 3.4.4.4.7 Place the particulate filter from the air sampler in a separate poly bag, label and retain for later analysis.
- 3.4.4.4.8 (Optional) Take smears at locations as directed by the FMC, place them in separate poly bags, label and retain for later analysis.
- 3.4.4.4.9 (Optional) Collect water samples in cubitainers at locations and times designated by the FMC. Label the cubitainers and retain for later analysis.
- 3.4.4.4.10 (Optional) Place TLDs at locations and times designated by the FMC.
- 3.4.4.4.11 (Optional) Collect air samples and TLDs that are located in the environment as part of the normal environmental

monitoring program as directed by the FMC. Record locations and collection times. Locations are listed in Enclosure 5.5.

- 3.4.4.4.12 Return all samples to the Environmental Lab or Crisis Management Center as directed by the FMC. Samples shall be counted onsite by Health Physics or transported to the Environmental Lab, Huntersville, N.C. for counting. The Crisis Management Center Administration and Logistics Group shall be responsible for transporting the samples expeditiously to the Environmental Lab if required.
- 3.4.4.4.13 Turn in all data sheets (Enclosures 5.6 and 5.8) to FMC or designee.
- 3.4.4.4.14 The teams shall be supplemented, relieved, or secured as directed by the FMC.

4.0 References

- 4.1 Procedure CP/O/B/4003/02, The Determination of Plume Direction and Sector(s) to be Monitored Following a Large Unplanned Release of Gaseous Radioactivity.
- 4.2 Procedure CP/O/B/4003/03, Emergency Radio System Operations, Maintenance and Communications.
- 4.3 Procedure CP/O/B/4003/04, Operation of The ND-6, Portable Multichannel Analyzer
- 4.4 Procedure CP/O/B/4003/05, Energy Calibration and Efficiency Determination For the ND-6
- 4.5 Procedure CP/O/B/4003/06, Inventory, Calibrations and Operational Verification of Emergency Equipment.

5.0 Enclosures

- 5.1 Field Monitoring Organization.
- 5.2 Predetermined Sampling Locations by Sector and Distance from ONS
- 5.3 Procurement of Helicopter(s) for Emergency Environmental Surveillance.
- 5.4 Radio Operator's Log
- 5.5 Helicopter Survey Results

- 5.6 Air Sampler and TLD Locations for Normal Environmental Monitoring Program.
- 5.7 Field Monitoring Data Sheet for Dose Rate Measurements.
- 5.8 Sample Time Required For Minimum Sample Volume.
- 5.9 Field Monitoring Team Work Sheet for Determining ^{131}I Activity.

ENCLOSURE 5.1
FIELD MONITORING ORGANIZATION

FIELD MONITORING COORDINATOR (FMC) AND RADIO OPERATORS (RO)

Primary FMC: J. W. Crain - Office: [REDACTED] Home: [REDACTED]
Alternate(s): J. R. Leonard - Office: [REDACTED]; Home: [REDACTED]
C. V. Wray - Office: [REDACTED] Home: [REDACTED]

TSC RO: Field Monitoring Team Member, Part A 1-7 listed below.

TSC Alternate:

CMC Primary RO: J. Painter - Office: [REDACTED] Home: [REDACTED]
CMC Primary RO: S. A. Gewehr - Office: [REDACTED] Home: [REDACTED]
CMC Primary RO: R. Ouellette - Office: [REDACTED] Home: [REDACTED]
CMC Alternate: G.M. Harrison - Office: [REDACTED]; Home: [REDACTED]
CMC Alternate: R. L. Rivard - Office: [REDACTED]; Home: [REDACTED]
CMC Alternate: S. E. LeRoy - Office: [REDACTED] Home: [REDACTED]

FIELD MONITORING SUPERVISOR

J. D. Bivins Office: 803/882-5363(1465); Home: [REDACTED]

FIELD MONITORING TEAM MEMBERS

A. Chemistry (ONS)

1. *Bobby Lee - Ext. [REDACTED] Home: [REDACTED]
2. Gina Roach - Ext. [REDACTED] Home: [REDACTED]
3. Keith Beddingfield [REDACTED] Home: [REDACTED]
4. *Gary Sain - Ext. [REDACTED] Home: [REDACTED]
5. *Bobby Childress - Ext. [REDACTED]; Home: [REDACTED]
6. *Lynette Fant - Ext. [REDACTED] Home: [REDACTED]
7. *Judy Head - Ext. [REDACTED] Home: [REDACTED]
8. Rick Morris - Ext. [REDACTED] Home: [REDACTED]
9. *Sandra Luedeman - [REDACTED] Home: [REDACTED]
10. Gay Walter - Ext. [REDACTED] Home: [REDACTED]

B. Health Physics (ONS)

1. Steve Alexander - Ext. [REDACTED]; Home: [REDACTED]
2. Roger Slocum - Ext. [REDACTED] Home: [REDACTED]
3. Randy Smith - Ext. [REDACTED] Home: [REDACTED]
4. *Tom Smith - Ext. [REDACTED] Home: [REDACTED]
5. Janet Hutchins - [REDACTED] Home: [REDACTED]
6. *Don Davis - Ext. [REDACTED] Home: [REDACTED]
7. *Paul Tichenor - [REDACTED] Home: [REDACTED]
8. Barry Stewart - [REDACTED] Home: [REDACTED]
9. *Steve Kirkland - [REDACTED] Home: [REDACTED]
10. Robert Taylor - [REDACTED] Home: [REDACTED]
11. Darrell Lewis - [REDACTED] Home: [REDACTED]

*Can be on site within 30 minutes

ENCLOSURE 5.2
PREDETERMINED SAMPLING LOCATIONS BY SECTOR AND DISTANCE FROM ONS

<u>Sampling Sector</u>	<u>Sampling Location</u>	<u>Responsible Team</u>	<u>Radius from ONS (Mi)</u>	<u>Description of Sampling Locations</u>
N	A-1	E	1	Lake Keowee - Midlake due west of Warpath Access Area
N	A-2	B or E	3	Gap Hill Landing
N	A-3	E	3	West Shoreline of Lake Keowee from Gap Hill Landing
N	A-4	E	5	East Shoreline of Lake Keowee - Due East from Crow Creek Island
N	A-5	E	5	Midlake at Crow Creek Island
N	A-6	C or E	5	Old Town Landing
N	A-7	D	10	Keowee Toxaway State Park
N	A-8	D or E	9	Hwy 11 Bridge over Lake Keowee
NNE	B-1	A or E	1	Warpath Access Area
NNE	B-2	B	3	Junction of Hwy 157 (Gap Hill Rd) and 500 KV Transmission Line
NNE	B-3	B	3	Lake Hill Acres Campground - Hwy 157 (Gap Hill Rd)
NNE	B-4	C	5	Junction of Hwy 133 & 327
NNE	B-5	C	5	Hwy 327, Keowee Church
NNE	B-6	D	9	Junction of Hwy 133 & 49 (Shady Grove Church)
NE	C-1	A	1	Hwy 183, 1 mile N of Lake Hartwell at Steel Gate (West Side of Road)
NE	C-2	B	3	Junction of Hwy 183 & 157 (Gap Hill Rd)
NE	C-3	C	4	Love & Care Nursing Home (Love & Care Rd)
NE	C-4	C	5	Junction of Hwy 133 and Hunting Hollow Rd
NE	C-5	D	10	Martin Grove Church, Junction of Hwy 172 & 32
NE	C-6	D	10	Junction of Hwy 32 & 33
ENE	D-1	A	1	Hwy 183 N of Keowee Hydro Station Tailrace Bridge @ Keowee Cabins
ENE	D-2	B	3	Junction of Hwy 157 (Gin Shoals Rd.) and Shadydale Circle
ENE	D-3	C	5	Junction of Hwy 137 and Belle Shoals Rd

ENCLOSURE 5.2 (Cont.)
PREDETERMINED SAMPLING LOCATIONS BY SECTOR AND DISTANCE FROM ONS

Sampling Sector	Sampling Location	Responsible Team	Radius from ONS (Mi)	Description of Sampling Locations
ENE	D-4	C	5	Hwy 137, 1.5 miles east of Hwy 183 at first road junction
ENE	D-5	D	10	Junction of Hwy 267 & 12 Mile Creek
ENE	D-6	D	10	Junction of Hwy 273 & 12 Mile Creek
ENE	D-7	D	10	Junction of Hwy 183 & 287
E	E-1	A	1	Old Pickens Grocery, Junction of Hwy 182 & 160
E	E-2	B	3	Bridge @ Junction of Hwy 291 (Old Seneca Hwy) & Six Mile Creek
E	E-3	B	3	Entrance to Foxfire Estates off Hwy 291 1 mile N of Hwy 160
E	E-4	C	5	Junction of S.C. 133 & County 137 @ Six Mile Post Office
E	E-5	C	5	Junction of Hwy 133 & 337 (Maw Bridge Rd)
E	E-6	C	5	Junction of Hwy 337 & Camp Creek Rd
E	E-7	D	10	Holly Springs Church on Hwy 222
E	E-8	D	10	Junction of Hwy 158 & 137
E	E-9	D	10	Junction of Hwy 93 & 171
ESE	F-1	A	1	Hwy 183 Bridge across Lake Hartwell
ESE	F-2	B	3	Junction of Hwy 160 & Furman L. Smith Rd
ESE	F-3	B	3	Junction of Furman L. Smith Rd & Hwy 101 (Knoll View Road)
ESE	F-4	C	5	Junction of Hwy 277 & 337 (Maw Bridge Rd)
ESE	F-5	D	10	Junction of Hwy 165 & 44 (Central, S.C.)
ESE	F-6	D	10	Midway Church, Junction of Hwy 395 & 91
ESE	F-7	D	10	Junction of Hwy 93 & 51 (Norris, S.C.)
SE	G-1	A	1	Hwy 183 @ Old Pickens Church
SE	G-2	B	3	Hwy 291 @ entrance to Toby Hills Subdivision
SE	G-3	C	5	Pleasant Hill Church @ Junction of Hwy 160 & 133
SE	G-4	C	5	Daniel High School @ Junction of Hwy 133 & 15

ENCLOSURE 5.2 (Cont.)
PREDETERMINED SAMPLING LOCATIONS BY SECTOR AND DISTANCE FROM ONS

<u>Sampling Sector</u>	<u>Sampling Location</u>	<u>Responsible Team</u>	<u>Radius from ONS (Mi)</u>	<u>Description of Sampling Locations</u>
SE	G-5	D	7	Junction of Hwy 15 & 102 (Central, S.C.)
SE	G-6	D	10	Junction of Hwy 123 & 18
SE	G-7	D	10	Junction of Hwy 123 & 30
SSE	H-1	A	1	Junction of Hwy 183 & 6
SSE	H-2	B	3	Hwy 291 two miles S of Hwy 160
SSE	H-3	B	5	Hwy 291 & 27 @ Isaquena Park Entrance
SSE	H-4	B	5	Hwy 27, Lawrence-Ramsey Bridge Access Area
SSE	H-5	C	9	Junction of Hwy 123 & 133 (Clemson, S.C.)
SSE	H-6	C	9	Junction of Hwy 123 & 93 (Clemson, S.C.)
SSE	H-7	C	9	Junction of Hwy 93 & 320 @ Littlejohn Colliseum
SSE	H-8	C	10	Bridge across Lake Hartwell 1 mile E of Hwy 149 & 115 Junction
S	I-1	A	1	0.5 Miles SW of Junction 130 & 6 @ Beaver Pond Marker
S	I-2	A	3	Hwy 130 @ Holder's Landing
S	I-3	B	5	Junction of Hwy 27 & N Bayshore Dr.
S	I-4	B	5	Junction of Hwy 27 & 359 (Hanover Hills)
S	I-5	B	5	Corinth Baptist Church, Hwy 1 (Old Clemson Hwy)
S	I-6	C	10	Junction of Hwy 37 & 210
S	I-7	C	10	Clemson, Oconee Airport, Hwy 37
SSW	J-1	A	1	Junction of Hwy 183 & 130
SSW	J-2	A	3	Junction of Hwy 130 & 38
SSW	J-3	E	3	Lake Keowee, East Shoreline
SSW	J-4	B	5	Hwy 130 @ South end of Newry Dam
SSW	J-5	E	5	Lake Keowee, Midlake west of Newry Dam
SSW	J-6	B	8	Junction of Hwy 130 & 123
SSW	J-7	C	9	Utica Elementary School, Seneca, S.C.
SSW	J-8	C	8	Seneca Water Plant

ENCLOSURE 5.2 (Cont.)
PREDETERMINED SAMPLING LOCATIONS BY SECTOR AND DISTANCE FROM ONS

<u>Sampling Sector</u>	<u>Sampling Location</u>	<u>Responsible Team</u>	<u>Radius from ONS (Mi)</u>	<u>Description of Sampling Locations</u>
SW	K-1	A	1	Old Hwy 183, 1/4 mile W of Hwy 130
SW	K-2	E	3	Lake Keowee, Midlake beneath Norcross Ga. 500 KV Transmission Line
SW	K-3	B	5	Fairview Church, Hwy 340
SW	K-4	B	5	Crooked Creek Bridge across Lake Keowee on Hwy 183
SW	K-5	C	9	Oconee Memorial Hospital @ Hwy 123 & 28
SW	K-6	C	9	Head-Lee Nursery, Hwy 28
WSW	L-1	E	1	Lake Keowee, Cove immediately north of skimmer wall
WSW	L-2	E or A	3	End of Hwy 605 @ Lake Keowee
WSW	L-3	B	5	Junction of Hwy 46 & 175
WSW	L-4	B	5	2 Mi S of Hwy 46 & 175 Junction
WSW	L-5	C	10	Junction of Hwy 35 & 28 (West Union)
WSW	L-6	C	10	Junction of Hwy 11 & 28 (West Union)
W	M-1	E	1	Due West of ONS on Lake Keowee
W	M-2	A	3	Junction of Hwy 12 & 576
W	M-3	B	5	Junction of Hwy 223 & Crooked Creek
W	M-4	B	6	Junction of Hwy 183 & 40 (Patterson's Grocery)
W	M-5	C	8	Junction of Hwy 11 & 131
W	M-6	C	8	Junction of Hwy 11 & 183
WNW	N-1	E	1	Midlake, due west of Connecting Canal Bridge in Lake Keowee
WNW	N-2	A	3	Junction of Hwy 183 & 201
WNW	N-3	A	3	Junction of Hwy 201 & 92
WNW	N-4	B	5	Junction of Hwy 40 & 46
WNW	N-5	B	5	Little River Bridge on Hwy 132
WNW	N-6	C	9	Pickett Post @ Hwy 11
WNW	N-7	C	9	Junction of Hwy 11 and 94

ENCLOSURE 5.2 (Cont.)
PREDETERMINED SAMPLING LOCATIONS BY SECTOR AND DISTANCE FROM ONS

<u>Sampling Sector</u>	<u>Sampling Location</u>	<u>Responsible Team</u>	<u>Radius from ONS (Mi)</u>	<u>Description of Sampling Locations</u>
NW	O-1	A	1	Junction of Hwy 130 & 183 at Keowee Key Sign
NW	O-2	A or E	3	Stamp Creek Landing on Hwy 92
NW	O-3	B	5	Junction of Hwy 132 & unmarked Rd.
NW	O-4	B	5	Junction of Hwy 130 & 200
NW	O-5	C	10	Tamassee DAR School off Hwy 11
NW	O-6	C	10	Junction of Hwy 11 & 57
NNW	P-1	E	1	West shoreline of cove immediately north of connecting canal on Lake Keowee
NNW	P-2	A	3	Stamp Creek Church @ Junction of Hwy 128 & 130
NNW	P-3	B	5	Junction of Hwy 200 & Stamp Creek Bridge
NNW	P-4	B	5	Church of God @ Junction of Hwy 200 & 128
NNW	P-5	C	10	Junction of Hwy 11 & 171
NNW	P-6	C	10	Junction of Hwy 11 & 127

ENCLOSURE 5.3

PROCUREMENT OF HELICOPTERS FOR EMERGENCY ENVIRONMENTAL SURVEILLANCE

Inland Airways, Greenville, S. C., is under contract to Duke Power Company to furnish one helicopter upon request and an additional helicopter within six hours following notification. Once a helicopter is requested, there is a maximum elapsed time of three hours for the helicopter to arrive at Oconee or other dispatched locations.

Helicopter service is limited to daylight hours and adequate flying weather. The helicopters will hold three people, the pilot and two passengers. To perform surveys, instrumentation may limit the passenger space.

To obtain helicopter(s) for emergency service contact:

	<u>Office</u>	<u>Home</u>
1. L. W. Johnson*		
2. L. M. Whisonant*		
3. B. A. Turpin*		
4. D. M. Staggs*		

*These contacts are in Duke Power Company Transmission Dept., Line Division

ENCLOSURE 5.5
AIRBORNE RADIATION MONITORING DATA SHEET
HELICOPTER SURVEY RESULTS

STATION _____
*FHC _____
PILOT _____

PAGE _____ OF _____

DATE _____

HELICOPTER I.D. _____

NET. DATA: WIND SPEED _____ MPH; WIND DIRECTION: FROM _____ °; AZIMUTH _____ ° to _____ °

SURVEY INSTRUMENTS: TYPE _____; I.D. NUMBER _____
TYPE _____; I.D. NUMBER _____

ROUTE - AIRBORNE CHECK POINT (APC)
APC LEG FROM _____ TO _____

*ROUTE - AIRBORNE CHECK POINT (APC)
APC LEG FROM _____ TO _____

DESCRIPTION: FROM _____
TO _____

DESCRIPTION: FROM _____
TO _____

SURVEY CRITERIA: INTERVAL _____ SEC.; AIR SPEED _____ MPH
ALTITUDE _____ FT.

SURVEY CRITERIA: INTERVAL _____ SEC.; AIR SPEED _____ MPH
ALTITUDE _____ FT.

START TIME _____ (All Readings in mR/Hr.)

1	16	31
2	17	32
3	18	33
4	19	34
5	20	35
6	21	36
7	22	37
8	23	38
9	24	39
10	25	40
11	26	41
12	27	42
13	28	43
14	29	44
15	30	45

START TIME _____ (All Readings in mR/Hr.)

