

# DUKE POWER

## EMERGENCY PLAN IMPLEMENTING PROCEDURES VOLUME C



**APPROVED:**

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*8/29/2002*  
\_\_\_\_\_  
Date Approved

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**VOLUME C**  
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# INFORMATION ONLY

## Duke Power Company PROCEDURE PROCESS RECORD

(1) ID No. HP/0/B/1009/018  
Revision No. 020

### PREPARATION

Station OCONEE NUCLEAR STATION

(3) Procedure Title Off -Site Dose Projections

(4) Prepared By Doug Berkshire (Signature) Doug Berkshire Date 8-28-2002

(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 [Signature] (QR) Date 8/29/02  
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(8) Temporary Approval (if necessary)  
By \_\_\_\_\_ (OSM/QR) Date \_\_\_\_\_  
By \_\_\_\_\_ (QR) Date \_\_\_\_\_  
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### PERFORMANCE (Compare with control copy every 14 calendar days while work is being performed.)

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Compared with Control Copy \_\_\_\_\_ Date \_\_\_\_\_  
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### 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 \_\_\_\_\_  
(13) Procedure Completion Approved \_\_\_\_\_ Date \_\_\_\_\_

(14) Remarks (Attach additional pages)

<b>Duke Power Company</b> <b>Oconee Nuclear Station</b>	<b>Procedure No.</b>
	<b>HP/0/B/1009/018</b>
	<b>Revision No.</b> <b>020</b>
<b>Off-Site Dose Projections</b>	<b>Electronic Reference No.</b> <b>OX002SD7</b>
<b>Reference Use</b>	

## Off-Site Dose Projections

### 1. Purpose

- 1.1 This procedure provides instructions to Offsite Dose Assessment personnel to:
- Determine release status, path and magnitude,
  - Evaluate source term,
  - Project dose commitment,
  - Determine appropriate radiological protective actions and associated emergency classification.
- 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/1,2,3/A/1009/017, Operating Procedure for Post-Accident Containment Air Sampling System
- 2.2 HP/0/B/1009/015, Procedure for Sampling and Quantifying High Level Gaseous, Radioiodine And Particulate Radioactivity
- 2.3 HP/0/B/1009/020, Estimating Food-Chain Doses Under Post-Accident Conditions.
- 2.4 RP/0/B/1000/001, Emergency Classification Procedure
- 2.5 EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents
- 2.6 Draft NuReg-1465, Accident Source Terms for Light-Water Nuclear Power Plants
- 2.7 NuReg-0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
- 2.8 OSC-5575, Oconee Engineering Calc File, documenting the development of NuReg-1465 Source Term and Related Data
- 2.9 Letter from H.B. Tucker, November 30, 1989, Re: Follow-up on McGuire Alert (March 7&8, 1989), and the definition of a release
- 2.10 U.S. Nuclear Regulatory Commission Response Technical Manual (RTM-93)
- 2.11 PIP 0-O-84-0743, Method to Quantify Radioactive Release From TDEFWP

## 2.12 PIP 4-O-93-701, Distribution Of Emergency Plan Procedures

**3. Limits And Precautions**

- 3.1 This procedure considers all releases to be ground level releases and that meteorological data are fifteen-minute averages.
- 3.2 This procedure is intended for use under abnormal/emergency conditions. It may be performed in part or whole. Sections may be performed in any appropriate order and some situations may require actions **NOT** addressed in this procedure.
- 3.3 In the event of a Steam Generator Tube Leak, all airborne radioactivity release pathways (example: TDEFWPs) must be considered in the offsite dose projection. Utilizing the steam generator tube leak rate, as determined by Operations or Engineering, converting the leak rate to cubic feet per minute flow rate, and inputting the cfm flow rate and applicable RCS concentrations as a Unit Vent release will account for all activity release pathways. {PIP 0-O-94-0743}
- 3.4 Review data, both automatic and manual, to ensure acceptability prior to use in dose assessments.
- 3.5 Persons communicating with the NRC (via the HPN) or with the State, should discuss only Offsite Dose information. For plant-specific questions, NRC and State representatives should be referred to the Emergency Coordinator or the EOF Director (EOFD).
- 3.6 **IF** ENF transmittal is because of EAL escalation, projected dose information (sections 11, 12, 13, and 14 is **NOT** required. This avoids delaying escalation transmittals.
- 3.7 **IF** an additional PAZ(s) is identified, notification must be made to the State via the ENF within 15 minutes.
- 3.8 Offsite Dose Assessment is **NOT** responsible for evaluating liquid releases. Questions regarding liquid releases should be directed to Chemistry in the OSC.
- 3.9 Provide enclosures and other pertinent information to Emergency Planning after drills and actual emergencies.

## 4. Procedure

### 4.1 Setup Facility as applicable:

**NOTE:** For Alternate TSC, spare computer with RD5 is located in OOB Room 319, and should be rolled into room 316 and connected to power and the network using connections in the southeast corner of the room.

- Setup TSC using Enclosure 5.1 as a guide as necessary.

**NOTE:** Spare computers with RD5 are located in the EOF: (1) The left side of the room, when facing the stage in the EOFD's area, and (2) The Engineering room, near the back hall.

- Setup EOF using Enclosure 5.2 as a guide as necessary.

### 4.2 Evaluate RIAs and other plant conditions, by using SDS and/or contact with other groups:

#### 4.2.1 Notify Emergency Coordinator, or Radiological Assessment Manager, and EOFD of RIA status and significant changes.

##### 4.2.1.1 Continue evaluating RIAs and plant conditions as required by the event scenario or as directed by the RAM:

- A. Use Enclosure 5.3 (data trending sheet) as a guide as necessary.
- B. In the event of a loss of power, refer to Enclosure 5.9 as necessary for a listing of power sources for selected RIAs.

### 4.3 Determine release status using criteria on Enclosure 5.4:

#### 4.3.1 **IF NOT** releasing **OR IF** a release has **NOT** been made, do **NOT** run Raddose-5 (RD5) unless specifically requested by the RAM:

##### 4.3.1.1 Because plant conditions may require Protective Action Recommendations (PARs), with no release in progress, use Enclosure 5.5 as necessary to select Protective Action Zones (PAZs).

**NOTE:** **IF** automatic data is available to RD5, assessing meteorological data will serve as a verification of data used. If automatic data is **NOT** available to RD5, meteorological data must be selected and input manually.

4.3.2 **IF** a release is occurring, or has occurred, assess meteorological conditions using Enclosure 5.5.

4.3.3 **IF** a release is occurring, or has occurred, run RD5 using Enclosure 5.6 as a guide as necessary.

**NOTE:** Standard conversions and non-accident RIA correlations are provided in Enclosure 5.10.

4.3.3.1 Obtain RD5 "Summary Sheet" printout or display data.

4.3.3.2 Obtain RD5 "Emergency Notification Form" (ENF/"Green Sheet"), printout or display data.

4.3.3.3 Using Enclosure 5.4 and RD5 printouts/displays, evaluate release status to determine if release is above or below normal operating (SLC) limits.

4.3.3.4 Using Enclosure 5.7 and RD5 printouts/displays, evaluate Emergency Action Levels (EALs).

4.3.3.5 Using Enclosure 5.5 and RD5 printouts/displays, evaluate PAZs:

A. RD5 PAZs should be verified with the manual procedure to ensure accuracy.

B. Once PARs have been made, recheck meteorological conditions every 15 minutes to ensure that additional PAZs are identified as necessary.

4.3.3.6 Using Enclosure 5.8 and RD5 printouts/displays as necessary, assist in the completion of the ENF.

4.3.4 Notify Emergency Coordinator, or RAM and EOFD of the results of the above evaluations.

4.4 Evaluate Field Monitoring survey results:

4.4.1 Compare Field Monitoring survey results to EAL criteria in Enclosure 5.7:

4.4.1.1 Make EAL recommendations based on step 4.4.1 evaluation.



- 4.4.2 Compare Field Monitoring survey results to RD5 projections:
  - 4.4.2.1 **IF** Field Monitoring results are higher than RD5 projections, evaluate the need to adjust RD5 input data to project dose.
- 4.5 **IF** requested by the State, supply Self-Reading Dosimeter (SRD) Correction Factor from the RD5 Summary Report, to estimate emergency worker dose.
- 4.6 **IF** ingestion pathway dose calculations are necessary, refer to HP/0/B/1009/020, (Estimating Food Chain Doses Under Post Accident Conditions), for limits, criteria, and additional information:
  - 4.6.1 Input Field Monitoring sample data into RD5 to calculate ingestion pathway dose.
  - 4.6.2 Communicate ingestion pathway dose calculation results to South Carolina DHEC.

## 5. Enclosures

- 5.1 TSC Setup
- 5.2 EOF Setup and RAM Checklist
- 5.3 Dose Assessment Data Trending Sheet
- 5.4 Release Status
- 5.5 Meteorology and PAZ Selection
- 5.6 Raddose 5 Operation
- 5.7 Emergency Action Levels and Protective Action Recommendations
- 5.8 Emergency Notification Form (ENF) Completion
- 5.9 RIA Power Supplies
- 5.10 Conversion Factors

Initial lines as applicable, depending upon accident/drill scenario. Coordinate activities with the EOF (it is **NOT** necessary to duplicate efforts with the EOF). This is only a checklist/guide for setting up the TSC. Actual completion of this enclosure is **NOT** required. Steps may be performed in any order:

\_\_\_ Notify Emergency Coordinator upon arrival.

\_\_\_ Log name and arrival time on TSC personnel status board.

\_\_\_ Boot RD5/SDS computer and start SDS.

- TSC computer should boot automatically using a default User ID and Password.
- **IF** computer does **NOT** boot, re-start, using your network User ID and Password.

\_\_\_ Determine release pathways (if any) using SDS and contact with other groups.

\_\_\_ Use release criteria on Enclosure 5.4 to determine release status.

\_\_\_ **IF** releasing, determine if release < or > Normal Operating (SLC) Limits using RD5.

\_\_\_ Notify TSC Emergency Coordinator.

\_\_\_ USE RD5 results as necessary to support Emergency Notification Form (ENF) generation.

\_\_\_ Monitor Field Team activities      \_\_\_ # of Teams available.

\_\_\_ Select meteorology and PAZs, based on Enclosure 5.5, or RD5 as required.  
Refer to Section 4.3.1.1 of the procedure.

\_\_\_ Communicate RD5 results to the Emergency Coordinator and to the Offsite Communicator as necessary.

\_\_\_ Develop 24-hour staffing schedule as needed.

\_\_\_ **IF** requested by NRC **OR** ERO management, staff HPN (Health Physics Network) phone.

\_\_\_ **IF** formally accepting turnover from EOF, use Page 2 of Enclosure 5.2 to document turnover.

## EOF Setup and RAM Checklist

Initial lines as applicable, depending upon accident/drill scenario (mandatory items in bold). The first, or duty person should sign in as RAM until a more experienced person arrives at EOF. This is only a checklist/guide for setting up the TSC. Actual completion of this enclosure is **NOT** required. Steps may be performed in any order:

- \_\_\_ Sign Attendance Log upon entry into EOF.
- \_\_\_ Notify EOF Director (EOFD) upon arrival.
- \_\_\_ Log name and arrival time on EOF personnel status board.
- \_\_\_ Ensure RD5 computer and SDS computers are booted. SDS could be booted on RD5 computer if necessary. Use your network User ID and Password on RD5 computer.
- \_\_\_ Contact TSC Dose Assessment Liaison. Maintain contact as necessary
- \_\_\_ Ensure that turnover is completed with the TSC (ASAP) using page 2. Provide turnover sheet to EOFD:
  - \_\_\_ Determine release pathways (if any) and release specifics.
  - \_\_\_ **IF** releasing, determine if release < or > Normal Operating (SLC) Limits using RD5.
- \_\_\_ Ensure that Field Team activities are monitored \_\_\_ # of Teams available
- \_\_\_ Notify EOFD of the above results, and of changes affecting offsite rad conditions.
- \_\_\_ Ensure that the following duties are assigned (combine as needed: RAM to assume duties also):
 

___ Run RD5	___ Monitor SDS	___ Assist with ENF completion
___ Communications with TSC	___ Monitor Field Monitoring activities	
___ Maintain Status Board	___ Ensure Rad Assessment Mgr position is staffed.	
___ Assist with "risk" perspectives (if/as necessary)	___ Communicate with SCDHEC and NRC (via HPN) (if/as requested)	
- \_\_\_ Ensure that meteorology and PAZs are determined, based on Enclosure 5.5, or RD5, as required (Refer to section 4.3.1.1 of this procedure)
- \_\_\_ Ensure that RD5 is run/being run (approximately every 15 minutes) to project dose and to support Emergency Notification Form (ENF) generation, if a release is in progress.
- \_\_\_ Communicate RD5 results to EOFD, and Offsite Communicator (as necessary, assist News Group in putting doses into "risk" perspective).
- \_\_\_ Ensure Offsite Dose status board and PAZ maps in EOFDs area are maintained (as necessary).
- \_\_\_ Develop 24-hour staffing schedule (as necessary).

Enclosure 5.2  
EOF Setup and RAM Checklist

1. Check one:

\_\_\_ TSC to EOF Turnover

\_\_\_ EOF to TSC Turnover

2. Emergency Release(s):      No: \_\_\_\_\_      Yes: \_\_\_\_\_

Airborne: \_\_\_\_\_

Liquid:\* \_\_\_\_\_

Is occurring \_\_\_\_\_ Has Occurred \_\_\_\_\_ Time \_\_\_\_\_

Normal Operating Limits: Below \_\_\_\_\_ Above \_\_\_\_\_

3. Recommended Protective Actions: Based on radiological conditions

A No Recommended Protective Actions \_\_\_\_\_

B Evacuate \_\_\_\_\_

C Shelter-In-Place \_\_\_\_\_

D Other \_\_\_\_\_

\* Identify liquid releases that you are aware of. Off-Site Dose Assessment is **NOT** responsible for quantifying liquid releases or calculating doses due to liquid releases.



Dose Assessment Data Trending Sheet

<b>EROAREA</b>	<b>Contr Room Area RIA-1</b>	<b>&lt;1 mR/hr</b>											
"	Rx Bldg Canal Wall RIA-3	1-15 mR/hr											
"	Rx Bldg Entrance RIA-4	1-15 mR/hr											
"	SFP Bld Wall RIA-6	1-5 mR/hr											
"	HPI Rm Corridor RIA-15	1-10 mR/hr											
"	Main Stm RIA-16	0.01-0.05 mR/hr											
"	Main Stm RIA-17	0.01-0.05 mR/hr											
"	hi hi gas RIA-56	~ 0.5-1.5 R/hr											
"	hi hi gas RIA-57	~ 0.7-1.5R/hr											
"	hi hi gas RIA 58	~ 0.7-1.5R/hr											
<b>EROECCS U.S.*</b>	<b>RB Spray ON/OFF</b>	<b>(OFF)</b>											
<b>RB01 OR EROPRI</b>	<b>Containment psig USE HIGHEST VALUE</b>												
<b>RB01 U.S.*</b>	<b>Pen Room Filters (PRV) to Unit Vent</b>	<b>(OFF)</b>											
<b>P0162** OR RB01</b>	<b>Ambient Temp °C Ambient Temp °F</b>												

- \* **UNIT SPECIFIC SCREENS** – Be sure you’re on the correct Unit in SDS.
- \*\* Type in the following, without the " " and note that a blank space should be substituted for the underscore: "gd\_P0162" and hit enter. OR At top of SDS screen, select "Point List," then select "By Point ID." Then type in, P0162 , as the requested point.

**1. Determine release status using the following criteria:**

**NOTE:** • Dose projection values are **NOT** required for the Emergency Notification Form unless the release is above normal operating limits.

1.1 No Release - no potential release of activity generated by the event.

1.2 Potential Release - this item is on the Emergency Notification Form, but should be selected only if specifically instructed to do so by the RAM.

**NOTE:** Dose rates are assumed to be at the Site Boundary (one mile from site).

1.3 Release Within Normal Operating Limits - activity generated by the event currently or previously released within normal operating limits (Total Effective Dose Equivalent < 5.704E-2 mrem/hr; Committed Dose Equivalent - thyroid < 1.711E-1 mrem/hr).

Events:

- Reactor Building pressure > 1 psig with increased activity in Reactor Building
- OTSG Tube Leak with Main Steam Relief Valve release, or increased Unit Vent activity
- Increased Unit Vent Activity
- Field Team Activity

1.4 Release Above Normal Operating (SLC) Limits - activity generated by the event currently or previously released above normal operating limits (Total Effective Dose Equivalent > 5.704E-2 mrem/hr; Committed Dose Equivalent - thyroid > 1.711E-1 mrem/hr).

**Enclosure 5.5**  
**Meteorology and PAZ Selection**

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Page 1 of 5

**1. Assess Meteorology and Protective Action Zones (PAZs) as follows:**

**NOTE:** Actual, average meteorological data should be used unless it is more appropriate to use forecast data, as provided by a meteorologist.

- 1.1 Using section 2 hierarchy below, record the following on Enclosure 5.3, or other form such as the "Drill/Event Log"

**NOTE:** The sources of data are listed in order of preference in the flowchart in section 2 below.

- Time meteorological data taken.
  - Wind speed in miles per hour.
  - Direction from which the wind is blowing in degrees from North (North = 0).
  - Temperature gradient in degrees centigrade ( $\Delta T^{\circ}\text{C}$ ).
  - Stability class based on  $\Delta T$ .
- 1.2 Determine the PAZs using section 3 below.



**2. Select Meteorology By Using the Flowchart Below:**

**NOTE:** \*Conversion formulas for the meteorological data obtained from NWS are:

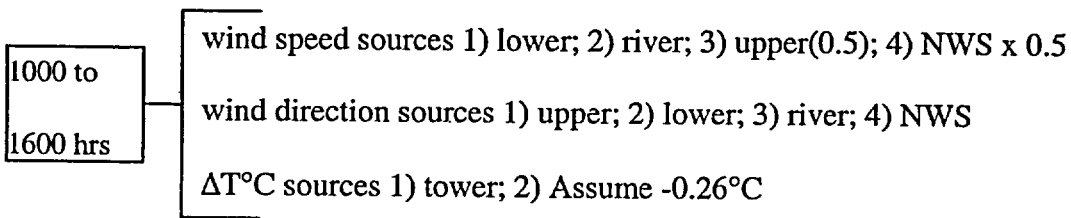
- $(1.15) \times (\text{knots}) = \text{mph}$
- $(1.8 \times ^\circ\text{C}) + 32 = ^\circ\text{F}$

METEOROLOGICAL DATA

(All data is 15 min average except NWS.)  
 National Weather Service (NWS) phone number is (864) 879-1085.

