Duke Energy

W. R. McCollum, Jr.
Vice President

Duke Energy Corporation
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672
(864) 885-3107 OFFICE
(864) 885-3564 FAX

December 3, 2001

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Emergency Plan Implementing Procedures Manual
Volume C Revision 2001-11

Please find attached for your use and review copies of the revision to the Oconee Nuclear Station Emergency Plan: Volume C Revision 2001-11, December 2001.

This revision is being submitted in accordance with 10 CFR 50-54(q) and does not decrease the effectiveness of the Emergency Plan or the Emergency Plan Implementing Procedures.

Any questions or concerns pertaining to this revision please call Mike Thorne, Emergency Planning Manager at 864-885-3210.

By copy of this letter, two copies of this revision are being provided to the NRC, Region II, Atlanta, Georgia.

Very truly yours,

W. R. McCollum, Jr.
VP, Oconee Nuclear Site

xc: (w/2 copies of attachments)
Mr. Luis Reyes,
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
61 Forsyth St., SW, Suite 24T23
Atlanta, GA 30303

w/copy of attachments
Mr. Steven Baggett
Rockville, Maryland

(w/o Attachments, Oconee Nuclear Station)
NRC Resident Inspector
M. D. Thorne, Manager, Emergency Planning

A045

December 3, 2001

OCONEE NUCLEAR SITE
INTRASITE LETTER

SUBJECT: Emergency Plan Implementing Procedures
Volume C, Revision 2001-11

Please make the following changes to the Emergency Plan Implementing Procedures Volume C by following the below instructions.

REMOVE	ADD
Cover Sheet - Rev. 2001-10	Cover Sheet Rev. 2001-11
Table of Contents, Page 1 & 2	Table of Contents, Page 1 &2
RP/0/B/1000/009 - 03/21/01	RP/0/B/1000/009 - 11/15/01
Radiation Protection Section 11.7 - 08/29/01	Radiation Protection Section 11.7 - 11/26/01

DUKE POWER

EMERGENCY PLAN
IMPLEMENTING PROCEDURES
VOLUME C

APPROVED:

W. W. Foster, Manager
Safety Assurance

12/03/2001
Date Approved

12/03/2001
Effective Date

VOLUME C
REVISION 2001-11
DECEMBER, 2001

VOLUME C
TABLE OF CONTENTS

VOLUME C
TABLE OF CONTENTS

NSD 703 (R04-01)

INFORMATION ONLY

Duke Power Company
PROCEDURE PROCESS RECORD

(1) ID No. RP/O/B/1000/009
Revision No. 005

EPARATION

(2) Station OCONEE NUCLEAR STATION

(3) Procedure Title Procedure for Site Assembly

(4) Prepared By Ray Waterman (Signature) Ray Waterman Date 11/15/01

(5) Requires NSD 228 Applicability Determination?
- ☐ Yes (New procedure or revision with major changes)
- ☒ No (Revision with minor changes)
- ☐ No (To incorporate previously approved changes)

(6) Reviewed By Robert Doyle (QR) Date 11/15/01
Cross-Disciplinary Review By _____ (QR)NA RET Date 11/15/01
Reactivity Mgmt Review By _____ (QR)NA_____ Date _____
Mgmt Involvement Review By_____ (Ops Supt) NA_____ Date _____

(7) Additional Reviews
Reviewed By _____ Date _____
Reviewed By _____ Date _____

(8) Temporary Approval *(if necessary)*
By _____ (OSM/QR) Date _____
By _____ (QR) Date _____

(9) Approved By M. L. Thomas Date 11-15-01

PERFORMANCE ***(Compare with control copy every 14 calendar days while work is being performed.)***

(10) Compared with Control Copy _____ Date _____
Compared with Control Copy _____ Date _____
Compared with Control Copy_____ Date _____

(11) Date(s) Performed _____
Work Order Number (WO#) _____

COMPLETION

(12) Procedure Completion Verification:
☐ Unit 0 ☐ Unit 1 ☐ Unit 2 ☐ Unit 3 Procedure performed on what unit?
- ☐ Yes ☐ NA Check lists and/or blanks initialed, signed, dated, or filled in NA, as appropriate?
- ☐ Yes ☐ NA Required enclosures attached?
- ☐ Yes ☐ NA Data sheets attached, completed, dated, and signed?
- ☐ Yes ☐ NA Charts, graphs, etc. attached, dated, identified, and marked?
- ☐ Yes ☐ NA Procedure requirements met?

Verified By _____ Date _____
Procedure Completion Approved _____ Date _____

(14) Remarks *(Attach additional pages)*

Duke Power Company Oconee Nuclear Site **Procedure for Site Assembly** **Reference Use**	Procedure No. RP/**0**/B/1000/009 Revision No. 005 Electronic Reference No. OX002WP1

Procedure For Site Assembly

NOTE: This is an implementing procedure to the Oconee Nuclear Site Emergency Plan and must be forwarded to Emergency Planning within seven (7) working days of approval.

1. Symptoms

1.1 A test of response time and procedures employed in completing an accounting of onsite personnel.

1.2 An incident occurs on site and:

1.2.1 The Technical Support Center, Operational Support Center, and Emergency Operations Facility are required to be established.

1.2.2 Portions of the site require evacuation or a site evacuation may be required.

2. Immediate Actions

2.1 (Action Plan for Emergency Coordinator), Enclosure 4.1

2.2 (Action Plan for Security Supervisor), Enclosure 4.2

2.3 Make announcements over the Public Address System, Enclosure 4.3, (Public Address Announcement)

2.4 Activate the outside Site Assembly Horn to notify personnel outside the reach of the PA System.

2.5 Continue the alarm, horn, and announcements for a duration long enough to ensure all onsite personnel are aware of the Site Assembly and are responding. (No more than 6 alarm and horn activations, together with announcements, need to be made.)

2.6 (Action Plan for Offsite Communicator), Enclosure 4.5.

3. Subsequent Actions

3.1 (Action Plan for Onsite Personnel), Enclosure 4.4

3.2 Record accountability results (via phone or fax) from Security on Enclosure 4.7, (Site Accountability Log).

3.2.1 It is required that personnel be accounted for within 30 minutes of initiation of site assembly. The number of unaccounted personnel can be reported first with the names being reported later.