1	16	31
2	17	32
3	18	33
4	19	34
5	20	35
6	21	36
7	22	37
8	23	38
9	24	39
10	25	40
11	26	41
12	27	42
13	28	43
14	29	44
15	30	45

ENCLOSURE 5.6
TLD AND AIR SAMPLER LOCATIONS FOR NORMAL ENVIRONMENTAL MONITORING
PROGRAM TLD LOCATIONS

- 020 Site Boundary Fence (0.2 miles N)
- 021 Site Boundary Fence (0.2 miles NNE)
- 022 Site Boundary Fence (0.5 miles NE)
- 023 Site Boundary Fence (0.9 miles ENE)
- 024 Site Boundary Fence (0.8 miles E)
- 025 Site Boundary Fence (0.6 miles ESE)
- 026 Site Boundary Fence (0.3 miles SE)
- 027 Site Boundary Fence (0.3 miles SSE)
- 028 Site Boundary Fence (0.5 miles S)
- 029 Site Boundary Fence (0.6 miles SSW)
- 030 Site Boundary Fence (0.4 miles SW)
- 031 Site Boundary Fence (0.2 miles WSW)
- 032 Site Boundary Fence (0.2 miles W)
- 033 Site Boundary Fence (0.2 miles WNW)
- 024 Site Boundary Fence (0.2 miles NW)
- 035 Site Boundary Fence (0.1 miles NNW)
- 036 Mile Creek Landing (4.0 miles N)
- 037 Keowee Church, Hwy. 327 (4.5 miles NNE)
- 038 Mauldin's Grocery, Junction Hwy. 183 and 133 (4.0 miles NE)
- 039 Hwy. 133, ~ 1 mile east of Hwy. 183 and 133 junction (4.0 miles ENE)
- 040 Microwave Tower, Six Mile (4.5 miles E)
- 041 Junction Hwy. 101 and 133 ~ 1.5 miles S of Microwave Tower (4.0 miles ESE)
- 042 Lawrence Chapel Church, Hwy. 133 (5.0 miles SE)
- 043 Hwy. 291 at Entrance to Isaqueena Park (4.0 miles SSE)
- 044 Hwy. 130 at Little River Dam (4.0 miles S)
- 045 Terminus of Hwy. 588 into Lake Keowee (5.0 miles SSW)
- 046 Hwy. 188 at Crooked Creek Bridge (4.5 miles SW)
- 047 New Hope Church - Hwy. 188 (4.0 miles WSW)
- 048 Junction Hwy. 175 and 188 ~ ½ mile N of Keowee School (4.0 miles W)
- 049 Junction Hwy. 201 and 92 (4.0 miles WNW)
- 050 Stamp Creek Landing - End of Hwy. 92 (4.0 miles NW)
- 051 Hwy. 128 ~ 1 mile N of Hwy. 130 (4.5 miles NNW)
- 052 Duke Power Branch Office - Pickens (12.0 miles ENE)

ENCLOSURE 5.6 (Cont.)
TLD AND AIR SAMPLER LOCATIONS FOR NORMAL ENVIRONMENTAL MONITORING
PROGRAM TLD LOCATIONS

053 Duke Power Branch Office - Liberty (11.0 miles E)
054 Midway Church - Hwy. 395 - Central (9.5 miles ESE)
055 Clemson Meteorology Plot (9.5 miles SSE)
056 Utica School - Seneca (8.5 miles SSW)
057 Oconee Memorial Hospital - Seneca (9.0 miles SW)
058 Branch Road Substation - Walhalla (Control) (10.0 miles WSW)
059 Tamassee DAR School (9.0 miles NW)

AIR SAMPLER LOCATIONS

060 Greenville Water Intake Access Road - (2.5 miles NNE)
061 Old Hwy. 183 (1.5 miles SSW)
072 Hwy. 130 (1.7 miles S)
073 Tamassee DAR School (9.0 miles NNW)
074 Keowee Key Sewage Treatment Plant - Hwy. 130 (1.7 miles NNW)

ENCLOSURE 5.8

SAMPLE TIME REQUIRED FOR MINIMUM SAMPLE VOLUME

FLOW RATE (CFM)	MINIMUM REQUIRED SAMPLING TIME IN MINUTES
.5	71
1.0	36
1.5	24
2.0	18
2.5	15
3.0	12
3.5	11
4.0	9
4.5	8

NOTE: When estimating time required to get a minimum volume of 1×10^6 ml if flow rate for the air sampler in use is not on table, go to next Lower flow rate.

Example: Air Sampler flow rate = 3.6. Minimum time = 11 minutes

ENCLOSURE 5.9
FIELD MONITORING TEAM WORK SHEET FOR DETERMINING ¹³¹I ACTIVITY

Team Members/Call Sign^A _____ / _____ Date _____ RADCO Air Sampler No. _____ ND-6 No. _____

DETERMINATION OF AIR SAMPLE VOLUME (ml)

DETERMINATION OF ¹³¹I Activity

Column A Sample ^A No./Time/Location	Column B Air Sampler Run Time (min)	Column C Cal. Flow Rate (CFM)	Column D 2.83×10^4 ml ft ³	Column E ND-6 CPM	Column F Eff. of ND-6	Column G 4.728×10^{-7} l	Column H Air Sample Volume (ml)	Column I ¹³¹ I Activity μCi/ml ^B
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=
/ /	x	x	2.83×10^4	±	±	4.728×10^{-7}	±	=

Column B) Length of time the air sampler ran in minutes, see Enclosure 5.7 for sample time for minimum sample volume.

Column C) Calibrated flow rate for GY-130 filter cartridge written on the calibration sticker (DO NOT USE THE METER FLOW RATE).

Column D) 2.83×10^4 ml/ft³ = Conversion factor, ft³ to ml.

Column E) ND-6 cpm = [net counts under ¹³¹I curve] ÷ 5 (number of minutes samples are counted with ND-6).

Column F) ND-6 Efficiency = the efficiency value from the curve at 364 KeV posted on the inside lid of the ND-6 abundance of the ¹³¹I gamma).

Column G) 4.728×10^{-7} = Accounts for both the ¹³¹I filtering efficiency of the silver zeolite cartridge (.95) and the conversion factor for converting dpm to μCi (4.505×10^{-7} μCi/dpm).

Column H) The product of (B x C x D), must be ≥ 1×10^6 ml to be an adequate sample as per Enclosure 5.7.

^AItems reported to the FHC by radio. (Column A and Column I).

CRISIS MANAGEMENT PLAN
IMPLEMENTING PROCEDURE

5.3.16

QUARTERLY INVENTORY/COMMUNICATIONS EQUIPMENT CHECK

Rev. 9

August 15, 1984

Attachment 5.2
 QUARTERLY INVENTORY/CHECK
 COMMUNICATIONS EQUIPMENT
 Catawba/McGuire CMC/CNC

<u>Room</u>	<u>Telephone/ Radio/Headphones</u>	<u>Inplace?</u>	<u>Operational?*</u>	
<u>Recovery Manager/ Scheduling & Planning</u> WC-1010		_____	_____	
		To TSC	_____	_____
		Signal Sys.	_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
			_____	_____
<u>Offsite Radiological Support</u> WC-1222		_____	_____	
		_____	_____	
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<u>Technical Services Support</u> WC-2390		_____	_____	
		_____	_____	
		_____	_____	
		_____	_____	

*Operationally check one phone per room at each quarterly inventory.

Attachment 5.5
 QUARTERLY INVENTORY
 SCHEDULING/PLANNING SUPPORT GROUP
 EQUIPMENT/SUPPLIES

LOCATION: GENERAL OFFICE ROOM WC-1010 - LOCKED CABINET

<u>Item</u>	<u>Number In Plan</u>	<u>Number In Inventory</u>
Crisis Management Plan	<u>1</u>	<u> </u>
Crisis Management Implementing Plans	<u>1</u>	<u> </u>
Oconee Emergency Plan	<u>1</u>	<u> </u>
McGuire Emergency Plan	<u>1</u>	<u> </u>
Oconee Implementing Plan	<u>1</u>	<u> </u>
Telephone	<u>3</u>	<u> </u>
Speaker Telephone	<u>1</u>	<u> </u>
McGuire/Catawba CMC Directory	<u>4</u>	<u> </u>
Oconee CMC Directory	<u>4</u>	<u> </u>
G.O. Directory	<u>4</u>	<u> </u>
McGuire 10 Mile Radius Wall Map*	<u>1</u>	<u> </u>
Oconee 10 Mile Radius Wall Map*	<u>1</u>	<u> </u>
Catawba EPZ Folding Map		<u> </u>
Preformed Wall Trending Graphs*	<u>5</u>	<u> </u>
Blank Wall Trending Graphs*	<u>2</u>	<u> </u>
Scheduling/Planning Manager's Kit	<u>1</u>	<u> </u>
Summary Wall Data Sheets	<u>2</u>	<u> </u>

*Located in Room 1066

Attachment 5.5 (continued)

QUARTERLY INVENTORY

SCHEDULING/PLANNING SUPPORT GROUP

EQUIPMENT/SUPPLIES

LOCATION: SCHEDULING/PLANNING MANAGER'S KIT-P.H. BARTON'S OFFICE

<u>Item</u>	<u>Number In Plan</u>	<u>Number In Inventory</u>
Crisis Management Plan (CMP)	<u>1</u>	<u> </u>
Crisis Management Implementing Plans	<u>1</u>	<u> </u>
Oconee CMC Telephone Directory	<u>1</u>	<u> </u>
McGuire/Catawba CMC Telephone Directory	<u>1</u>	<u> </u>
G.O. Directory	<u>1</u>	<u> </u>
Scheduling/Planning Manager's File	<u>1</u>	<u> </u>
Scheduling Coordinator's File	<u>1</u>	<u> </u>
Planning Coordinator's File	<u>1</u>	<u> </u>
Performance Monitor's File	<u>1</u>	<u> </u>
Clipboard/Pad	<u>1</u>	<u> </u>
Large Envelopes	<u>8</u>	<u> </u>
Small Envelopes	<u>3</u>	<u> </u>
Telephone Message Pads	<u>2</u>	<u> </u>
Chalk Marker	<u>1</u>	<u> </u>
Pointer	<u>1</u>	<u> </u>
Scissors	<u>1</u>	<u> </u>
Transp. Tape/Dispenser	<u>1</u>	<u> </u>
Rubber Bands	<u>1 bag</u>	<u> </u>

DUKE POWER COMPANY
Crisis Management Plan

Implementing Procedure 5.3.17

Operator Aid Computer Data Available In An Emergency
(Via Crisis Management Data Transmittal System)

Enclosure 5.2
AVAILABLE OAC POINT ID's

Oconee Unit 1

NOTE: Other points are available on request to the CMC Data Coordinator.

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>A</u>				
1.	<u>A1632</u>	RC Hot Leg A WR Temp.	°F	50-650
	A1634	RC Hot Leg A Temp. 1	°F	520-620
	A1635	RC Hot Leg A Temp. 2	°F	520-620
2.	<u>A1633</u>	RC Hot Leg B WR Temp.	°F	50-650
	A1492	RC Hot Leg B Temp. 1	°F	520-620
	A1493	RC Hot Leg B Temp. 2	°F	520-620
3.	<u>A1638</u>	RC Cold Leg A1 NR Temp.	°F	520-620
	A1639	RC Cold Leg A1 WR Temp.	°F	50-650
4.	<u>A1636</u>	RC Cold Leg A2 NR Temp.	°F	520-620
	A1637	RC Cold Leg A2 WR Temp.	°F	50-650
5.	<u>A1046</u>	RC Cold Leg B1 NR Temp.	°F	520-620
	A1047	RC Cold Leg B1 WR Temp.	°F	50-650
6.	<u>A1494</u>	RC Cold Leg B2 NR Temp.	°F	520-620
	A1495	RC Cold Leg B2 WR Temp.	°F	50-650
7.	<u>A1416</u>	RC Loop A WR Press. 1	PSIG	0-2500
	A1418	RC Loop A WR Press. 2	PSIG	0-2500
	A1417	RC Loop B WR Press.	PSIG	0-2500
8.	<u>A1939</u>	RC PRZR LVL 1 Corr.	In. H ₂ O	
	A1940	RC PRZR LVL 2 Corr.	In. H ₂ O	
	A1941	RC PRZR LVL 3 Corr.	In. H ₂ O	
	A1717	RC PRZR LVL 1 Uncorrected	In. H ₂ O	0-400
	A1718	RC PRZR LVL 2 Uncorrected	In. H ₂ O	0-400
	A1719	RC PRZR LVL 3 Uncorrected	In. H ₂ O	0-400
9.	<u>A1920</u>	CA Boron Conc. PPM	PPM	
10.	<u>A1536</u>	NI 1 SR Flux	CPS	0.1-E6
	A1537	NI 2 SR Flux	CPS	0.1-E6
11.	<u>A1540</u>	NI 3 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
	A1541	NI 4 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
12.	<u>A1544</u>	NI 5 PR Flux	%	0-125
	A1545	NI 6 PR Flux	%	0-125
	A1546	NI 7 PR Flux	%	0-125
	A1547	NI 8 PR Flux	%	0-125
13.	<u>D2306</u>	RC Pump A1 ON (OFF)		
14.	<u>D2307</u>	RC Pump A2 ON (OFF)		
15.	<u>D2308</u>	RC Pump B1 ON (OFF)		
16.	<u>D2309</u>	RC Pump B2 ON (OFF)		
<u>B</u>				
1.	<u>A1026</u>	FDW SG A Full LVL	In. H ₂ O	0-650
	A1213	FDW SG A TR A LVL	In. H ₂ O	0-388
	A1214	FDW SG A TR B LVL	In. H ₂ O	0-388
2.	<u>A1031</u>	FDW SG B Full LVL	In. H ₂ O	0-650

Underline indicates points used on data sheet.

Enclosure 5.2 (cont'd)
AVAILABLE OAC POINT ID'S

Oconee Unit 1

<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>B (cont'd)</u>			
A1215	FDW SG B TR A LVL	In. H ₂ O	0-388
A1216	FDW SG B TR B LVL	In. H ₂ O	0-388
3. <u>A1470</u>	MS Stm. Gen. A Press. 1	PSIG	0-1200
<u>A1471</u>	MS Stm. Gen. A. Press 2	PSIG	0-1200
4. <u>A1466</u>	MS Stm. Gen. B. Press. 1	PSIG	0-1200
<u>A1467</u>	MS Stm. Gen. B. Press. 2	PSIG	0-1200
5. <u>A1563</u>	FDW Flow A Comp. & Sel.	KLB/HR	0-6E6
6. <u>A1564</u>	FDW Flow B Comp. & Sel.	KLB/HR	0-6E6
7. <u>A1644</u>	EMR FDW Flow 1 SG A	GPM	0-1200
8. <u>A1758</u>	EMR FDW Flow 1 SG B	GPM	0-1200
9. <u>A0158</u>	C UST A LVL	FT-H ₂ O	0-12
<u>A0014</u>	C UST B LVL	FT-H ₂ O	0-12
<u>C</u>			
1. <u>A1044</u>	HP Letdn. Flow	GPM	0-160
<u>D</u>			
1. <u>A1238</u>	HP Loop A Inj. Flow	GPM	0-6000
2. <u>A1239</u>	HP Loop B Inj. Flow	GPM	0-6000
3. <u>A1310</u>	LP Loop A Inj. Flow	GPM	0-1200
4. <u>A1311</u>	LP Loop B Inj. Flow	GPM	0-1200
5. <u>A2214</u>	LP Pump A ON (OFF)		
6. <u>A2215</u>	LP Pump B ON (OFF)		
7. <u>A2216</u>	LP Pump C ON (OFF)		
8. <u>D2125</u>	HP Pump A ON (OFF)		
9. <u>D2127</u>	HP Pump B ON (OFF)		
10. <u>D2129</u>	HP Pump C ON (OFF)		
<u>E</u>			
1. <u>A1011</u>	Reactor Bldg. Press. CH. A	PSIG	-5-175
<u>A1315</u>	Reactor Bldg. Press. CH. B	PSIG	-5-175
2. <u>A0043</u>	RBV Dome Temp.	°F	0-390
<u>A0005</u>	RBV RB LWR Temp.	°F	0-390
3. <u>A1565</u>	RB Sump Level CH. A	Ft.	0-15
<u>A1033</u>	RB Sump LVL CH. B	Ft.	0-15
4. <u>A1465</u>	CA H2 Conc.	%	0-5
5. <u>A0049</u>	LWD RB NOR Sump LVL	In. H ₂ O	0-30

Underline indicates points used on data sheet.

Enclosure 5.2 (cont'd)
AVAILABLE OAC POINT ID'S

Oconee Unit 1

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>F</u>				
1.	<u>A1663</u>	SG/A RIA 16-Gross Activity	MR/HR	.01-E7
2.	<u>A1676</u>	SG/B RIA 17-Gross Activity	MR/HR	.01-E7
3.	<u>A1674</u>	RIA-40 CSAE Monitor	CPM	10-106
4.	<u>A1678</u>	RIA-44 Vent Iodine	CPM	10-106
5.	<u>A1679</u>	RIA-45 LR Vent Noble Gas	CPM	10-106
6.	<u>A1680</u>	RIA-46 HR Vent Noble Gas	CPM	10-106
7.	XXXXX	RIA-56 Vent Noble Gas	MR/HR	
8.	<u>A1654</u>	RIA-4 Cont HR Area	MR/HR	.1-E7
9.	XXXXX	RIA-57 Cont HR	R/HR	
10.	<u>XXXXX</u>	RIA-58 Cont HR	R/HR	
<u>G</u>				
1.	XXXXX	Upper Wind Speed	MPH	
2.	XXXXX	Lower Wind Speed	MPH	
3.	XXXXX	Upper Wind Direction from	DEG	
4.	XXXXX	Lower Wind Direction from	DEG	
5.	<u>A0953</u>	Delta Temp.	°F	-30-(+30)
6.	XXXXX	Dew Point	°F	
7.	XXXXX	Ambient Temp.	°F	
8.	<u>XXXXX</u>	Precipitation	IN	

Underline indicates points used on data sheet.