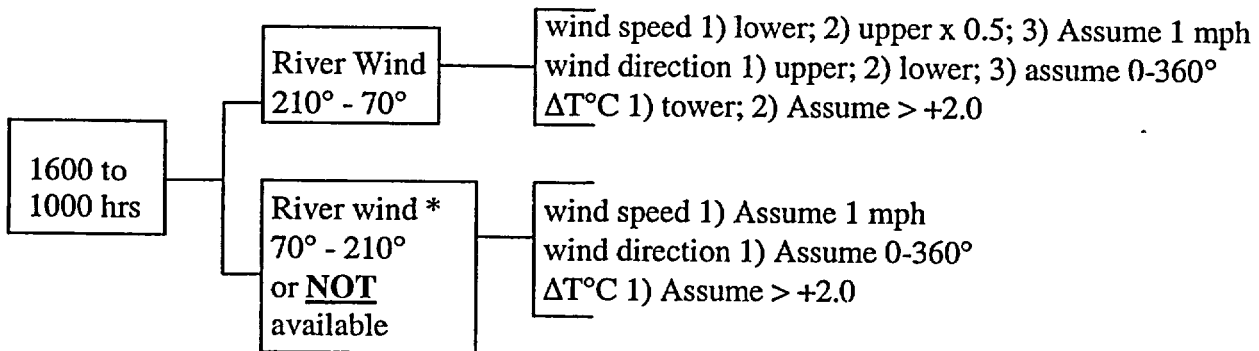
TIME

DATA SOURCE PRIORITY



TIME

DATA SOURCE PRIORITY



\* Based on experiment

$\Delta T^\circ\text{C}$	Stability Class
$\leq -0.95$	A
-0.94 to -0.85	B
-0.84 to -0.75	C
-0.74 to -0.25	D
-0.24 to +0.75	E
+0.76 to +2.0	F
$> +2.0$	G

**3. Determine PAZ by completing one of the options under Daytime or Nighttime, using meteorological data selected above.**

**3.1 Daytime (1000-1600 hrs):**

- Wind speed  $\geq$  5 mph for tower or river wind direction; use the table below.
- Wind speed  $<$  5 mph for tower or river wind direction. Assume PAZs A0, A1, B1, C1, D1, E1, and F1 are affected. Use table below to determine additional PAZ.
- For NWS wind direction. Assume all PAZs are affected (A0, A1 through F1, A2 through F2).

**3.2 Nighttime (1600-1000 hrs.):**

- **IF** river wind direction is between 210°-70, use Daytime Option above .
- **IF** river wind direction is between 70°-210, or is **unavailable**, assume all PAZs are affected (A0, A1 through F1, A2 through F2).

Wind Direction	Protective Action Zones		
	0-2 miles;	2-5 miles;	5-10 miles
14.1°-27°	A0,	C1, D1, E1,	C2, D2, E2
27.1°-42°	A0,	C1, D1, E1,	D2, E2
42.1°-66°	A0,	D1, E1,	D2, E2
66.1°-85°	A0,	D1, E1,	D2, E2, F2
85.1°-104°	A0,	D1, E1, F1,	D2, E2, F2
104.1°-129°	A0,	E1, F1,	E2, F2
129.1°-156°	A0,	A1, E1, F1,	A2, E2, F2
156.1°-175°	A0,	A1, E1, F1,	A2, F2
175.1°-181°	A0,	A1, F1,	A2, F2
181.1°-219°	A0,	A1, B1, F1,	A2, B2, F2
219.1°-255°	A0,	A1, B1,	A2, B2,
255.1°-271°	A0,	A1, B1, C1,	A2, B2, C2
271.1°-297°	A0,	B1, C1,	B2, C2
297.1°-312°	A0,	B1, C1,	B2, C2, D2
312.1°-345°	A0,	B1, C1, D1,	B2, C2, D2
345.1°-14°	A0,	C1, D1,	C2, D2

**Enclosure 5.5**  
**Meteorology and PAZ Selection**

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3.3 Identify PAZs selected in Step 3.1 or 3.2 on table below:

3.3.1 Recommend sheltering for the remainder of the 10-mile EPZ anytime that zones are recommended for evacuation.

**NOTE:** Default Protective Action Recommendations (PARs) upon initial declaration of a **General Emergency** are to Evacuate the 2-mile radius around the plant and out to 5-miles downwind.

3.3.2 Recommend the "default" PARs upon initial declaration of a General Emergency, unless Dose Assessment or Field Monitoring indicate that additional PAZs should be evacuated.

**CAUTION:** Once a zone has been added to the list of affected zones, it shall **NOT** be removed except under the direction of the RAM.

3.3.3 **IF** a General Emergency has been declared and protective action recommendations have been made, recheck meteorological conditions every 15 minutes to ensure that additional PAZs are identified as required.

3.3.3.1 **IF** additional zones need to be added to the list of PAZs, notify the Emergency Coordinator, or RAM, or EOF Director.

- The State must be notified (via the ENF) within 15 minutes of additions to PAZs.

**NOTE:** Default PARs for "Severe Core Damage" (Condition 3 failed fuel) are to Evacuate the 5-mile radius around the plant and out to 10-miles downwind of the plant.

3.3.4 **IF** Severe core damage (Condition 3 failed fuel per RP/0/B/1000/18, Core Damage Assessment) conditions exist, recommend the associated "default" PARs, unless Dose Assessment or Field Monitoring indicate that additional PAZs should be evacuated. **SAM G may be in effect at this point.**

Enclosure 5.5  
 Meteorology and PAZ Selection

Date/Time \_\_\_\_\_

PAZ Selection for: \_\_\_\_\_ Info Only    \_\_\_\_\_ General Emergency    \_\_\_\_\_ General Emergency Upgrade

	PICKENS COUNTY							OCONEE COUNTY						
	0-2 miles	2-5 miles			5-10 miles			0-2 miles	2-5 miles			5-10 miles		
	A0	A1	B1	C1	A2	B2	C2	A0	D1	E1	F1	D2	E2	F2
EVACUATE														
SHELTER														

Date/Time \_\_\_\_\_

PAZ Selection for: \_\_\_\_\_ Info Only    \_\_\_\_\_ General Emergency    \_\_\_\_\_ General Emergency Upgrade

	PICKENS COUNTY							OCONEE COUNTY						
	0-2 miles	2-5 miles			5-10 miles			0-2 miles	2-5 miles			5-10 miles		
	A0	A1	B1	C1	A2	B2	C2	A0	D1	E1	F1	D2	E2	F2
EVACUATE														
SHELTER														

Date/Time \_\_\_\_\_

PAZ Selection for: \_\_\_\_\_ Info Only    \_\_\_\_\_ General Emergency    \_\_\_\_\_ General Emergency Upgrade

	PICKENS COUNTY							OCONEE COUNTY						
	0-2 miles	2-5 miles			5-10 miles			0-2 miles	2-5 miles			5-10 miles		
	A0	A1	B1	C1	A2	B2	C2	A0	D1	E1	F1	D2	E2	F2
EVACUATE														
SHELTER														

**1. Operate Raddose 5 (RD5) as follows:**

- 1.1 Choose RD5 icon.
- 1.2 **IF** no icon is available, go to "Start", "Programs", "Raddose-V":
  - 1.2.1 **IF** RD5 is **NOT** available, load it by going to "Start", "Run", and typing in, \\mnsf2\raddose5\launcher\prod\setup.exe.
    - 1.2.1.1 Follow computer prompts to complete RD5 installation.

**NOTE:** Proper "Configuration" is required in order to transfer RD5 files between the TSC and EOF.

- 1.3 Ensure the proper "Configuration" message displays for the facility, "TSC" for TSC and "EOF" for EOF:
  - 1.3.1 Revise "Configuration" if necessary, by selecting "File" at DAS desktop.
  - 1.3.2 Select "DAS Configuration" and choose appropriate configuration for facility.
  - 1.3.3 Reboot RD5 for "Configuration" changes to take effect.
- 1.4 Choose the affected ONS Unit.

**NOTE:** Accident Mode uses "live" data when in "Automatic". Drill Mode uses simulated data which must be input manually.

- 1.5 Select "Accident" or "Drill".
- 1.6 Select "Automatic" data to use "archived" data, **OR**, select "Manual" data for manual entry of data.
- 1.7 Select "Begin new incident" to begin a new scenario, **OR**, to use previously-generated dose assessments, go to Step 1.12.
- 1.8 Enter reactor trip date and time:
  - 1.8.1 **IF** reactor did **NOT** trip and shutdown is **NOT** in progress, use current date and time for reactor trip specifics.
  - 1.8.2 **IF** reactor did **NOT** trip and shutdown **IS** in progress, use time and date that descent in power began as the reactor trip time and date.
- 1.9 Enter the release date and time (estimated or known).
- 1.10 Enter operator initials and either "Accept" or "Cancel".

**Enclosure 5.6**  
**Raddose 5 Operation**

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- 1.11 Go to Step 1.13.
- 1.12 **IF** previous TSC **OR** EOF files are to be used, select "Continue Previous Incident":
- 1.12.1 After selecting "Network Data", select location from which to take data.
- 1.12.2 Select either "Local Data" to use data from local hard drive, **OR** "Network Data" to use data from TSC or EOF.

**NOTE:** Any "Automatic" data may be manually overwritten if necessary.

- 1.13 Enter meteorological data either manually or automatically:
- 1.13.1 **IF** data is entered manually, select "F9" to accept wind speed and wind direction data, or "esc" to abort.
- 1.13.2 **WHEN** meteorological data has been entered, select "Accept".
- 1.14 Enter Source Term data either manually or automatically:

**NOTE:**

- "Accident Type" and "NG Method" must be manually selected.
- **IF** more than one release path is used, the "Accident Type" should be the same for each path used, to ensure consistent nuclide "mix" is assumed in dose projections.

- 1.14.1 Select "Accident Type" for each applicable release path in a time step:
- 1.14.1.1 **IF** time permits, consult with TSC Nuclear Engineering prior to use of GAP release or Core Melt accident types.

**Enclosure 5.6**  
**Raddose 5 Operation**

1.14.1.2 Use the following table to assist in determining fuel condition/ accident types:

Time After Initiation of Accident:	t = 0 hours	t = 12 hours	t = 24 hours	Nuclide Mix Recommendations
<b>RIA-57 R/hr</b>	Bkg to 90	Bkg to 6	Bkg to 2.75	LOCA
R/hr	~90 to 500	~6 to 75	~ 2.75 to 45	LOCA AND Consult Reactor Eng*
R/hr	~500 to ~9E3	~75 to 600	~45 to ~275	Gap AND Consult Reactor Eng*
R/hr	~9E3 to 3E4	~600 to 5.5E3	~275 to 3E3	Consult Reactor Eng* about using Core Melt
R/hr	>3E4	>5.5E3	>3E3	Core Melt AND Consult Reactor Eng*
<b>RIA-58 R/hr</b>	Bkg to 45	Bkg to 2.8	Bkg to 1.50	Assume LOCA.
R/hr	~45 to 200	~2.8 to 35	~1.5 to 20	LOCA AND Consult Reactor Eng*
R/hr	~200 to ~4.5E3	~35 to 280	~20 to 125	Gap AND Consult Reactor Eng*
R/hr	~4.5E3 to 1E4	~280 to 1.5E3	~125 to 1E3	Consult Reactor Eng* about using Core Melt
R/hr	>1E4	>1.5E3	>1E3	Core Melt AND Consult Reactor Eng*

\* Table values provided are recommendations. If more reliable information is available, it should be used. Therefore, decisions made through consultation with Reactor Engineering take priority over the table values provided.

- NOTE:**
- Guidance provided in NRC document, RTM-93, indicates that between normal operating temperature (Core Exit Thermocouple readings between  $<650^{\circ}\text{F}$  and  $\sim 700^{\circ}\text{F}$ ; and fuel cladding temperatures  $<1200^{\circ}\text{F}$ ), the GAP activity is **NOT** assumed to have been released, therefore, "normal coolant" should be assumed.
  - Containment activity concentration adjustments/multipliers for LOCA, LOCAG, and LOCAM are automatically applied by Raddose 5 as follows:
    - For RB Sprays OFF,  $<24$  hours holdup, 0.5;  $>24$  hours holdup, 0.03.
    - For RB Sprays ON,  $<24$  hours holdup, 0.02;  $>24$  hours holdup, 0.01.
    - Assuming "No Filters" gives no additional adjustment for Unit Vent releases.
    - Using "Filters" multiplies iodines by a factor of 0.1, and particulates by a factor of 0.01 (no noble gas reduction).

- LOCA - Loss of coolant (normal coolant) - leaks released into containment with fission products normally found in coolant.
- LOCAG - Loss of coolant with GAP release - coolant containing radionuclides from the fuel pin GAP leaks into containment after fuel cladding has failed (e.g., core being uncovered, fuel pin heat up, and/or if mechanical fuel pin damage has occurred).
- LOCAM - Loss of coolant core melt - coolant containing radionuclides expected to be released from a core that is partially melted leaks into containment.

**NOTE:** Steam Generator activity concentration adjustments/multipliers for SGTR, SGTRG, and SGTRM are automatically applied by Raddose 5 as follows:

- For Partitioned release, 0.02.
- For **NOT** Partitioned release, 0.5.
- Release through Main Steam Relief Valves, 1.0 (no adjustment).
- Release through CSAE to Unit Vent, 0.02.
- Factors apply to Iodines and Particulates only.
- No reduction for noble gas.

- SGTR - Steam generator tube rupture (normal coolant) - steam generator tube rupture accidents with fission products normally found in coolant.



- SGTRG - Steam generator tube rupture GAP release - steam generator tube rupture accidents that release fission products in the fuel pin gap after fuel cladding has failed (e.g., core uncover or fuel pin heat up and/or after mechanical fuel pin damage has occurred).
- SGTRM - Steam generator tube rupture core melt - steam generator tube rupture accidents that release fission products expected to be released from a core that is partially melted.

**NOTE:** Aux. Building LOCA activity concentration adjustments/multipliers for LOCO, LOCOG, and LOCOM are automatically applied by Raddose 5 as follows:

- Iodines and Particulates multiplied by a factor of 0.02.
- No reduction for noble gases.

- LOCO - LOCA outside containment (normal coolant) - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides normally found in reactor coolant.
- LOCOG - LOCA outside containment gap release - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides from the fuel pin gap after fuel cladding has failed (e.g., core uncover of fuel pin heat up and/or after mechanical fuel pin damage has occurred).
- LOCOM - LOCA outside containment core melt - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides expected to be released from a core that is partially melted.

**NOTE:** Activity concentration adjustments/multipliers for FUEL type accidents are automatically applied by Raddose 5 as follows:

- "Pool Scrubbing," 0.05. No "Pool Scrubbing," 1.0 (No adjustment).
- Assuming "No Filters" gives no additional adjustment for releases.
- "Filters" multiplies iodines by a factor of 0.1, and particulates by a factor of 0.01.
- No adjustment for noble gas.

- FUEL - Fuel handling gap release - fuel pin fission products (GAP activity) released from fuel during refueling, or Spent Fuel Pool accident. Release pathway is assumed to be via the Unit Vent (Unit 2 for 1&2 SFP).

1.14.2 Enter monitor reading and flow rate data as required:

1.14.2.1 "Accept" data, or overwrite data if necessary

1.14.3 Select "Emergency Classification".

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**Raddose 5 Operation**

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- SGTRG - Steam generator tube rupture GAP release - steam generator tube rupture accidents that release fission products in the fuel pin gap after fuel cladding has failed (e.g., core uncover or fuel pin heat up and/or after mechanical fuel pin damage has occurred).
- SGTRM - Steam generator tube rupture core melt - steam generator tube rupture accidents that release fission products expected to be released from a core that is partially melted.

**NOTE:** Aux. Building LOCA activity concentration adjustments/multipliers for LOCO, LOCOG, and LOCOM are as follows:

- Iodines and Particulates multiplied by a factor of 0.02.
- No reduction for noble gases.

- LOCO - LOCA outside containment (normal coolant) - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides normally found in reactor coolant.
- LOCOG - LOCA outside containment gap release - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides from the fuel pin gap after fuel cladding has failed (e.g., core uncover of fuel pin heat up and/or after mechanical fuel pin damage has occurred).
- LOCOM - LOCA outside containment core melt - leaks released directly to outside environment (e.g., Auxiliary Building) with radionuclides expected to be released from a core that is partially melted.

**NOTE:** Activity concentration adjustments/multipliers for FUEL type accidents are as follows:

- "Pool Scrubbing," 0.05. No "Pool Scrubbing," 1.0 (No adjustment).
- Assuming "No Filters" gives no additional adjustment for releases.
- "Filters" multiplies iodines by a factor of 0.1, and particulates by a factor of 0.01.
- No adjustment for noble gas.

- FUEL - Fuel handling gap release - fuel pin fission products (GAP activity) released from fuel during refueling, or Spent Fuel Pool accident. Release pathway is assumed to be via the Unit Vent (Unit 2 for 1&2 SFP).

1.14.2 Enter monitor reading and flow rate data as required:

1.14.2.1 "Accept" data, or overwrite data if necessary

1.14.3 Select "Emergency Classification".

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**Raddose 5 Operation**

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1.14.4 Select "Perform Calculations":

1.14.4.1 Select "Continue" and "Go to Report Menu".

**NOTE:** If a printer is **NOT** available, the RD5 "Summary Report" screen and the "Green Form" may be displayed on-screen, from which information may be manually recorded.

1.14.4.2 Select "Print Summary Report".

1.14.4.3 Select "Return to Output Menu" and "Return to Main Menu".

1.14.5 Select "Perform Forecast":

**NOTE:** If "General Emergency" was selected, PAZs based solely on the General Emergency default may be displayed, or if dose warrants, PAZs based on dose may be displayed as desired. Dose PAZs and General Emergency PAZs from 5 to 10 miles from the plant may be different. PAZs should be verified to the manual procedure.

1.14.5.1 Select "Continue" and "Go to Report Menu".

1.14.5.2 Select "Print Green Form".

1.14.5.3 Select "Return to Output Menu" and "Return to Main Menu".

1.14.6 Continue with offsite dose projections as required to evaluate dose to the public and to support ENF transmittal:

**NOTE:** If initial TSC offsite dose projections indicate that releases likely will **NOT** affect Emergency Classification, and if time does **NOT** permit (ex: initial stages of TSC activation, etc), the requirement to run RD5 every 15 minutes may be relaxed.

1.14.6.1 Because of meteorological model in RD5, data should be collected to support RD5 projections every 15 minutes if "Manual" mode is used.

1.14.6.2 **IF** "Automatic" mode is used, RD5 should be run approximately every 15 minutes.

1.14.7 Determine approximate dose to the public beyond the 10-mile EPZ by going to the RD5 "Output Menu" and selecting "Display Point-of-Interest Doses":

1.14.7.1 Follow screen prompts to calculate dose rate at the point of interest.

1.14.7.2 Relate dose rate to known distances at or within the 10-mile EPZ to distances beyond the 10-mile EPZ.

1.14.7.3 Note approximate direction of plume and approximate distance at which PAG doses are exceeded.

**Emergency Action Levels and Protective  
Action Recommendations****1. Determine Emergency Action Levels (EALs):**

1.1 **IF** any of doses described below are projected at the Site Boundary (one mile from plant) make the associated EAL recommendation to the RAM:

- **IF** the projected doserate at the Site Boundary  $\geq 1.14E-1$  mrem/hr TEDE **OR**  $\geq 3.42E-1$  mrem/hr committed dose equivalent (thyroid), then recommend an **Unusual Event** (bases:  $\geq 2$  times SLC limits).
- **IF** the projected doserate at the Site Boundary  $\geq 1.14E1$  mrem/hr TEDE **OR**  $\geq 3.42E1$  mrem/hr committed dose equivalent (thyroid) then recommend an **Alert** (bases:  $\geq 200$  times SLC limits).
- **IF** the projected dose at the Site Boundary  $\geq 100$  mrem TEDE **OR**  $\geq 500$  mrem committed dose equivalent (thyroid), then recommend a **Site Area Emergency** (bases: one tenth of PAG limit).
- **IF** the projected dose at the Site Boundary  $\geq 1000$  mrem TEDE **OR**  $\geq 5000$  mrem committed dose equivalent (thyroid), then recommend a **General Emergency** (bases: PAG limit).