3.3 When personnel accountability has been completed during a Site Assembly, one of the following will occur:

3.3.1 If the requirement for an assembly no longer exists, a request to return to normal duties will be given by the Emergency Coordinator.

3.3.2 Plant conditions may require evacuation of the station. Consult procedure RP/0/B/1000/010 (Procedure for Emergency Evacuation/Relocation).

4. Enclosures

4.1 Action Plan for Emergency Coordinator

4.2 Action Plan for Security Supervisor/ Designated Officer

4.3 Public Address Announcement

4.4 Action Plan for Onsite Personnel

4.5 Action Plan For Off-Site Communicator

4.6 Site Assembly Locations

4.7 Site Accountability Log

4.8 Card Reader Locations

1. Action Plan For Emergency Coordinator

_____ 1.1 Alert Security Supervisor that a Site Assembly will be initiated.

_____ 1.2 Appoint a person or persons to:

_____ 1.2.1 Activate warble tone over PA System and outside Site Assembly horn located at the microwave tower.

_____ 1.2.2 Make voice announcements over the PA System per Enclosure 4.3, (Public Address Announcement).

_____ 1.3 Obtain accountability results from Security on Enclosure 4.7, (Site Accountability Log).

_____ 1.4 Direct necessary actions to account for any missing personnel.

1.4.1 MERT will be utilized for this purpose.

_____ 1.5 Examine the radiation/contamination levels established in RP/0/B/1000/010 (Procedure for Emergency Evacuation/Relocation), to determine the category of personnel that may need to be evacuated.

_____ 1.6 If the requirements for an assembly no longer exist, return the station to normal duties.

1. Action Plan For Security Supervisor

_____ 1.1 Contact the World Of Energy, Keowee Hydro, Oconee Complex, Motor Pool, and the Oconee Training Center to make them aware of Site Assembly.

_____ 1.2 Initiate a patrol of the general station area within station boundaries, both inside and outside of the restricted area, to assure that personnel in remote and noise restrictive areas are aware of the Site Assembly requirement.

NOTE: Should site assembly be initiated during high traffic ingress and egress, traffic flow will not be restricted.

_____ 1.3 Use automated gates to restrict traffic in and out of the station during Site Assembly as determined by Security.

1.4 Receive Accountability reports from all groups via phone mail ext. 5050 and complete Enclosure 4.7, (Site Accountability Log).

1.5 Report accountability results within 30 minutes (sooner if completed) to Offsite Communicator if the TSC is activated, Control Room OSM Emergency Coordinator if TSC is not activated.

1.5.1 Provide an update of site assembly status if requested.

1.6 Fax Enclosure 4.7, (Site Accountability Log) to ext. 4308 upon completion of site accountability.

NOTE: Report names of all unaccounted personnel. However, in the event large numbers of personnel are unaccounted for, names may not initially be provided.

_____ 1.7 Report total accountability to the TSC Offsite Communicator or Emergency Coordinator within 30 minutes of the time the assembly was initiated. Report the number(s) and name(s) of any missing person(s).

_____ 1.8 Coordinate a search and rescue effort if directed.

1.8.1 Utilize MERT for this purpose.

_____ 1.9 Contact the World of Energy, Keowee Hydro, Oconee Complex, Motor Pool, and the Oconee Training Center to make them aware of Site Assembly completion.

_____ 1.10 Coordinate evacuation if so instructed.

CAUTION: For drill purposes only, preface and close all announcements with, "This is a drill. This is a drill."

SITE ASSEMBLY ALARM INSTRUCTIONS:

- Actuate Site Assembly Alarm switch, Control Board 1UB1, and hold in position
- Activate alarm for 10 seconds
- Repeat announcements and alarm activations six times

PAGE ANNOUNCEMENT INSTRUCTIONS:

- Pick up a ROLM phone located on Unit 1&2 Control Room desk
- Switch Office Page to ON
- Dial 70
- Make Announcements #1 and #2 as required by situation
- Switch Office Page to OFF after announcements have been made

NOTE: If any particular area of the plant is found to be unsafe during an emergency, and a Site Assembly is held, warnings should be sounded through the public address system advising the safe corridors to use.

ANNOUNCEMENT #1

"This is a Site Assembly. This is a Site Assembly. All visitors are to assemble with their permanently badged escorts. All permanently badged personnel shall report to their designated Site Assembly area. All other personnel not presently wearing security badges shall report to their supervisor. All personnel are required to remain at their site assembly locations until released."

ANNOUNCEMENT #2

Make this announcement if the Technical Support Center, Operational Support Center, and Emergency Operations Facility are to be activated. If required, specify that the Alternate TSC and/or OSC will be used.

"ACTIVATE THE TECHNICAL SUPPORT CENTER."

"ACTIVATE THE OPERATIONAL SUPPORT CENTER."

"ACTIVATE THE EMERGENCY OPERATIONS FACILITY"

1. Response To Site Assembly Alarm

1.1 Each person (except those noted in 1.2) shall assemble with their supervisor.

1.1.1 Assembly points for personnel onsite at Oconee Nuclear Site are identified in Enclosure 4.6, (Site Assembly Locations).

NOTE: In case of a reactor building evacuation alarm, the reporting requirements in 1.2 apply.

1.2 Persons working in Radiation Control Areas in protective clothing should leave their work areas, remove outer protective clothing at RCZ Exit, and go to the contaminated side of the appropriate change room.

1.2.1 In the change room, they should contact the appropriate persons as designated by 2.1.1 for personnel accountability reporting. Wait in change room for further instructions concerning the advisability of changing clothes and reporting to normal assembly areas.

NOTE: Card reader locations are listed in Enclosure 4.8, (Card Reader Locations).

1.3 All personnel inside protected area will swipe their badges at their designated site assembly areas.

2. Normal working hours 0700-1730 (Monday – Thursday)

Supervisors should report their accountability within 8 to 10 minutes.

Superintendents/Managers shall report for their group and give names of any persons not accounted for within 20 minutes. Completion of station accountability shall be made within 30 minutes.

2.1 All personnel shall assemble at designated assembly areas and all personnel inside the protected area shall swipe badges.

2.1.1 Each supervisor shall be responsible for accounting for all assigned personnel.

A. Each reporting supervisor or designee is to report accountability by calling extension 5050 and following instructions.

- Department name, your name and extension, your accountability, and number of missing.
- If a large number of personnel are unaccounted for provide number of missing to Security, Security will call back for names.