Enclosure 5.3
AVAILABLE OAC POINT ID'S

Oconee Unit 2

<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
A			
1. <u>A1632</u>	RC Hot Leg A WR Temp.	°F	50-650
<u>A1634</u>	RC Hot Leg A Temp. 1	°F	520-620
<u>A1635</u>	RC Hot Leg A Temp. 2	°F	520-620
2. <u>A1633</u>	RC Hot Leg B WR Temp.	°F	50-650
<u>A1492</u>	RC Hot Leg B Temp. 1	°F	520-620
<u>A1493</u>	RC Hot Leg B Temp. 2	°F	520-620
3. <u>A1638</u>	RC Cold Leg A1 NR Temp.	°F	520-620
<u>A1639</u>	RC Cold Leg A1 WR Temp.	°F	60-650
4. <u>A1636</u>	RC Cold Leg A2 NR Temp.	°F	520-620
<u>A1637</u>	RC Cold Leg A2 WR Temp.	°F	60-650
5. <u>A1046</u>	RC Cold Leg B1 NR Temp.	°F	520-620
<u>A1047</u>	RC Cold Leg B1 WR Temp.	°F	50-650
6. <u>A1494</u>	RC Cold Leg B2 NR Temp.	°F	520-620
<u>A1495</u>	RC Cold Leg B2 WR Temp.	°F	50-650
7. <u>A1416</u>	RC Loop A WR Press. 1	PSIG	0-2500
<u>A1418</u>	RC Loop A WR Press. 2	PSIG	0-2500
<u>A1417</u>	RC Loop B WR Press.	PSIG	0-2500
8. <u>A1939</u>	RC PRZR LVL 1 Corr.	In. H ₂ O	
<u>A1940</u>	RC PRZR LVL 2 Corr.	In. H ₂ O	
<u>A1941</u>	RC PRZR LVL 3 Corr.	In. H ₂ O	
<u>A1717</u>	RC PRZR LVL 1 Uncorrected	In. H ₂ O	0-400
<u>A1718</u>	RC PRZR LVL 2 Uncorrected	In. H ₂ O	0-400
<u>A1719</u>	RC PRZR LVL 3 Uncorrected	In. H ₂ O	0-400
9. <u>A1009</u>	CA Boron Conc. PPM	PPM	0-2050
10. <u>A1536</u>	NI 1 SR Flux	CPS	0.1-E6
<u>A1537</u>	NI 2 SR Flux	CPS	0.1-E6
11. <u>A1540</u>	NI 3 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
<u>A1541</u>	NI 4 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
12. <u>A1544</u>	NI 5 PR Flux	%	0-125
<u>A1545</u>	NI 6 PR Flux	%	0-125
<u>A1546</u>	NI 7 PR Flux	%	0-125
<u>A1547</u>	NI 8 PR Flux	%	0-125
13. <u>D2306</u>	RC Pump A1 ON (OFF)		
14. <u>D2307</u>	RC Pump A2 ON (OFF)		
15. <u>D2308</u>	RC Pump B1 ON (OFF)		
16. <u>D2309</u>	RC Pump B2 ON (OFF)		
B			
1. <u>A1026</u>	FDW SG A Full LVL	In. H ₂ O	0-648
<u>A1213</u>	FDW SG A TR A LVL	In. H ₂ O	0-388
<u>A1214</u>	FDW SG A TR A LVL	In. H ₂ O	0-388

Underline indicates points used on data sheet.

Enclosure 5.3 (cont'd)
AVAILABLE OAC POINT ID'S

Oconee Unit 2

<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>B (cont'd)</u>			
2. <u>A1031</u>	FDW SG B Full LVL	In. H ₂ O	0-648
<u>A1215</u>	FDW SG B TR A LVL	In. H ₂ O	0-388
<u>A1216</u>	FDW SG B TR B LVL	In. H ₂ O	0-388
3. <u>A1470</u>	MS Stm. Gen. A Press. 1	PSIG	0-1200
<u>A1471</u>	MS Stm. Gen. A Press. 2	PSIG	0-1200
4. <u>A1466</u>	MS Stm. Gen. B Press. 1	PSIG	0-1200
<u>A1467</u>	MS Stm. Gen. B Press. 2	PSIG	0-1200
5. <u>A1563</u>	FDW Flow B Comp. & Sel.	KLB/HR	0-6E6
6. <u>A1564</u>	FDW Flow B Comp. & Sel.	KLB/HR	0-6E6
7. <u>A0012</u>	EMR FDW Flow 1 SG A	GPM	0-1200
8. <u>A0013</u>	EMR FDW Flow 1 SG B	GPM	0-1200
9. <u>A0014</u>	C UST A LVL	FT-H ₂ O	0-12
<u>A0158</u>	C UST B LVL	FT-H ₂ O	0-12
<u>C</u>			
1. <u>A1044</u>	HP Letdn. Flow	GPM	0-160
<u>D</u>			
1. <u>A1238</u>	HP Loop A Inj. Flow	GPM	0-1200
2. <u>A1239</u>	HP Loop B Inj. Flow	GPM	0-1200
3. <u>A1310</u>	LP Loop A Inj. Flow	GPM	0-1300
4. <u>A1311</u>	LP Loop B Inj. Flow	GPM	0-1300
5. <u>D2214</u>	LP Pump A ON (OFF)		
6. <u>D2215</u>	LP Pump B ON (OFF)		
7. <u>D2216</u>	LP Pump C ON (OFF)		
8. <u>D2125</u>	HP Pump A ON (OFF)		
9. <u>D2127</u>	HP Pump B ON (OFF)		
10. <u>D2129</u>	HP PUMP C ON (OFF)		
<u>E</u>			
1. <u>A1011</u>	Reactor Bldg. Press. CH. A	PSIG	-5-175
<u>A1315</u>	Reactor Bldg. Press. CH. B	PSIG	-5-175
2. <u>A0043</u>	RBV Dome Temp.	°F	0-390
<u>A0005</u>	RBV RB LWR Temp.	°F	0-390
3. <u>A0792</u>	RB Sump Level Ch. A	Ft.	0-15
<u>A0793</u>	RB Sump LVL CH. B	Ft.	0-15
4. <u>A0049</u>	CA H2 Conc.	(Not Available)	
5. <u>A0049</u>	LWD RB NOR Sump LVL	In. H ₂ O	0-30

Underline indicates points used on data sheet.

Enclosure 5.3 (cont'd)
AVAILABLE OAC POINT ID'S

Oconee Unit 2

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>F</u>				
1.	<u>A1663</u>	SG/A RIA 16-Gross Activity	MR/HR	.01-E7
2.	<u>A1676</u>	SG/B RIA 17-Gross Activity	MR/HR	.01-E7
3.	<u>A1674</u>	RIA-40 CSAE Monitor	CPM	10-106
4.	<u>A1678</u>	RIA-44 Vent Iodine	CPM	10-106
5.	<u>A1679</u>	RIA-45 LR Vent Noble Gas	CPM	10-106
6.	<u>A1680</u>	RIA-46 HR Vent Noble Gas	CPM	10-106
7.	XXXXX	RIA-56 Vent Noble Gas	MR/HR	
8.	<u>A1654</u>	RIA-4 Cont HR Area	MR/HR	.1-E7
9.	XXXXX	RIA-57 Cont HR	R/HR	
10.	<u>XXXXX</u>	RIA-58 Cont HR	R/HR	
<u>G</u>				
1.	XXXXX	Upper Wind Speed	MPH	
2.	XXXXX	Lower Wind Speed	MPH	
3.	XXXXX	Upper Wind Direction from	DEG	
4.	XXXXX	Lower Wind Direction from	DEG	-30-(+30)
5.	<u>A0953</u>	Delta Temp.	°F	
6.	XXXXX	Dew Point	°F	
7.	XXXXX	Ambient Temp.	°F	
8.	XXXXX	Precipitation	IN	

Underline indicates points used on data sheet.

Enclosure 5.4
AVAILABLE OAC POINT ID's

Oconee Unit 3

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>A</u>				
1.	<u>A1632</u>	RC Hot Leg A WR Temp.	°F	50-650
	A1634	RC Hot Leg A Temp. 1	°F	520-620
	A1635	RC Hot Leg A Temp. 2	°F	520-620
2.	<u>A1633</u>	RC Hot Leg B WR Temp.	°F	50-650
	A1492	RC Hot Leg B Temp. 1	°F	520-620
	A1493	RC Hot Leg B Temp. 2	°F	520-620
3.	<u>A1638</u>	RC Cold Leg A1 NR Temp.	°F	520-620
	A1639	RC Cold Leg A1 WR Temp.	°F	50-650
4.	<u>A1636</u>	RC Cold Leg A2 NR Temp.	°F	520-620
	A1637	RC Cold Leg A2 WR Temp.	°F	50-650
5.	<u>A1046</u>	RC Cold Leg B1 NR Temp.	°F	520-620
	A1047	RC Cold Leg B1 WR Temp.	°F	50-650
6.	<u>A1494</u>	RC Cold Leg B2 NR Temp.	°F	520-620
	A1495	RC Cold Leg B2 WR Temp.	°F	50-650
7.	<u>A1416</u>	RC Loop A WR Press. 1	PSIG	0-2500
	A1418	RC Loop A WR Press. 2	PSIG	0-2500
	A1417	RC Loop B WR Press.	PSIG	0-2500
8.	<u>A1939</u>	RC PRZR LVL 1 Corr.	In. H ₂ O	
	A1940	RC PRZR LVL 2 Corr.	In. H ₂ O	
	A1941	RC PRZR LVL 3 Corr.	In. H ₂ O	
	A1717	RC PRZR LVL 1 Uncorrected	In. H ₂ O	0-400
	A1718	RC PRZR LVL 2 Uncorrected	In. H ₂ O	0-400
	A1719	RC PRZR LVL 3 Uncorrected	In. H ₂ O	0-400
9.	<u>A1009</u>	CA Boron Conc. PPM	PPM	0-2050
10.	<u>A1536</u>	NI 1 SR Flux	CPS	0.1-E6
	A1537	NI 2 SR Flux	CPS	0.1-E6
11.	<u>A1540</u>	NI 3 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
	A1541	NI 4 IR Flux	E ⁻⁶ Amps	E ⁻¹¹ -E ⁻³
12.	<u>A1544</u>	NI 5 PR Flux	%	0-125
	A1545	NI 6 PR Flux	%	0-125
	A1546	NI 7 PR Flux	%	0-125
	A1547	NI 8 PR Flux	%	0-125
13.	<u>D2306</u>	RC Pump A1 ON (OFF)		
14.	<u>D2307</u>	RC Pump A2 ON (OFF)		
15.	<u>D2308</u>	RC Pump B1 ON (OFF)		
16.	<u>D2309</u>	RC Pump B2 ON (OFF)		
<u>B</u>				
1.	<u>A1026</u>	FDW SG A Full LVL	In. H ₂ O	0-650
	A1213	FDW SG A TR A LVL	In. H ₂ O	0-388
	A1214	FDW SG A TR A LVL	In. H ₂ O	0-388

Underline indicates points used on data sheet.

Enclosure 5.4 (cont'd)
AVAILABLE OAC POINT ID's

Oconee Unit 3

<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>B (cont'd)</u>			
2. <u>A1031</u>	FDW SG B Full LVL	In. H ₂ O	0-650
<u>A1215</u>	FDW SG B TR A LVL	In. H ₂ O	0-388
<u>A1216</u>	FDW SG B TR B LVL	In. H ₂ O	0-388
3. <u>A1470</u>	MS Stm. Gen. A Press. 1	PSIG	0-1200
<u>A1471</u>	MS Stm. Gen. A Press. 2	PSIG	0-1200
4. <u>A1466</u>	MS Stm. Gen. B Press. 1	PSIG	0-1200
<u>A1467</u>	MS Stm. Gen. B Press. 2	PSIG	0-1200
5. <u>A1563</u>	FDW Flow A Comp. & Sel.	KLB/HR	0-6E6
6. <u>A1564</u>	FDW Flow B Comp. & Sel.	KLB/HR	0-6E6
7. <u>A0012</u>	EMR FDW Flow 1 SG A	GPM	0-1200
8. <u>A0013</u>	EMR FDW Flow 1 SG B	GPM	0-1200
9. <u>A0158</u>	C UST A LVL	FT-H ₂ O	0-12
<u>A0014</u>	C UST B LVL	FT-H ₂ O	0-12
<u>C</u>			
1. <u>A1044</u>	HP Letdn. Flow	GPM	0-160
<u>D</u>			
1. <u>A1238</u>	HP Loop A Inj. Flow	GPM	0-1200
2. <u>A1239</u>	HP Loop B Inj. Flow	GPM	0-1200
3. <u>A1310</u>	LP Loop A Inj. Flow	GPM	0-1300
4. <u>A1311</u>	LP Loop B Inj. Flow	GPM	0-1300
5. <u>D2214</u>	LP Pump A ON (OFF)		
6. <u>D2215</u>	LP Pump B ON (OFF)		
7. <u>D2216</u>	LP Pump C ON (OFF)		
8. <u>D2125</u>	HP Pump A ON (OFF)		
9. <u>D2127</u>	HP Pump B ON (OFF)		
10. <u>D2129</u>	HP Pump C ON (OFF)		
<u>E</u>			
1. <u>A1011</u>	Reactor Bldg. Press. CH. A	PSIG	-5-175
<u>A1315</u>	Reactor Bldg. Press. CH. B	PSIG	-5-175
2. <u>A0043</u>	RBV Dome Temp.	°F	0-390
<u>A0005</u>	RBV RB LWR Temp.	°F	0-390
3. <u>A0792</u>	RB Sump Level CH. A	Ft.	0-15
<u>A0793</u>	RB Sump LVL CH. B	Ft.	0-15
4. <u>A1465</u>	CA A2 Conc.	%	0-5
5. <u>A0049</u>	LWD RB NOR Sump LVL	In. H ₂ O	0-30

Underline indicates points used on data sheet.

Enclosure 5.4 (cont'd)
AVAILABLE OAC POINT ID's

Oconee Unit 3

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>F</u>				
1.	<u>A1663</u>	SG/A RIA 16-Gross Activity	MR/HR	.01-E7
2.	<u>A1676</u>	SG/B RIA 17-Gross Activity	MR/HR	.01-E7
3.	<u>A1674</u>	RIA-40 CSAE Monitor	CPM	10-106
4.	<u>A1678</u>	RIA-44 Vent Iodine	CPM	10-106
5.	<u>A1679</u>	RIA-45 LR Vent Noble Gas	CPM	10-106
6.	<u>A1680</u>	RIA-46 HR Vent Noble Gas	CPM	10-106
7.	<u>XXXXX</u>	RIA-56 Vent Noble Gas	MR/HR	
8.	<u>A1654</u>	RIA-4 Cont HR Area	MR/HR	.1-E7
9.	<u>XXXXX</u>	RIA-57 Cont HR	R/HR	
10.	<u>XXXXX</u>	RIA-58 Cont HR	R/HR	
<u>G</u>				
1.	<u>XXXXX</u>	Upper Wind Speed	MPH	
2.	<u>XXXXX</u>	Lower Wind Speed	MPH	
3.	<u>XXXXX</u>	Upper Wind Direction from	DEG	
4.	<u>XXXXX</u>	Lower Wind Direction from	DEG	-30-(+30)
5.	<u>XXXXX</u>	Delta Temp.	°F	
6.	<u>XXXXX</u>	Dew Point	°F	
7.	<u>XXXXX</u>	Ambient Temp.	°F	
8.	<u>XXXXX</u>	Precipitation	IN	

Underline indicates points used on data sheet.

Enclosure 5.5
AVAILABLE OAC POINT ID's

McGuire Units 1 & 2

NOTE: Other points are available on request to the CMC Data Coordinator.

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
A				
1.	<u>A0965</u>	T/Hot-Loop A (Wide Range)	°F	0-700
2.	<u>A0971</u>	T/Hot-Loop B (Wide Range)	°F	0-700
3.	<u>A0977</u>	T/Hot-Loop C (Wide Range)	°F	0-700
4.	<u>A0983</u>	T/Hot-Loop D (Wide Range)	°F	0-700
5.	<u>A1061</u>	T/Cold-Loop A (Wide Range)	°F	0-700
	<u>A1064</u>	(Narrow Range)	°F	510-630
6.	<u>A1067</u>	T/Cold-Loop B (Wide Range)	°F	0-700
	<u>A1076</u>	(Narrow Range)	°F	510-630
7.	<u>A1073</u>	T/Cold-Loop C (Wide Range)	°F	0-700
	<u>A1088</u>	(Narrow Range)	°F	510-630
8.	<u>A1079</u>	T/Cold-Loop D (Wide Range)	°F	0-700
	<u>A1100</u>	(Narrow Range)	°F	510-630
9.	<u>A0826</u>	NC System Press. (Wide Range)	PSIG	0-3000
	<u>A0845</u>	(Low Range)	PSIG	0-800
10	<u>A1118</u>	(Pzr. Press. I)	PSIG	1700-2500
	<u>A0962</u>	(Pzr. Press. II)	PSIG	1700-2500
	<u>A0968</u>	(Pzr. Press. III)	PSIG	1700-2500
	<u>A0974</u>	(Pzr. Press. IV)	PSIG	1700-2500
11.	<u>A1124</u>	Pzr. Water Level (Pzr. Level I)	%	0-100
	<u>A0980</u>	(Pzr. Level II)	%	0-100
	<u>A0976</u>	(Pzr. Level III)	%	0-100
12.	<u>D2803</u>	NCP/A Status: ON, OFF		
13.	<u>D2804</u>	NCP/B Status: ON, OFF		
14.	<u>D2805</u>	NCP/C Status: ON, OFF		
15.	<u>D2806</u>	NCP/D Status: ON, OFF		
16.	<u>A1177</u>	Neutron Flux - Source Range Level Channel 1	CPS	0-1000000
17.	<u>A1206</u>	- Source Range Level Channel 2	CPS	0-1000000
18.	<u>A0602</u>	Boron Concentration	PPM	
19.	<u>P1385</u>	Reactor Thermal Power	%	
20.	<u>A0628</u>	- Power Range AVG Level Quad 1	%	0-120
	<u>A0627</u>	- Power Range AVG Level Quad 2	%	0-120
	<u>A0629</u>	- Power Range AVG Level Quad 3	%	0-120
	<u>A0626</u>	- Power Range AVG Level Quad 4	%	0-120

Underline indicates points used on data sheet.