1.2 **IF** Field Monitoring Teams at the Site Boundary detect any of the doserates described below, make the associated EAL recommendation:

- **IF** dose rate at the Site Boundary  $\geq 100$  mrem/hr TEDE **OR**  $\geq 500$  mrem/hr ( $3.84E-7$   $\mu\text{Ci/ml}$  I-131 equivalent) Committed Dose Equivalent (thyroid) and either is expected to last for more than one hour, recommend a **Site Area Emergency** (bases: one tenth of PAG limit).
- **IF** the dose rate at the Site Boundary  $\geq 1000$  mrem/hr TEDE **OR**  $\geq 5000$  mrem/hr ( $3.84E-6$   $\mu\text{Ci/ml}$  I-131 equivalent) Committed Dose Equivalent (thyroid) and either is expected to last for more than one hour, recommend a **General Emergency** (bases: PAG limit).

Emergency Action Levels and Protective  
Action Recommendations

**2. Determine Protective Action Recommendations (PARs):**

2.1 Recommend no protective action, for doses:

- < 1 Rem Total Effective Dose Equivalent **OR**,
- < 5 Rem Committed Dose Equivalent (Thyroid)

2.2 Recommend Evacuation of Population in PAZs identified on Enclosure 5.5 and sheltering of remaining PAZs in the 10-mile EPZ, for doses:

- $\geq 1$  Rem Total Effective Dose Equivalent (TEDE) **OR**,
- $\geq 5$  Rem Committed Dose Equivalent (CDE Thyroid).

2.3 Notify EOPD and State Offsite Dose personnel that the area beyond the 10-mile EPZ has exceeded the Protective Action Guide (PAG) doses, for the following doses:

- $\geq 1$  Rem Total Effective Dose Equivalent (TEDE) **OR**,
- $\geq 5$  Rem Committed Dose Equivalent (CDE Thyroid).

2.3.1 Provide EOPD and State Offsite Dose personnel with the approximate direction of the plume and the approximate distance at which PAG doses are exceeded.

**Enclosure 5.8**  
**Emergency Notification Form Completion**  
**Example**

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**1. Supply information to complete the ENF as follows:**

**NOTE:** "Offsite Communicators" should actually complete the Emergency Notification Form (ENF) using radiological information supplied by Offsite Dose Assessment.

- 1.1 At line 10, indicate appropriate box, according to Enclosure 5.4 (procedure section 4.3):
  - 1.1.1 **IF** release status is "None", go to ENF line 14 (step 1.6 of this enclosure).
- 1.2 At line 11, indicate that the release is:
  - "Ground Level",
  - "Airborne", and
  - Provide the release "Start time" and "Start date".
  - **IF** release has stopped, provide the release "Stop time" and "Stop date".
- 1.3 At line 12, indicate that the release magnitude is in "Curies per sec":
  - 1.3.1 Indicate if the release is "Above" or "Below" normal operating limits, using Enclosure 5.4 and RD5 data (procedure section 4.3.3.3).
  - 1.3.2 Supply "Noble Gases," "Particulates," and "Iodines" curies per second values from RD5 data.
- 1.4 At line 13, **IF** releases < normal operating limits, go to ENF line 14 (step 1.6 of this enclosure).
- 1.5 **IF** releases > normal operating limits, indicate if the projection is "New" or "Unchanged" and provide "Projection Time" from RD5 data:
  - 1.5.1 Provide "Estimated Duration" from RD5 data.
  - 1.5.2 Provide "TEDE mrem" and "Thyroid CDE mrem" values from RD5.
- 1.6 At line 14, supply "Meteorological Data", either from SDS or from RD5.
- 1.7 At line 15, supply Offsite Dose related "Protective Action Recommendations" as determined from Enclosure 5.5 or RD5 data (procedure Section 4.3.3.5).

Emergency Notification Form Completion Example

1. A  THIS IS A DRILL B.  ACTUAL EMERGENCY  INITIAL  FOLLOW-UP MESSAGE NUMBER \_\_\_\_\_

2. SITE: Oconee UNIT: 1 REPORTED BY: \_\_\_\_\_

3. TRANSMITTAL TIME/DATE: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ CONFIRMATION PHONE NUMBER: \_\_\_\_\_  
(Eastern) mm/dd/yy

4. AUTHENTICATION (If Required): \_\_\_\_\_  
(Number) (Codeword)

5. EMERGENCY CLASSIFICATION: A.  NOTIFICATION OF UNUSUAL EVENT  
B.  ALERT C.  SITE AREA EMERGENCY D.  GENERAL EMERGENCY

6.  Emergency Declaration At:  Termination At: TIME/DATE: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (If B, go to item 16)  
(Eastern) mm dd yy

7. EMERGENCY DESCRIPTIONS/REMARKS:  
\_\_\_\_\_  
\_\_\_\_\_

8. PLANT CONDITION:  IMPROVING  STABLE  DEGRADING

9. REACTOR STATUS:  SHUTDOWN: TIME/DATE: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  \_\_\_\_\_ % POWER  
(Eastern) mm dd yy

10. EMERGENCY RELEASE(S):  
A.  NONE (Go to item 14) B.  POTENTIAL (Go to item 14) C.  IS OCCURRING D.  HAS OCCURRED

\*\*11. TYPE OF RELEASE:  ELEVATED  GROUND LEVEL  
 AIRBORNE: STARTED: 12:00 - 09/21/98 STOPPED: \_\_\_\_\_  
Time (Eastern) Date Time (Eastern) Date  
 LIQUID: STARTED: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ STOPPED: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Time (Eastern) Date Time (Eastern) Date

\*\*12. RELEASE MAGNITUDE:  Curies Per Sec  Curies NORMAL OPERATING LIMITS:  BELOW  ABOVE  
 NOBLE GASES 2.56E+00  IODINES 1.81E-01  
 PARTICULATES 0.05E-03  OTHER \_\_\_\_\_

\*\*13. ESTIMATE OF PROJECTED OFFSITE DOSE:  NEW  UNCHANGED PROJECTION TIME: 12-15

	TEDE (mrem)	Thyroid CDE (mrem)	ESTIMATED DURATION: _____ HRS.
SITE BOUNDARY	<u>1.45E+01</u>	<u>2.48E+02</u>	<u>1.25</u>
2 MILES	<u>2.93E+00</u>	<u>4.97E+01</u>	
5 MILES	<u>3.93E-01</u>	<u>6.78E+00</u>	
10 MILES	<u>0.00E+00</u>	<u>0.00E+00</u>	

\*\*14. METEOROLOGICAL DATA:  WIND DIRECTION (from) 20.0 deg  SPEED (mph) 6.0  
 STABILITY CLASS B  PRECIPITATION (type) 0.00 in/16 min

15. RECOMMENDED PROTECTIVE ACTIONS:  
A.  NO RECOMMENDED PROTECTIVE ACTIONS  
B.  EVACUATE  
C.  SHELTER IN-PLACE  
D.  OTHER \_\_\_\_\_

16. APPROVED BY: \_\_\_\_\_ TIME/DATE: \_\_\_\_\_ : \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
(Name) (Title) (Eastern) mm dd yy

\* If items 8-14 have not changed, only items 1-7 and 15-16 are required to be completed  
\*\* Information may not be available on initial notification

**Enclosure 5.9**  
**RIA Power Supplies**

The following information is believed to be accurate but is provided as information only. Before making critical decisions using this information, verify that it is correct.

RIA	Skid Power/Electronics (Pwr Pnlbd)
<b>Unit 1 Process RIAs</b>	
1RIA-40	1TC-1X7-1XO-1KM BKR 14
1RIA-43-46	1TC-1X7-1XO-1KM BKR 8
1RIA-47-49A	1TC-1X7-1XO-1KM BKR 9
1RIA-56	1TC-1X7-1XO-1KM BKR 20
<b>Unit 1 Area RIAs</b>	
1RIA-3, 4, 16, 17	1TC-1X7-1XO-1KM BKR 20
1RIA-57 (safety related parts)	1TD-1SKK BKR 11
1RIA-58 (safety related parts)	1TC-1SKJ BKR 13

Unit 1 Control Room Display node is powered from 1KVIA, BKR 15. U-1PMC System server is powered from Unit 2 power panelboard 2KU, Breaker 22.

<b>Unit 2 Process RIAs</b>	
2RIA-40	2TE-2X6-2XP-2KM BKR 15
2RIA-43-46	2TE-2X6-2XP-2KM BKR 8
2RIA-47-49A	2TE-2X6-2XP-2KM BKR 9
2RIA-56	2TE-2X6-2XP-2KM BKR 20
<b>Unit 2 Area RIAs</b>	
2RIA-3, 4, 16, 17	2TE-2X6-2XP-2KM BKR 20
2RIA-57 (safety related parts)	2TD-2SKK BKR 11
2RIA-58 (safety related parts)	2TC-2SKJ BKR 11

Unit 2 Control Room Display node is powered from 2KVIA, BKR 15. U-2PMC System server is powered from Unit 3 power panelboard 3KU, Breaker 22.

<b>Shared Process RIAs</b>	
(1&2) RIA-32 Aux Bld multi-point	1X6-MCC 1XP BKR R3BB
(1&2) RIA-39 Control Room	1TC-1X7-1XO-1KM 16
(1&2) RIA-41 Spent Fuel Pool	1TC-1X7-1XO-1KM 17
(1,2,3) RIA-53 Interim Radwaste	LR1 BKR 31
<b>Unit 1&amp;2 Shared Area RIAs</b>	
RIA-1, RIA-6, and RIA-15	1TC-1X7-1XO-1KM BKR 20



**Enclosure 5.9**  
**RIA Power Supplies**

RIA	Skid Power/Electronics (Pwr Pnlbd)
<b>Unit 3 Process RIAs</b>	
3RIA-32	3XS2 BKR R2BT
3RIA-39	3TD-3X5-3XO-3KM BKR 15
3RIA-40	3TD-3X5-3XO-3KM BKR 14
3RIA-41	3TD-3X5-3XO-3KM BKR 10
3RIA-43-46	3TD-3X5-3XO-3KM BKR 12
3RIA-47-49A	3TD-3X5-3XO-3KM BKR 13
3RIA-56	3TD-3X5-3XO-3KM BKR 20
<b>Unit 3 Area RIAs</b>	
3RIA-1, 3, 4, 6, 15, 16, 17	3TD-3X5-3XO-3KM BKR 20
3RIA-57 (safety related parts)	3TD-3SKK BKR 11
3RIA-58 (safety related parts)	3TC-3SKJ BKR 11

The Control Room display node is supplied power from 3KVIA, breaker #15. U-3 PMC  
System server is powered from Unit 1 power panel board 1KU, breaker 22.

Enclosure 5.10  
Conversion Factors

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RIA Manufacturer Correlation Factors (non-accident)

<u>RIA</u>	<u>Function</u>	<u>Manufacturer Correlation Factor</u> $\mu\text{Ci/ml/cpm}$
example: (Correlation Factor $\mu\text{Ci/ml/cpm}$ ) x (RIA cpm) = $\mu\text{Ci/ml}$		
32	Aux Bld Multi-Point (includes Pen Rm Exhaust gas)	3.4E-8
35	LPSW	1.5E-8
39	Control Rm gas	3.4E-8
40	Condenser Steam Air Ejector (CSAE)	3.4E-8
41	Spent Fuel Pool gas	3.4E-8
45	Unit Vent gas (normal range)	7.09E-8
46	Unit Vent gas (high range)	3.17E-4
49	Reactor Building gas (normal range)	7.09E-8
49A	Reactor Building gas (high range)	3.17E-4
53	Interim Radwaste Building Vent gas	3.4E-8

Unit Conversions

2.832E4 ml/ft <sup>3</sup>	1CFM ~ 1.7E6 ml/hr	1CFM ~ 4.72E2 ml/sec
3.785E3 ml/gal	7.48 gal/ft <sup>3</sup>	~8.35 lbs/gallon of water

Degrees Fahrenheit = (1.8 x degrees C) + 32

Degrees C = (degrees F - 32)/1.8

**INFORMATION  
ONLY**

Duke Power Company  
**PROCEDURE PROCESS RECORD**

**PREPARATION**

(2) Station OCONEE NUCLEAR STATION

(3) Procedure Title Control Room Emergency Coordinator Procedure

(4) Prepared By Rodney Brown (Signature) Rodney Brown Date 08/27/2002

- (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 Fisher (QR) Date 8/28/02  
 Cross-Disciplinary Review By Michelle Hill (QR)NA Date 8/28/02  
 Reactivity Mgmt Review By \_\_\_\_\_ (QR)NA Date \_\_\_\_\_  
 Mgmt Involvement Review By \_\_\_\_\_ (Ops Supt) NA Date \_\_\_\_\_

(7) Additional Reviews

Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

Temporary Approval (if necessary)

By \_\_\_\_\_ (OSM/QR) Date \_\_\_\_\_

By \_\_\_\_\_ (QR) Date \_\_\_\_\_

(9) Approved By Rodney Brown Date 08/29/02

**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 \_\_\_\_\_

(13) Procedure Completion Approved \_\_\_\_\_ Date \_\_\_\_\_

(14) Remarks (Attach additional pages)

<p style="text-align: center;">Duke Power Company Oconee Nuclear Site</p> <p style="text-align: center;"><b>Control Room Emergency Coordinator Procedure</b></p> <p style="text-align: center;"><b>Reference Use</b></p>	<p>Procedure No. <b>RP/0/B/1000/002</b></p>
	<p>Revision No. 010</p>
	<p>Electronic Reference No. OX002WOT</p>

## Control Room Emergency Coordinator Procedure

**NOTE:** This procedure is an implementing procedure to the Oconee Nuclear Site Emergency Plan and must be forwarded to Emergency Planning within three (3) working days of approval.

### 1. Symptoms

- 1.1 Events are in process or have occurred which require activation of the Oconee Nuclear Site Emergency Plan.

### 2. Immediate Actions

The Operations Shift Manager/Emergency Coordinator shall use this procedure until relieved by the Station Manager/Alternate in the Technical Support Center.

**NOTE:** Place Keeping Aids:  at left of steps may be used for procedure place keeping. ()

- 2.1 **IF** General Emergency conditions are met,  
**THEN** GO TO Enclosure 4.1 (General Emergency).
- 2.2 **IF** Site Area Emergency conditions are met,  
**THEN** GO TO Enclosure 4.2 (Site Area Emergency).
- 2.3 **IF** Alert conditions are met,  
**THEN** GO TO Enclosure 4.3 (Alert).
- 2.4 **IF** Unusual Event conditions are met,  
**THEN** GO TO Enclosure 4.4 (Unusual Event).
- 2.5 **IF** An Emergency Classification does **NOT** exist and ERO Activation is desired,  
**THEN** GO TO Step 1.6 of Enclosure 4.4 (Unusual Event).

### 3. Subsequent Actions

**NOTE:** Actions are **NOT** required to be followed in any particular sequence.

- 3.1 **IF** A SBLOCA or Steam Generator Tube Leak exist,  
**THEN** Implement Step 5.4, Emergency Worker Exposure Limits, of OMP 1-18, (Implementation Standard During Abnormal And Emergency Events).

- 3.2    **IF**        RIA 46 is on scale,  
          **THEN**      Use Enclosure 4.3 of RP/0/B/1000/001, (Emergency Classification), to determine if the emergency classification should be upgraded to a Site Area Emergency or General Emergency based on radiation activity.
- 3.2.1    Instruct RP to perform an Offsite Dose Calculation and determine any additional Protective Action Recommendations.
- 3.3    **IF**        1, 3 RIA 57 reads  $\geq 1.0$  R/hr; 2 RIA 57 reads  $\geq 1.6$  R/hr; or 1, 2, 3 RIA 58 reads  $\geq 1.0$  R/hr.  
          **THEN**      Use Enclosure 4.1 or 4.8 of RP/0/B/1000/001, (Emergency Classification), to determine if the emergency classification should be upgraded to a Site Area Emergency or General Emergency based on radiation activity.
- 3.4    **IF**        RIA 16 or 17 are/were in Alert or High Alarm ( $\geq 2.5$  mR/hr),  
          **THEN**      Instruct RP to perform an Offsite Dose Calculation using the RIA values.
- 3.4.1    Use Enclosure 4.3 of RP/0/B/1000/001, (Emergency Classification), and the Offsite Dose Calculation results to determine if the emergency classification should be upgraded to a Site Area Emergency or General Emergency based on dose projection at the site boundary.
- 3.4.2    Determine any additional Protective Action Recommendations.
- 3.5    **IF**        A large scale fire or flood damage has occurred or is occurring,  
          **THEN**      Use RP/0/B/1000/022, (Procedure For Site Fire Damage Assessment And Repair) and /or RP/0/B/1000/29, (Fire Brigade Response) to determine additional actions that may be required.
- 3.6    **IF**        A Security Event is in progress,  
          **THEN**      Use RP/0/B/1000/007, (Security Event), to determine additional actions that may be required.
- 3.7    **IF**        A hazardous substance has been released,  
          **THEN**      Use RP/0/B/1000/017, (Spill Response), to determine additional actions that may be required.

**NOTE:** Priority should be placed on providing treatment for the most life-threatening event (i.e., medical vs radiation exposure - OSC procedure RP/0/B/1000/011, (Planned Emergency Exposure). The Emergency Coordinator may authorize (either verbal or signature) exposures greater than 25 rem TEDE (Total Effective Dose Equivalent) for lifesaving missions.

- 3.8    **IF**            A medical response is required,  
                  **THEN**        Use RP/0/1000/016, (Medical Response).
- 3.8.1    Document verbal approval of Planned Emergency Exposures required for lifesaving missions in the Control Room Emergency Coordinator Log.
- 3.9    **IF**            Changing plant conditions require an emergency classification upgrade,  
                  **THEN**        **GO TO** the applicable enclosure, designated in the Immediate Actions section of this procedure, required for the appropriate emergency classification.

3.10    Announce over the Plant Public address System the following information:

- 3.10.1    The current emergency classification level and plant status UE/Alert/SAE/GE
- 3.10.2    If appropriate, the status of contamination and how people are to handle themselves:

Plant personnel should assume they are contaminated until surveyed by RP or until they have frisked themselves.

**NO** eating, drinking, or smoking until the area is cleared by RP

Identify areas of contamination to plant personnel:

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**WARNING:** Use of the Outside Air Booster Fans during a Security Event may introduce incapacitating agents into the Control Room.

{3}

- NOTE:**
- The Outside Air Booster Fans (Control Room Ventilation System - CRVS) are used to provide positive pressure in the Control Room to prevent smoke, toxic gases, or radioactivity from entering the area as required by NuReg 0737.
  - Chlorine Monitor Alarm will either stop the Air Booster Fans or will not allow them to start.

3.11 **IF** There is an indication that smoke or toxic gases from the Turbine Building may enter the Control Room.