2.1.2 Station Superintendents/Supervisors of various organizations working at Oconee (ESS, Bartlett, Communications, Power Delivery, World of Energy, Keowee Hydro, and Framatome) shall make an accountability report for their areas of accountability by calling extension 5050 and following instructions.

3. After hours, weekends, holidays

3.1 All personnel shall assemble at designated assembly areas and all personnel inside the protected area shall swipe badges.

3.1.1 Each supervisor shall be responsible for accounting for all assigned personnel.

A. Each reporting supervisor or designee is to report:

- Department name, your name and extension, your accountability, and number of missing.
- If a large number of personnel are unaccounted provide number of missing to Security, Security will call back for names. Supervisors shall report accountability to the Security Supervisor by calling extension 5050 and following instructions.

1. Action Plan For Offsite Communicator

1.1 Obtain accountability results from the Security Shift Supervisor on Enclosure 4.7 (Site Accountability Log).

1.2 Provide 20 minute accountability to Emergency Coordinator.

- Site Assembly update

1.3 Provide 30 minute accountability to Emergency Coordinator

- Number and names, (if available), of unaccounted for personnel.

DUKE OCONEE NUCLEAR SITE PERSONNEL

SECTION	ASSEMBLY POINT
Site Vice President's Group:	
Site Vice President/Managers and Assigned Staff/Clerks:	Admin Building
Chemistry:	
Chemistry Staff and Technicians	Chemistry Offices
Chemistry Shifts A,B,C.D,E (On-Duty)	Radwaste Facility
Radwaste Staff and Technicians	Radwaste Facility
Maintenance:	
I&E SPOC Crew (On-Duty Shift A,B,C.D,E)	Work Control Center/OSC
I&E Staff, Supervisors, and Technicians	I&E Offices
I&E Plant Maintenance	5th Floor Turbine Bd.
Mech Maintenance SPOC Crew (On-Duty Shift A,B,C.D,E)	Work Control Center/OSC
Mech Maintenance Staff, Supervisors, and Technicians	Mechanical Offices
Operations:	
All	Control Rooms/Ops' Offices
Radiation Protection:	
RP Staff	RP Offices
Support Functions	RP Offices
Surveillance and Control	RP Offices
RP Shifts A,B,C,D,E (On-Duty)	RP Offices/OSC
Work Control:	
All	Work Control Offices
Engineering:	
All	Engineering Offices
Commodities & Facilities:	
All	C&F Offices

SECTION	ASSEMBLY POINT
Safety Assurance:	
All	Safety Assurance Offices
Training:	
Manager/Tech Staff, RP, Chemistry, Admin Support, GET Operator Training, Simulator Support, Manager/Tech Staff I&E Mechanical Maintenance	Training Offices Oconee Training Center Maintenance Training Facility
Human Resources:	
All (except for Security)	Human Resources Security Offices
Community Relations:	
All	WOE Offices
Business Management:	
All	Business Management

DUKE NON-OCONEE NUCLEAR SITE PERSONNEL

(Permanently Badged Personnel)

SECTION	ASSEMBLY POINT
Engineering:	Engineering Offices
Operations:	Operations' Offices
Chemistry:	Chemistry Offices
Radiation Protection:	RP Offices
Communications:	Communications' Offices
Keowee:	Keowee Hydro Station
World of Energy:	WOE Offices
ESS:	
Quality Verification:	Safety Assurance Offices
Electric System Support	
Personnel Inside Protected Area	Maint. Support Bldg Canteen
Personnel Outside Protected Area	ESS Offices
Transportation Department:	
Personnel Inside Protected Area	Maintenance Support Building
Personnel Outside Protected Area	Transportation Offices/Garage
Geo-Tech	Complex

DUKE NON-OCONEE NUCLEAR SITE PERSONNEL

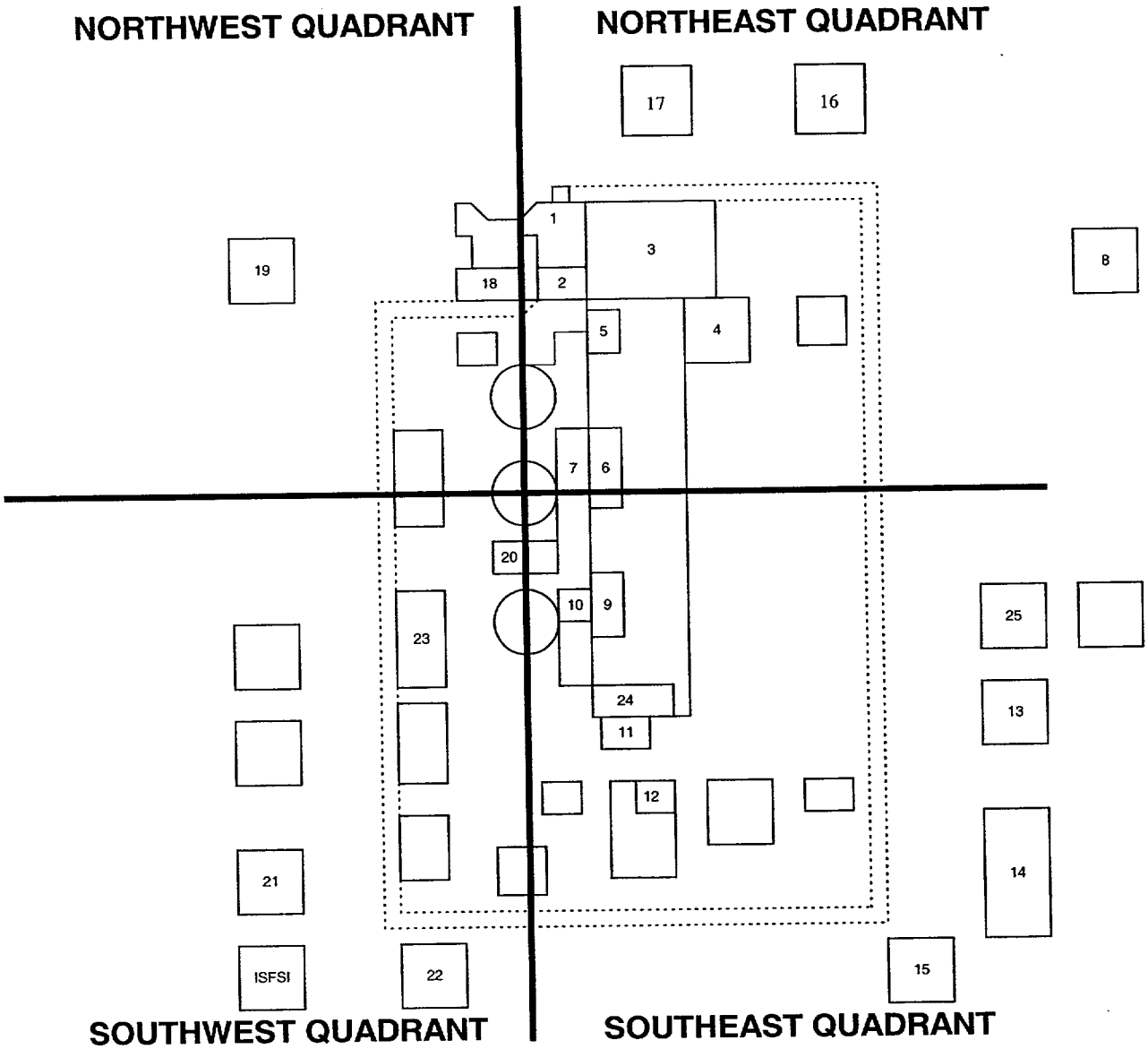
SECTION	ASSEMBLY POINT
Engineering:	Engineering Offices
Maintenance: Personnel Outside Protected Area	Maintenance Offices 2nd Floor Maint. Support Building
Bartlett: Personnel Inside Protected Area Personnel Outside Protected Area	 Maintenance Support Building Canteen Bartlett Offices
Framatome:	Framatome Office
Maintenance Vendors: Personnel Inside Protected Area Personnel Outside Protected Area	Maintenance Support Building Canteen Station Contact Group
I&E Vendors:	Maintenance Support Building Canteen
Radiation Protection Vendors:	RP Offices
NRC:	
All	NRC Offices
Food Service Vendor: Personnel Inside Protected Area Personnel Outside Protected Area	 Maintenance Support Building Canteen Admin. Bldg Canteen