Enclosure 5.5 (cont'd)
AVAILABLE OAC POINT ID's

McGuire Units 1 & 2

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>B</u>				
1.	<u>A1004</u>	SG/A Level (Wide Range Level)	%	0-100
2.	<u>A1005</u>	SG/B Level (Wide Range Level)	%	0-100
3.	<u>A0970</u>	SG/C Level (Wide Range Level)	%	0-100
4.	<u>A0988</u>	SG/D Level (Wide Range Level)	%	0-100
5.	<u>A1107</u>	SG/A Steam Press. (Steam Press. I)	PSIG	0-1300
	<u>A1022</u>	(Steam Press. II)	PSIG	0-1300
	<u>A1028</u>	(Steam Press. IV)	PSIG	0-1300
6.	<u>A1113</u>	SG/B Steam Press. (Steam Press. I)	PSIG	0-1300
	<u>A1023</u>	(Steam Press. II)	PSIG	0-1300
	<u>A1029</u>	(Steam Press. III)	PSIG	0-1300
7.	<u>A1119</u>	SG/C Steam Press. (Steam Press. I)	PSIG	0-1300
	<u>A1024</u>	(Steam Press. II)	PSIG	0-1300
	<u>A1030</u>	(Steam Press. III)	PSIG	0-1300
8.	<u>A1125</u>	SG/D Steam Press. (Steam Press. I)	PSIG	0-1300
	<u>A1025</u>	(Steam Press. II)	PSIG	0-1300
	<u>A1031</u>	(Steam Press. IV)	PSIG	0-1300
9.	<u>P1412</u>	Total SG/A CF Flow (Flow I)	MPPH	0-682.93
	<u>P1413</u>	(Flow II)	MPPH	0-678.67
10.	<u>P1414</u>	Total SG/B CF Flow (Flow I)	MPPH	0-677.87
	<u>P1415</u>	(Flow II)	MPPH	0-679.92
11.	<u>P1416</u>	Total SG/C CF Flow (Flow I)	MPPH	0-683.48
	<u>P1417</u>	(Flow II)	MPPH	0-683.76
12.	<u>P1418</u>	Total SG/D CF Flow (Flow I)	MPPH	0-675.97
	<u>P1419</u>	(Flow II)	MPPH	0-680.33
13.	<u>P1208</u>	CA Flow to S/G A	MPPH	0-300
14.	<u>P1209</u>	B	MPPH	0-300
15.	<u>P1210</u>	C	MPPH	0-300
16.	<u>P1211</u>	D	MPPH	0-300
<u>C</u>				
1.	<u>A0758</u>	CCP Discharge Hdr. Flow	GPM	0-1000
2.	<u>A0856</u>	ND Return Flow	GPM	0-7000
3.	<u>D0970</u>	CCP/A Status: ON, OFF		
4.	<u>D0620</u>	CCP/B Status: ON, OFF		
5.	<u>D3574</u>	NI Pump A Status: ON, OFF		
6.	<u>D3576</u>	NI Pump B Status: ON, OFF		
7.	<u>A0764</u>	NV Letdown Flow (HX Outlet Flow)	GPM	0-200

Underline indicates points used on data sheet.

Enclosure 5.5 (cont'd)
AVAILABLE OAC POINT ID'S

McGuire Units 1 & 2

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
D				
1.	<u>A0785</u>	Containment Press. 2	PSIG	-5 to 20
	<u>A0791</u>	3	PSIG	-5 to 20
	<u>A0797</u>	4	PSIG	-5 to 20
	<u>A0590</u>	Containment Narrow Range Press.	PSIG	-1 to 1
	<u>A1047</u>	Containment Pressure Train A	PSIG	-5 to 60
	<u>A0665</u>	Train B	PSIG	-5 to 20
2.	<u>A1228</u>	Lower Cont. Ambient Air Temp. A	°F	0-200
	<u>A1234</u>	Temp. B	°F	0-200
	<u>A1240</u>	Temp. C	°F	0-200
	<u>A1246</u>	Temp. D	°F	0-200
3.	<u>A1204</u>	Upper Cont. Ambient Air Temp. A	°F	0-200
	<u>A1210</u>	Temp. B	°F	0-200
	<u>A1216</u>	Temp. C	°F	0-200
	<u>A1222</u>	Temp. D	°F	0-200
4.	<u>A1041</u>	Containment Sump Level (Train A)	FT	.5-20
5.	<u>A0671</u>	(Train B)	FT	.5-20
6.	<u>A0848</u>	Containment H2 Concent. (Train A)	%	0-30
	<u>A0854</u>	(Train B)	%	0-30
E				
1.	<u>A0115</u>	NCS Monitor	CPM	10E ¹ -10E ⁷
2.	<u>A0829</u>	Cont. High Range Area I	R/HR	10E ⁰ -10E ⁸
3.	<u>A0835</u>	Area II	R/HR	10E ⁰ -10E ⁸
4.	<u>A1009</u>	Unit Vent Noble Gas (High High Range)	R/HR	10E ⁰ -10E ⁸
5.	<u>A0018</u>	(High Range)	CPM	10E ¹ -10E ⁶
	<u>A0012</u>	(Low Range)	CPM	10E ¹ -10E ⁷
6.	<u>A0019</u>	EMF 35 Unit Vent Particulate, Hi Range	CPM	10E ¹ -10E ⁶
7.	<u>A0049</u>	Unit Vent Iodine	CPM	10E ¹ -10E ⁷
8.	<u>A1368</u>	EMF24 Steam Line 1A Radiation Monitor	R/HR	
9.	<u>A1374</u>	EMF25 Steam Line 1B Radiation Monitor	R/HR	
10.	<u>A1380</u>	EMF26 Steam Line 1C Radiation Monitor	R/HR	
11.	<u>A1386</u>	EMF27 Steam Line 1D Radiation Monitor	R/HR	
12.	<u>A0127</u>	EMF 49 Liq Waste Discharge, Hi Range	CPM	10E ¹ -10E ⁶
13.	<u>A1069</u>	Upper Wind Speed	MPH	0-30
14.	<u>A1183</u>	Lower Wind Speed	MPH	0-30
15.	<u>A1200</u>	Lower to Upper Temp. Diff.	°C	-4 to 8
16.	<u>A1075</u>	Upper Wind Direction From	DEG	0-540
17.	<u>A1189</u>	Lower Wind Direction From	DEG	0-540
18.	<u>P0595</u>	Precipitation in Last 15 Min.	IN	
19.	<u>A1218</u>	Lower to Middle Temp. Diff.	°C	-4 to 8
20.	<u>A0863</u>	Unit Vent Stack Flow	FT ³ /MIN	

Underline indicates points used on data sheet.

Enclosure 5.6
AVAILABLE OAC POINT ID's

Catawba Units 1 & 2

NOTE: Other points are available on request to the CMC Data Coordinator.

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
A				
1.	<u>A0668</u>	NC Loop A Wide Range Hot Leg Temp.	°F	0-700
2.	<u>A0669</u>	NC Loop B Wide Range Hot Leg Temp.	°F	0-700
3.	<u>A0670</u>	NC Loop C Wide Range Hot Leg Temp.	°F	0-700
4.	<u>A0671</u>	NC Loop D Wide Range Hot Leg Temp.	°F	0-700
5.	<u>A0700</u>	NC Loop A Wide Range Cold Leg Temp.	°F	0-700
6.	<u>A0706</u>	NC Loop B Wide Range Cold Leg Temp.	°F	0-700
7.	<u>A0712</u>	NC Loop C Wide Range Cold Leg Temp.	°F	0-700
8.	<u>A0718</u>	NC Loop D Wide Range Cold Leg Temp.	°F	0-700
9.	<u>PXXXX</u>	Average Incore T/C (5 highest)	°F	
10.	<u>PXXXX</u>	NC Subcooling Margin	°F	
11.	<u>A0719</u>	NC System Wide Range Press.	PSIG	0-3000
	<u>A0839</u>	NC System Wide Range Press. CH. 2	PSIG	0-3000
12.	<u>A0713</u>	PZR Pressure CH. 1	PSIG	1700-2500
	<u>A0868</u>	PZR Pressure CH. 2	PSIG	1700-2500
	<u>A0874</u>	PZR Pressure CH. 3	PSIG	1700-2500
	<u>A0880</u>	PZR Pressure CH. 4	PSIG	1700-2500
13.	<u>A0707</u>	PZR Level CH. 1	%	0-100
	<u>A0867</u>	PZR Level CH. 2	%	0-100
	<u>A0873</u>	PZR Level Ch. 3	%	0-100
14.	<u>AXXXX</u>	NC Vessel Wide Range Level Train A	%	0-100
	<u>AXXXX</u>	NC Vessel Wide Range Level Train B	%	0-100
15.	<u>D2037</u>	Reactor Coolant Pump A ON, OFF		
16.	<u>D2085</u>	Reactor Coolant Pump B ON, OFF		
17.	<u>D2038</u>	Reactor Coolant Pump C ON, OFF		
18.	<u>D2086</u>	Reactor Coolant Pump D ON, OFF		
19.	<u>A1214</u>	Boron Concentration	PPM	0-5000
	<u>P0096</u>	Reactor Coolant Boron Concentration	PPM	
20.	<u>A1248</u>	Source Range Level Channel 1	CPS	0-10E ⁶
	<u>A1254</u>	Source Range Level Channel 2	CPS	0-10E ⁶
21.	<u>A0766</u>	Intermediate Range Level Channel 1	MA	10E-8-1
	<u>A0767</u>	Intermediate Range Level Channel 2	MA	10E-8-1
22.	<u>P0738</u>	Power Range AVG Level AVG	%	0-120
	<u>A0672</u>	Power Range Upper Level Quadrant 1	%	0-120
	<u>A0678</u>	Power Range Upper Level Quadrant 2	%	0-120
	<u>A0684</u>	Power Range Upper Level Quadrant 3	%	0-120
	<u>A0690</u>	Power Range Upper Level Quadrant 4	%	0-120
	<u>A0696</u>	Power Range Lower Level Quadrant 1	%	0-120
	<u>A0702</u>	Power Range Lower Level Quadrant 2	%	0-120
	<u>A0708</u>	Power Range Lower Level Quadrant 3	%	0-120
	<u>A0714</u>	Power Range Lower Level Quadrant 4	%	0-120
	<u>A0758</u>	Power Range AVG Level Quadrant 1	%	0-120
	<u>A0759</u>	Power Range AVG Level Quadrant 2	%	0-120
	<u>A0760</u>	Power Range AVG Level Quadrant 3	%	0-120
	<u>A0761</u>	Power Range AVG Level Quadrant 4	%	0-120

Underline indicates points used on data sheet.

Enclosure 5.6 (cont'd)
AVAILABLE OAC POINT ID'S

Catawba Units 1 & 2

<u>B</u>	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
1.	<u>A0674</u>	S/G A Wide Range Level	%	0-100
2.	<u>A0680</u>	S/G B Wide Range Level	%	0-100
3.	<u>A0686</u>	S/G C Wide Range Level	%	0-100
4.	<u>A0692</u>	S/G D Wide Range Level	%	0-100
5.	<u>A0723</u>	S/G A Steam Press. CH. #1	PSIG	0-1300
	<u>A1274</u>	S/G A Steam Press. CH. #2	PSIG	0-1300
	<u>A1280</u>	S/G A Steam Press. CH. #4	PSIG	0-1300
6.	<u>A0729</u>	S/G B Steam Press. CH. #1	PSIG	0-1300
	<u>A1286</u>	S/G B Steam Press. CH. #2	PSIG	0-1300
	<u>A1292</u>	S/G B Steam Press. CH. #3	PSIG	0-1300
7.	<u>A0735</u>	S/G C Steam Press. CH. #1	PSIG	0-1300
	<u>A1298</u>	S/G C Steam Press. CH. #2	PSIG	0-1300
	<u>A1304</u>	S/G C Steam Press. CH. #3	PSIG	0-1300
8.	<u>A0741</u>	S/G D Steam Press. CH. #1	PSIG	0-1300
	<u>A1310</u>	S/G D Steam Press. CH. #2	PSIG	0-1300
	<u>A1316</u>	S/G D Steam Press. CH. #4	PSIG	0-1300
9.	<u>A0634</u>	S/G A Feedwater Flow CH. 1	MLB/HR	0-4.8
	<u>A0640</u>	S/G A Feedwater Flow CH. 2	MLB/HR	0-4.8
10.	<u>A0646</u>	S/G B Feedwater Flow CH. 1	MLB/HR	0-4.8
	<u>A0629</u>	S/G B Feedwater Flow CH. 2	MLB/HR	0-4.8
11.	<u>A0635</u>	S/G C Feedwater Flow CH. 1	MLB/HR	0-4.8
	<u>A0641</u>	S/G C Feedwater Flow CH. 2	MLB/HR	0-4.8
12.	<u>A0650</u>	S/G D Feedwater Flow CH. 1	MLB/HR	0-4.8
	<u>A0651</u>	S/G D Feedwater Flow CH. 2	MLB/HR	0-4.8
13.	<u>A0974</u>	CA Flow To S/G A	GPM	0-500
14.	<u>A0975</u>	CA Flow To S/G B	GPM	0-500
15.	<u>A0976</u>	CA Flow To S/G C	GPM	0-500
16.	<u>A0977</u>	CA Flow to S/G D	GPM	0-500
17.	<u>PXXXX</u>	Prev. 15 Min. Steam Releases	LBM	
	<u>PXXXX</u>	Steam Release Loop A Volume	LBM	
	<u>PXXXX</u>	Steam Release Loop B Volume	LBM	
	<u>PXXXX</u>	Steam Release Loop C Volume	LBM	
	<u>PXXXX</u>	Steam Release Loop D Volume	LBM	

Underline indicates points used on data sheet.

Enclosure 5.6 (cont'd)
AVAILABLE OAC POINT ID'S

Catawba Units 1 & 2

	<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
<u>C</u>				
1.	<u>A0452</u>	NV Letdown Flow	GPM	0-200
2.	<u>A1262</u>	FWST Level Ch. 1	%	0-100
	A1268	FWST Level Ch. 2	%	0-100
	A1250	FWST Level Ch. 3	%	0-100
	A1256	FWST Level Ch. 4	%	0-100
3.	<u>A1013</u>	SNSWP Level	Ft.	566-572
4.	<u>A0586</u>	4KV Bus ETA Volts	KV	0-5.25
5.	<u>A0575</u>	4KV Bus ETB Volts	KV	0-5.25
<u>D</u>				
1.	<u>A0820</u>	Charging Line Flow Control	GPM	0-200
2.	<u>D2450</u>	Centrifugal Charging Pump A ON, OFF		
3.	<u>D2440</u>	Centrifugal Charging Pump B ON, OFF		
4.	<u>A0447</u>	Boron Injection Flow	GPM	0-1000
5.	<u>D2456</u>	NI Pump A ON, OFF		
6.	<u>D2446</u>	NI Pump B ON, OFF		
7.	<u>A0902</u>	ND HX A Return Flow	GPM	0-5000
8.	<u>A0908</u>	ND HX B Return Flow	GPM	0-5000
9.	<u>D2455</u>	ND Pump A ON, OFF		
10.	<u>D2445</u>	ND Pump B ON, OFF		
<u>E</u>				
1.	A0743	Containment Press. CH. 2	PSIG	-5 to 5
	A0899	Containment Press. CH. 3	PSIG	-5 to 5
	A0893	Containment Press. CH. 4	PSIG	-5 to 5
	<u>A1499</u>	Containment Wide Range Pressure Train A	PSIG	-5 to 60
	<u>A1515</u>	Containment Wide Range Pressure Train B	PSIG	-5 to 60
2.	<u>P1500</u>	Upper Containment Temp	°F	40-200
	<u>A1178</u>	Upper Containment Temperature A	°F	40-200
	<u>A1220</u>	Upper Containment Temperature B	°F	40-200
	<u>A1455</u>	Upper Containment Temperature C	°F	32-212
	<u>A1449</u>	Upper Containment Temperature D	°F	32-212
3.	<u>A1418</u>	Containment Sump Level A	FT	0-20
	<u>A1424</u>	Containment Sump Level B	FT	0-20
4.	<u>A0939</u>	Containment H ₂ Concentration Train A	%	0-30
	<u>A0945</u>	Containment H ₂ Concentration Train B	%	0-30
5.	<u>D2448</u>	NS Pump A ON, OFF		
6.	<u>D2438</u>	NS Pump B ON, OFF		
<u>F</u>				
1.	<u>A0061</u>	EMF 48 Reactor Coolant Monitor	CPM	10E1-10E7

Underline indicates points used on data sheet.

Enclosure 5.6 (cont'd)
AVAILABLE OAC POINT ID's

Catawba Units 1 & 2

<u>Point I.D.</u>	<u>Description</u>	<u>Units</u>	<u>Range</u>
2. <u>A1308</u>	EMF 53A Cont. High Range Monitor Train A	R/HR	1-10E8
<u>A1314</u>	EMP 53B Cont. High Range Monitor Train B	R/HR	1-10E8
3. <u>A0025</u>	EMF 39L Containment Gas Monitor	CPM	10E1-10E7
<u>A0031</u>	EMF 39H Containment Gas Monitor	CPM	10E1-10E6
4. <u>A1315</u>	EMF 54 Unit Vent Extended Range Monitor	R/HR	1-10E8
5. <u>A0048</u>	EMF 37 Unit Vent Iodine Monitor	CPM	10E1-10E7
6. <u>A0013</u>	EMF 36L Unit Vent Gas Monitor	CPM	10E1-10E7
<u>A0019</u>	EMF 36H Unit Vent Gas Monitor	CPM	10E1-10E6
7. <u>A0036</u>	EMF 49L Waste Liquid Discharge	CPM	10E1-10E7
<u>A0042</u>	EMF 49H Waste Liquid Discharge	CPM	10E1-10E6
8. <u>A0078</u>	EMF 17 Refueling Bridge/Reactor Bldg.	CPM	10E1-10E4
9. <u>AXXXX</u>	EMF Main Stream Line Monitor	LATER	LATER
<u>AXXXX</u>	EMF XXX Main Stream Line A Monitor	LATER	LATER
<u>AXXXX</u>	EMF XXX Main Stream Line B Monitor	LATER	LATER
<u>AXXXX</u>	EMF XXX Main Stream Line C Monitor	LATER	LATER
<u>AXXXX</u>	EMF XXX Main Stream Line D Monitor	LATER	LATER
 <u>G</u>			
1. <u>A0483</u>	Upper Wind Speed	MPH	0-90
2. <u>A0485</u>	Lower Wind Speed	MPH	0-90
3. <u>A0484</u>	Upper Wind Direction	Deg	0-540
4. <u>A0489</u>	Lower Wind Direction	Deg	0-540
5. <u>A1127</u>	Barometric Pressure	In. HG	25-35
6. <u>A0490</u>	Ambient Air D/T Elev 662 & Elev 762	°C	-4-+8
7. <u>A0491</u>	Ambient Air D/T Elev 662 & Elev 712	°C	-4-+8
8. <u>A0495</u>	Ambient Air Temp. At Elev 662	°C	-20-+40
9. <u>A0496</u>	Dew Point	°C	-30-+30
10. <u>AXXXX</u>	Unit Vent Flow Rate	CFM	
11. <u>XXXXX</u>	RL Discharge Flow	GPM	

Underline indicates points used on data sheet.