**THEN** Instruct Control Room personnel to turn on the Outside Air Booster Fans.

Fans On \_\_\_\_\_ Time: \_\_\_\_\_

3.12 **IF** RIA-39 is in **ALARM**,

**THEN** Follow AP/1/2/3/1700/018, (Abnormal Release Of Radioactivity).

Fans On \_\_\_\_\_ Time: \_\_\_\_\_

- Secure fans if back-up sample by RP shows RIA-39 is in error.
- Isolate source of airborne contamination to the Control Room if sample from RP shows RIA alarm is valid.
- Secure fans if dose levels in CR/TSC/OSC are increased by the addition of outside filtered air.

Fans Off \_\_\_\_\_ Time: \_\_\_\_\_



**NOTE:**

- 10CFR50.54(q) allows for reasonable actions that depart from a License Condition or Technical Specification to be performed in an emergency when this action is immediately needed to protect the health and safety of the public and no action consistent with the License Condition or Technical Specification that can provide adequate or equivalent protection is immediately apparent.
- 10CFR50.54 (y) requires approval of any 10CFR50.54(x) actions by a Licensed Senior Operator
- Implementation of Oconee Severe Accident Guidelines (OSAG) requires the use of 10CFR50.54 (x) and (y) provisions.

- 3.13 **IF** Plant conditions require a decision to implement 10CFR50.54(x),  
**THEN** Perform the following steps:
  - 3.13.1 Document decision and actions taken in the affected unit's log.
  - 3.13.2 Document decision and actions taken in the CR Emergency Coordinator Log.

**NOTE:** NRC must be notified of any 10CFR50.54(x) decisions and actions within one (1) hour.

- 3.13.3 Request CR NRC Communicator to report decision and actions taken to the NRC.

**NOTE:** 10CFR50.72 requires NRC notification for specific plant conditions.

- 3.14 **IF** Plant conditions require NRC notification under 10CFR50.72,  
**THEN** Request the CR NRC Communicator to provide this notification using the guidance in OMP 1-14, (Notifications).
- 3.15 **IF** The Emergency Response Organization was activated and a security event involving an intrusion/attempted intrusion **does not exist**, {4}
- THEN** Provide turnover to the Technical Support Center using Enclosure 4.5 of this procedure.

Technical Support Center Activated \_\_\_\_\_ Time: \_\_\_\_\_

A. Turn over all emergency response procedures in use to the TSC.

- NOTE:**
- After normal working hours, emergency response personnel will not report to the TSC or OSC until after the security threat has been neutralized.
  - The EOF Director will notify the Control Room Emergency Coordinator once the EOF is *Operational* and initiate turnover.

3.16 **IF** The Emergency Response Organization was activated after normal working hours **AND** a security event involving an intrusion/attempted intrusion does exist,

**THEN** Provide turnover to the EOF Director using the following guidance. {4}

3.16.1 Obtain the current copy of the Emergency Notification Form and plant status.  
 A. Verify the following information being provided by the EOF Director to the Control Room Emergency Coordinator.

• Present Emergency Classification \_\_\_\_\_ Time of Classification \_\_\_\_\_

Initial Emergency Classification \_\_\_\_\_ Time of Classification \_\_\_\_\_

• Initiating Condition/Unit(s) Affected: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

• Present status of affected unit(s), including significant equipment out of service.

Plant Condition: Improving \_\_\_ Stable \_\_\_ Degrading \_\_\_

Status of affected unit(s):

Unit 1 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power

Unit 2 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power

Unit 3 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power

Equipment out of service: \_\_\_\_\_

• Emergency Releases:  
 None \_\_\_ Potential \_\_\_ Is Occurring \_\_\_ Has Occurred \_\_\_

• Protective Action Recommendations:  
 None \_\_\_  
 Oconee County: \_\_\_\_\_  
 Pickens County: \_\_\_\_\_

• Last Message Number \_\_\_\_\_ Next Message due at (time): \_\_\_\_\_

- 3.16.2 Control Room Emergency Coordinator turnover to EOF Director completed.  
EOF Activated \_\_\_\_\_ Time \_\_\_\_\_
- 3.16.3 Direct NRC Communicator to notify the NRC Operations Center that the EOF is activated.
- 3.17 **IF** An Unusual Event classification is being terminated,
- THEN** **REFER TO** Enclosure 4.6, (Emergency Classification Termination Criteria), of this procedure for termination guidance.
- 3.17.1 Verify that the Offsite Communicator has provided termination message to the offsite agencies.

**NOTE:** The EP Section shall develop a written report, for signature by the Site Vice President, to the State Emergency Preparedness Agency, Oconee County EPD, and Pickens County EPD within 24 working hours of the event termination.

- 3.17.2 Notify Emergency Planning Section (Emergency Planning Duty person after hours) that the Unusual Event has been terminated.
- 3.17.3 Emergency Planning shall hold a critique following termination of any actual Unusual Event.

#### 4. Enclosures

- 4.1 General Emergency
- 4.2 Site Area Emergency
- 4.3 Alert
- 4.4 Unusual Event
- 4.5 Operations Shift Manager to TSC Emergency Coordinator Turnover Sheet
- 4.6 Emergency Classification Termination Criteria
- 4.7 Condition A/Condition B Response Actions
- 4.8 ERO Pager Activation By Security
- 4.9 References

**1. Immediate Actions**

**NOTE:**

- State and County Agencies must be notified of event classification within **15 minutes** of Emergency Declaration.
- Provide Offsite Communicator with declaration time.

- 1.1 **IF** It has been determined that an Emergency Action Level for an Initiating Condition has been met,  
**THEN** Declare a **General Emergency**.

Time of Declaration: \_\_\_\_\_

- 1.2 Appoint a person to maintain the Emergency Coordinator Log **OR** maintain the log yourself.

**NOTE:**

- Remind the Control Room Offsite Communicator that Follow Up notifications (updates) are required at least every **60 Minutes** for this classification.
- Condition A, Dam Failure (Keowee or Jocassee), **OR** Condition B also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the Control Room Offsite Communicator to notify these agencies in addition to and after SC State, Oconee County, and Pickens County.

- 1.3 Appoint Control Room Offsite Communicator(s).
- 1.4 Provide the following Protective Action Recommendations for use by the Offsite Communicator to complete the Emergency Notification Form.

PROTECTIVE ACTION  RECOMMENDATION	PICKENS COUNTY SECTORS							OCONEE COUNTY SECTORS						
	A0	A1	B1	C1	A2	B2	C2	A0	D1	E1	F1	D2	E2	F2
EVACUATE	X	X	X	X				X	X	X	X			
SHELTER					X	X	X					X	X	X

- 1.4.1 **IF** Condition A, Imminent or Actual Dam Failure (Keowee or Jocassee) exists,  
**THEN REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions), Step 1.0, for additional Protective Action Recommendations.

**Enclosure 4.1**  
**General Emergency**

RP/0/B/1000/002  
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**NOTE:** Steps 1.6 - 1.13 may be started/completed while the Emergency Notification Form is being prepared by the Offsite Communicator.

- 1.5 Review and approve completed Emergency Notification Form.

1.5.1 Sign Emergency Notification Form.

**NOTE:** Activate the Alternate TSC and OSC in the Oconee Office Building, Rooms 316 and 316A, if a fire in the Turbine Building, flooding conditions, security events (except those involving intrusion/attempted intrusion), or onsite/offsite hazardous materials spill have occurred or are occurring. {4}

- 1.6 Activate the Emergency Response Organization (ERO) by completing the following actions.

1.6.1 Activate ERO Pagers as follows:

**NOTE:** Flooding/dam failure/earthquake conditions assume bridges may be impassable to reach emergency facilities. Provide the code below for these conditions.

- A. **IF** ERO activation for an Emergency (Blue Echo) is required,  
**THEN** Press ERO Pager Activation Panel Button 1.
- B. **IF** ERO activation for an Emergency affecting bridges (Blue Echo Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 2.
- C. **IF** ERO activation for a Drill (Blue Delta) is required,  
**THEN** Press ERO Pager Activation Panel Button 3.
- D. **IF** ERO activation for a Drill affecting bridges (Blue Delta Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 4.

**WARNING:** Activating the Alternate TSC and OSC during security events involving an intrusion/attempted intrusion into the site is not recommended. {4}

- E. **IF** Alternate TSC/OSC will be used,  
**THEN** Press ERO Pager Activation Panel Button 5.
- F. **IF** A Security Event is in progress,  
**THEN** Press ERO Pager Activation Panel Button 6.

- 1.6.2 Wait one minute and repeat step 1.6.1.

**Enclosure 4.1**  
**General Emergency**

RP/0/B/1000/002  
Page 3 of 4

- 1.6.3 Monitor ERO Pager and verify that message has been provided to the ERO.
- 1.6.4 Repeat steps 1.6.1 - 1.6.3 if message is not displayed on ERO Pager.
  - A. **REFER TO** Enclosure 4.8, (ERO Pager Activation By Security), if the ERO Pager is not activated by the completion of Steps 1.6.1 - 1.6.3.
- 1.6.5 **IF** ERO activation is after normal working hours,  
**THEN** Contact Security at extension 3636 or 2309.

Security Officer Name \_\_\_\_\_

- A. Request Security Officer to activate the CAN call list.

**WARNING:** Conducting Site Assembly during a Security Event may not be prudent.

- 1.7 Contact the Security Shift Supervisor.
  - 1.7.1 Inform the Security Shift Supervisor that the ERO has been activated.
  - 1.7.2 Discuss the need to conduct Site Assembly.
- 1.8 **IF** A Security Event does **NOT** exist,  
**OR** A Security Event does exist and the Security Shift Supervisor agrees,  
**THEN** Conduct Site Assembly per RP/0/B/1000/009, (Procedure For Site Assembly), Enclosure 4.1 and 4.3.
- 1.9 **IF** Area Radiation Monitors are in **ALARM**,  
**OR** Steam Line Break has occurred,  
**THEN** Contact shift RP and dispatch onsite monitoring teams.

**NOTE:**

- Remind the NRC Communicator to complete the NRC Event Notification Worksheet and Plant Status Sheet from OMP 1-14 (Notifications).
- An open line to the NRC may be required.

- 1.10 Appoint a SRO to notify the NRC immediately after notification of the Offsite Agencies but not later than **one (1) hour** after declaration of the emergency.
  - 1.10.1 NRC Communicator (SRO) Name \_\_\_\_\_

**Enclosure 4.1**  
**General Emergency**

RP/0/B/1000/002  
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**NOTE:** The NRC Communicator is responsible for activating ERDS.

- 1.10.2 Start the Emergency Response Data System (ERDS) for unit(s) involved within one (1) hour of the emergency classification.
  - A. **REFER TO** RP/0/B/1000/003A, (ERDS Operation).
  
- 1.11 Evacuate all non-essential personnel from the site after personnel accountability has been reached.
  - 1.11.1 **REFER TO** RP/0/B/1000/010, (Procedure For Emergency Evacuation/Relocation Of Site Personnel).
  
- 1.12 **IF** Condition A, Imminent or Actual Dam Failure (Keowee or Jocassee),  
**OR** Condition B (Keowee) exists,  
**THEN** **REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions), Step 2.0 or 3.0, for additional response actions.
  
- 1.13 Return to Step 3.0, (Subsequent Actions), of this procedure.

## 1. Immediate Actions

- NOTE:**
- State and County Agencies must be notified of event classification within **15 minutes** of Emergency Declaration.
  - Provide Offsite Communicator with declaration time.

- 1.1 **IF** It has been determined that an Emergency Action Level for an Initiating Condition has been met,  
**THEN** Declare a Site Area Emergency.

Time of Declaration: \_\_\_\_\_

- 1.2 Appoint a person to maintain the Emergency Coordinator Log **OR** maintain the log yourself.

- NOTE:**
- Remind the Control Room Offsite Communicator that Follow Up notifications (updates) are required at least every **60 Minutes** for this classification.
  - Condition A, Dam Failure (Keowee or Jocassee), **OR** Condition B also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the Control Room Offsite Communicator to notify these agencies in addition to and after SC State, Oconee County, and Pickens County.

- 1.3 Appoint Control Room Offsite Communicator(s).

- 1.4 **IF** Condition A, Imminent or Actual Dam Failure (Keowee or Jocassee), exists,  
**THEN** **REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions), Step 1.0, and provide Protective Action Recommendations to the Offsite Communicator.

{5}

- NOTE:** Steps 1.6 - 1.12 may be started/completed while the Emergency Notification Form is being prepared by the Offsite Communicator.

- 1.5 Review and approve completed Emergency Notification Form.

1.5.1 Sign Emergency Notification Form.



**Enclosure 4.2**  
**Site Area Emergency**

RP/0/B/1000/002  
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**NOTE:** Activate the Alternate TSC and OSC in the Oconee Office Building, Rooms 316 and 316A, if a fire in the Turbine Building, flooding conditions, security events (except those involving intrusion/attempted intrusion), or onsite/offsite hazardous materials spill have occurred or are occurring. {4}

1.6 Activate the Emergency Response Organization (ERO) by completing the following actions.

1.6.1 Activate ERO Pagers as follows:

**NOTE:** Flooding/dam failure/earthquake conditions assume bridges may be impassable to reach emergency facilities. Provide the code below for these conditions.

- A. **IF** ERO activation for an Emergency (Blue Echo) is required,  
**THEN** Press ERO Pager Activation Panel Button 1.
- B. **IF** ERO activation for an Emergency affecting bridges (Blue Echo Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 2.
- C. **IF** ERO activation for a Drill (Blue Delta) is required,  
**THEN** Press ERO Pager Activation Panel Button 3.
- D. **IF** ERO activation for a Drill affecting bridges (Blue Delta Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 4.

**WARNING:** Activating the Alternate TSC and OSC during security events involving an intrusion/attempted intrusion into the site is not recommended. {4}

- E. **IF** Alternate TSC/OSC will be used,  
**THEN** Press ERO Pager Activation Panel Button 5.
  - F. **IF** A Security Event is in progress,  
**THEN** Press ERO Pager Activation Panel Button 6.
- 1.6.2 Wait one minute and repeat step 1.6.1.
- 1.6.3 Monitor ERO Pager and verify that message has been provided to the ERO.
- 1.6.4 Repeat steps 1.6.1 - 1.6.3 if message is not displayed on ERO Pager.
- A. **REFER TO** Enclosure 4.8, (ERO Pager Activation By Security), if the ERO Pager is not activated by the completion of Steps 1.6.1 - 1.6.3.



**Enclosure 4.2**  
**Site Area Emergency**

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- 1.11 **IF** Condition A, Imminent or Actual Dam Failure (Keowee or Jocassee),  
**OR** Condition B (Keowee) exists,  
**THEN** **REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions),  
Step 2.0 or 3.0, for additional response actions.
  
- 1.12 Return to Step 3.0, (Subsequent Actions), of this procedure.

## 1. Immediate Actions

- NOTE:**
- State and County Agencies must be notified of event classification within **15 minutes** of Emergency Declaration.
  - Provide Offsite Communicator with declaration time.

- 1.1 **IF** It has been determined that an Emergency Action Level for an Initiating Condition has been met,

**THEN** Declare an **Alert**.

Time of Declaration: \_\_\_\_\_

- 1.2 Appoint a person to maintain the Emergency Coordinator Log **OR** maintain the log yourself.

- NOTE:**
- Remind the Control Room Offsite Communicator that Follow Up notifications (updates) are required at least every **60 minutes** for this classification.
  - Condition B for Keowee Hydro Project Dams/Dikes also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the Control Room Offsite Communicator to notify these agencies in addition to and after SC State, Oconee County, and Pickens County.

- 1.3 Appoint Control Room Offsite Communicator(s).

**NOTE:** Steps 1.5 - 1.11 may be started/completed while the Emergency Notification Form is being prepared by the Offsite Communicator.

- 1.4 Review and approve completed Emergency Notification Form.

1.4.1 Sign Emergency Notification Form.

**NOTE:** Activate the Alternate TSC and OSC in the Oconee Office Building, Rooms 316 and 316A, if a fire in the Turbine Building, flooding conditions, security events (except those involving intrusion/attempted intrusion), or onsite/offsite hazardous materials spill have occurred or are occurring. {4}

- 1.5 Activate the Emergency Response Organization (ERO) by completing the following actions.

1.5.1 Activate ERO Pagers as follows:

**NOTE:** Flooding/dam failure/earthquake conditions assume bridges may be impassable to reach emergency facilities. Provide the code below for these conditions.

- A. **IF** ERO activation for an Emergency (Blue Echo) is required,  
**THEN** Press ERO Pager Activation Panel Button 1.
- B. **IF** ERO activation for an Emergency affecting bridges (Blue Echo Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 2.
- C. **IF** ERO activation for a Drill (Blue Delta) is required,  
**THEN** Press ERO Pager Activation Panel Button 3.
- D. **IF** ERO activation for a Drill affecting bridges (Blue Delta Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 4.

**WARNING:** Activating the Alternate TSC and OSC during security events involving an intrusion/attempted intrusion into the site is not recommended. {4}

- E. **IF** Alternate TSC/OSC will be used,  
**THEN** Press ERO Pager Activation Panel Button 5.
- F. **IF** A Security Event is in progress,  
**THEN** Press ERO Pager Activation Panel Button 6.
- 1.5.2 Wait one minute and repeat step 1.5.1.
- 1.5.3 Monitor ERO Pager and verify that message has been provided to the ERO.
- 1.5.4 Repeat steps 1.5.1 - 1.5.3 if message is not displayed on ERO Pager.
- A. **REFER TO** Enclosure 4.8, (ERO Pager Activation By Security), if the ERO Pager is not activated by the completion of Steps 1.5.1 - 1.5.3.

## Alert

- 1.5.5 **IF** ERO activation is after normal working hours,  
**THEN** Contact Security at extension 3636 or 2309.

Security Officer Name \_\_\_\_\_

- A. Request Security Officer to activate the CAN call list.

**WARNING:** Conducting Site Assembly during a Security Event may not be prudent.

- 1.6 Contact the Security Shift Supervisor.
- 1.6.1 Inform the Security Shift Supervisor that the ERO has been activated.
- 1.6.2 Discuss the need to conduct Site Assembly.
- 1.7 **IF** A Security Event does **NOT** exist,  
**OR** A Security Event does exist and the Security Shift Supervisor agrees,  
**THEN** Conduct Site Assembly per RP/0/B/1000/009, (Procédur  For Site Assembly),  
Enclosure 4.1 and 4.3.
- 1.8 **IF** Area Radiation Monitors are in **ALARM**,  
**OR** Steam Line Break has occurred,  
**THEN** Contact shift RP and dispatch onsite monitoring teams

**NOTE:**

- Remind the NRC Communicator to complete the NRC Event Notification Worksheet and Plant Status Sheet from OMP 1-14 (Notifications).
- An open line to the NRC may be required.

- 1.9 Appoint an SRO to notify the NRC immediately after notification of the Offsite Agencies but not later than **one (1) hour** after declaration of the emergency.
- 1.9.1 NRC Communicator (SRO) Name \_\_\_\_\_

**NOTE:** The NRC Communicator is responsible for activating ERDS.

- 1.9.2 Start the Emergency Response Data System (ERDS) for unit(s) involved within **one (1) hour** of the emergency classification.
  - A. **REFER TO** RP/0/B/1000/003A, (ERDS Operation).
- 1.10 **IF** Condition B at Keowee exists,  
**THEN** **REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions), Step 3.0, for additional response actions.
- 1.11 Return to Step 3.0, (Subsequent Actions), of this procedure.

## 1. Immediate Actions

- NOTE:**
- State and County Agencies must be notified of event classification within **15 minutes** of Emergency Declaration.
  - Provide Offsite Communicator with declaration time.