VISITORS

Personnel Inside Protected Area with Escort	Assemble with escort
Personnel Outside Protected Area	Assemble with Station Contact

OTHER PERSONNEL OUTSIDE PROTECTED AREA

All personnel not identified above will report to their Station Contacts' area of assembly.



NORTHWEST QUADRANT	NORTHEAST QUADRANT
18. Administrating Building 19. Oconee Office Building	1. Security Building 2. Training/Locker Building 3. Maintenance Service Bd. 4. Maintenance Support Building 5. Turbine Building North Offices 6. Turbine Building 1&2 Offices 7. Unit 1&2 Control Room 8. Keowee Hydro Station 16. World of Energy 17. Oconee Training Center
SOUTHWEST QUADRANT	**SOUTHEAST QUADRANT**
20. RP Assembly Building 21. Interim Outage Building 22. Geo-Technical Center 23. Warehouse Offices	9. Turbine Building 3 Offices 10. Unit 3 Control Room 11. Technical Support Building 12. Radwaste Facility 13. Oconee Garage 14. Oconee Complex 15. L-1 Storage Yard 24. Turbine Building South Offices 25. Maintenance Training Facility

1. Site Accountability Log

NOTE: Instructions in note are for Security only unless directed otherwise.

Acquire site assembly call-ins from phone mail #5050

- Instructions: dial 4444, then 5050#, then 7318#, then 3, and listen to message

		ACCOUNTABILITY RESULTS		
Work Group	**Contacts Name**	**Phone #**	**30 min.**	Names of Missing
Bartlett				
Business Management				
Chemistry				
Commodities & Facilities				
Engineering/LIT				
Electric System Support (ESS)				
Human Resources/Security				
Keowee Hydro				
Mechanical Maintenance				
Operations				
Radiation Protection				
Safety Assurance Station Mgr., & Training				
World of Energy				
Work Control				

PERSONNEL UNACCOUNTED FOR		
NAME	**WORK GROUP**	**LAST KNOWN LOCATION**

1. Site Assembly Card Reader Listing

PSC ID #	Location
EP CR # 01	Locker Building - hallway near west entrance to machine shop
EP CR # 02	Security Admin. Building – second level near mechanical conference room
EP CR # 03	Maintenance Service Building - maintenance shop east wall near doorway leading to yard area
EP CR # 04	Maintenance Service Building - canteen north/east wall near corridor to stairway
EP CR # 05	Maintenance Service Building - canteen south/west wall near stairway
EP CR # 06	Maintenance Service Building – second level south wall near stairway
EP CR # 07	Maintenance Service Building – fourth level south wall near stairway
EP CR # 08	Maintenance Service Building – fifth level south wall near stairway
EP CR # 09	Turbine Building - turbine floor level, north offices located at bottom of north stairwell
EP CR # 10	Turbine Building - units 1&2 turbine floor level offices located in work control/document control area near east door
EP CR # 11	Unit 2 Control Room - on south side of column Q-73
EP CR # 12	Unit 2 Control Room - on south wall of corridor between kitchen and TSC entrance
EP CR # 13	Unit 3 Control Room – on north side of column Q-89
EP CR # 14	Unit 3 Control Room – on south wall of corridor between kitchen and OSC
EP CR # 15	Technical Support Building – fifth floor operations office area near east stairway door
EP CR # 16	Technical Support Building – third floor, in corridor leading from breezeway to Chemistry area
EP CR # 17	Turbine Building - Unit 3 offices, north entrance near inside door to stairway
EP CR # 18	Turbine Building - south offices, bottom of stairway leading to second level offices
EP CR # 19	Aux. Bldg. - Unit 1&2, third level, hot change room, located in hallway near change room door
EP CR # 20	Aux. Bldg. - Unit 1&2 Spent Fuel Change Room
EP CR # 21	Aux. Bldg. - Unit 3, third level, Hot Change Room, located in hallway near change room door
EP CR # 22	Unit 3 Spent Fuel Change Room
EP CR # 23	Warehouse #3 – first floor office area, to the left, just inside door
EP CR # 24	Radiation Protection Building - lower level west stairway near outside entrance
EP CR # 25	Rad Waste Building - near control room area
EP CR # 26	Standby Shutdown Facility - ground level (elev. 796) in south laydown area near CAS corridor door

INFORMATION ONLY

Radiation Protection Section
Manual 11.7
Approval [signature]
Original Date 09/13/89
Revision Date 11/26/01
Revision Number 002

Oconee Nuclear Station
Radiation Protection

Environmental Monitoring For Emergency Conditions

1. Purpose

1.1 To provide a systematic method for identifying airborne plumes or liquid effluents and obtaining field data indicative of the radiation exposure to the general public, following a release of radioactive material.