CRISIS MANAGEMENT PLAN

IMPLEMENTING PROCEDURE

5.3.18

"Environmental Monitoring for Emergency Conditions
Within Ten Mile Radius of Catawba Nuclear Station"

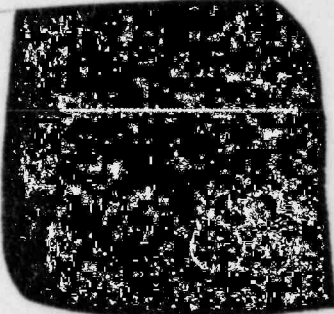
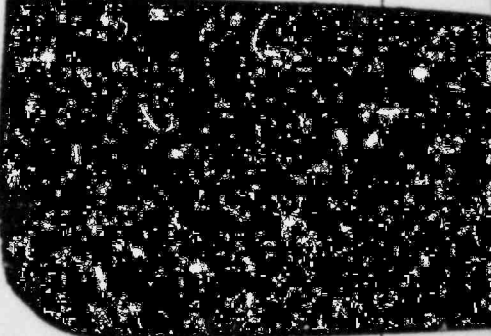
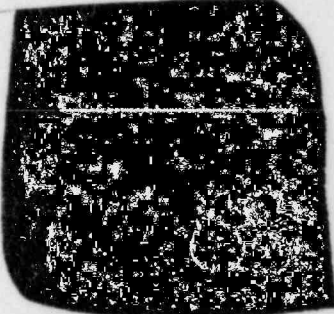
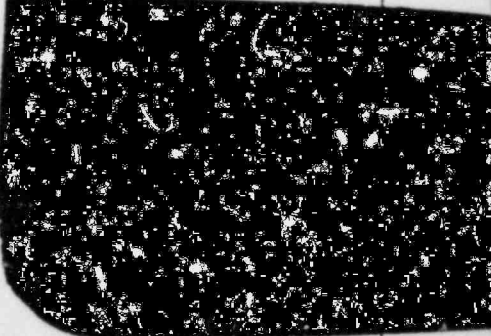
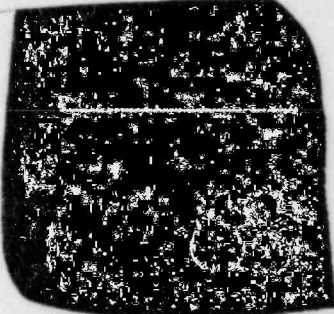
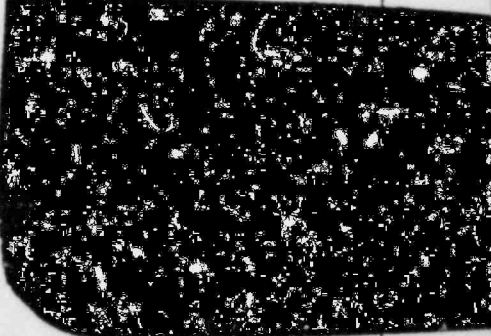
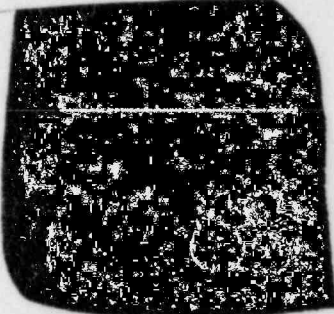
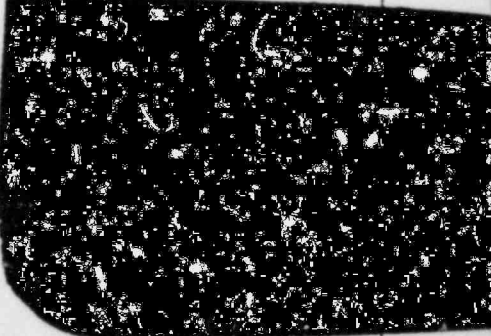
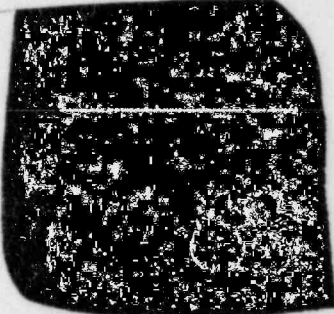
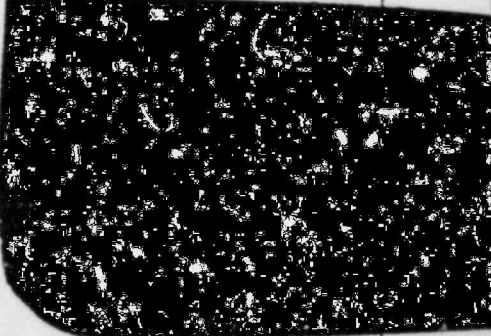
ENVIRONMENTAL MONITORING FOR EMERGENCY CONDITIONS
WITHIN TEN MILE RADIUS OF CATAWBA NUCLEAR STATION
CRISIS MANAGEMENT PLAN

Procedure


- 1.0 Upon receiving a call to activate the Crisis Management Center (CMC) for a problem at Catawba, the Field Monitoring Coordinator (FMC) will notify the CMC Field Monitoring Organization for Catawba (See Enclosure 1) and have them report to the side entrance of the temporary administration building at Catawba. When the CMC is activated, or at the earliest convenient time, the Station Field Teams will be recalled to this position and the CMC Teams will resume monitoring, using the station vehicles and equipment.
- 2.0 The FMC will report to Room WC-1222 and, after activation of the CMC, will direct the teams as described in the attached Station Procedure HP/O/B/1009/04. The FMC will advise the Offsite Dose Radiological Coordinator, the Special Assistance Coordinator, the Dose Assessment Coordinator, and the TSC H.P. Staff of the results of Field Team measurements. The FMC will assure continued adequate staffing of the Field Teams. The FMC will confer periodically (every hour) with the State Field Team Coordinator to compare findings.
- 3.0 The Field Teams will survey and sample the area as described in the attached Station Procedure HP/O/B/1009/04 and as directed by the FMC. In addition, they shall review their received doses (on pocket dosimeters) at times appropriate to prevailing dose rates.

Enclosure 1

CMC Field Team Members To Support Catawba Emergencies

	<u>Home</u>	<u>Office</u>		<u>Home</u>	<u>Office</u>
Gary Harrison			Steve Abernathy		
Julie Cox			Glenn Long		
Grayden Cayton			Mike McConnell		
Doug Allen			Chris Miller		
Lovett Epps			Pete Dame		

Note: All members are from McGuire. They may be reached thru the microwave or from outside lines thru the station operator at



DUKE POWER COMPANY
PROCEDURE PREPARATION
PROCESS RECORD

(1) ID No: HP/0/B/1009/04
Change(s) 0 to
0 Incorporated

- (2) STATION: CATAWBA
- (3) PROCEDURE TITLE: ENVIRONMENTAL MONITORING FOR EMERGENCY CONDITIONS
WITHIN THE TEN MILE RADIUS OF CATAWBA NUCLEAR STATION
- (4) PREPARED BY: Steve Jones DATE: 3-15-84
- (5) REVIEWED BY: [Signature] DATE: 3-19-84
- Cross-Disciplinary Review By: _____ N/R: S.T. [Signature]
- (6) TEMPORARY APPROVAL (IF NECESSARY):
- By: _____ (SRO) Date: _____
- By: _____ Date: _____
- (7) APPROVED BY: Jw. [Signature] Date: 4/3/84
- (8) MISCELLANEOUS:
- Reviewed/Approved By: _____ Date: _____
- Reviewed/Approved By: _____ Date: _____

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
ENVIRONMENTAL MONITORING FOR
EMERGENCY CONDITIONS WITHIN THE
TEN MILE RADIUS OF CATAWBA NUCLEAR STATION

1.0 PURPOSE

To provide a method for identifying gaseous plumes or liquid effluent, and obtaining field data indicative of the radiation exposure to the general public following a suspected uncontrolled release of radioactivity. This procedure shall also be implemented by the Crisis Management Center once it is activated.

2.0 REFERENCES

- 2.1 HP/O/B/1000/06 Emergency Equipment Functional Check and Inventory
- 2.2 HP/O/B/1002/04 Collection of Operational Environmental Weekly Samples
- 2.3 HP/O/B/1002/05 Collection of Operational Environmental Monthly Samples
- 2.4 HP/O/B/1002/06 Collection of Operational Environmental Quarterly Samples
- 2.5 HP/O/B/1002/08 Collection of Operational Environmental Semimonthly Samples
- 2.6 HP/O/B/1002/10 Collection of Operational Environmental Semiannual Samples
- 2.7 HP/O/B/1003/05 Operating and Calibration Procedure: Eberline Model PIC-6A Portable Ion Chamber
- 2.8 HP/O/B/1003/12 Operating and Calibration Procedure: Eberline Model E-520 Portable Beta-Gamma Geiger Counter
- 2.9 HP/O/B/1003/17 Operation and Calibration Procedure: Canberra Series - 10 Portable MCA
- 2.10 HP/O/B/1003/31 Operation and Calibration: Eberline Model E140N Portable Count Rate Meter
- 2.11 HP/O/B/1009/16 Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release
- 2.12 HP/O/B/1009/19 Emergency Radio System Operations, Maintenance and Communications

3.0 LIMITS AND PRECAUTIONS

- 3.1 The Field Monitoring Teams (FMT) should park vehicles completely off the road when sampling.
- 3.2 Four (4) FMTs consisting of two (2) technicians per team and one (1) helicopter team (1 person) if necessary shall be formed as follows:

<u>Team Call Signs</u>	<u>Transportation</u>
Alpha	Land Vehicle
Bravo	Land Vehicle
Charlie	Land Vehicle
Delta	Land Vehicle
Echo	Helicopter

- 3.3 Each FMT shall use particulate masks and protective clothing whenever activity justifies it or when directed by the Field Monitoring Coordinator (FMC).
- 3.4 If the team members are expected to be exposed to I-131 in excess of 70 MPC (63×10^{-3} $\mu\text{Ci/ml}$), and directed by the FMC, each team member should ingest a tablet of potassium iodide per Reference 2.11.
- 3.5 Environmental sampling during emergency conditions shall not replace, but rather supplement normal environmental monitoring.
- 3.6 Each FMT shall maintain open radio communications with the FMC per Reference 2.12. If radio becomes inoperable, call in sample results on a phone at 831-8182 or 803/831-2282 (Lake Wylie/Charlotte), 861-0331 (Gaston County), 324-3128 (Rock Hill and Fort Mill).
- 3.7 If any equipment becomes inoperable, notify the FMC and wait for further instructions.
- 3.8 Annual training in the use of this procedure and the associated equipment and instrumentation shall be conducted and documented on TSR-10.
- 3.9 Portable MCA's shall be picked up at the Health Physics instrument issue point when directed by the FMC. Ensure that the dewars are adequately filled per Reference 2.9.
- 3.10 When returning kits to the Emergency Kit Storage Room, perform an equipment inventory check using the Environmental Survey Kit Checklist (Reference 2.1). Note deviations and forward to the Respiratory/Instrument Calibration Supervisor.

4.0 PROCEDURE

4.1 Activation

- 4.1.1 Upon notification and assembly (FMC), the FMT members shall:

- 4.1.1.1 Report to the Health Physics area on the 609' elevation (on back shifts report to Administration Building) and wait for further instructions from the FMC.
 - 4.1.1.2 Report to the Emergency Kit Storage Room in the Temporary Administration Building to get Environmental Survey Kits.
 - 4.1.1.3 Ensure the Portable Power Generator is operational and the gas can is fully fueled (Reference 2.1).
 - 4.1.1.4 Ensure the tamper seal on the Environmental Survey kits have not been broken and inventory any that have (Reference 2.1).
 - 4.1.1.5 Don TLD and pocket dosimetry and fill out dose cards.
 - 4.1.1.6 Battery and source check survey instruments and portable MCA for proper operation (References 2.7, 2.8, 2.9, 2.10).
 - 4.1.1.7 Ensure the portable radios are functional before leaving (Reference 2.12).
 - 4.1.1.8 Obtain emergency vehicles as directed in Enclosure 5.8.
 - 4.1.1.9 Each FMT will proceed to the survey point assigned by the FMC (Enclosure 5.3).
- 4.2 Locating and Tracking the Plume
- 4.2.1 At the assigned survey point, the FMT shall perform a general area Beta vs. Beta-Gamma survey. This method should be used to locate center and width of plume.
 - 4.2.1.1 Record date, time, location and dose rate (mr/hr) on the Field Monitoring Data Sheet (Enclosure 5.4).
 - 4.2.2 If survey results are less than or equal to expected background, call in the results to the FMC and wait for further instructions.
 - 4.2.3 If survey results are greater than background, take protective actions as necessary. Then, if directed, take an air sample (volume should be $> 10^6$ ml) equipped with a Silver Zeolite Cartridge and particulate filter.
 - 4.2.3.1 Insert cartridge with arrow pointing in.

- 4.2.3.2 Insert filter paper with smooth side facing out.
 - 4.2.3.3 Calculate required sample time per Enclosure 5.5.
 - 4.2.3.4 When air sample is completed, place the Silver Zeolite Cartridge in a poly bag for analysis.
 - 4.2.3.5 Place filter in a separate poly bag, label and retain for later analysis.
 - 4.2.3.6 Follow instructions on the Field Monitoring Team Work Sheet and the attached Operator Guidelines (Enclosure 5.6) to record air sample information and analyze the cartridge on the Canberra-10.
- 4.3 Special Sampling, as directed:
- 4.3.1 All sampling outside of Auxiliary, Service and Turbine Buildings should be done in conjunction with Operations Support Center (OSC) personnel.
 - 4.3.2 Take smears and place them in separate poly bags, label and retain for later analysis.
 - 4.3.3 Count smears on E140N and record on Field Monitoring Data Sheet (Enclosure 5.4). Call in results to FMC.
 - 4.3.4 Collect water samples in cubitainers using good Health Physics practices and label and retain for later analysis.
 - 4.3.5 Place TLD's in the environment.
 - 4.3.6 Retrieve and replace air sample and/or TLD's that are already located in the environment. Locations are listed in Enclosure 5.1. Place samples in separate poly bags, label and retain for later analysis.
 - 4.3.7 Collect broad leaf vegetation sample (one square meter) label and retain for later analysis (Reference 2.12).
 - 4.3.8 Collect shoreline sediment sample (one liter) label and retain for later analysis (Reference 2.6).
 - 4.3.9 Collect milk sample (one full cubitainer) label and retain for later analysis (Reference 2.5). Locations are listed in Sample Enclosure 5.2.
- 4.4 Turnover
- 4.4.1 Each FMT shall be relieved as directed by the FMC.
 - 4.4.2 Inform the relief FMT of the equipment inventory status.

- 4.4.3 Direct the relief FMT to don TLD's and pocket dosimetry and fill out dose cards.
- 4.4.4 Return all samples to the Emergency Kit Storage Room as directed by the FMC.
- 4.4.5 Turn in all data sheets to the FMC or his designee.

5.0 ENCLOSURES

- 5.1 Air Sampler, TLD, and Water Sample Locations
- 5.2 Milk Sample Locations
- 5.3 Predetermined Sampling Locations
- 5.4 Sample of Field Monitoring Data Sheet
- 5.5 Sample Time Required For Minimum Sample Volume
- 5.6 Sample of Field Monitoring Team Work Sheet For Determining Iodine Activity
- 5.7 TSC Field Monitoring Organization
- 5.8 Emergency Vehicles

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.1
 AIR SAMPLER, TLD, AND WATER SAMPLE LOCATIONS

Air Sample Locations (need key CPD-1)

<u>Zone</u>	<u>& Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A0	1	1	Hwy 274-N, right Liberty Hill Rd., right in fork to end (Air CNS #200, need key).
A0	1	5	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd., left on Blue Bird Ln., through gate to end (Air CNS #201, need key).
B1	3	1	Hwy 49-N, right Hwy 160, right at Tega Cay sign (98), right before Tega Cay entrance into Duke Power Company substation (Air CNS #212, need key).
C2	10	5	Hwy 274-S, left Hwy 161, right Mt. Gallant Rd. (195), right Hwy 21-121 By-Pass, right on Hwy 72 - 121 By-pass, left on dirt road (Trash Pile Rd.) across from Wayne's Auto Service, go to Duke Power Company substation (Air CNS #217, need key).
A0	1	26	. Behind Catawba Nuclear Station overlook (Air CNS #205, need key).