- 1.1 **IF** It has been determined that an Emergency Action Level for an Initiating Condition has been met,

**THEN** Declare an **Unusual Event**.

Time of Declaration: \_\_\_\_\_

- 1.2 Appoint a person to maintain the Emergency Coordinator Log **OR** maintain the log yourself.

- NOTE:**
- Remind the Control Room Offsite Communicator that an Initial Message and a Termination Message are required for this classification. No Follow Up Notifications (updates) are required unless requested by the Offsite Agencies.
  - Condition B for Keowee Hydro Project Dams/Dikes also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the Control Room Offsite Communicator to notify these agencies in addition to and after SC State, Oconee County, and Pickens County.

- 1.3 Appoint Control Room Offsite Communicator(s).

**NOTE:** Steps 1.5 - 1.11 may be started/completed while the Emergency Notification Form is being prepared by the Offsite Communicator.

- 1.4 Review and approve completed Emergency Notification Form.

1.4.1 Sign Emergency Notification Form.

- 1.5 **IF** Condition B at Keowee exists,

**THEN** **REFER TO** Enclosure 4.7, (Condition A/Condition B Response Actions), Step 3.0, for additional response actions.



**NOTE:**

- Activation of the ERO is **NOT** required for an Unusual Event Classification.
- Activate the Alternate TSC and OSC in the Oconee Office Building, Rooms 316 and 316A, if a fire in the Turbine Building, flooding conditions, security events (except those involving intrusion/attempted intrusion), or onsite/offsite hazardous materials spills have occurred or are occurring. {4}

1.6 **IF** Emergency Response Organization (ERO) activation is desired,  
**THEN** Complete the following actions.

1.6.1 Activate ERO Pagers as follows:

**NOTE:** Flooding/dam failure/earthquake conditions assume bridges may be impassable to reach emergency facilities. Provide the code below for these conditions.

A. **IF** ERO activation for an Emergency (Blue Echo) is required,  
**THEN** Press ERO Pager Activation Panel Button 1.

B. **IF** ERO activation for an Emergency affecting bridges (Blue Echo Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 2.

C. **IF** ERO activation for a Drill (Blue Delta) is required,  
**THEN** Press ERO Pager Activation Panel Button 3.

D. **IF** ERO activation for a Drill affecting bridges (Blue Delta Bridges) is required,  
**THEN** Press ERO Pager Activation Panel Button 4.

**WARNING:** Activating the Alternate TSC and OSC during security events involving an intrusion/attempted intrusion into the site is not recommended. {4}

E. **IF** Alternate TSC/OSC will be used,  
**THEN** Press ERO Pager Activation Panel Button 5.

F. **IF** A Security Event is in progress,  
**THEN** Press ERO Pager Activation Panel Button 6.

1.6.2 Wait one minute and repeat step 1.6.1.

1.6.3 Monitor ERO Pager and verify that message has been provided to the ERO.

**Enclosure 4.4**  
**Unusual Event**

RP/0/B/1000/002  
Page 3 of 4

- 1.6.4 Repeat steps 1.6.1 - 1.6.3 if message is not displayed on ERO Pager.
  - A. **REFER TO** Enclosure 4.8, (ERO Pager Activation By Security), if the ERO Pager is not activated by the completion of Steps 1.6.1 - 1.6.3.
- 1.6.5 **IF** ERO activation is after normal working hours,  
**THEN** Contact Security at extension 3636 or 2309.

Security Officer Name \_\_\_\_\_

- A. Request Security Officer to activate the CAN call list.

**WARNING:** Conducting Site Assembly during a Security Event may not be prudent.

- 1.7 Contact the Security Shift Supervisor.
  - 1.7.1 Inform the Security Shift Supervisor that the ERO has been activated.
  - 1.7.2 Discuss the need to conduct Site Assembly.

**NOTE:** Consider conducting a Site Assembly if a Hazardous Materials spill affecting personnel safety is involved; or, if personnel safety is a concern.

- 1.8 **IF** The Emergency Response Organization is needed to assist with the Unusual Event emergency activities,  
**AND** A Security Event does **NOT** exist,  
**OR** A Security Event does exist and the Security Shift Supervisor agrees,  
**THEN** Conduct Site Assembly per RP/0/B/1000/009, (Procedure For Site Assembly), Enclosure 4.1 and 4.3.
  - 1.8.1 Document the decision to conduct Site Assembly in the Control Room Emergency Coordinator Log.
- 1.9 **IF** Area Radiation Monitors are in **ALARM**,  
**OR** Steam Line Break has occurred,  
**THEN** Contact shift RP and dispatch onsite monitoring teams.

**Enclosure 4.4**  
**Unusual Event**

RP/0/B/1000/002  
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- NOTE:**
- Remind the NRC Communicator to complete the NRC Event Notification Worksheet and Plant Status Sheet from OMP 1-14 (Notifications).
  - An open line to the NRC may be required.

1.10 Appoint an SRO to notify the NRC immediately after notification of the Offsite Agencies but not later than **one (1) hour** after declaration of the emergency.

1.10.1 NRC Communicator (SRO) Name \_\_\_\_\_

1.11 Return to Step 3.0, (Subsequent Actions), of this procedure.

Operations Shift Manager To TSC Emergency  
Coordinator Turnover Sheet

EMERGENCY CLASSIFICATION \_\_\_\_\_ TIME DECLARED \_\_\_\_\_  
DESCRIPTION OF EVENT \_\_\_\_\_

Unit One Status:

Reactor Power \_\_\_\_\_ RCS Pressure \_\_\_\_\_ RCS Temperature \_\_\_\_\_  
Auxiliaries Being Supplied Power From \_\_\_\_\_ ES Channels Actuated \_\_\_\_\_

MAJOR EQUIPMENT OUT OF SERVICE \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

JOBS IN PROGRESS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Unit Two Status:

Reactor Power \_\_\_\_\_ RCS Pressure \_\_\_\_\_ RCS Temperature \_\_\_\_\_  
Auxiliaries Being Supplied Power From \_\_\_\_\_ ES Channels Actuated \_\_\_\_\_

MAJOR EQUIPMENT OUT OF SERVICE \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

JOBS IN PROGRESS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Unit Three Status:

Reactor Power \_\_\_\_\_ RCS Pressure \_\_\_\_\_ RCS Temperature \_\_\_\_\_  
Auxiliaries Being Supplied Power From \_\_\_\_\_ ES Channels Actuated \_\_\_\_\_

MAJOR EQUIPMENT OUT OF SERVICE \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

JOBS IN PROGRESS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Operations Shift Manager To TSC Emergency Coordinator Turnover Sheet

Classification Procedure in Use:

RP/0/B/1000/002 (Control Room Emergency Coordinator Procedure)

Is RP/0/B/1000/03A, (ERDS Operation) in use? Yes \_\_\_ No \_\_\_ If Yes, Unit No. \_\_\_ Step No. \_\_\_

Is RP/0/B/1000/007, (Security) in use? Yes \_\_\_ No \_\_\_ If Yes, Step No. \_\_\_

Is RP/0/B/1000/016, (Medical) in use? Yes \_\_\_ No \_\_\_ If Yes, Step No. \_\_\_

Is RP/0/B/1000/017, (Spill Response) in use? Yes \_\_\_ No \_\_\_ If Yes, Step No. \_\_\_

Is RP/0/B/1000/022, (Fire/Flood) in use? Yes \_\_\_ No \_\_\_ If Yes, Step No. \_\_\_

Is RP/0/B/1000/029, (Fire Brigade) in use? Yes \_\_\_ No \_\_\_ If Yes, Step No. \_\_\_

Is Step 5.4 of OMP 1-18 (Implementation Standard During Abnormal And Emergency Events) in use? \* Yes \_\_\_ No \_\_\_

\* If yes, implementation of emergency worker exposure limits must be announced over Public Address System. {1}

IF Condition A, Dam Failure, has been declared for Keowee Hydro Project,

THEN Provide the following information to the TSC Emergency Coordinator:

- Status of Offsite Agency Notifications
Recommendations made to offsite agencies
Status of relocation of site personnel

What is the status of Site Assembly? (This question is only applicable for those times that the Emergency Response Organization is activated after hours, holidays, or weekends.)

Three horizontal lines for handwritten input.

Next message due to Offsite Agencies at Time: \_\_\_\_\_

Operations Shift Manager/CR \_\_\_\_\_ Time: \_\_\_\_\_

Emergency Coordinator/TSC \_\_\_\_\_ Time: \_\_\_\_\_

**Emergency Classification Termination  
Criteria**

**IF** The following guidelines applicable to the present emergency condition have been met or addressed,

**THEN** An emergency condition may be considered resolved when:

- \_\_\_\_\_ 1. Existing conditions no longer meet the existing emergency classification criteria and it appears unlikely that conditions will deteriorate further.
- \_\_\_\_\_ 2. Radiation levels in affected in-plant areas are stable or decreasing to below acceptable levels.
- \_\_\_\_\_ 3. Releases of radioactive material to the environment greater than Technical Specifications are under control or have ceased.
- \_\_\_\_\_ 4. The potential for an uncontrolled release of radioactive material is at an acceptably low level.
- \_\_\_\_\_ 5. Containment pressure is within Technical Specification requirements.
- \_\_\_\_\_ 6. Long-term core cooling is available.
- \_\_\_\_\_ 7. The shutdown margin for the core has been verified.
- \_\_\_\_\_ 8. A fire, flood, earthquake, or similar emergency condition is controlled or has ceased.
- \_\_\_\_\_ 9. Offsite power is available per Technical Specification requirements.
- \_\_\_\_\_ 10. All emergency action level notifications have been completed.
- \_\_\_\_\_ 11. Hydro Central has been notified of termination of Condition B for Keowee Hydro Project. {2}
  - ◆ **REFER TO** Section 6 of the Emergency Telephone Directory, (Keowee Hydro Project Dam/Dike Notification).
- \_\_\_\_\_ 12. The Regulatory Compliance Section has evaluated plant status with respect to Technical Specifications and recommends Emergency classification termination.
- \_\_\_\_\_ 13. Emergency terminated. Request the Control Room Offsite Communicator to complete an Emergency Notification Form for a Termination Message using guidance in RP/0/1000/015A, (Offsite Communications From The Control Room), and provide information to offsite agencies.
  - ◆ Return to Step 3.16.1.

\_\_\_\_\_ Date/Time    \_\_\_\_\_ Initial

## 1. Condition A Response - Immediate Actions

- 1.1 **IF** Condition A, Imminent or Actual Dam Failure (Keowee or Jocassee) exists,  
**THEN** Perform the following actions:
- 1.1.1 Provide the following **protective action recommendations** to Oconee County and Pickens County for imminent/actual dam failure.
- A. Provide the following recommendation for Emergency Notification Form Section 15 (B) Evacuate:
1. Move residents living downstream of the Keowee Hydro Project dams to higher ground.
- B. Provide the following recommendation for Emergency Notification Form Section 15 (D) Other:
1. Prohibit traffic flow across bridges identified on your inundation maps until the danger has passed.
- 1.2 Return to applicable Enclosure (4.1 or 4.2).
- 1.2.1 **IF** A General Emergency has been declared,  
**THEN** GO TO Step 1.5 of Enclosure 4.1, (General Emergency).
- 1.2.2 **IF** A Site Area Emergency has been declared,  
**THEN** GO TO Step 1.5 of Enclosure 4.2, (Site Area Emergency).

## 2. Condition A Response - Subsequent Actions

- 2.1 Notify Hydro Central and provide information related to the event.
- 2.1.1 **REFER TO** Section 6 of the Emergency Telephone Directory, (Keowee Hydro Project Dam/Dike Notification). {2}
- 2.2 Relocate Keowee personnel to the Operational Support Center (OSC) if events occur where their safety could be affected.
- 2.2.1 **IF** Keowee personnel are relocated to the OSC,  
**THEN** Notify Hydro Central.
- A. **REFER TO** Section 6 of the Emergency Telephone Directory, (Keowee Hydro Project Dam/Dike Notification). {2}

**NOTE:** A loss of offsite communications capabilities (Selective Signaling and the Wide Area Network - WAN) could occur within 1.5 hours after Keowee Hydro Dam failure. Rerouting of the Fiber Optic Network through Bad Creek should be started as soon as possible.

- 2.3 Notify Telecommunications Group in Charlotte to begin rerouting the Oconee Fiber Optic Network.

2.3.1 **REFER TO** Selective Signaling Section of the Emergency Telephone Directory (page 9).

- 2.4 Request Security to alert personnel at the Security Track/Firing Range and Building 8055 (Warehouse #5) to relocate to work areas inside the plant.

**NOTE:**

- Plant access road to the Oconee Complex could be impassable within **1.5 hours** if the Keowee Hydro Dam fails. A loss of the Little River Dam (Newry Dam) or Dikes A-D will take longer to affect this road.
- PA Announcements can be made by the Control Room using the Office Page Override feature or Security.

- 2.5 Make a PA Announcement to relocate personnel at the following locations to the World Of Energy/Operations Training Center.

\_\_\_\_\_ Oconee Complex

\_\_\_\_\_ Oconee Garage

\_\_\_\_\_ Oconee Maintenance Training Facility

- 2.6 Dispatch operators to the SSF and establish communications.

- 2.7 Return to applicable Enclosure (4.1 or 4.2).

2.7.1 **IF** A General Emergency has been declared,  
**THEN** GO TO Step 1.13 of Enclosure 4.1, (General Emergency).

2.7.2 **IF** A Site Area Emergency has been declared,  
**THEN** GO TO Step 1.12 of Enclosure 4.2, (Site Area Emergency).



**3. Condition B Response - Immediate Actions**

- 3.1 **IF** Condition B at Keowee exists,  
**THEN** Notify Hydro Central. {2}
- 3.1.1 **REFER TO** Section 6 of the Emergency Telephone Directory, (Keowee Hydro Project Dam/Dike Notification).
- 3.2 Return to applicable Enclosure (4.1, or 4.2, or 4.3, or 4.4).
  - 3.2.1 **IF** A General Emergency has been declared,  
**THEN** **GO TO** Step 1.13 of Enclosure 4.1, (General Emergency).
  - 3.2.2 **IF** A Site Area Emergency has been declared,  
**THEN** **GO TO** Step 1.12 of Enclosure 4.2, (Site Area Emergency).
  - 3.2.3 **IF** An Alert has been declared,  
**THEN** **GO TO** Step 1.11 of Enclosure 4.3, (Alert).
  - 3.2.4 **IF** An Unusual Event has been declared,  
**THEN** **GO TO** Step 1.6 of Enclosure 4.4, (Unusual Event).

## ERO Pager Activation By Security

**1. Symptoms**

- 1.1 Activation of the ERO Pagers using the ERO Pager Activation Panel in the TSC was unsuccessful.

**2. Immediate Actions**

- 2.1 Activate the Emergency Response Organization (Technical Support Center, Operational Support Center, and Emergency Operations Facility) by completing the following actions.:

2.1.1 Contact Security.

- A. Dial 3636 (Dial 2309 if no response is received).

Security Officer Name \_\_\_\_\_

2.1.2 Read the following information to the Security Officer:

- A. The Emergency Response Organization (Technical Support Center, Operational Support Center, and Emergency Response Facility) is being activated for an emergency relating to Unit # \_\_\_\_\_.

- B. This is a \_\_\_\_\_ Blue Delta (Drill) activation, **OR**

This is a \_\_\_\_\_ Blue Echo (Emergency) activation

**NOTE:** Flooding/dam failure/earthquake conditions assume bridges may be impassable to reach emergency facilities. Provide the code below for these conditions.

- C. This is a \_\_\_\_\_ Blue Delta Bridges (Drill) activation, **OR**

This is a \_\_\_\_\_ Blue Echo Bridges (Emergency) activation

**NOTE:** Activate the Alternate TSC and OSC in the Oconee Office Building, Rooms 316 and 316A, if a fire in the Turbine Building, flooding conditions, security events (except those involving intrusion/attempted intrusion), or onsite/offsite hazardous materials spills have occurred or are occurring. {4}

**WARNING:** Activating the Alternate TSC and OSC during security events involving an intrusion/attempted intrusion into the site is not recommended. {4}

- D. \_\_\_\_\_ The Alternate TSC/OSC will be used

**NOTE:** The following step is only applicable during security events.

E. \_\_\_\_\_ A Security Event is in progress.

**Enclosure 4.9**

**References**

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1. PIP O-01-01395
2. PIP O-01-03460
3. PIP O-01-03696
4. PIP O-02-01452
5. PIP O-02-03705

# INFORMATION ONLY

## PREPARATION

(2) Station OCONEE NUCLEAR STATION

(3) Procedure Title Medical Response

(4) Prepared By Robert Taylor (Signature) Robert Taylor Date 9/11/02

- (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 Ray Waterman (QR) Date 9/12/02

Cross-Disciplinary Review By \_\_\_\_\_ (QR) NA Ray Date 9-12-02

Reactivity Mgmt Review By \_\_\_\_\_ (QR) NA Ray Date 9-12-02

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 Rodney Brown Date 09-12-02

## 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 \_\_\_\_\_

(13) Procedure Completion Approved \_\_\_\_\_ Date \_\_\_\_\_

(14) Remarks (Attach additional pages)

<b>Duke Power Company</b> <b>Oconee Nuclear Site</b>	<b>Procedure No.</b> <b>RP/0/B/1000/016</b>
	<b>Revision No.</b> 005
	<b>Electronic Reference No.</b> OX002WPD
<b>Medical Response</b>	
<b>Reference Use</b>	

## Medical Response

### 1. Symptoms

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

- 1.1 Conditions exist where medical treatment, confined space rescue and/or transport of injured personnel is required.
- 1.2 This procedure shall provide guidance to Shift personnel and Emergency Coordinator for response, actions, coordination and transportation associated with a medical emergency either from the Control Room or the Operational Support Center.

### 2. Immediate Actions

- 2.1 Refer to Enclosure 4.1, (Medical Emergency Actions - Routine Operations), for response and action guidelines for emergency medical incidents that occur during routine operations.
- 2.2 Refer to Enclosure 4.2, (Medical Emergency Actions - OSC/TSC Activated), for response and action guidelines for emergency medical incidents that occur when OSC/TSC are operational.
- 2.3 Refer to Enclosure 4.3, (Oconee Nuclear Site - General Area Layout), for directions to provide the ambulance service for entry to the site.

### 3. Subsequent Actions

- 3.1 Complete Enclosure 4.1, (Medical Emergency Actions, - Routine Operations) or Enclosure 4.2, (Medical Emergency Actions - OSC/TSC Activated), and submit to the Emergency Planning Section.

### 4. Enclosures

- 4.1 Medical Emergency Actions - Routine Operations
- 4.2 Medical Emergency Actions - OSC/TSC Activated
- 4.3 Oconee Nuclear Site - General Area Layout
- 4.4 Medical Emergency Response Team - Patient Treatment Form

Medical Emergency Actions  
Routine Operations

1. Medical Emergency Actions Routine Operations

**NOTE:**

- Security Manager or designee in the Operational Support Center (OSC) will assume responsibility for running this procedure Enclosure 4.2, Medical Emergency Actions (OSC/TSC Activated) after the TSC/OSC is established and turnover is accepted from Operations. The Security Manager or designee will also assume the responsibility of MERT Communicator after activation of the TSC/OSC.
- Actions may be followed in any sequence.
- Lines left of procedure steps are used to indicate place in procedure. Check marks are acceptable in these blanks.