1.2 This procedure is an Emergency Plan Implementing Procedure (EPIP). It must be forwarded to the Emergency Planning Group within three working days of approval by the responsible group. {PIP 4-O-93-0701}

2. References

2.1 HP/0/B/1009/001, Emergency Equipment Inventory and Instrument Check

2.2 Duke Power Company Radio Operators Manual

2.3 NUREG-0654, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"

2.4 FEMA REP-2, Rev. 1, "Guidance on Offsite Emergency Radiation Measurement Systems, Phase 1 - Airborne Release"

2.5 Code of Federal Regulations, Title 10, Part 20

2.6 Lowrance GlobalNav Installation And Operation Instructions

2.7 PIP 4-O-93-0701, Distribution of Emergency Plan Procedures

2.8 Offsite Dose Calculation Manual

3. Limits And Precautions

3.1 The Field Monitoring Teams (FMTs) members should comply with SRWP 98 (current copies are located in Emergency Equipment). Depending upon conditions, the Field Monitoring Coordinator (FMC) or the Radiological Assessment Manager can change these criteria.

3.2 Upon activation of the Emergency Response Organization, the FMC will report to the Site and will direct the Field Monitoring Teams (FMTs) under the guidance of the Radiological Assessment Manager. After teams are activated, the FMC will report to the EOF. It is desired that the FMC **NOT** assume FMT duties while at the Site.

3.3 The Field Monitoring Teams (FMTs) should park vehicles completely off the road when sampling and use emergency flashers while stopped.

3.4 Once a release has occurred, vehicle windows should be kept closed with ventilation OFF or ventilation on RECIRCULATION to minimize contamination, until the plume area is identified.

3.5 Each FMT shall maintain open radio communications with the FMC.

3.6 **IF** radio becomes inoperable, telephone:

- Dose Assessment at TSC (ONS) – (864) 885-3705
- FMC at EOF (MNS/CNS) - (704) 382-0735/0736 or
- FMC at EOF (ONS) - (864) 624-4387
- Radiological Assessment Manager at EOF (ONS) – (864) 624-4373 or (864) 624-4374

3.7 Ensure count rate meter is ON and is monitored during transport to the sampling locations..

3.8 **IF** any equipment becomes inoperable, notify the FMC and await further instructions.

3.9 Personnel **NOT** trained for emergency response may assist a trained Radiation Protection technician to do surveys and/or drive the vehicle.

3.10 The radio operator should follow the radio operation guidance described in the Duke Power Company Radio Operators Manual; providing pertinent, general information. Care should be taken to **NOT** provide detailed, specific plant information.

3.11 During a drill, repeat the statement, "This is a drill, this is a drill" with each radio transmission.

3.12 Environmental sampling during emergency conditions shall **NOT** replace, but rather supplement normal environmental monitoring.

3.13 The Radiological Assessment Manager and/or FMC will determine the need for ingestion of Potassium Iodide (KI) tablets based upon the potential for release and exposure to radioiodine. Although they are effective in blocking radioiodine when taken after exposure, they are most effective if taken about 2 hours before exposure occurs:

3.13.1 **IF** thyroid CDE is expected to exceed 25 rem, in most cases the use of KI is warranted. 1000 Iodine DAC-hours is equivalent to 25 rem to the thyroid. DACs are as follows:

Isotope	DAC (uCi/ml)
I-131	2E-8
I-133	1E-7
I-135	7E-7

3.14 All procedures stored at satellite locations shall be verified to be current by comparing each copy to the control copy stored in the Emergency Procedure cabinet. The FMC will be responsible for the verification by way of radio communications.

3.15 Should additional personnel be needed for Field Monitoring, the Off-Site Communications Manager at the EOF can call the DOE to provide assistance.

4. Procedure

4.1 Field Monitoring Team (FMT) Activation:

NOTE: For any backup sampling vans from other stations, the call sign shall be preceded by the station name, e.g. (Station) Sample Van 1.

4.1.1 Form as many survey teams and sampling van teams as possible, based upon the number of personnel available and field monitoring required.

4.1.2 The initial survey FMT will perform a survey of the security area boundary fence, as directed by the FMC.

NOTE: Emergency materials/equipment available to FMTs are listed in HP/0/B/1009/001 (Emergency Inventory and Instrument Check).

4.1.3 Activate remaining FMTs in accordance with Enclosure 5.1.

4.1.4 In the event that backup sampling vans/FMT members are provided from other stations, the FMC should ensure that at least one FMT member from the affected station is on each FMT.

4.2 Locating and Tracking the Plume:

NOTE: If **NOT** dose prohibitive, the FMC may direct the FMTs to traverse the plume.

4.2.1 Unless otherwise directed by the FMC, the FMTs will generally be dispatched as follows:

- Alpha, Bravo, Charlie, Delta - performance of beta/gamma radiation surveys on the edges of the suspected area to determine plume.
- Sample Vans 1, 2, etc - performance of air sample surveys and beta/gamma radiation surveys and mobile analyses at or beyond the site boundary fence, utilizing an emergency van.
- Sample Boats 1, etc. - performance of beta/gamma radiation surveys on adjacent lake areas, utilizing an emergency boat.

4.2.2 The FMC will direct FMTs to systematically survey the suspected areas in a continuous mode and to obtain air samples and beta/gamma measurements as conditions warrant; utilizing quadrants, major roads, predetermined sampling locations and/or Global Positioning System information:

4.2.2.1 Each quadrant consists of a four square mile area (two miles on each side). This area is then sub-divided into four sub-quadrants of one square mile each:

NOTE: The letter "I" has been omitted to eliminate possible confusion with the number one (1).

A. A quadrant on the EPZ Map will be identified by:

1. the letter depicting the column and
2. the number depicting the row, e.g. B-6, D-7, H-12, etc.