TLD Locations

I. Site Boundary TLD's

<u>Zone</u>	<u>& Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A0	1	44	Hwy 274-N, right Liberty Hill Rd., right in fork, pass softball field to large rocks at fence on right. TLD is on fence (TLD CNS #222).
A0	1	1	Hwy 274-N, right Liberty Hill Rd., right in fork to end (TLD CNS #200, need key).
A0	1	5	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd., left on Blue Bird Ln., through gate to end (TLD CNS #201, need key).
A0	1	8	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd. Go to first drive on right past Paradise Pl., TLD across road (TLD CNS #202).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.1
 AIR SAMPLER, TLD. AND WATER SAMPLE LOCATIONS

<u>Zone</u>	<u>& Radius</u> (Mi)	<u>No.</u>	<u>Description</u>
A0	1	11	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd. TLD is .1 miles on left in curve (TLD CNS #223).
A0	1	14	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd. TLD .2 miles on right (TLD CNS #224).
A0	1	45	Left at Steam Production entrance on Concord Rd., left on Old Concord Rd. to end. TLD on fence on left (TLD CNS #203).
A0	1	17	Left at Steam Production entrance on Concord Rd. to first transmission tower on left after bridge (TLD CNS #225).
A0	1	20	Left at Steam Production entrance on Concord Rd., TLD on left across bridge just past fence (TLD CNS #226).
A0	1	23	Left at Steam Production entrance on Concord Rd., TLD on left at beginning of guardrail posts (TLD CNS #204).
A0	1	26	Behind Catawba Nuclear Station overlook (TLD CNS #205).
A0	1	29	Left at Steam Production entrance on Concord Rd., TLD at Shady Shore Dr. on right corner at Bethel Community Clubhouse sign (TLD CNS #227).
A0	1	32	Right at Steam Production entrance on Concord Rd., TLD at first dirt left (Valelake Dr.) on right corner (TLD CNS #228).
A0	1	35	TLD on top of hill at Catawba Nuclear Station Construction entrance on North side of street (TLD CNS #206).
A0	1	38	Hwy 274-N, right at Liberty Hill Rd., right in fork to third power line on right, walk about 200 yds. South along boundary fence. TLD on fence (TLD CNS #229).
A0	1	41	Hwy 274-N, right at Liberty Hill Rd., go .8 miles (right in fork) TLD on fence on right (TLD CNS #207).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
 HP/O/B/1009/04
 ENCLOSURE 5.1
 AIR SAMPLER, TLD, AND WATER SAMPLE LOCATIONS

<u>Zone</u>	<u>& Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
II. 4-5 Mile TLD's			
F1	4	4	Hwy 49-N to River Hills Plantation rear entrance at Robinwood Rd. TLD behind green building on right corner (TLD CNS #230).
F1	4	6	Hwy 49-N to River Hills Plantation front entrance guardhouse (TLD CNS #231).
A1	4	2	Hwy 49-N to intersection of Pleasant Hill Rd. (1109), TLD on power line (TLD CNS #232).
A1	4	4	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left Zoar Rd. (1105), right Thomas Rd. (1104), TLD behind second house on right (TLD CNS #233).
B2	4	2	Hwy 49-N, right Hwy 160 to Home Federal Savings and Loan on left. TLD on left rear corner of building. (TLD CNS #234).
B1	4	3	Hwy 49-N, right Hwy 160, right on Dam Rd. (99), last gravel right in sharp curve before Lake Wylie Dam, left through fence to substation, TLD on right of inner substation fence (TLD CNS #235).
C1	4	1	Hwy 274-S, left Mt. Gallant Rd. (195), left India Hook Rd. (30) to S.C. Wildlife Resources Dept (TLD CNS #236).
C1	4	3	Hwy 274-S, left Mt. Gallant Rd. (195), right Homestead Rd. (657) to end, TLD straight across intersection of Twin Lakes Rd. (TLD CNS #237).
C1	4	5	Hwy 274-S, left Mt. Gallant Rd. (195), right W. Oak Dr. (962) to end at fork, TLD on left at fence (TLD CNS #238).
D1	5	1	Hwy 274-S to Carter Lumber Co., TLD on fence near gate (TLD CNS #239).
D1	4	2	Hwy 274-S, right Campbell Rd. (80), left on Paraham Rd. (54) to transmission tower on right, TLD on brown power pole (TLD CNS #240).
D1	5	4	Hwy 274-S, right Campbell Rd. (80) for about 3 miles, TLD on left at beginning of horse fence (TLD CNS #241).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.1

AIR SAMPLER, TLD, AND WATER SAMPLE LOCATIONS

<u>Zone</u>	<u>& Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
E1	5	2	Hwy 49-S, right Paraham Rd, (54) to transmission tower on left after bridge (TLD CNS #242).
E1	5	3	Hwy 274-N, left Hwy 55, left Kingsberry Rd. (114) to transmission tower on left (TLD CNS #243).
F1	4	1	Hwy 274-N, left Hwy 55 to Bethel School, TLD on side of small building in back (TLD CNS #244).
F1	4	3	Hwy 274-N left on Glenvista Rd. to Crowder Creek Boat Landing, TLD to East of parking lot (TLD CNS #245).
B2	8	1	Hwy 49-N, right Carowinds Blvd. (1441), left Choate Cir., TLD on inside of fence left of the guardhouse (TLD CNS #246).
B1	3	1	Hwy 49-N, right Hwy 160, right Tega Cay sign (98), right before Tega Cay entrance into Duke Power Company substation (TLD CNS #212).
B2	7	6	Hwy 49-N, right Hwy 160 to Fort Mill, right Lee St., left Self St., TLD at Fort Mill Municipal Water Supply behind Springs Mill (TLD CNS #247).
C2	7	3	Hwy 274-S, right on Herlong Ave. to Piedmont Medical Center emergency entrance to back of hospital. TLD on fence at back right corner of Liquid Oxygen storage area (TLD CNS #248).
C2	10	5	Hwy 274-S to Newport, left at stop light, right on Rawlinson Rd., left Hwy 5, right on Heckle Blvd. (901) to end, left on Hwy 72, right on dirt road just across from Wayne's Auto Service, go to Duke Power Company Substation (TLD CNS #217).
C2	8	6	Hwy 274-S, left Hwy 161, right Rawlinson Rd. (56), left Hwy 5 to Rock Hill Career Development Center, TLD on transmission tower (TLD CNS #249).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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ENCLOSURE 5.1

AIR SAMPLER, TLD, AND WATER SAMPLE LOCATIONS

<u>Zone</u>	<u>& Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
D2	10	4	Hwy 274-S, right Campbell Rd. (80), left Hwy 49-S, left Rd. 64, left Hwy 5. Go to Duke Power Company Appliance Center on left. TLD on fence in back (TLD CNS #250).
E2	10	2	Hwy 55 into Clover, TLD at Duke Power Company Appliance Center in rear lot on inner fence (TLD CNS #251).
<u>Water Sample Locations</u>			
F3	14	4	Hwy 274-N, right Pole Branch Rd. (279), right Hwy 273 into Belmont, right Catawba St., left at next light to Belmont Municipal Water Supply (Water CNS #218).
C2	7	2	Hwy 274-S, left Hwy 161, right Mt. Gallant Road (195) to end. Rock Hill Municipal Water Supply across intersection on left (Water CNS #214).
B2	7	6	Hwy 49-N, right Hwy 160 to Fort Mill, right Lee St., left Self St., go to Fort Mill Municipal Water Supply behind Springs Mill (Water CNS #213).
A0	1	46	Left exiting Steam Production entrance on Concord Rd., left just after canal bridge. Go to pier (water CNS #208, need key).
B1	4	5	Hwy 49-N, right Hwy 160, right Dam Rd. (99), left Gray Rock Rd. (251) to Lake Wylie Dam. Walk through plant to upstream side of the dam (water CNS #211).
B1	4	6	Hwy 49-N, right Hwy 160, right Dam Rd. (99), left Gray Rock Rd., (251) to Lake Wylie Dam. Ride or walk to river access on downstream side of dam.
C2	7	8	Hwy 274-S left Mt. Gallant Rd. (195), left Hwy 161, left Cherry Rd. (Hwy 21), left on dirt road at Fort-Rock Drive-In to end, go right to Rock Hill Municipal water intake.
A1	4	6	Hwy 49-N, left at Camp Steere sign after crossing Buster Boyd Bridge (Water CNS #215).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.2
 MILK SAMPLE LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>Milk</u>	
D1	6	M	Hwy 274-S, right Hwy 161, left Rd. 1080 to Pursley Dairy.
D2	8	M	Hwy 274-S, right Hwy 161, left Scism Dairy and Equipment Co. (CASE sign).
E2	6	M	Hwy 274-N, left Hwy 55, left Clinton Dairy Rd.
F1	3	M	Hwy 274-N, right Lake Wylie Rd. (1099) to first house on left, (Ingram Richmond residence).
F2	7	M	Hwy 274-N, Hwy 55, right Paraham Rd. (54), left Hwy 557. Barnett Dairy 1 mile on left.
D1	7	M	Hwy 274-S to Newport, left at stop light, right Adnah Church Rd. (81). Woods Dairy 1.5 miles on left.
F2	13	M	Hwy 274-N, left Hwy 55, go through Clover, SC. Right on Lloyd White Rd. (148), left on Crowders Creek Rd. (1103), next paved right (1125). Oates Dairy is half mile on left.

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A0	1	1	Hwy 274-N, right Liberty Hill Rd., right in fork to end (TLD & Air CNS #200, need key).
A0	1	2	Hwy 274-N, right Lake Wylie Rd. (1099), right at Hudson Rd. fork, right at Commodore Pl. fork, left on Tioga Rd. to end.
A0	2	3	Hwy 274-N, right Lake Wylie Rd., (1099), left fork after pavement ends, on Hudson Rd. to end.
A0	2	4	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102) to dead end at Catawba Yacht Club.
A0	1	5	Left exiting Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd., left on Blue Bird Ln. through gate to end (TLD & Air CNS #201, need key).
A0	1	6	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left on Snug Harbor Rd. (1357), right Coze Cove Rd. (1434) to end.
A0	2	7	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), to intersection of Snug Harbor Rd. (1357).
A0	1	8	Left exiting Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Rd. Go to first drive on right past Paradise Pl., TLD across road (TLD CNS #202).
A0	1	9	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left Snug Harbor Rd. (1357) to end.
A0	2	10	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left Snug Harbor Rd. (1357), stay on Snug Harbor at Kalabash Rd. Fork, take first gravel left (Crosshavens Dr.) after fork to the end (Beware of dogs).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A0	1	11	Left exiting Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd., left on Crepe Myrtle Road. TLD is .1 miles on left in curve (TLD CNS #223).
A0	1	12	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left McKee Rd (1100), right Bankhead Rd. to end.
A0	2	13	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left McKee Rd. (1100), right Bankhead Rd. to intersection of Bessbrook Rd.
A0	1	14	Left exiting Steam Production entrance on Concord Rd., left on Old Concord Rd., right on Acacia Rd. TLD .2 miles on right (TLD CNS #224).
A0	1	15	Left exiting Steam Production entrance on Concord Rd., take first dirt fork to left on Kingsberry Dr., Stop at Commodore Yacht Club.
A0	1	16	Left exiting Steam Production entrance on Concord Rd. to last big curve before pavement ends.
A0	1	17	Left exiting Steam Production entrance on Concord Rd. to first transmission tower on left after bridge (TLD CNS #225).
A0	1	18	Left exiting Steam Production entrance on Concord Rd., go to end and turn right on Sandlapper Rd. Stop at transmission tower.
A0	2	19	Hwy 274-S, left Allison Creek Rd. (1081) to end of pavement.
A0	2	20	Left exiting Steam Production entrance on Concord Rd. TLD on left across bridge, just past fence (TLD CNS #226).
A0	1	21	Left Hwy 274-S, left Allison Creek Rd. (1081), left Spratt Rd., to end (Beware of dogs).
A0	2	22	Hwy 274-S, left Allison Creek Rd. (1081) to intersection of Bardale Rd.

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
AO	1	23	Left exiting Steam Production entrance on Concord Rd. TLD on left at beginning of guardrail posts (TLD CNS #204).
AO	1	24	Hwy 274-S, left Allison Creek Rd. (1081), left at Spratt Rd., left Morrison Rd., then right in next 2 forks, left in next fork to end.
AO	2	25	Hwy 274-S, left Allison Creek Rd. (1081), to intersection of Spratt Rd.
AO	1	26	Behind Catawba Nuclear Station overlook (TLD and Air CNS #205, need key).
AO	1	27	Right exiting Steam Production entrance on Concord Rd., first dirt left on Valelake Rd., left in fork to end.
AO	2	28	Hwy 274-S, left Allison Creek Rd. (1081) to intersection of Colina Rd.
AO	1	29	Left exiting Steam Production entrance on Concord Rd. TLD at Shady Shore Dr. on right corner at Bethel Community Clubhouse sign (TLD CNS #227).
AO	1	30	Right exiting Steam Production entrance on Concord Rd., first dirt left on Valelake Rd., right in fork to end.
AO	2	31	Hwy 274-S to intersection of Campbell Rd. (80).
AO	1	32	Right exiting Steam Production entrance on Concord Rd. TLD at first dirt left (Valelake Dr.) on right corner (TLD CNS #228).
AO	1	33	Right exiting Steam Production entrance on Concord Rd., left on dirt road (Pine Pt. Dr.) just before Granny's Restaurant, stop .5 miles.
AO	2	34	Hwy 274-S to Big Allison Creek bridge.
AO	1	35	TLD on top of hill at intersection of Catawba Nuclear Station Construction entrance and Road 1132 (TLD CNS #206).
AO	1	36	Right exiting Steam Production entrance to transmission line just before Granny's Restaurant on Concord Rd. (1132).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A0	2	37	Hwy 274-N, left Liberty Hill Rd., take first left and go to end.
A0	1	38	Hwy 274-N, right at Liberty Hill Rd., right in fork to third transmission line on right, walk about 200 yds. South along boundary fence. TLD is on fence (TLD CNS #229).
A0	1	39	Hwy 274-N, right at Liberty Hill Rd., right in fork to third transmission line on right.
A0	2	40	Right exiting Steam Production entrance on Concord Rd. to end. Right on Hwy 274-N for 1 mile.
A0	1	41	Hwy 274-N, right at Liberty Hill Rd., go .8 miles (right in fork), TLD on fence on right (TLD CNS #207).
A0	1	42	Hwy 274-N, right at Liberty Hill Rd., right in fork, go to softball field entrance.
A0	2	43	Hwy 274-N, right Lake Wylie Rd. (1099), right Beaver Creek Trail to end.
A0	1	44	Hwy 274-N, right at Liberty Hill Rd., right in fork, pass softball field to large rock piling on fence. TLD is on fence (TLD CNS #222).
A0	1	45	Left exiting Steam Production entrance, left on Old Concord Rd. to end. TLD on fence on left (TLD CNS #203).
A0	1	46	Left exiting Steam Production entrance on Concord Rd. Turn left just after canal bridge. Go to pier (water CNS #208, need key).
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A1	3	1	Hwy 49-N to NC side of Buster Boyd Bridge.
A1	4	2	Hwy 49-N to intersection of Pleasant Hill Rd. (1109), TLD on transmission tower (TLD CNS #232).
A1	5	3	Hwy 49-N to Steele Creek Vol. Fire Dept. on right.

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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
A1	4	4	Hwy 49-N, right Pleasant Hill Rd (1109), right Youngblood Rd. (1102), left Zoar Rd. (1105), right Thomas Rd. (1104, TLD behind second house on right in pines (TLD CNS #233).
A1	5	5	Hwy 49-N, right Pleasant Hill Rd. (1109, right Youngblood Rd. (1102), left Hamilton Rd. (1106) to intersection of Hwy 160.
A1	4	6	Hwy 49-N, left at Camp Steere sign after crossing Buster Boyd Bridge (Water CNS #215).
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A2	10	1	Hwy 49-N, stop one mile past Westinghouse Blvd. at Roberts Systems 8300 on left.
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A3	10	1	Hwy 49-N, right Carowinds Blvd. (1441), left Hwy 51 to Pineville, stop near Sugar Creek bridge.
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B1	3	1	Hwy 49-N, right Hwy 160, right on Gold Hill Rd. (98) at Tega Cay sign, right before Tega Cay entrance on gravel road into Duke Power Company substation (TLD & Air CNS #212, need key).
B1	2	2	Hwy 49-N, right Pleasant Hill Rd. (1109), right Youngblood Rd. (1102), left McKee Rd (1100).. left Bankhead Rd., left Bessbrook Rd. to end.
B1	4	3	Hwy 49-N, right Hwy 160, right on Dam Rd. (99), last gravel right in sharp curve before Lake Wylie Dam, left through fence to substation, TLD on right of inner substation fence (TLD CNS #235).
B1	2	4	Hwy 49-N, right Hwy 160, right on Gold Hill Rd. (98) at Tega Cay sign, enter Tega Cay following Tega Cay Dr., right Windjammer Dr., 6 miles, Right at circle, Left Kiwi Point to end.

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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
B1	4	5	Hwy 49-N, right Hwy 160, right Dam Rd. (99), left Gray Rock Rd. (251) to Lake Wylie Dam. Walk through plant to upstream side of the dam (water CNS #211).
B1	4	6	Hwy 49-N, right Hwy 160, right Dam Rd. (99), left Gray Rock Rd. (251) to Lake Wylie Dam. Go to river access on downstream side of dam.
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B2	8	1	Hwy 49-N, right Carowinds Blvd. (1441), left Choate Circle, TLD on inside of fence left of the guardhouse (TLD CNS #246).
B2	4	2	Hwy 49-N, right Hwy 160 to Home Federal Savings and Loan on left. TLD on left rear corner of building (TLD CNS #234).
B2	5	3	Hwy 49-N, right Hwy 160, left on Gold Hill Rd. (98) at Home Federal Savings and Loan, stop at intersection of Whitley Rd.
B2	10	4	Hwy 49-N, right Carowinds Blvd. (1441), left Hwy 51 to Pineville, right Hwy 521 (Polk St.) in Pineville, right on Dorman Rd., stop at state line.
B2	5	5	Hwy 49-N, right Hwy 160, right Sutton Rd. (49) to intersection of Gray Rock Rd. (251).
B2	7	6	Hwy 49-N, right Hwy 160 to Fort Mill, Right Lee St., left Self St. TLD at Fort Mill Municipal Water Supply on right behind Springs Mill (TLD CNS #247, also Water CNS #213).
B2	10	7	Hwy 49-N, right Hwy 160 through Fort Mill to the Sugar Creek bridge.
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C1	4	1	Hwy 274-S, left Mt. Gallant (195), left India Hook Rd. (30) to SC Wildlife Resources Dept. (TLD CNS #236).
C1	5	2	Hwy 274-S, left Mt. Gallant Rd. (195), go beyond India Hook to Red Burketts Body Shop on right.