\_\_\_\_\_ 1.1 Complete the procedure steps that apply to this medical emergency, N/A steps not performed.

\_\_\_\_\_ 1.2 Complete the following accident information:

Name of person reporting injury \_\_\_\_\_

Call back number \_\_\_\_\_

Name of person(s) injured:

\_\_\_\_\_

\_\_\_\_\_

Supervisor of injured person: \_\_\_\_\_

Location injury occurred \_\_\_\_\_

Brief description of injury \_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_



**Enclosure 4.1**  
**Medical Emergency Actions**  
**Routine Operations**

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<b>NOTE:</b> Do <b><u>NOT</u></b> activate MERT when a security event is in progress until Security confirms that it is safe for MERT members to respond.
---

- \_\_\_\_\_ 1.3    **IF**        There is a **Security Event** in progress,
- THEN**    Continue with Step 1.3.1 or 1.3.2 as appropriate; if **NOT**, go to Step 1.4.
- \_\_\_\_\_ 1.3.1    **IF**        The patient is outside the Protected Area,
- THEN**    Dial 9-911 from the Operations Shift Manager’s phone or Unit 1 Control Room SRO’s phone or dial 911 from the Bell South line: Units 1/2 and 3 Control Rooms. Request EMS to respond along with local law enforcement.
- \_\_\_\_\_ 1.3.2    **IF**        The patient is inside the Protected Area,
- THEN**    Wait until Security gives assurance that it is safe for MERT to respond before proceeding to Step 1.4.
- \_\_\_\_\_ 1.4    Activate MERT to respond to the medical emergency.
- \_\_\_\_\_ 1.4.1    Use Plant Page to request all MERT members to respond to the incident.
- \_\_\_\_\_ 1.4.2    Use the radio paging system to request MERT members to respond to the incident.
- A. Use the following directions to activate radios and pagers encoded to the MERT alert tones:
- Transmit “Standby for Emergency Message”
  - Press the “Instant Call” button labeled “MERT”
  - Wait for the red “Transmit” light on the radio to turn off
  - Transmit message
- \_\_\_\_\_ 1.4.3    Repeat Steps 1.4.1 and 1.4.2.

**Enclosure 4.1**  
**Medical Emergency Actions**  
**Routine Operations**

RP/0/B/1000/016  
Page 3 of 7

**NOTE:** Do NOT call Security if there is a security event in progress.

\_\_\_\_\_ 1.4.4 Call Security at one of the following extensions and request they have Security MERT members respond to the emergency.

SAS (Secondary Alarm Station) - 2205 or 2767

CAS (Central Alarm Station) - 2222 or 2958

\_\_\_\_\_ 1.4.5 **IF** The incident location is away from the main plant (Woe, Complex, Keowee Hydro, etc.) and incident occurs during normal working hours,

**THEN** Notify Shuttle Bus at 5353 to come to the main plant entrance to transport MERT members to those locations.

**NOTE:** The primary location for Triage, should it be needed, is the Maintenance Support Building Cafeteria. An alternate location may need to be selected depending on the area of the plant involved in the incident.

\_\_\_\_\_ 1.5 **IF** A mass casualty event has occurred or is suspected, and a centralized treatment area is needed, and plant conditions allow,

**THEN** Make a PA Announcement emphasizing the following:

- Location of the Triage area
- Warn that only trained medical personnel should move injured people unless there are life threatening conditions in the area.

**Medical Emergency Actions  
Routine Operations**

- NOTE:**
- Occupational Health Unit may call direct and request an ambulance without going through the emergency line (4911). Immediate notification will then be made to the Operations Shift Manager or his designee.
  - Patients with less serious injuries or illnesses may be transported to offsite medical facilities by personal or company vehicle if site Medical or MERT Command gives approval.

\_\_\_\_ 1.6 **IF** Hospital evaluation is needed as determined by MERT Command or as indicated by Step 1.6.1,

**THEN** Arrange transport of patient to the hospital by one of the following means:

- \_\_\_\_ • EMS (ambulance)

Dial 9-911 from the Operations Shift Manager's phone or Unit 1 Control Room SRO's phone or dial 911 from the Bell South line - Units 1/2 and 3 Control Rooms. Refer to Step 1.6.2, prior to requesting EMS.

- \_\_\_\_ • Company vehicle (less serious injury)

- \_\_\_\_ • Personal vehicle (less serious injury)

\_\_\_\_ 1.6.1 **IF** Any of the following illnesses or injuries are reported on emergency line (4911),

**THEN** Immediately request EMS (ambulance) to respond to the site:

- unconsciousness
- cardiac arrest
- fall greater than 10-12 feet (qualified as multi-trauma)
- obvious fractures (with deformity or open wounds)
- amputations
- allergic reaction WITH airway compromise (swollen lips, tongue)
- poisonous snake bite
- head injury with altered level of consciousness (confusion, disorientation)
- altered mental status (confusion, disorientation)
- seizure (grand mal)

**Medical Emergency Actions  
Routine Operations**

- respiratory distress
- entrapped person
- crushing injuries

**NOTE:** EMS personnel will not prepare for a radiologically contaminated patient while enroute to the site unless the EMS dispatcher is requested to relay this information to them at the time of dispatch.

\_\_\_ 1.6.2    **IF**      The patient is known or suspected to be radiologically contaminated,  
  
                  **THEN**    Have the EMS dispatcher inform the EMS personnel to expect a contaminated person.

\_\_\_ 1.6.3    Notify Security at 2222 that the ambulance is enroute.

\_\_\_ 1.6.4    Notify MERT Command that the ambulance is enroute.

\_\_\_ 1.6.5    Notify World of Energy/Public Affairs Duty Person (Ext. 4602 during operating hours).

\_\_\_ 1.7      Notify the Occupational Health Unit at ONS during normal working hours (4652).

**NOTE:**    **IF**            Transportation of a radiologically contaminated person to an offsite medical facility is required.  
                  **THEN**        The NRC must be notified within eight (8) hours (ref. 10CFR50.72 (b) (3) (xii)).

\_\_\_ 1.8      **IF** Radiological contamination is involved and the person is being sent to a hospital.

**THEN:** Complete the following

\_\_\_ 1.8.1    Request MERT Command to FAX the Patient Treatment Form to the appropriate hospital as soon as possible.

\_\_\_ 1.8.2    Determine if a Radiation Protection Technician accompanied the contaminated patient to the hospital.

**IF**            A RP Technician did not go with the ambulance to the hospital

**THEN**        Arrange for the first available one to go and assist the hospital with radiation monitoring and contamination control as needed.

\_\_\_ 1.8.3    Notify Operations Shift Manager to refer to NSD 202 for reportability requirements.

**Medical Emergency Actions  
Routine Operations**

- 1.9 Remind MERT Command that a Patient Treatment Form needs to be completed for all patients and that the completed form is to be sent to the Medical Unit for inclusion in the patients medical file.

<p><b>NOTE:</b> The Safety Duty Person should refer to the Environmental Health &amp; Safety Manual for additional information.</p>
---

- 1.10 After normal working hours the Operations Shift Manager or designee shall report the following incidents to ONS Safety Duty Person who will determine if additional people need to be notified

- Fatality (including heart attacks at work)
- Injuries requiring offsite medical treatment
- Admission of 3 or more employees to the hospital for in-patient care
- Serious accidents (near miss) whereby personnel could have sustained a disabling injury although not resulting in an injury
- Electric contact, shock or flash burns
- Injuries or burns resulting from a fire
- Vehicle accidents
- Accident involving serious property damage
- Accident involving potential DPC liability

- 1.11 OSM shall verify the following notifications in the event of a fatality (including all fatal heart attacks at work) or admission of 3 or more employees to the hospital for in-patient care.

1.11.1 Notify Safety Duty person who will notify OSHA (8 hours oral reporting requirement).

1.11.2 Refer to NSD 202 for other reportability requirements.

1.11.3 Notify Site VP or his designee.

- 1.12 Notify the STA to make appropriate notifications of the transport of an employee to an off site medical facility.

1.13 **IF** A death, near death, or major traumatic injury incident occurs, {1}

**THEN** Notify Employee Assistance Program at extension 3315 or 704-382-7900.

1.13.1 Inform the EAP person of the event and the possible need to conduct a critical incident debriefing.

**Medical Emergency Actions  
Routine Operations**

- \_\_\_\_\_ 1.14 The Operations Shift Manager or designee shall ensure notification of next of kin, if applicable.
- Fatality - Appropriate Division Manager performs notifications.
  - Injury requiring hospitalization - Employee's Supervisor or Manger perform
- \_\_\_\_\_ 1.15 Submit completed Enclosure 4.1, (Medical Emergency Actions-Routine Operations) to the Emergency Planning Section.

Medical Emergency Actions  
OSC/TSC Activated

1. Medical Emergency Actions – OSC/TSC Activated

**NOTE:**

- Security Manager or designee in the Operational Support Center (OSC) will assume responsibility for running this procedure (Enclosure 4.2) after the TSC/OSC is established and turnover is accepted from Operations. The Security Manager or designee will also assume the responsibility of MERT Communicator after activation of the TSC/OSC.
- Community Alert Network will recall 3 MERT members to the site. One of these MERT members may assist the Security Manager in running this procedure.
- Actions may be followed in any sequence.
- Lines left of procedure steps are used to indicate place in procedure. Check marks are acceptable in these blanks.

\_\_\_\_ 1.1 Contact the Control Room and determine if MERT was activated prior to OSC/TSC activation and if turnover for MERT Communicator is needed from the Control Room to the OSC.

\_\_\_\_ 1.2 Complete the procedure steps that apply to this medical emergency, N/A steps not performed.

\_\_\_\_ 1.3 Complete the following accident information:

Name of person reporting injury \_\_\_\_\_

Call back number \_\_\_\_\_

Name of person(s) injured:

\_\_\_\_\_

\_\_\_\_\_

Supervisor of injured person: \_\_\_\_\_

Location injury occurred \_\_\_\_\_

Brief description of injury \_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Enclosure 4.2**  
**Medical Emergency Actions**  
**OSC/TSC Activated**

RP/0/B/1000/016  
Page 2 of 6

**NOTE:** Do **NOT** activate MERT when a security event is in progress until Security confirms that it is safe for MERT members to respond.

\_\_\_\_\_ 1.4    **IF**        There is a **Security Event** in progress,  
  
                 **THEN**      Continue with Step 1.4.1 or 1.4.2 as appropriate; if **NOT**, go to Step 1.5.

\_\_\_\_\_ 1.4.1    **IF**        The patient is outside the Protected Area and radiological conditions will allow,  
  
                                 **THEN**      Dial 9-911 from the Security Managers phone (ext. 3176 – OSC and ext. 3421- Alt. OSC) and request a response from EMS and law enforcement.

\_\_\_\_\_ 1.4.2    **IF**        The patient is inside the Protected Area,  
  
                                 **THEN**      Wait until it is safe for MERT to respond before activating MERT.

**NOTE:** Do **NOT** use the plant paging system for activating MERT when the OSC/TSC are activated.

\_\_\_\_\_ 1.5    **IF**        The patient is located inside the Protected Area,  
  
                 **THEN**      Request MERT to respond in the following order.

1. Designated MERT (CAN call backs, Safety, etc.) members in the OSC, if present.
2. Call Security SAS or CAS for Security MERT to respond.
3. MERT (ERO personnel, RP, Chem., etc.) members in OSC.

\_\_\_\_\_ 1.6    **IF**        The patient is located outside the Protected Area,  
  
                 **THEN**      Select one of the following options for providing medical response:

- Request Medical Unit to have nurse respond if available. (extension 4652)
- Send MERT if manpower is available.
- Request a response from EMS and law enforcement if radiological conditions allow.



**Medical Emergency Actions  
OSC/TSC Activated**

**NOTE:** The primary location for Triage, should it be needed, is the Maintenance Support Building Cafeteria. An alternate location may need to be selected depending on the area of the plant involved in the incident.

\_\_\_\_ 1.7    **IF**        A mass casualty event has occurred or is suspected, and a centralized treatment area is needed, and plant conditions allow,

**THEN**    Make a PA Announcement emphasizing the following:

- Location of the Triage area
- Warn that only trained medical personnel should move injured people unless there are life threatening conditions in the area

**NOTE:**

- Occupational Health Unit may call direct and request an ambulance without going through the emergency line (4911). Immediate notification will then be made to the Emergency Coordinator.
- Patients with less serious injuries or illnesses may be transported to offsite medical facilities by personal or company vehicle if site Medical or MERT Command gives approval.

\_\_\_\_ 1.8    **IF**        Hospital evaluation is needed as determine by MERT Command or as indicated by step 1.8.1.

**THEN**    Arrange transport of patient to the hospital by one of the following means:

- \_\_\_\_ • EMS (ambulance)

Dial 9-911 from the Security Manager's phone (ext. 3176 – OSC and ext. 3421 Alternate OSC) and request EMS (Ambulance) to respond. Refer to Step 1.8.2 , prior to requesting EMS.

- \_\_\_\_ • Company vehicle (less serious injury)

- \_\_\_\_ • Personal vehicle (less serious injury)

**Medical Emergency Actions  
OSC/TSC Activated**

\_\_\_\_ 1.8.1 **IF** Any of the following illnesses or injuries are reported on emergency line (4911),

**THEN** Immediately request EMS (ambulance) to respond to the site:

- unconsciousness
- cardiac arrest
- fall greater than 10-12 feet (qualified as multi-trauma)
- obvious fractures (with deformity or open wounds)
- amputations
- allergic reaction WITH airway compromise (swollen lips, tongue)
- poisonous snake bite
- head injury with altered level of consciousness (confusion, disorientation)
- altered mental status (confusion, disorientation)
- seizure (grand mal)
- respiratory distress
- entrapped person
- crushing injuries

**NOTE:** EMS personnel will not prepare for a radiologically contaminated patient while enroute to the site unless the EMS dispatcher is requested to relay this information to them at the time of dispatch.

\_\_\_\_ 1.8.2 **IF** The patient is known or suspected to be radiologically contaminated,

**THEN** Have the EMS dispatcher inform EMS personnel to expect a contaminated patient.

\_\_\_\_ 1.8.3 Notify Security at 2222 that the ambulance is enroute.

\_\_\_\_ 1.8.4 Notify MERT Command that the ambulance is enroute.

\_\_\_\_ 1.8.5 Notify World of Energy /Public Affairs Duty Person.

\_\_\_\_ 1.9 Notify the Occupational Health Unit at ONS during normal working hours (4652).

**Medical Emergency Actions  
OSC/TSC Activated**

**NOTE:** **IF** Transportation of a radiologically contaminated person to an offsite medical facility is required,

**THEN** The NRC must be notified within four (8) hours (ref. 10CFR50.72 (b) (3) (xii).

\_\_\_\_\_ 1.10 **IF** Radiological contamination is involved and the person is being sent to a hospital,

**THEN** Complete the following:

\_\_\_\_\_ 1.10.1 Request MERT Command to FAX the Patient Treatment Form to the appropriate hospital as soon as possible.

\_\_\_\_\_ 1.10.2 Determine if a Radiation Protection Technician accompanied the contaminated patient to the hospital. If a RP Technician did not go with the ambulance to the hospital, arrange for the first available one to go and assist the hospital with radiation monitoring and contamination control as needed.

\_\_\_\_\_ 1.10.3 Notify Emergency Coordinator to refer to NSD 202 for reportability.

\_\_\_\_\_ 1.11 Remind MERT Command that a Patient Treatment Form, needs to be completed for all patients and that the completed form is to be sent to the Medical Unit for inclusion in the patients medical file.

\_\_\_\_\_ 1.12 Notify Offsite Communicator (extension 3706) of MERT activation and/or injured personnel transported offsite.

**NOTE:** The Safety Duty Person should refer to the Environmental Health and Safety Manual for additional information.

\_\_\_\_\_ 1.13 Report the following incidents to ONS Safety Duty Person who will determine if additional people need to be notified:

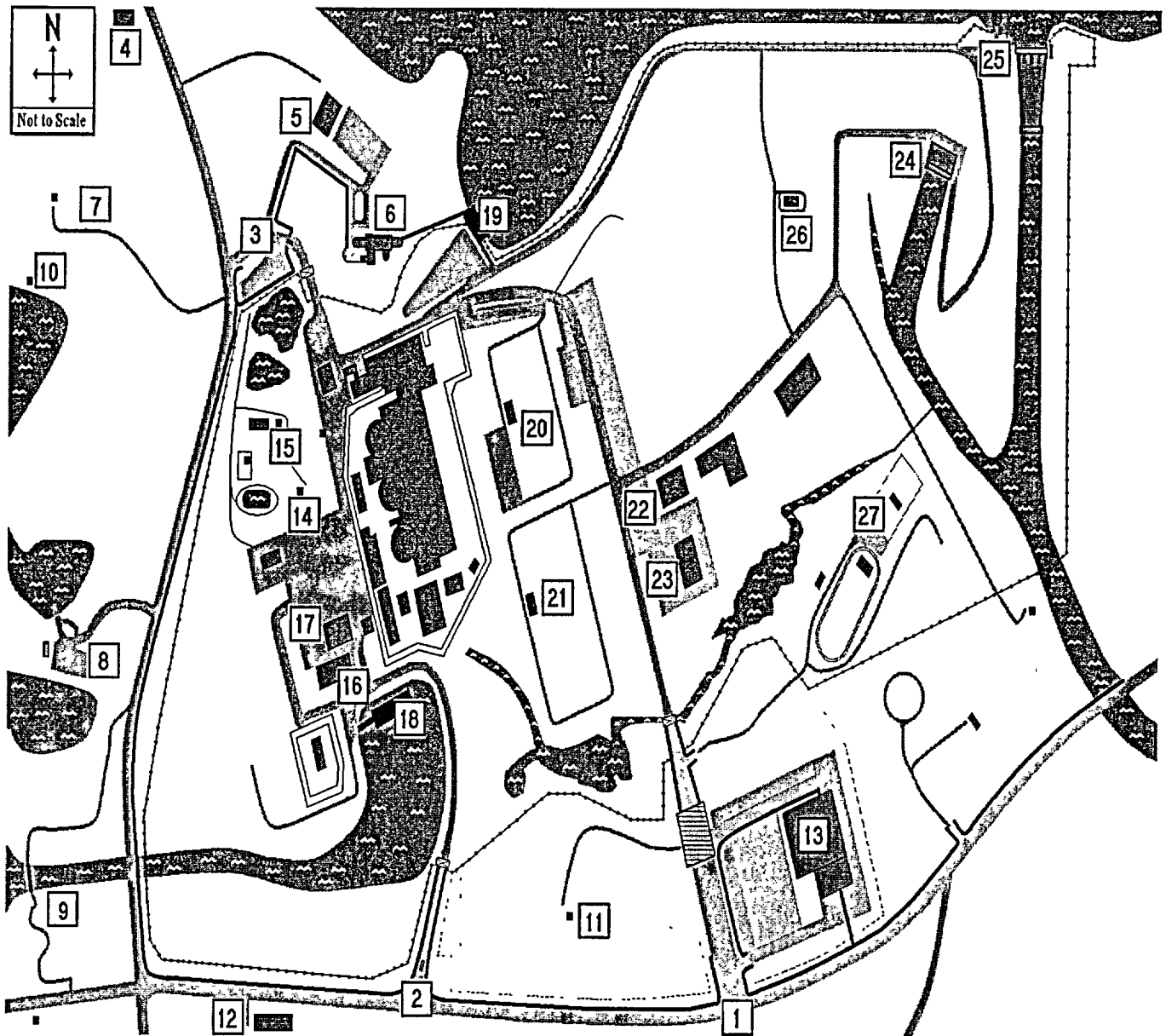
- Fatality (including heart attacks at work)
- Injuries requiring offsite medical treatment
- Admission of 3 or more employees to the hospital for in-patient care
- Serious accidents (near miss) whereby personnel could have sustained a disabling injury although not resulting in an injury
- Electric contact, shock or flash burns
- Injuries or burns resulting from a fire
- Vehicle accidents
- Accident involving serious property damage
- Accident involving potential DPC liability

Medical Emergency Actions  
OSC/TSC Activated

- \_\_\_\_\_ 1.14 OSM shall verify the following notifications in the event of a fatality (including all fatal heart attacks at work) or 3 or more admissions of employees to the hospital for in-patient care.
- \_\_\_\_\_ 1.14.1 Notify Safety Duty person who will notify OSHA (8 hour reporting requirement).
- \_\_\_\_\_ 1.14.2 Refer to NSD 202 for other reporting requirements.
- \_\_\_\_\_ 1.14.3 Notify Site VP or his designee
- \_\_\_\_\_ 1.15 Notify the Emergency Coordinator of the transport of an employee to an offsite medical facility.
- \_\_\_\_\_ 1.16 **IF** A death, near death, or major traumatic injury incident occurs, {1}
- THEN** Notify Employee Assistance Program at extension 3315 or 704-832-7900.
- \_\_\_\_\_ 1.16.1 Inform the EAP person of the event and the possible need to conduct a critical incident debriefing.
- \_\_\_\_\_ 1.17 Ensure notification of next of kin, if applicable, for either of the following conditions.
- Fatality - Appropriate Division Manager performs notifications.
  - Injury requiring hospitalization - Employee's Supervisor or Manager performs notification.
- \_\_\_\_\_ 1.18 Submit the completed Enclosure 4.2, (Medical Emergency Actions-OSC/TSC Activated) to the Emergency Planning Section.