B. A sub-quadrant will be described as the upper left (UL), upper right (UR), lower left (LL), or lower right (LR).

4.2.2.2 Major roadways delineate major territories surrounding the plant. Either all or a portion of these sections would be expected to be affected, to some degree, by the radioactivity released from the plant. Major roadways are therefore utilized to provide access to suspected regions (outer edges, leading edges(s), centerline) of the plume, as necessary:

A. Numerical designations and responsibility level (federal, state, county or city) designations identify major roadways on the EPZ map.

B. A specific name, rather than a numerical responsibility designation identify selected roadways on the EPZ map.

4.2.2.3 Each predetermined sampling location is denoted by a (colored) dot on the map. The sampling point designator indicates the protective action zone the point is in and the mileage from the plant:

A. The FMC should use the points as landmarks when directing the teams.

B. The point locations can be read directly from the map or from the directions in Enclosure 5.2.

4.2.2.4 Use GPS Unit in accordance with Enclosure 5.7 and a Site Map.

4.2.2.5 While enroute and at sampling locations, survey teams shall report the maximum radiation level to the FMC.

4.2.2.6 Sample van teams shall report the maximum radiation level of the instantaneous cloud, the average radiation level while inside the plume, and air sample data to the FMC.

4.2.3 The FMC may use Enclosure 5.3 as a log to document instructions to the radio operator regarding FMT movement and utilization.

4.2.4 The radio operator may use Enclosure 5.4 or site area maps to record FMT movement and field data such as beta/gamma surveys, air samples, and/or special samples.

4.2.5 The FMC should periodically provide information to the FMTs on the emergency classification, wind speed, wind direction, zones affected and other pertinent information, using Enclosure 5.5. Typically, information provided by the Emergency Coordinator or the EOF Director during public address announcements could be used to update FMTs.

4.2.6 The FMC should periodically check and track FMT members' radiation dose, using Enclosure 5.6.

4.3 Special Sampling, as directed:

NOTE:	FMTs may also be requested to retrieve and replace environmental air samplers and/or TLDs.

4.3.1 Collect additional special samples including but **NOT** limited to: smears of surrounding areas, integrated dose over a period of time with TLDs, vegetation, sediment, snow, water, and milk, as requested by the FMC.

4.3.2 Label and save each for analysis:

4.3.2.1 To collect vegetation samples, use the shears to cut enough broad leaf vegetation to fill a 12"x12" poly bag.

4.3.2.2 To collect a soil sample, estimate one 12"x12" square of soil and dig out one inch deep.

4.3.2.3 To collect a water sample, use the limnological sampler to fill a one-gallon cubitainer.

4.3.2.4 Smears should be taken on stationary, horizontal surfaces, e.g. mailboxes, gas pumps, etc. **NOT** on Automobiles!

4.3.2.5 To sample snow, use shovel to collect enough snow to fill a five gallon open top container. Snow should be collected over a wide surface area no more than two inches deep and firmly compacted in the container.

4.4 FMT Turnover:

4.4.1 FMTs shall be relieved as directed by the FMC.

4.4.2 The FMTs shall provide turnover to the relief FMTs, consisting of the following:

4.4.2.1 Dose rates and other sample data from areas previously surveyed.

4.4.2.2 Sampling van emergency supplies or emergency kit inventory consumed.

4.4.2.3 Equipment operating status.

4.4.2.4 Any sampling problems.

4.4.2.5 Emergency classification.

4.4.2.6 Wind speed and direction.

4.4.2.7 Zones affected.

4.4.3 FMTs shall turn in all data sheets to the FMC or designee, as directed.

4.4.4 Following turnover, relieved FMT members shall report to a counting facility designated by the FMC for a post-job BBA

5. Enclosures

5.1 Field Monitoring Team Checklist for Initial Response

5.2 Predetermined Sampling Locations By Sector and Distance from ONS

5.3 FMC Instruction Log

5.4 Field Monitoring Survey Data Sheet

5.5 Periodic Status Update for Field Monitoring Teams

5.6 Field Monitoring Team Radiation Dose Record

5.7 Lowrance GlobalNav Operating Instructions

5.8 Field Monitoring Coordinator Duties At The EOF

Enclosure 5.1
Field Monitoring Team Checklist For Initial Response

1. Field Monitoring Initial Response Verification

1.1 Verify the following:

_____ 1.1.1 Assemble at BBA Room.

_____ 1.1.2 Simultaneously Perform:

_____ 1.1.2.1 Survey of BBA Area

_____ 1.1.2.2 Confirm Accountability

_____ 1.1.2.3 Get Emergency Vehicle Keys

_____ 1.1.3 Assign and dispatch 1st Sample Van Team:

- Team member names: _____&_____

1.1.3.1 1st Sample Van Team Initial Responsibilities:

_____ A. Leave BBA Room and survey pathway to Sample Van parking area.

_____ B. Survey the route to the motor pool.

_____ C. Report conditions to FMC.

_____ D. **IF** path is clear, 2nd Sample Van will monitor transmissions and transport personnel to vehicles.

_____ E. Continue from vehicle parking area and complete Fence Survey.

_____ 1.1.4 Assign and dispatch 2nd Sample Van Team:

- Team member names: _____&_____

1.1.4.1 2nd Sample Van Team Initial Responsibilities:

_____ A. Leave BBA Room and survey pathway to Sample Van parking area.

_____ B. Park the Sample Van in front of the Admin Building.

_____ C. Monitor the radio for any information concerning the emergency.

_____ D. Verify conditions with 1st Sample Van.

_____ E. **IF** the route is clear, transport necessary personnel to their survey vehicles.

_____ F. Report to Emergency Count Room and if no other team has arrived, survey the Emergency Count Room area.

_____ G. Load and source check one Portable Iodine Analysis System in the van.

_____ H. Report availability to FMC.

_____ 1.1.5 Assign remaining personnel into Survey Teams:

- Alpha Team: _____&_____
- Bravo Team: _____&_____
- Charlie Team: _____&_____
- Delta Team: _____&_____
- Echo Team: _____&_____
- Foxtrot Team: _____&_____

_____ 1.1.6 Assemble in front of the Admin Building to be transported to Survey Vehicles.

_____ 1.1.7 **WHEN** Survey Vehicles are secured, assemble at the Emergency Count Room.

_____ 1.1.8 **IF** it has **NOT** been performed, perform an area survey.

1.1.9 Have each Survey Team source check instruments, load equipment and radios and report availability status to FMC:

_____ • Alpha Team
_____ • Bravo Team
_____ • Charlie Team
_____ • Delta Team
_____ • Echo Team
_____ • Foxtrot Team

_____ 1.1.10 Dispatch one survey to complete the fence surveys and allow the 1st Sample Van to report to the Emergency Count Room to obtain the remaining Portable Iodine Analysis System.