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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
C1	4	3	Hwy 274-S, left Mt. Gallant Rd. (195), right Homestead Rd. (657) to end. TLD straight across intersection of Twin Lakes Rd. (TLD CNS #237).
C1	5	4	Hwy 274-S, left Mt. Gallant Rd. (195), right Homestead Rd. (657) to end.
C1	4	5	Hwy 274-S, left Mt. Gallant Rd. (195), right W. Oak Dr. (962) to end at fork. TLD on left at fence (TLD CNS #238).
C1	5	6	Hwy 274-S, left Mt. Gallant Rd. (195), right at York County Museum (658) to end at SC National Guard Armory.
C1	5	7	Hwy 274-S to Carter Lumber Co.
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C2	10	1	Hwy 274-S, left Hwy 161, left in fork on Calanese Rd. (50) to intersection of Springdale Rd.
C2	7	2	Hwy 274-S, left Hwy 161, right Mt. Gallant Rd. (195) to end. Go to Rock Hill Municipal Water Supply across intersection on left (Water CNS #214).
C2	7	3	Hwy 274-S, right on Herlong Ave. to Piedmont Medical Center emergency entrance to back of hospital. TLD on fence at back right corner of Liquid Oxygen storage area (TLD CNS #248).
C2	10	4	Hwy 274-S, left Hwy 161, right Mt. Gallant Rd. (195), right Hwy 21-121 By-pass to Fast Fare on left at intersection of Springsteen Rd.
C2	10	5	Hwy 274-S to Newport, left at stop light, right on Rawlinson Rd., left Hwy 5, right on Heckle Blvd. (901) to end, left on Hwy 72, right on dirt road across from Wayne's Auto Service. Go to Duke Power Company substation (TLD & Air CNS #217, need key).
C2	8	6	Hwy 274-S, left Hwy 161, right Rawlinson Rd. (56), left Hwy 5 to Rock Hill Career Development Center, TLD on transmission tower (TLD CNS #249).

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 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
C2	10	7	Hwy 274-S, left Hwy 161, right Adnah Church Rd. (81), right on Hwy 5, left on Eastview Rd. (102) to intersection of Oak Park Rd. (103).
C2	7	8	Hwy 274-S, left Mt. Gallant Rd. (195), left Hwy 161, left Hwy 21, left on dirt road at Fort-Rock Drive-In to end, go right to Rock Hill Municipal Water Intake.
D1	5	1	Hwy 274-S to Carter Lumber Co. TLD on fence near gate (TLD CNS #239).
D1	4	2	Hwy 274-S, right Campbell Rd. (80), left Paraham Rd. (54) to transmission tower on right, TLD on power pole (TLD CNS #240).
D1	5	3	Hwy 274-S, right Campbell Rd. (80), left Paraham Rd. (54), next right on Rd. 815 to Allison Creek bridge.
D1	5	4	Hwy 274-S, right Campbell Rd. (80) for about 3 miles, TLD on left at beginning of horse fence (TLD CNS #241).
D2	10	1	Hwy 274-S, left Hwy 161, right Adnah Church Rd. (81), right Hwy 5, quick left on Eastview Rd. (102), right Holland Rd. (157), right Turkey Farm Rd. (1172), left Russell Rd. (536), go .2 miles.
D2	10	2	Hwy 274-S, left Hwy 161, right Adnah Church Rd. (81), right Hwy 5, left Billy Wilson Rd. (1451), right Turkey Farm Rd. (1172) to Fishing Creek bridge.
D2	10	3	Hwy 274-S, right Campbell Rd. (80), left Hwy 49-S, stop at Pantry before entering York.
D2	10	4	Hwy 274-S, right Campbell Rd. (80), left Hwy 49-S, left Rd. 64, left Hwy 5. Go to Duke Power Company Appliance Center on left. TLD on fence in back (TLD CNS #250).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
 HP/O/B/1009/04
 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
D2	10	5	Hwy 274-S, right Campbell Rd. (80), left 49-S, right Old Limestone Rd. (172) to end.
E1	5	1	Hwy 274-S, right Campbell Rd. (80) to intersection of Hwy 49.
E1	5	2	Hwy 49-S, right Paraham Rd. (54) to transmission tower on left after bridge (TLD CNS #242).
E1	5	3	Hwy 274-N, left Hwy 53, left Kingsberry Rd. (114) to transmission tower on left (TLD CNS #243).
E1	5	4	Hwy 274-N, left Hwy 55 to intersection of Kingsberry Rd. (114).
E2	5	1	Hwy 274-S, right Campbell Rd. (80), right Paraham Rd. (54) to intersection of Dr. Nichols Rd. (819).
E2	10	2	Hwy 274-N, left Hwy 55 into Clover, go to Duke Power Company Appliance Center on left. TLD on fence in back (TLD CNS #251).
E2	10	3	Hwy 274-N, left Hwy 55 to Pantry at intersection of Hwy 321 in Clover (behind Pantry).
F1	4	1	Hwy 274-N, left Hwy 55 to Bethel School. TLD on side of small building in back (TLD CNS #244).
F1	5	2	Hwy 274-N, left Hwy 55, right Bethel School Rd. (152) to intersection of Hollandale Dr.
F1	4	3	Hwy 274-N left on Glenvista Rd. to Crowder Creek boat landing, TLD to east of parking lot (TLD CNS #245).
F1	4	4	Hwy 49-N to River Hills Plantation rear entrance at Robinwood Rd. TLD behind green building on right corner (TLD CNS #230).

DUKE POWER COMPANY
 CATAWBA NUCLEAR STATION
 HP/C/E/1009/04
 ENCLOSURE 5.3
 PREDETERMINED SAMPLING LOCATIONS

<u>Zone</u>	<u>Radius (Mi)</u>	<u>No.</u>	<u>Description</u>
F1	5	5	Hwy 49-N, left Sherer Church Rd. to end.
F1	4	6	Hwy 49-N to River Hills Plantation entrance guardhouse (TLD CNS #231).
F1	5	7	Hwy 49-N, left Montgomery Rd. at the River Rat Restaurant. Stop in horseshoe curve near lake.
<hr/>			
F2	10	1	Hwy 274-N, left Hwy 557, right Ridge Rd. (27) to Bowling Green Presbyterian Church.
F2	5	2	Hwy 274-N, left Hwy 557 to Pina Grove Baptist Church.
<hr/>			
F3	10	1	Hwy 274-N, left Hwy 557, next paved right on Oakridge Rd. at Bethel Fire Dept. (Rd. 435) to intersection of Hwy 274 (in NC).
F3	10	2	Hwy 274-N, right Pole Branch Rd. (279) to Friendship Baptist Church on left.
F3	10	3	Hwy 274-N, right Pole Branch Rd. (279), right Hwy 273 to Allen Steam Plant Bridge.
F3	14	4	Hwy 274-N, right Pole Branch Rd. (279), right Hwy 273 into Belmont, right Catawba St., left at next light to Belmont Municipal Water Supply (Water CNS #218).

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
HP/O/B/1009/04
ENCLOSURE 5.5
SAMPLE TIME REQUIRED FOR MINIMUM SAMPLE VOLUME

FLOW RATE		MINIMUM REQUIRED SAMPLING TIME IN MINUTES	
CFM	LPM		
.5	= 14	. . . . .	71
1.0	= 28	. . . . .	36
1.5	= 42	. . . . .	24
2.0	= 56	. . . . .	18
2.5	= 70	. . . . .	15
3.0	= 84	. . . . .	12
3.5	= 99	. . . . .	11
4.0	= 113	. . . . .	9
4.5	= 127	. . . . .	8

NOTE: When estimating time required to get a minimum volume of 1×10^6 ml if flow rate for the air sampler in use is not on table, go to next Lower flow rate. The LPM are rounded off to the conservative side.

Example: Air Sampler flow rate = 106 LPM. Minimum time 11 minutes

FIELD MONITORING TEAM WORK SHEET FOR DETERMINING IODINE ACTIVITY

Team Members _____ Date _____ Air Sampler No. _____

Team Call Sign _____ Canberra No. _____

AIR SAMPLE INFORMATION

ANALYSIS RESULTS

A Sample ID. No./Time/Location	B Air Sampler Run Time (Min)	C Flow Rate (LPM)	D Iodine Activity Microcuries/ml	E Dose Rate mrem/hr	F Results Reported By:
____/____/____	_____	_____	_____	_____	_____
____/____/____	_____	_____	_____	_____	_____
____/____/____	_____	_____	_____	_____	_____
____/____/____	_____	_____	_____	_____	_____
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____/____/____	_____	_____	_____	_____	_____
____/____/____	_____	_____	_____	_____	_____

Column A) Number of Sample/Time it was Taken/Sampling Location (ex. A0-2-10).
Column B) Length of time the air sampler ran.
Column C) Air sampler meter flow rate.
Column D) Activity from Canberra.
Column E) Dose rate from Canberra.
Column F) Signature of person that calls in results to FMC.

5.6.1 MCA and Detector Set-Up

- 5.6.1.1 Disconnect DC power cord from unit.
- 5.6.1.2 Turn the contrast switch on the front of the unit clockwise to the ON mode.
- 5.6.1.3 Place sample holder with Na-22 check source onto the detector.
- 5.6.1.4 Press TEST SYSTEM.
- 5.6.1.5 Press ENTER to begin test.
- 5.6.1.6 If test failed, press CLEAR ENTRY and remove the instrument from service.
- 5.6.1.7 If test passed, press ENTER.

5.6.2 Collecting and Measuring Filter Cartridges

NOTE: Record data on Field Monitoring Team Work Sheet for Determining Iodine Activity (Sample Enclosure 5.6).

- 5.6.2.1 Press ANALYZE FILTER SAMPLE.
- 5.6.2.2 Press ENTER.
- 5.6.2.3 For each sample:
 - 5.6.2.3.1 Place cartridge with the recognizable side toward the detector (in small poly bag) in sample holder.
 - 5.6.2.3.2 Put detector and sample holder in shield.
 - 5.6.2.3.3 Press ENTER to accept ID number.
 - 5.6.2.3.4 Press ENTER to accept current Flow Rate (LPM). Otherwise, change number and press ENTER.
 - 5.6.2.3.5 Press ENTER to accept current Flow Time (min). Otherwise, change number and press ENTER.
 - 5.6.2.3.6 If the volume is determined to be too small, resample, press ENTER and return to Step 5.6.2.3.
 - 5.6.2.3.7 Press ENTER to start Collect/Analyze.
 - 5.6.2.3.8 Report/Record Iodine activity ($\mu\text{Ci/ml}$) and dose rate (mrem/hr).
 - 5.6.2.3.9 Press NEXT SAMPLE.
 - 5.6.2.3.10 Label the cartridge and retain for later analysis.

- 5.6.3 After sampling completion, turn the contrast switch counter-clockwise to the STAND-BY mode.

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
HP/O/B/1009/04
ENCLOSURE 5.7
TSC FIELD MONITORING ORGANIZATION

<u>POSITION</u>	<u>NAME</u>	<u>BUSINESS PHONE</u>	<u>HOME PHONE</u>
-----------------	-------------	-----------------------	-------------------

Field Monitoring Coordinators:

Primary: C. V. Wray

Alternates: R. L. Rivard
J. E. Threatt

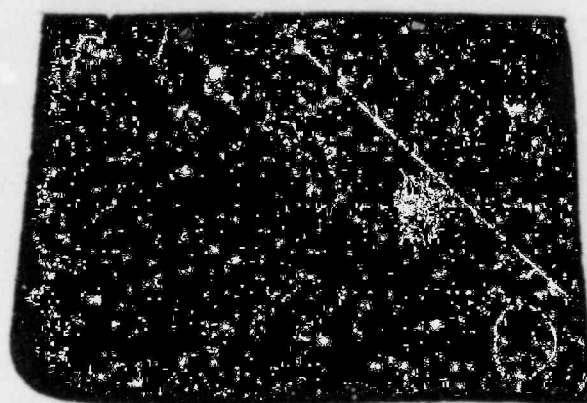
TSC Radio Operators:

Primary: D. E. Sexton

Alternate: T. W. O'Donohue

Field Monitoring Teams:

All Health Physics personnel with Field Monitoring Training.



DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
HP/O/B/1009/04
ENCLOSURE 5.8
EMERGENCY VEHICLES

The two designated emergency vehicles are the Operations pick-up truck and the Technical Services vehicle used primarily by Chemistry. These two vehicles are to be obtained (as directed by the FMC) by getting the keys from the front desk Security Officer. A set of all keys to station vehicles shall be maintained by Security at the Personnel Access Portal (PAP).

Obtain any other Station vehicles (if available) as directed by the FMC. Voluntary use of personal vehicles is another alternative that may be considered.

DUKE POWER COMPANY

CRISIS MANAGEMENT PLAN

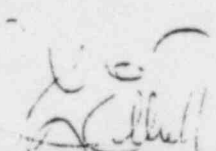
IMPLEMENTING PLAN 5.3.5

DESIGN & CONSTRUCTION SUPPORT GROUP PLAN

OCONEE NUCLEAR STATION

MCGUIRE NUCLEAR STATION

CATAWBA NUCLEAR STATION


APPROVED: DESIGN & CONSTRUCTION SUPPORT GROUP MANAGER

REVISION 15 - 07/19/84

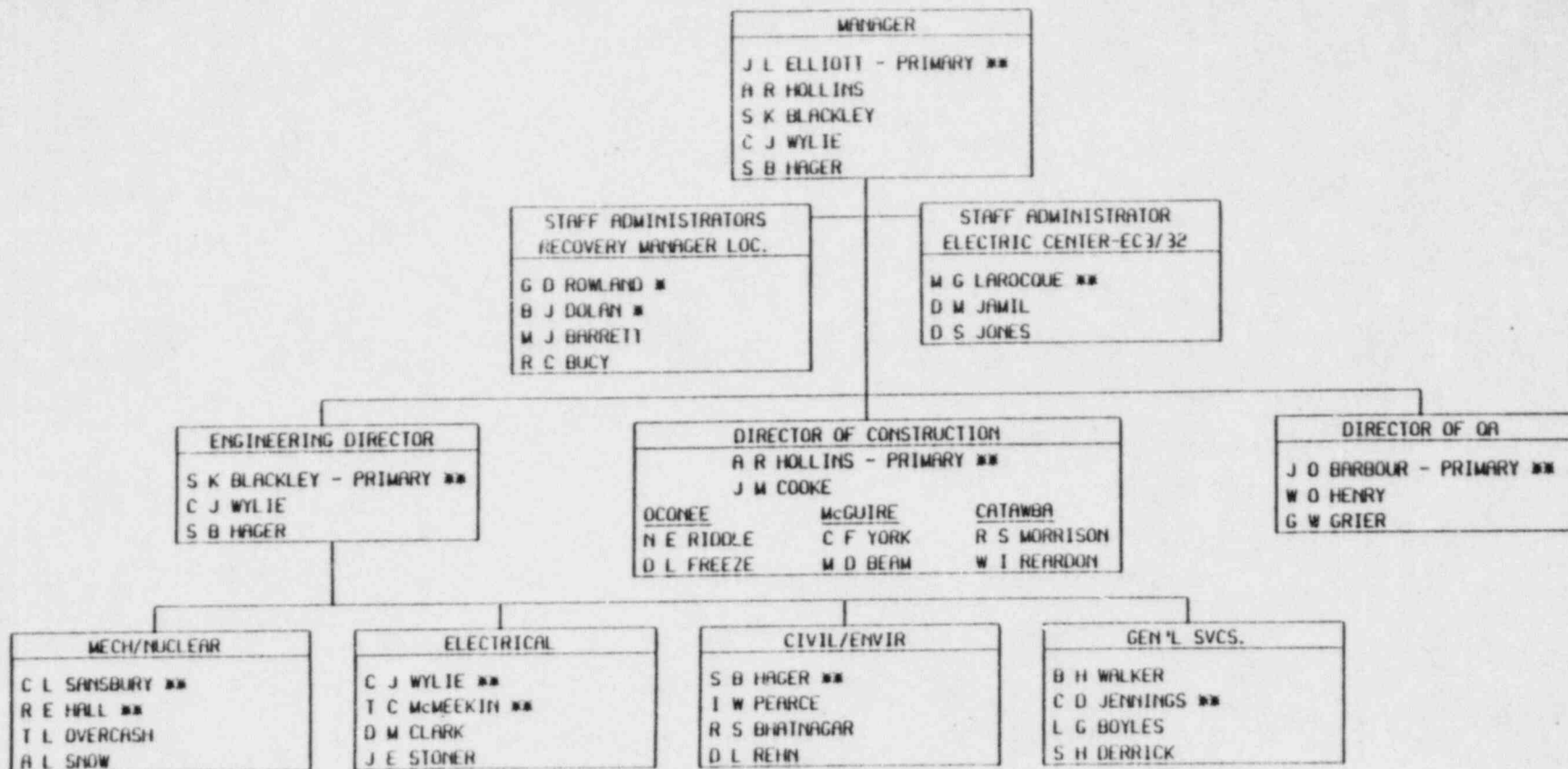
DESIGN AND CONSTRUCTION SUPPORT GROUP

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DESIGN & CONSTRUCTION SUPPORT GROUP



REVISION 15
 PAGE 3 OF 8

- * REPORT TO LOCATION DESIGNATED BY RECOVERY MANAGER AT TIME OF NOTIFICATION (SEE PAGE 12 - EMERGENCY FACILITIES)
- ** REPORT TO ELECTRIC CENTER CONFERENCE ROOM EC3/32 AFTER NOTIFICATION
- NOTE: NO PERSON WILL SERVE AS PRIMARY IN TWO PLACES

II. Organization - Charts

A. Additional Support Personnel

1. Engineering Personnel

<u>Name</u>	<u>Area of Expertise</u>	<u>Office #</u>	<u>Home #</u>
J R Hendricks	Fire Prot & Architecture		
H D Brandes	Fire Protection		
R M Sandifer	Instrumentation		
W H Rasin	Nuclear		
J E Thomas	Inst & Control Equipment		
D W Murdock	Inst & Control Systems		
H L Davenport	Pracs Computers & Security		
C E Kneeburg	Electrical Design		
D G Owen	Electrical Station Support		
G M Bostian	Electrical Station Support		
K R Caraway	Pwr Systems (Catawba Only)		
T A Ledford	Control Systems		

Other engineering and technical support personnel are available as needed in the General Office area and at each construction site.