Enclosure 4.3  
**Oconee Nuclear Site  
 General Area Layout**

**1. General Area Layout**



Map	Location	Map	Location
1	Main Site Entrance - Highway 183	14	Elevated Water Storage Tank
2	Intake Entrance - Highway 183	15	Microwave Tower and Adjacent Buildings
3	Highway 130 Entrance - Highway 130	16	Workforce Staffing Building - 8023
4	Crescent Resources Building	17	"Appendix R" Equipment Warehouse - 8019
5	Operations Training Facility - 8002	18	Oconee Station Intake Structure
6	World of Energy - 8003	19	Oconee Station Discharge Structure
7	Meteorological Tower/Softball Field	20	230 Kv Switchyard (upper)
8	Employee Recreation Site	21	525 Kv Switchyard (lower)
9	Oconee Intake Canal Skimmer Wall	22	Maintenance Training Facility - 8051
10	Mosquito Control Facility & Boathouse	23	Oconee Garage - 8049
11	"L-1" yard and Adjacent Buildings	24	Keowee Hydro Station
12	Site Inprocessing Building - 8029	25	Keowee Intake Structure and Spillway
13	Oconee Complex - 8032	26	Grass Cutters Maintenance Shed - 8060
		27	Security Range & Track and Adjacent Buildings

Example  
Oconee Nuclear Site

1. Medical Emergency Response Team – Patient Treatment Form



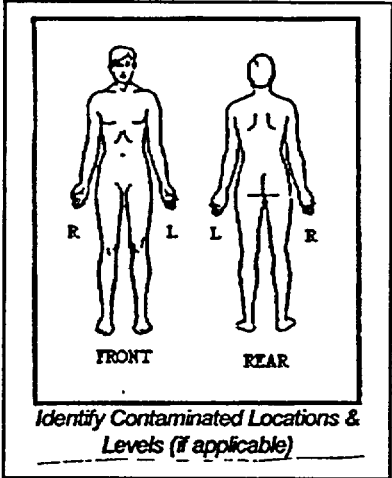
Duke Power Company  
Oconee Nuclear Site

Medical Unit-885-4652  
OPS Shift Manager-885-3271

Date: \_\_\_\_\_ Time of Incident: \_\_\_\_\_  
Patient Name: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: M F  
Work Group: \_\_\_\_\_ Work Supervisor: \_\_\_\_\_

Incident Location: \_\_\_\_\_  
Chief complaint: \_\_\_\_\_  
Injury/Illness Description: \_\_\_\_\_  
\_\_\_\_\_

Medications: \_\_\_\_\_ Allergies: \_\_\_\_\_  
PMH: \_\_\_\_\_



**Vital signs:** BP: \_\_\_\_/\_\_\_\_ Pulse: \_\_\_\_ Respirations: \_\_\_\_ ( \_\_\_\_ Normal \_\_\_\_ Shallow \_\_\_\_ Labored) Time: \_\_\_\_  
BP: \_\_\_\_/\_\_\_\_ Pulse: \_\_\_\_ Respirations: \_\_\_\_ ( \_\_\_\_ Normal \_\_\_\_ Shallow \_\_\_\_ Labored) Time: \_\_\_\_  
BP: \_\_\_\_/\_\_\_\_ Pulse: \_\_\_\_ Respirations: \_\_\_\_ ( \_\_\_\_ Normal \_\_\_\_ Shallow \_\_\_\_ Labored) Time: \_\_\_\_  
Level of Consciousness: Alert \_\_\_\_ Pain \_\_\_\_ Verbal \_\_\_\_ Unresponsive \_\_\_\_

Treatment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is patient contaminated? \_\_\_\_yes \_\_\_\_no If yes, and transporting to hospital, is RP Technician enroute? \_\_\_\_yes \_\_\_\_no  
Patient Disposition: \_\_\_\_Medical \_\_\_\_Return to Work \_\_\_\_Home \_\_\_\_ Personal Physician \_\_\_\_ Hospital  
Patient Instructions: \_\_\_\_\_  
MERT Command: \_\_\_\_\_ Primary Responder: \_\_\_\_\_  
Additional Responders: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**\*\*Fax completed form to Oconee Hospital (885-7384), ASAP, when transporting to hospital\*\***

1. PIP O-02-00585

**INFORMATION ONLY**

**Duke Power Company  
PROCEDURE PROCESS RECORD**

(1) ID No RP/0/B/1000/020

Revision No. 006

**PREPARATION**

(2) Station OCONEE NUCLEAR STATION

(3) Procedure Title Emergency Operations Facility Director Procedure

(4) Prepared By Rodney Brown (Signature) Rodney Brown Date 08/28/02

- (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 \_\_\_\_\_ (QR) Date \_\_\_\_\_

Cross-Disciplinary Review By \_\_\_\_\_ (QR)NA Date \_\_\_\_\_

Reactivity Mgmt Review By \_\_\_\_\_ (QR)NA Date \_\_\_\_\_

Mgmt Involvement Review By \_\_\_\_\_ (Ops Supt) NA Date \_\_\_\_\_

(7) Additional Reviews

Reviewed By M. D. Thorne Date 8-29-02

Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

Temporary Approval (if necessary)

By \_\_\_\_\_ (OSM/QR) Date \_\_\_\_\_

By \_\_\_\_\_ (QR) Date \_\_\_\_\_

(9) Approved By Rodney Brown Date 08/29/02

**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 \_\_\_\_\_

(13) Procedure Completion Approved \_\_\_\_\_ Date \_\_\_\_\_

(14) Remarks (Attach additional pages)



<p>Duke Power Company Oconee Nuclear Site</p> <p><b>Emergency Operations Facility Director Procedure</b></p> <p><b>Reference Use</b></p>	Procedure No. <b>RP/0/B/1000/020</b>
	Revision No. 006
	Electronic Reference No. OX002WPH

## Emergency Operations Facility Director Procedure

**NOTE:** This procedure is an implementing procedure to the Oconee Nuclear Site Emergency Plan and must be forwarded to Emergency Planning within three (3) working days of approval.

### 1. Symptoms

- 1.1 Conditions exist where events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant and activation of the Emergency Response Organization has been initiated.

### 2. Immediate Actions

**NOTE:**

- Place Keeping Aids:  at left of steps may be used for procedure place keeping (). Major events are required to be documented in the EOF Director's log.
- The EOF must be operational within **75 minutes** of an **Alert** or higher classification (except for security events involving intrusion/attempted intrusion into the site during normal working hours). Turnover may or may not have occurred. Turnover should occur with the TSC at a time that will not decrease the effectiveness of communications with the offsite agencies. {7}
- Enclosure 3.4, (Emergency Preparedness Acronyms) contains a list of abbreviations.

- 2.1 Sign in on the EOF Personnel Status Board.
- 2.2 Initiate a log of major activities and decisions.
- 2.3 Assure EOFD PA system has been turned on in the telephone room.
- 2.4 Turn switch to "ALL CALL" for announcements to all rooms.
  - 2.4.1 Select individual room if only one room is to receive announcement.
- 2.5 Notify the Emergency Coordinator in the TSC of arrival and establish an open phone line.
  - 2.5.1 Dial 66-3921 **OR** 66-3704 on the 624-4350 line (Reference: Emergency Telephone Directory, page 14). {5}

- 2.6 **IF** the Emergency Response Organization is being activated after normal working hours due to a security event involving an intrusion/attempted intrusion into site,  
**THEN** notify the Operations Shift Manager (Control Room Emergency Coordinator) of arrival and establish a turnover time. {7}

2.6.1 Dial 9-882-7076 **OR** 66-3271 on the 624-4350 phone.

- 2.7 Assure access control has been established.
- 2.8 Make EOF announcement concerning fitness-for-duty.

“Any one who has consumed alcohol within the past five (5) hours, notify either the EOF Director or the appropriate EOF Manager.”

**NOTE:** During a security event involving an intrusion/attempted intrusion into the site by a hostile force after normal working hours activation of the TSC will be delayed. In this situation it is not required for the EOF/TSC counterparts to make contact. {7}

- 2.9 Declare the EOF operational when the following positions are filled, and they have contacted their counterpart in the TSC.

2.9.1 Ensure that the following names are listed on the EOF Personnel Status Board.

NAME

EOF Director \_\_\_\_\_

Offsite Communications Manager \_\_\_\_\_

State/County Communicator \_\_\_\_\_

Radiological Assessment Manager \_\_\_\_\_

Operations Interface Manager \_\_\_\_\_

Access Control Security Guard \_\_\_\_\_

- 2.9.2 EOF Operational Time: \_\_\_\_\_ {3}

- 2.10 Contact the Emergency Coordinator at the TSC and inform him that the EOF is operational and will commence gathering plant status information **OR** contact the OSM and indicate that the EOF is Operational. {7}

2.10.1 **IF** the OSM is contacted,  
**THEN** GOTO Step 2.12 to conduct turnover with the OSM.

**NOTE:** If the TSC is able to activated, the following individuals will exchange information. Three separate enclosures will be provided to the EOF Director. These enclosures are a part of RP/0/B/1000/021, (Operations Interface (EOF)), RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility) and RP Manual Section 11.3, (Off-Site Dose Assessment And Data Evaluation)

<u>TSC</u>	<u>EOF</u>
Dose Assessment Liaison	Radiological Assessment Manager
Offsite Communicator	State/County Communicator
EOF Liaison	Operations Interface Manager

- NOTE:**
- EOF Managers will inform the EOFD when information is received.
  - Turnover with the TSC should be initiated **As Soon As Possible**. A goal of **30 minutes** should be used to complete turnover after the EOF is declared *Operational*.

{1}

2.11 Contact Emergency Coordinator to conduct turnover using the information prepared by the EOF Managers.

- Present emergency classification \_\_\_\_\_ Time \_\_\_\_\_  
 Initial emergency classification \_\_\_\_\_ Time \_\_\_\_\_
- Initiating Condition/Unit affected: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Present status of affected unit(s), including significant pieces of equipment out of service.  
 Improving \_\_\_\_\_ Stable \_\_\_\_\_ Degrading \_\_\_\_\_  
 Status of unaffected unit(s):  
 Unit 1 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ %power.  
 Unit 2 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ %power.  
 Unit 3 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ %power.
- Equipment out of service: \_\_\_\_\_
- Emergency Releases: NO \_\_\_\_\_ YES \_\_\_\_\_  
 Airborne \_\_\_ Liquid \_\_\_ Is occurring \_\_\_ Has occurred \_\_\_ Time \_\_\_  
 Normal operating limits: Below \_\_\_ Above \_\_\_
- Protective Action Recommendations:  
 None \_\_\_\_\_  
 Oconee County: \_\_\_\_\_  
 Pickens County: \_\_\_\_\_  
 Site Evacuation NO \_\_\_\_\_ YES \_\_\_\_\_ If yes, where \_\_\_\_\_  
 Time of evacuation \_\_\_\_\_
- Last message number \_\_\_\_\_ Next message due at \_\_\_\_\_.

- 2.11.1 Request Emergency Coordinator to provide periodic updates to the EOFD concerning plant status.
- 2.11.2 Inform the Emergency Coordinator that the EOFD will provide dose assessment and field monitoring data on a periodic basis.
- 2.11.3 Record EOF Activation Time: \_\_\_\_\_
- 2.12 **IF** the TSC is not activated due to a security event,  
**THEN** contact the OSM at 9-882-7076 **OR** 66-3271 **AND** conduct turnover using the following information (completed with information from the most recent emergency notification form). {7}
  - Present Emergency Classification \_\_\_\_\_ Time of Classification \_\_\_\_\_  
 Initial Emergency Classification \_\_\_\_\_ Time of Classification \_\_\_\_\_
  - Initiating Condition/Unit(s) Affected: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  - Present status of affected unit(s), including significant equipment out of service.  
 Plant Condition: Improving \_\_\_\_\_ Stable \_\_\_\_\_ Degrading \_\_\_\_\_  
 Status of affected unit(s):  
 Unit 1 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power.  
 Unit 2 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power.  
 Unit 3 shutdown at \_\_\_\_\_ or at \_\_\_\_\_ % Power.  
 Equipment out of service: \_\_\_\_\_
  - Emergency Releases:  
 None \_\_\_\_\_ Potential \_\_\_\_\_ Is Occurring \_\_\_\_\_ Has Occurred \_\_\_\_\_
  - Protective Action Recommendations:  
 None \_\_\_\_\_  
 Oconee County: \_\_\_\_\_  
 Pickens County: \_\_\_\_\_
  - Last Message Number \_\_\_\_\_ Next Message due at (time): \_\_\_\_\_
- 2.12.1 Request the OSM to provide updates to the EOFD concerning plant status as needed.

- 2.12.2 Inform the OSM that the EOFD will provide dose assessment and field monitoring data as needed.
- 2.12.3 Record EOF Activation Time: \_\_\_\_\_

**NOTE:** TSC remains responsible for all Offsite Notifications required by Title III (Hazardous Materials Spills).

- 2.13 Announce to all EOF personnel that the EOF is activated. Provide time of activation and name of EOF Director.

**NOTE:** For all drills, precede messages with "This is a drill."

Example message:

"May I have your attention please. The EOF is activated as of (time) hours. This is (Name). I am the EOF Director and have taken responsibility for emergency management from the Emergency Coordinator in the Technical Support Center.

The plant status is....."

- 2.14 Determine that the EOF Managers understand they are responsible for each of the following actions:

NAME

EOF Director \_\_\_\_\_

- ◆ Emergency Classification
- ◆ Protective Action Recommendations
- ◆ Approval of news releases.

**NOTE:** News releases may be approved by Public Spokesperson if the news releases only contain information already approved by the EOFD on the notification form.

Offsite Communications Manager \_\_\_\_\_

- ◆ Notification to offsite agencies.
- ◆ Contact for offsite agency support (i.e.; medical, fire, law enforcement)

Operations Interface Manager \_\_\_\_\_

- ◆ Emergency classification recommendation
- ◆ Plant status

Radiological Assessment Manager \_\_\_\_\_

- ◆ Dose Calculations
- ◆ Field Monitoring
- ◆ HPN Communication
- ◆ TSC radio to the EOF operational

**NOTE:** The following two managers do not have to be in place in a required time frame. Sign off Step 2.12 when the first four managers are identified. Continuation to Step 2.13 should commence while completing this step.

News Director \_\_\_\_\_

- ◆ Interface with news media.
- ◆ Update of company officers.
- ◆ Update Industry groups. This includes INPO.
- ◆ Provide technical briefers to the SC Emergency Operations Center (SEOC), Pickens Emergency Operations Center (PEOC) and Oconee Emergency Operations Center (OEOC), and the Joint Information Center (JIC). (Note: JIC is in the EOF).

Step 2.14 Continued to next page.



Sites Services Group Manager \_\_\_\_\_

- ◆ Update of Duke Power Insurance Department
  - ◆ Access Control
  - ◆ Responsible for any actions relating to Security
  - ◆ Facility equipment repair
  - ◆ Assure 24 hr. Staffing for EOF positions
- 2.15 Notify SEPD and Oconee and Pickens CEPD that the EOF has assumed turnover from the TSC. This duty may be assigned to the following positions:
- ◆ EOF Logkeeper
  - ◆ Emergency Planning Manager
- 2.15.1 Contact SEPD after each message is transmitted to provide additional information/follow-up.
- 2.16 Verify with the News Director that the Executive Vice President, Nuclear Generation, has been notified of the emergency status.
- 2.17 Make an announcement over the EOF PA system requesting persons who are medical first responders or EMT's to register that information with the SSG Manager.
- 2.18 EOF Director may approve entry of personnel to the Emergency Operations Facility if the individual's training is not current. Each case would be decided on its own merits. Document decision in the EOF Director's log.
- 2.19 Hold round-table discussions with EOF managers every hour. (Secure timer from procedures cart.)
- 2.20 Keep EOF personnel updated on changing plant conditions after each round-table discussion. This duty may be assigned to the EOF Logkeeper.
- 2.21 **REFER TO** Enclosure 3.1, (Emergency Classification Tracking Sheet).

### 3. Enclosures

- 3.1 Emergency Classification Tracking Sheet
- 3.2 Emergency Classification Termination/Reduction Flowchart
- 3.3 Recovery Guidelines
- 3.4 Emergency Preparedness Acronyms
- 3.5 References

## 1. Emergency Classification Tracking

Review emergency classification and verify it meets the criteria of RP/0/B/1000/001, (Emergency Classification). Discuss changing plant conditions with Emergency Coordinator. Discuss classification prior to making recommendation.

- 1.1 **IF** A General Emergency is/or should be classified,  
**THEN** GO TO Step 4.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).
- 1.2 **IF** A Site Area Emergency is/or should be classified,  
**THEN** GO TO Step 3.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).
- 1.3 **IF** An Alert is/or should be classified,  
**THEN** GO TO Step 2.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).

## 2. Alert

**NOTE:** If Steps 2.1 and 2.2 are verified to have been completed by the Emergency Coordinator then they may be marked COMPLETE on this procedure.

- 2.1 Discuss need to change classification with the Emergency Coordinator. Determine the following:
  - ◆ Have any medical emergencies occurred? Status? Transported offsite? Where?