_____ 1.1.11 1st Sample Van installs Portable Iodine Analysis System, performs the source check and report availability to the FMC.

1.1.12 All teams verify copies of procedure(s) to control copy.

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
N	A-1	E	1	Lake Keowee – Mid-lake 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	Mid-lake 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 North 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

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
ENE	D-1	A	1	Hwy 183 N of Keowee Hydro Station Trailrace Bridge @ Keowee Cabins
ENE	D-2	B	3	Junction of 157 (Gin Shoals Rd) and Shadydale Circle
ENE	D-3	C	5	Junction of Hwy 137 and Belle Shoals Rd
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 SC 133 & County 137 @ Old 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

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
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 Rd)
ESE	F-4	C	5	Junction of Hwy 277 & 337 (Maw Bridge Rd)
ESE	F-5	D	10	Junction of Hwy 165 & 44 (Central, SC)
ESE	F-6	D	10	Midway Church, Junction of Hwy 395 & 91
ESE	F-7	D	10	Junction of Hwy 93 & 51 (Norris, SC)
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
SE	G-5	D	7	Junction of Hwy 15 & 102 (Central, SC)
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 Hwy 183 & 6
SSE	H-2	B	3	Hwy 291 two miles South of Hwy 160
SSE	H-3	B	5	Hwy 291 & 27 @ Issaqueena 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, SC)
SSE	H-6	C	9	Junction of Hwy 123 & 93 (Clemson, SC)
SSE	H-7	C	9	Junction of Hwy 93 & 320 @ Littlejohn Coliseum
SSE	H-8	C	10	Bridge across Lake Hartwell 1 mile East of Hwy 149 & 115 Junction

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
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 & North 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, SC
SSW	J-8	C	8	Seneca Water Plant
SW	K-1	A	1	Old Hwy 183, 1/4 mile West 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 188
SW	K-5	C	9	Oconee Memorial Hospital @ Hwy 123 & 28
SW	K-6	C	9	Head-Lee Nursery, Hwy 28

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
WSW	L-1	E	1	Lake Keowee, Cove immediately North of Simmer 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 miles South 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 (D&D 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 & 94
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

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

Sampling Sector	Sampling Location	Responsible Team	Radius From ONS (Miles)	Description of Sampling Locations
NNW	P-1	E	1	West shoreline of cove immediately north of connection 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

TLD LOCATIONS

SAMPLING LOCATION DESCRIPTION*

020	Site Boundary	(0.1 Miles N)	040	4-5 Mile Radius	(4.5 Miles E)
021	Site Boundary	(0.3 Miles NNE)	041	4-5 Mile Radius	(4.0 Miles ESE)
022	Site Boundary	(0.5 Miles NE)	042	4-5 Mile Radius	(5.0 Miles SE)
023	Site Boundary	(0.9 Miles ENE)	043	4-5 Mile Radius	(4.0 Miles SSE)
024	Site Boundary	(0.8 Miles E)	044	4-5 Mile Radius	(4.0 Miles S)
025	Site Boundary	(0.4 Miles ESE)	045	4-5 Mile Radius	(5.0 Miles SSW)
026	Site Boundary	(0.3 Miles SE)	046	4-5 Mile Radius	(4.5 Miles SW)
027	Site Boundary	(0.4 Miles SSE)	047	4-5 Mile Radius	(4.0 Miles WSW)
028	Site Boundary	(0.5 Miles S)	048	4-5 Mile Radius	(4.0 Miles W)
029	Site Boundary	(0.6 Miles SSW)	049	4-5 Mile Radius	(4.0 Miles WNW)
030	Site Boundary	(0.4 Miles SW)	050	4-5 Mile Radius	(4.0 Miles NW)
031	Site Boundary	(0.3 Miles WSW)	051	4-5 Mile Radius	(4.5 Miles NNW)
076	Site Boundary	(0.2 Miles W)	052	Special Interest	(12.0 Miles ENE)
032	Site Boundary	(0.2 Miles WNW)	053	Special Interest	(11.0 Miles E)
033	Site Boundary	(0.2 Miles WNW)	054	Special Interest	(9.5 Miles ESE)
034	Site Boundary	(0.2 Miles NW)	055	Special Interest	(9.5 Miles SSE)
035	Site Boundary	(0.2 Miles NNW)	056	Special Interest	(8.4 Miles SSW)
036	4-5 Mile Radius	(4.0 Miles N)	057	Special Interest	(9.0 Miles SW)
036	4-5 Mile Radius	(4.5 Miles NNE)	058	Special Interest	(9.4 Miles WSW)
081	Special Interest	(9.8 Miles SE)	059	Special Interest	(9.2 Miles NW)
038	4-5 Mile Radius	(4.0 Miles ENE)	081	Special Interest	(9.8 Miles SE)

*All sampling locations are collected quarterly.

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM LOCATIONS

Code:

W - Weekly
SM – Semi-Monthly
M - Monthly
SA - Semi-Annually

Sampling Location Description		Air Sample	Surface Water	Drinking Water	Shoreline Sediment	Milk	Fish	Broadleaf Vegetation
060	New Greenville Water Intake Rd. (2.6 miles NNE)*	W		M			SA	M
062	Lake Kewoee/Hydro Intake (0.8 mile ENE) (CONTROL)		M					
063	Lake Hartwell – Hwy 183 Bridge (0.8 mile ESE)[000.7]		M		SA		SA	
064	Seneca (6.7 miles SW) [004.1] (CONTROL)			M				
066	Anderson (19.0 miles SSE) [012]			M				
067	Lawrence Ramsey Bridge, Hwy 27 (4.2 miles SSE) [005.2]				SA		SA	
068	High Falls County Park (2.0 miles W) (CONTROL)				SA			
069	Orr's Dairy (4.5 miles WNW) [002.1]					SM		
071	Clemson Dairy (10.3 miles SSE) [006.3]					SM		
074	Keowee Key Resort (2.3 miles NNW)	W						
077	Skimmer Wall (1.0 mile SW)	W						M
078	Recreation Site (0.6 mile WSW)	W						
079	Keowee Dam (0.5 mile NE)	W						M
080	Martin's Dairy (10.0 miles SSE) (CONTROL)					SM		
081	Clemson Operations Center (9.8 mile SE)	W						M