2. Construction Personnel

<u>Name</u>	<u>Office #</u>	<u>Home #</u>
T C Chappel		
R W Timms		

The Construction Department Manager, Employee Resources and Development, maintains a directory of key Construction Department supervisors who have skills that might be required during an emergency at an operating nuclear plant. During a developing or short duration emergency, the directory will be used by the Administrative and Logistics Group to contact needed employees as directed by the Design and Construction Manager or his designee. In a longer term recovery situation, the Construction Department Manager, Employee Resources and Development, will

Primary Responsibilities:

1. Direct the activities of Design Engineering, Construction forces, Quality Assurance, and outside vendors on plant modifications.
2. Assure the design and construction activities are adequately staffed and equipped to respond in timely fashion.
3. Determine application of Corporate Quality Assurance Program. Recovery Manager or Station Manager approval is required for deviations from present practices.
4. Assure that engineering and technical specialists are available on a pre-planned basis for assisting Nuclear Engineering Services, Station Manager, Nuclear Technical Services and the Recovery Manager as required.
5. Advise the Recovery Manager on matters related to Design and Construction Support.

Principal Working Relationships:

1. Station Manager for plans on modifications to systems and equipment in plant.
2. Nuclear Engineering Services Manager for joint review of proposed modifications to systems and equipment in the plant.
3. Nuclear Technical Services Manager for modifications to systems and equipment and support of activities in the waste management area.
4. Scheduling and Planning Manager for status of activities in the Design and Construction area.

8. Staff Administrators

Reports to: Design and Construction Manager

Basic Functions: To assist the Design and Construction Manager in all areas of his responsibility and perform other tasks that the Manager may direct to meet requirements of the recovery operation.

The Staff Administrator reporting to Electric Center Conference Room EC3/32 after notification is responsible for moving the VAX computer terminal from David Nabow Library (EC2/30) to room EC3/32. He is responsible for setting the terminal up and operating it during the

provide needed manpower using his conventional organization and methods.

3. Quality Assurance Personnel

A minimum of 12 inspectors are permanently assigned to each operating nuclear plant and about one-half of these inspectors are qualified in one or more methods of NDE. This would be the initial group called upon to perform required QA activities to assure work quality and documentation. If other QA inspectors or NDE personnel are needed at the emergency site, they are or will be available from other operating or construction sites. The required tools and equipment for this group are available at each site.

Oconee Site

Name

Office #

Home #

R. J. Brackett

R. H. Ledford

J. J. McCool

McGuire Site

Name

Office #

Home #

R. P. Ruth

D. M. Franks

Catawba Site

Name

Office #

Home #

J. W. Willis

4. Babcock Wilcox (B&W) - Page 25

5. Westinghouse (W) - Page 24

III. Functional Responsibilities

A. Design and Construction Manager

Reports to: Recovery Manager

Supervises: Design and Construction Staff

Basic Functions: Coordinates the design and construction activities of Design Engineering, NSS Suppliers, Construction forces, and outside vendors.

Primary Responsibilities:

1. Directs the engineering staff.
2. Provides the administrative and technical control of the engineering and technical staff assigned to him.
3. Assure that engineering and technical specialists are available on a pre-planned basis for assisting Nuclear Engineering Services, Nuclear Technical Services, and the Station and Recovery Managers as required.
4. Assure that his engineering and design activity is adequately staffed and equipped to respond in timely fashion, both on site and at the main office.
5. Direct, coordinate, and approve engineering and design tasks assigned by the Design and Construction Support Manager.
6. Coordinate the work of suppliers providing components/services for the balance of the plant.
7. Assist Design and Construction Support Manager in determining activities to be performed under the Corporate Quality Assurance Program.

Principal Working Relationships:

1. Director of NSS Supply regarding technical requirements and balance-of-plant interface requirements.
2. Director of Construction for engineering support and for fabrication and erection procedures for balance of plant.
3. Nuclear Engineering Services, Nuclear Technical Services and the Station and Recovery Managers for engineering and technical support for their activities on a pre-planned and operational basis.
4. Administrative and Logistics Manager regarding contract administration, materials control, field purchasing, and labor relations, or other support activities required.

Manager, Mechanical/Nuclear Division

Reports to: Engineering Director

Basic Functions: Provides the mechanical and nuclear design response to meet the requirements of the recovery operation.

emergency or drill to receive plant data sheets. He is also responsible for obtaining appropriate priority for Design and Construction Support Group computer work. Computer Services contacts for obtaining priority are:

Primary - K. K. Sherrill
1st Alternate - J. E. Sinclair,
2nd Alternate - Shift Supervisor, (24 hours)

The Staff Administrator reporting to EC3/32 is also responsible for checking out the following drawings from the Electrical Division File Room and bringing them to EC3/32:

- General Arrangement Drawings
- Electrical Power System One-Line Drawings
- Mechanical Flow Diagrams

The plant and unit for which the drawings will be required will be identified in the Crisis Management Organization Emergency Activation Message. The need for additional drawings will be identified by members of the Design and Construction Support Group Team in EC3/32.

The Staff Administrators reporting to the Recovery Manager's location serve as the Design and Construction Manager's liaison with the Recovery Manager.

C. Engineering Director

Reports to: Design and Construction Support Manager

Supervises: Engineering Staff Personnel

Basic Functions: Responsible for directing and assisting the engineering staff and performing engineering and design tasks that the Design and Construction Manager may direct to meet the requirements of the recovery operation.

will not change substantially from normal practices. However, suspension of some operational quality assurance measures, as well as some design and construction quality assurance measures could be required due to time constraints. The Design and Construction Manager will determine application of Corporate Quality Assurance Program and apply as appropriate. Recovery Manager or Station Manager approval is required for deviations from present practices.

IV. Notification Procedure

Upon notification and initiation of the Crisis Management Plan, members of the Design and Construction Support Group are to report to either the Recovery Manager's designated location or Electric Center Conference Room EC3/32 as directed. Design and Construction Support Group personnel who report to the designated location, if they are the first to arrive, will assume the role of organizing the designated location for the Recovery Manager. The first member to arrive will continue to serve in this role until such time as the Recovery Manager, an alternate, or the Scheduling/ Planning Manager or his alternate arrives to assume the lead responsibilities. Initial actions to be completed and documented are as listed on the Activation Checklist (see page 15). This Checklist is to be started by the first member of the Crisis Management Organization to arrive at the Designated Location and once completed is to be retained by the Recovery Manager.

- A. Design and Construction Support Manager - Notification of an emergency or accident situation initiating the implementation of the overall Crisis Management Plan will be by the Manager of the Recovery Operation or by his designee.
- B. Design and Construction Support Directors - Notification of an emergency or accident situation initiating the implementation of the Design and Construction Support Group Plan will be by the Manager of the Design and Construction Support Group and/or his designee(s).
- C. Supporting Members - Notification of an emergency or accident situation initiating the implementation of the Design and Construction Support Group Plan will be by the appropriate Director and/or his designee(s).

- D. NSS Supplier - Will be notified by Recovery Manager or his designee that an emergency situation has developed. This notification will activate the NSSS emergency plan and response.
- E. All identified members of the Design and Construction Support Group, their home and office phone numbers are a part of this plan. (See Page #17)
- F. Upon notification of an Alert, Site Emergency or General Emergency situation at an operating nuclear station, individuals with an asterisk (*) by their name on Page 3 are to report to the Recovery Manager's Designated Location. Individuals with a double asterisk (**) by their name will report to Electric Center Conference Room EC3/32. (Note: The CMC may not be activated in an Alert situation.)

V. Emergency Facilities

A. Recovery Manager

When notified that an Alert, Site Emergency or General Emergency has been initiated, the Recovery Manager will decide where he will meet with his staff. This decision will be transmitted to each group along with station information during the customary notification procedure. His choices for Crisis Management Center locations are as follows:

McGuire/Catawba - Wachovia Center Room WC10/10 (pages 19)

Oconee - Nuclear Training Facility (pages 20 & 21)

Liberty Retail Office, Liberty SC (backup) (pages 22 & 23)

B. General Office Groups

General Office Headquarters will be maintained by the Design and Construction Support Group, the Nuclear Engineering Services Group, the Nuclear Technical Services Group, and the Administration and Logistics Support Group.

These headquarters will direct the General Office response activities of their respective groups.

C. Additional Support Personnel

Temporary quarters for the additional support personnel will be established as necessary at time of emergency in a near site "trailer city". Space for 25-30 trailers and mess facilities are provided; power and telephone services will be provided at the discretion and

direction of Administration and Logistics Manager. "Trailer City" locations are as follows:

Oconee: Keowee Construction Yard, about 1600 feet east of the 525KV switchyard.

McGuire: Parking lot area at Training and Technology Center, if needed.

Catawba: Construction Parking Lot, if needed.

VI. Emergency Equipment

Plant data is transmitted to various support groups by means of the VAX computer system during emergencies and drills. Technical Support Center personnel are responsible for releasing plant data on a timely basis. The Design and Construction Support Group VAX terminal is normally located in the David Nabow Library (EC2/30). During emergencies and drills this terminal will be relocated to EC3/32 and operated by the EC3/32 Staff Administrator.

VII. Additional Support Needed From Other Groups

The following is a list of support activities that would be required from other groups in addition to the support that would normally be expected from the other Groups. (Reference Part III of Plan for identification of responsibilities and key interfaces.)

A. Administration and Logistics Group

1. Secretarial, clerical personnel and assistance for typing, filing, reproduction, etc.
2. Communications equipment for members of Group. Each construction foreman would need capability to communicate with Construction or Engineering Directors and General Superintendent while performing repair work inside the plant.
3. Filed-purchasing and delivery of required construction materials including materials control and contract negotiation/administration.
4. Transportation and delivery of required "Special Requirements" and other Support personnel as identified by Group Manager or Directors.
5. Maps of the appropriate areas for each Group member.
6. Set up and furnish required drafting areas and office spaces as determined by Manager and Staff Administrator.

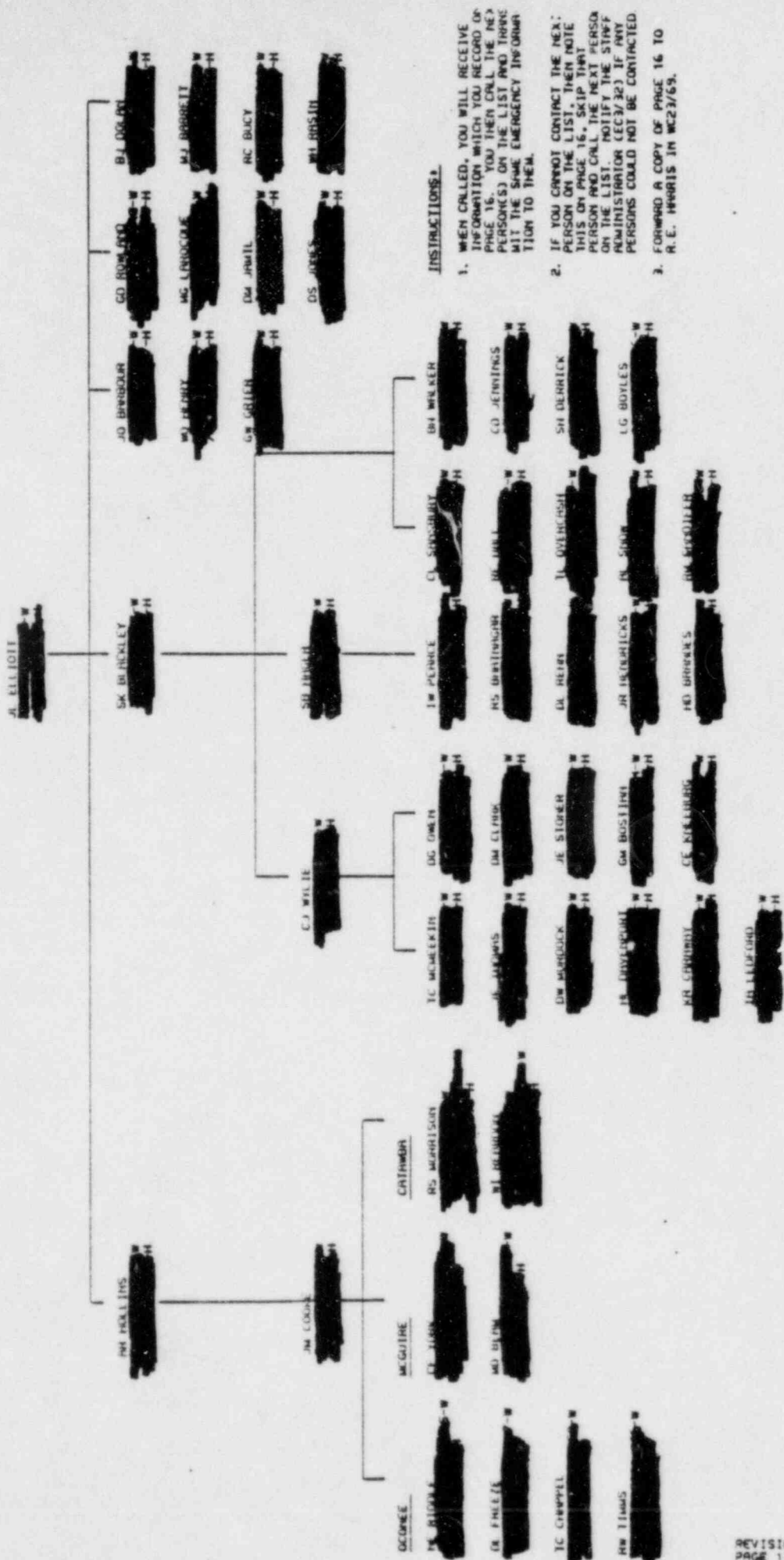
7. Funds to cover out-of-pocket expenses incurred by Group members.
 8. Provide necessary training of other personnel as required.
- B. Scheduling/Planning Group
Assemble the schedules and status reports for the Recovery Manager.
- C. Nuclear Engineering Services Group
Review proposed modifications to station equipment and system.
Provide NSSS interface.
- D. Nuclear Technical Services Group
Review proposed modifications to related equipment.

VIII. Recovery Planning

After the plant emergency situation has improved and the complete TSC, CMC and OSC staffs are not needed, actions will shift into the recovery phase. The Recovery Manager will inform the Group Managers when this is to occur.

J. L. Elliott will continue to act as the Design and Construction Manager during recovery. He will be responsible for assuring that Design and Construction activities are adequately staffed and equipped to aid the recovery effort. The Design and Construction Support Group organization will be changed as necessary to best meet the requirements of recovery.

CRISIS MANAGEMENT PLAN
DESIGN AND CONSTRUCTION GROUP
TELEPHONE CALL-UP LIST



INSTRUCTIONS:


1. WHEN CALLED, YOU WILL RECEIVE INFORMATION WHICH YOU RECORD ON PAGE 16. YOU THEN CALL THE NEXT PERSON(S) ON THE LIST AND SHARE WITH THE SAME EMERGENCY INFORMATION TO THEM.
2. IF YOU CANNOT CONTACT THE NEXT PERSON ON THE LIST, THEN NOTE THIS ON PAGE 16. SKIP THAT PERSON AND CALL THE NEXT PERSON ON THE LIST. NOTIFY THE STAFF ADMINISTRATION (CC3/33) IF ANY PERSONS COULD NOT BE CONTACTED.
3. FORWARD A COPY OF PAGE 16 TO R.E. HARRIS IN WC23/69.

DUKE POWER COMPANY
EMERGENCY RESPONSE FACILITIES

McGUIRE/CATAWBA CMC
GENERAL LOCATION



OCCURE NUCLEAR STATION
BABCOCK AND WILCOX EMERGENCY ORGANIZATION

	<u>TITLE OR FUNCTION</u>	<u>NAME</u>	<u>OFFICE</u>	<u>HOME</u>
1.	Service Manager	J. G. Brown		
2.	Resident Engineer	B. W. Street		
3.	Resident Engineer	L. H. Williams		

CRISIS MANAGEMENT TELEPHONE NUMBERS

1. General Office Numbers

a. Support Group Offices

Design & Construction -

Offsite Radiological Coordinator

Nuclear Engr. Services

Administration/Logistics

Nuclear Tech. Services -

b. Recovery Manager's Office (WC10/10)

Recovery Manager/Scheduling and Planning

Nuclear Engineering Services

News Director

Administration/Logistics

Design & Construction

Nuclear Technical Services

Offsite Radiological Support
(Special Assistance Coordinator)

2. Oconee Nuclear Training Facility Numbers

Direct
Bell Line

ONS Switchboard
ext. first dial

Recovery Manager

Design & Construction

Nuclear Engineering Services

Nuclear Technical Services

Offsite Radiological Coordinator

Administration/Logistics

Scheduling/Planning

NOTE: A complete list of Crisis Management telephone numbers can be found in Implementing Procedures 5.3.10 and 5.3.11 of the Duke Power Company Crisis Management Plan, Implementing Plans. An updated copy will be kept in EC3/32.

DESIGN & CONSTRUCTION SUPPORT GROUP

DISTRIBUTION LIST - CRISIS MANAGEMENT PLAN

<u>COPY NUMBER</u>	<u>INDIVIDUAL</u>
19	J. L. Elliott
20	S. K. Blackley
21	A. R. Hollins
22	S. B. Hager
23	C. J. Wylie
77	L. C. Dail
81	C. D. Jennings
82	C. D. Jennings



UNITED STATES
NUCLEAR REGULATORY COMMISSION

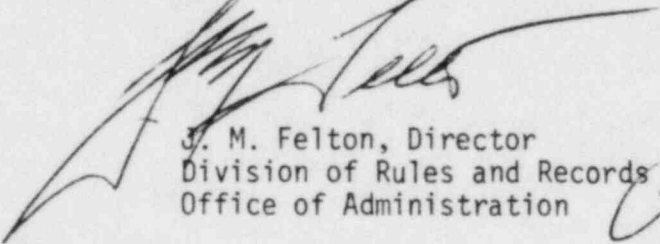
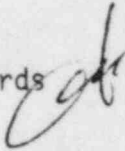
WASHINGTON, D. C. 20555

August 23, 1984

50-269/270/287/369/370/413/414
Oconee/McGuire/Catawba

MEMORANDUM FOR: Chief, Document Management Branch, TIDC
FROM: Director, Division of Rules and Records, ADM
SUBJECT: REVIEW OF UTILITY EMERGENCY PLAN DOCUMENTATION

The Division of Rules and Records has reviewed the attached document and has determined that it may now be made publicly available.


J. M. Felton, Director
Division of Rules and Records
Office of Administration 

Attachment: As stated