* Control for Fish Only
[ ] Location Numbers prior to 1984

Enclosure 5.2
Predetermined Sampling Locations By Sector And Distance From ONS

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM FREQUENCIES

		Analyses				
Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
1. Air Radioiodine	Weekly	X				
2. Air Particulate	Weekly Quarterly Composite	X			X	
3. Direct Radiation	Quarterly					X
4. Surface Water	Monthly Quarterly Composite	X	X			
5. Drinking Water	Monthly Quarterly Composite	X	X	X	X	
6. Shoreline Sediment	Semi-Annually	X				
7. Milk	Semi-Monthly	X		X		
8. Fish	Semi-Annually	X				
9. Broadleaf Vegetation	Monthly	X				

Enclosure 5.3
FMC INSTRUCTION LOG

Team	Location		Sample Type		Special Instructions
	From	To	βγ	Air	

Enclosure 5.4
Field Monitoring Survey Data Sheet

Time	Team	Location	Results		Notes
			Rad Levels	Air Activity	

Enclosure 5.5
Periodic Status Update For Field Monitoring Teams

Date ______________

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Time ______________ Classification ______________
Wind Speed ______________ Wind Direction ______________
Zones Affected ______________
Other Information ______________

____

Enclosure 5.6
Field Monitoring Team Radiation Dose Record

Start Date/Time ______________________________ End Date/Time ____________________

	SV1		SV2		Alpha		Bravo		Charlie		Delta		Echo		Foxtrot	
Name																
TLD #																
Initial Dose																
Subsequent Dose																
Cumulative Total																
Subsequent Dose																
Cumulative Total																
Subsequent Dose																
Cumulative Total																
Subsequent Dose																
Cumulative Total																
Subsequent Dose																
Cumulative Total																
Subsequent Dose																
Cumulative Total																

SV1 ______________________

SV2 ______________________

Alpha ______________________

Bravo ______________________

Charlie ______________________

Delta ______________________

Echo ______________________

Foxtrot ______________________

WARNING:

- Vehicle operator should never use the GPS unit while operating a vehicle. They should pull over and stop to use unit. Passengers may use the unit at any time.
- Do NOT use lithium batteries to power GPS.
- Do NOT use "heavy duty" batteries; Lowrance recommendsDuracell AA alkaline.
- Do NOT mix different types of batteries (Example alkaline and ni-cad).

CAUTION: When using the auxiliary power cable, ensure all connections are tight.

1. Install 4 each AA alkaline batteries per the decal in the unit's battery compartment that shows the correct polarity (+,-) AND/OR connect auxiliary power cord to GPS and plug into cigarette lighter receptacle.
2. IF available and desirable, connect external antenna (accessory) to GPS.
3. Press PWR to turn GPS on.
4. Press EXIT to get rid of warning message.
5. Wait for GPS to acquire position.
6. Press WPT.
7. Use up and down arrows to select WPT#.
8. Use right and left arrows to select WPT# 1 (named "OCONEE"). If supporting McGuire or Catawba, select appropriate waypoint from Step 18 below.
9. Use down arrow to select GO TO WPT.
10. Press ENTER.
11. Press PAGES.
12. Use up and down arrows to select NAV.
13. Use right and left arrows to select NAV 2.
14. Press ENTER.

CAUTION: If display flashes at any time, position is invalid because satellites have been lost. Do NOT use position information until GPS re-acquires position (i.e., display does NOT flash).

15. The GPS now shows the distance and direction to Oconee.
16. Quickly pressing and releasing the PWR pushbutton turns the light on. Quickly pressing it again turns the light off. The light automatically turns off after 30 seconds unless the GPS is being operated off of the auxiliary power cable and the vehicle battery. Then it will stay on continuously until turned off.
17. When done, hold PWR pushbutton down for 3 seconds until GPS turns off.

NOTE: The following waypoints are already entered into the unit and require no changes by the user. The user will simply select the appropriate waypoint for the desired site.

18. Waypoint coordinates are:

WPT 1	Oconee	WPT2	McGuire	WPT3	Catawba
	N 34° 47.633'		N 35° 25.983'		N 35° 03.083'
	W 82° 53.917'		W 80° 56.917'		W 81° 04.167

Enclosure 5.8
Field Monitoring Coordinator Duties At The EOF

1. Fill out the accountability sheets at the entrance for you, the radio operator, and each field team member. Need to include controllers on this.

2. Get a Control Copy of RPSM 11.7 from procedure cart and verify the field teams have current copy in their kits.

3. Establish radio contact with team members as they become activated. Make sure everyone is fit for duty.

4. Record on Enclosure 5.6 of RPSM 11.7 each team's RP numbers and names.

5. Find out from the dose assessor's meteorological data or ask one of the field teams for wind direction using the flag at the WOE. Remember to caution the team members that the map used for the GPS unit is opposite (180 degrees) from their regular map.

6. Direct the teams and record that information on Enclosure 5.3 of RPSM 11.7.

7. As it becomes available, record plant information on Enclosure 5.5 of RPSM 11.7. Remember to give this information to the field teams as often as you can and keep their dose record updated every hour.

8. Record data on Enclosure 5.4 of RPSM 11.7 when pertinent data is received. Always keep the dose assessors informed of this data.

9. When you get a chance, contact the TSC on your radio. You may have to call them first to turn up the volume.

10. After the drill is over, you have to record on Enclosure 5.5 of RPSM 11.7 whether or NOT KI was distributed.

The basic team deployment that has worked is to get one team performing a fence survey as close to the protected area fence as possible. If you have 4-6 teams available, get some moving towards the downwind side of the plant and keep one sample van and survey team upwind in reserve. Keep them moving, unless sampling, along major roads perpendicular to the plant. Remember that the drill isn't over till we find the plume, sample the air, and sometimes pull vegetation/soil samples. Air samples shouldn't be over 3 minutes (generally 2 minutes) and the analysis 5 minutes. In the past, KI tablets are given to teams entering the plume to take samples as a precaution. We have bottled water for this.

$$\text{Air Sample Activity in uCi/cc} = \left[\frac{CCPM \times EFF.FACTOR}{SAMPLE\_TIME \times 2CFM \times 0.02832E6}\right] \times 0.4505E-6$$