**NOTE:** World Of Energy personnel **must** be evacuated if non-essential site personnel are evacuated.

- ◆ Status of non-essential personnel evacuation
- ◆ Have any chemical spills occurred? If yes, what?
- ◆ Has fire brigade responded to any fires? Has offsite fire department responded?
- ◆ Has a Condition B been determined for a Keowee Hydro Project Dam/Dike? {2}
- 2.2 Declare an Alert. Notify Offsite Communications Manager to complete an Emergency Notification Form in accordance with RP/0/B/1000/015C, (Offsite Communications From the Emergency Operations Facility), get it approved, and fax to the offsite agencies. (The Alert is officially declared when the Emergency Action Levels for the initiating condition have been exceeded.)
  - 2.2.1 Time of declaration: \_\_\_\_\_

Emergency Classification Tracking Sheet

**NOTE:**

- Message form transmission must begin within **15 minutes** of declaration.
- Condition B for Keowee Hydro Project Dams/Dikes also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the EOF Communications Manager to notify these agencies in addition to and after SC State, Oconee County, and Pickens County. {2}

- 2.3 When the message form is completed and the form has been sent, contact the SEPD at the SEOC. This is in addition to contact by the State/County Communicator.

<u>NAME</u>	<u>Telephone Numbers</u>
SEPD _____	<u>8-1(803)737-8500</u>

- 2.3.1 **IF** the SEOC has **NOT** been activated, **THEN** Contact the County Emergency Preparedness Directors (CEPD) to discuss plant status.

Oconee CEPD _____	<u>8-1(864)638-4200</u>
Pickens CEPD _____	<u>8-1(864)898-5943</u>

- 2.3.2 **IF** Condition B at Keowee exists, **THEN** Notify Hydro Central (Refer to Section 6 of the Emergency Telephone Directory, Keowee Hydro Project Dam/Dike Notification). {2}{6}

- 2.4 Notify Emergency Coordinator of change in classification. Request Emergency Coordinator to notify the NRC EOC regarding current emergency classification.

**NOTE:** Announcements should be made approximately every **30 minutes**. Provide current plant status also.

- 2.5 Announce the emergency class and the time of classification to EOF personnel.

**NOTE:** SSG will manage the staffing sheets and route to the EOF Director.

- 2.6 Evaluate the need for 24-hour staffing and instruct managers to prepare for it if needed. Telephone numbers and staffing sheets are located in the procedures cart.

## Emergency Classification Tracking Sheet

- 2.7 Review emergency classification to determine if it is current and meets the criteria of RP/0/B/1000/001, (Emergency Classification).
  - 2.7.1 **IF** the emergency classification remains as an Alert,  
**THEN** have the Offsite Communications Manager continue updating the state and counties by message form every **60 minutes**.
  - 2.7.2 Keep EOF personnel informed concerning plant conditions.
  - 2.7.3 Keep EC aware of offsite conditions.
  - 2.7.4 Log actions in the EOF Director's log.
  - 2.7.5 Remain in this step until plant conditions dictate a change in emergency classification.
- 2.8 **IF** A Site Area Emergency is determined,  
**THEN** **GO TO** Step 3.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).
- 2.9 **IF** A General Emergency is determined,  
**THEN** **GO TO** Step 4.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).
- 2.10 **IF** The termination criteria of Enclosure 3.2, (Emergency Classification Termination Criteria) has been met,  
**THEN** **GO TO** Step 5.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).

### 3. Site Area Emergency

**NOTE:** If Steps 3.1 and 3.2 are verified to have been completed by the Emergency Coordinator then they may be marked COMPLETE on this procedure.

- 3.1 Discuss need to change classifications with the Emergency Coordinator. Determine the following:

◆ Have any medical emergencies occurred? Status? Transported offsite? Where?

**NOTE:** World Of Energy personnel must be evacuated if non-essential site personnel are evacuated.

◆ Status of non-essential personnel evacuation?

◆ Have any chemical spills occurred? If yes, what?

◆ Has fire brigade responded to any fires? Have offsite fire department responded?

◆ Has dam failure for Keowee or Jocassee occurred? Actions taken?

◆ Has a Condition B been determined for a Keowee Hydro Project Dam/Dike? {2}

- 3.2 Declare a Site Area Emergency. Notify Offsite Communications Manager to complete an Emergency Notification Form in accordance with RP/0/B/1000/015C, (Offsite Communications From the Emergency Operations Facility), get it approved, and fax to the offsite agencies. (The Site Area Emergency is officially declared when the Emergency Action Levels for the initiating condition have been exceeded.)

3.2.1 Time of declaration: \_\_\_\_\_

Emergency Classification Tracking Sheet

**NOTE:**

- Message form transmission must begin within **15 minutes** of declaration.
- Condition B for Keowee Hydro Project Dams/Dikes also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the EOF Communications Manager to notify these agencies in addition to and after SC State, Oconee County, and Pickens County. {2}

3.3 **IF** Condition A, Dam Failure (Keowee or Jocassee) exists,  
**THEN** Make the following protective action recommendations to Oconee County and Pickens County for imminent/actual dam failure **AND** include on the Emergency Notification Form under Section 15 (B) and (D):

- ◆ Move residents living downstream of the Keowee Hydro Project dams to higher ground.
- ◆ Prohibit traffic flow across bridges identified on your inundation maps until the danger has passed

3.4 When message form has been sent, contact SEPD. This is in addition to contact by the State/County Communicator.

<u>NAME</u>	<u>Telephone Numbers</u>
SEPD _____	<u>8-1(803)737-8500</u>

3.4.1 **IF** the SEOC has **NOT** been activated,  
**THEN** Contact the County Emergency Preparedness Directors (CEPD) to discuss plant status.

Oconee CEPD _____	<u>8-1(864)638-4200</u>
-------------------	-------------------------

Pickens CEPD _____	<u>8-1(864)898-5943</u>
--------------------	-------------------------

3.4.2 **IF** Condition B at Keowee exists,  
**THEN** Notify Hydro Central (Refer to Section 6 of the Emergency Telephone Directory, Keowee Hydro Project Dam/Dike Notification). {2}{6}

3.5 Notify Emergency Coordinator of change in classification. Request Emergency Coordinator to notify the NRC EOC regarding current emergency classification.

**NOTE:** Announcements should be made approximately every **30 minutes**. Provide current plant status also.

3.6 Announce the emergency class **AND** the time of classification to EOF personnel.

## Emergency Classification Tracking Sheet

- 3.7 **IF** Fire apparatus is needed to provide water to the spent fuel pool,  
**THEN** Contact the Oconee CEPD to provide sufficient fire apparatus (at least three pumper trucks of 1000 gpm, or greater, capacity) to Oconee Nuclear Site (If available, Keowee Ebenezer, Corinth Shiloh and Keowee Key Rural Volunteer Fire Departments should be requested to provide support). Provide instructions concerning entry to the site.

**NOTE:** A loss of offsite communications capabilities (Selective Signaling and the WAN) could occur within **1.5 hours** after Keowee Hydro dam failure. Rerouting of the Fiber Optic Network through Bad Creek should be stated **AS SOON AS POSSIBLE**.

- 3.8 **IF** A Condition A, Keowee Dam failure, exists,  
**THEN** Request Sites Services Group to notify Telecommunications Group in Charlotte to begin rerouting the Oconee Fiber Optic Network. Refer them to Selective Signaling Section of the Emergency Telephone Directory (page 9).
- 3.9 Request Radiological Assessment Manager to provide information regarding potential sectors that would be affected should emergency be upgraded to a General Emergency.

**NOTE:** SSG will manage the staffing sheets and route to the EOF Director.

- 3.10 Evaluate the need for 24-hour staffing and instruct managers to prepare for it if needed. Telephone numbers and staffing sheets are available in the emergency procedures cart.
- 3.11 Review emergency classification to determine if it is current and meets the criteria of RP/0/B/1000/001, (Emergency Classification).
- 3.11.1 **IF** the emergency classification remains as a Site Area Emergency,  
**THEN** have the Offsite Communications Manager continue updating the counties by message form every **60 minutes**.
- 3.11.2 Keep EOF personnel informed concerning plant conditions.
- 3.11.3 Keep EC aware of offsite conditions.
- 3.11.4 Log actions in the EOF Director's log.
- 3.11.5 Remain in this step until plant conditions dictate a change in emergency classification.
- 3.12 **IF** A General Emergency is determined,  
**THEN** **GO TO** Step 4.0 of this enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).

Emergency Classification Tracking Sheet

- 3.13 **IF** the termination criteria of Enclosure 3.2, (Emergency Classification Termination Criteria) has been met,  
**THEN GO TO** Step 5.0 of this enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).
- 3.14 **IF** the reduction criteria of Enclosure 3.2, (Emergency Classification Termination Criteria) has been met,  
**THEN REFER TO** Step 3.16.
- 3.15 Notify Offsite Communications Manager to complete a message form in accordance with RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility), get it approved, and send it to the offsite agencies.
- 3.16 When message form has been sent, contact SEPD to discuss emergency classification reduction. This is in addition to contact by the State/County Communicator.

NAME

Telephone Numbers

SEPD \_\_\_\_\_

8-1(803)737-8500

- 3.16.1 **IF** the SEOC has **NOT** been activated,  
**THEN** Contact the County Emergency Preparedness Directors (CEPD) to discuss plant status.

Oconee CEPD \_\_\_\_\_

8-1(864)638-4200

Pickens CEPD \_\_\_\_\_

8-1(864)898-5943

- 3.17 Consider the present working copy procedure as being completed since the classification is reduced to an Alert.
  - 3.17.1 Obtain a new working copy of RP/0/B/1000/020, (Emergency Operations Facility Director Procedure) from the procedures cart and **GOTO** Enclosure 3.1, (Emergency Classification Tracking Sheet) Step 2.1.



#### 4. General Emergency

**NOTE:** If Steps 4.1 AND 4.2 are verified to have been completed by the Emergency Coordinator then they may be marked COMPLETE on this procedure.

- 4.1 Discuss changing plant conditions AND emergency classification with Emergency Coordinator prior to making recommendation. Determine the following:

◆ Have any medical emergencies occurred? Status? Transported offsite? Where?

**NOTE:** World Of Energy personnel must be evacuated if non-essential site personnel are evacuated.

◆ Status of non-essential personnel evacuation?

◆ Have any chemical spills occurred? If yes, what?

◆ Has fire brigade responded to any fires? Have offsite fire departments responded?

◆ Has dam failure at Keowee or Jocassee occurred? Actions taken?

◆ Has a Condition B been determined for a Keowee Hydro Project Dam/Dike? {2}

**NOTE:**

- The General Emergency is officially declared at this time.
- Protective Action recommendations are the sole responsibility of the EOF Director. Use input from other managers. Continually review plant status for change in Protective Action Recommendations. Review the requirements of RP/0/B/1000/024, (Protective Action Recommendations).

- 4.2 Declare a General Emergency. Initial protective action recommendation is to evacuate 2 mile radius and 5 miles downwind.

4.2.1 Time of Declaration: \_\_\_\_\_

**NOTE:**

- Message form transmission must begin within **15 minutes** of declaration.
- Condition B for Keowee Hydro Project Dams/Dikes also requires notification of the Georgia Emergency Management Agency and National Weather Service. Remind the EOF Communications Manager to notify these agencies in addition to and after SC State, Oconee County, and Pickens County. {2}

- 4.2.2 Notify Offsite Communications Manager to begin completing a message form in accordance with RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility).
  - A. Request Radiological Assessment Manager to determine the exact sectors to be evacuated and sheltered using HP/0/B/1009/018, (Offsite Dose Projections).
  - B. Provide the following protective action recommendations for use by the offsite communicator to complete the emergency notification form.

	PICKENS COUNTY							OCONEE COUNTY						
	A0	A1	B1	C1	A2	B2	C2	A0	D1	E1	F1	D2	E2	F2
EVACUATE														
SHELTER														

- C. **IF** Condition A, Dam Failure (Keowee or Jocassee) exists, **THEN** Make the following protective action recommendations to Oconee County and Pickens County for imminent/actual dam failure and include on the Emergency Notification Form under Section 15 (B) and (D):
  - ◆ Move residents living downstream of the Keowee Hydro Project dams to higher ground.
  - ◆ Prohibit traffic flow across bridges identified on your inundation maps until the danger has passed.

Emergency Classification Tracking Sheet

- 4.3 When message form is completed and the form has been sent, contact SEPD. This is in addition to contact by the State/County Communicator.

**Protective Action Recommendation:** Read from the approved emergency notification form the protective action recommendations. Provide any known information concerning conditions that would make evacuation dangerous.

- 4.3.1 **IF** the State Emergency Operations Center has been activated, **THEN** contact the SEPD.

<u>NAME</u>	<u>Telephone Numbers</u>
SEPD _____	<u>8-1(803)737-8500</u>

- 4.3.2 **IF** the State Emergency Operations Center has **NOT** been activated, **THEN** contact the CEPD.

Oconee CEPD _____	<u>8-1(864)638-4200</u>
Pickens CEPD _____	<u>8-1(864)898-5943</u>

- 4.3.3 Request SEPD or CEPD to call back after a decision has been made on actual protective actions recommended by the State and Counties for the plume exposure pathway population.

A. Record below the actions that have been taken by SEPD or CEPD:

\_\_\_\_\_

\_\_\_\_\_

B. Information received from : \_\_\_\_\_ Time: \_\_\_\_\_

- 4.4 Notify the Emergency Coordinator of the change in classification **AND** the current protective action recommendations. Request Emergency Coordinator to notify the NRC EOC of the change in emergency classification **AND** the protective action recommendations.

**NOTE:** Announcements should be made approximately every **30 minutes**. Provide current plant status also.

- 4.5 Announce the emergency class **AND** the time of classification to EOF personnel. Provide the current protective action recommendations.

## Emergency Classification Tracking Sheet

- 4.6 **IF** Condition B at Keowee exists,  
**THEN** Notify Hydro Central (Refer to Section 6 of the Emergency Telephone Directory, Keowee Hydro Project Dam/Dike Notification). {2}{6}
- 4.7 **IF** Fire apparatus is needed to provide water to the Spent Fuel Pool,  
**THEN** Contact the Oconee CEPD to provide sufficient fire apparatus (at least three pumper trucks of 1000 gpm, or greater, capacity) to Oconee Nuclear Site (If available, Keowee Ebenezer, Corinth Shiloh and Keowee Key Rural Volunteer Fire Departments should be requested to provide support). Provide instructions concerning entry to the site.
- 4.8 Evaluate plant status.
- 4.8.1 **IF** emergency classification remains as a General Emergency,  
**THEN** have Offsite Communications Manager continue updating the counties by message form every **60 minutes**.
- 4.8.2 Keep EOF personnel informed concerning plant conditions.
- 4.8.3 Keep EC aware of offsite conditions.
- 4.8.4 Log actions in the EOF Director's log.
- 4.8.5 Remain in this step until plant conditions dictate a change in protective action **OR** emergency classification.
- 4.8.6 **IF** Additional protective action recommendations are required by RP/0/B/1000/024, (Protective Action Recommendations),  
**THEN** **GO TO** Step 4.9.
- A. Additional PAR Determination Time: \_\_\_\_\_ {4}
- 4.8.7 **IF** The termination criteria of Enclosure 3.2, (Emergency Classification Termination Criteria) are met,  
**THEN** **GO TO** Step 5.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).

<p><b>NOTE:</b> Transmission of a change in protective action recommendations <b>must</b> begin within <b>15 minutes</b> of determination.</p>
--

- 4.9 Notify Offsite Communications Manager to complete a message form in accordance with RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility) providing the additional protective action recommendations, get it approved, and send it to the offsite agencies.

Emergency Classification Tracking Sheet

- 4.10 When the message form has been sent, contact SEPD. This is in addition to contact by the State/County Communicator.

**Protective Action Recommendation:** Read from the approved emergency notification form the protective action recommendations. Provide any known information concerning conditions that would make evacuation dangerous.

- 4.10.1 **IF** the State Emergency Operations Center has been activated, **THEN** contact the SEPD.

<u>NAME</u>	<u>Telephone Numbers</u>
SEPD _____	<u>8-1(803)737-8500</u>

- 4.10.2 **IF** the State Emergency Operations Center has **NOT** been activated, **THEN** contact the CEPD.

Oconee CEPD _____	<u>8-1(864)638-4200</u>
Pickens CEPD _____	<u>8-1(864)898-5943</u>

- 4.10.3 Request SEPD or CEPD to call back after a decision has been made on actual protective actions recommended by the State and Counties for the plume exposure pathway population.

A. Record below the actions that have been taken by SEPD or CEPD:

\_\_\_\_\_

\_\_\_\_\_

B. Information received from : \_\_\_\_\_ Time: \_\_\_\_\_

- 4.11 Notify the Emergency Coordinator of the change in protective action recommendations.
  - 4.11.1 Request Emergency Coordinator to notify the NRC EOC of the change in protective action recommendations.

**NOTE:** Announcements should be made approximately every **30 minutes**. Provide current plant status also.

- 4.12 Announce the current protective action recommendation **AND** plant status to EOF personnel.

## Emergency Classification Tracking Sheet

- 4.13 Evaluate Plant status.
- 4.13.1 **IF** emergency classification remains as a General Emergency,  
**THEN** have the Offsite Communications Manager continue updating the counties by message form every **60 minutes**.
- 4.13.2 Keep EOF personnel informed concerning plant conditions.
- 4.13.3 Keep EC aware of offsite conditions.
- 4.13.4 Log actions in the EOF Director's log.
- 4.13.5 Remain in this step until plant conditions dictate a change in protective action **OR** emergency classification.
- 4.13.6 **IF** Additional protective action recommendations are required by RP/0/B/1000/024, (Protective Action Recommendations),  
**THEN** **GO TO** Step 4.14.
- A. Additional PAR Determination Time: \_\_\_\_\_ {4}
- 4.13.7 **IF** The termination criteria of Enclosure 3.2, (Emergency Classification Termination Criteria) are met,  
**THEN** **GO TO** Step 5.0 of this Enclosure, (Enclosure 3.1, Emergency Classification Tracking Sheet).

<p><b>NOTE:</b> Transmission of a change in protective action recommendations <b>must</b> begin within <b>15 minutes</b> of determination.</p>
--

- 4.14 Notify Offsite Communications Manager to complete a message form in accordance with RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility) providing the additional protective action recommendations, get it approved, and send it to the offsite agencies.

Emergency Classification Tracking Sheet

- 4.15 When the message form has been sent, contact SEPD. This is in addition to contact by the State/County Communicator.

**Protective Action Recommendation:** Read from the approved emergency notification form the protective action recommendations. Provide any known information concerning conditions that would make evacuation dangerous.

- 4.15.1 **IF** the State Emergency Operations Center has been activated, **THEN** contact the SEPD.

	<u>NAME</u>	<u>Telephone Numbers</u>
SEPD	_____	<u>8-1(803)737-8500</u>

- 4.15.2 **IF** the State Emergency Operations Center has **NOT** been activated, **THEN** contact the CEPD.

Oconee CEPD	_____	<u>8-1(864)638-4200</u>
Pickens CEPD	_____	<u>8-1(864)898-5943</u>

- 4.15.3 Request SEPD or CEPD to call back after a decision has been made on actual protective actions recommended by the State and Counties for the plume exposure pathway population.

A. Record below the actions that have been taken by SEPD or CEPD:

\_\_\_\_\_

\_\_\_\_\_

B. Information received from : \_\_\_\_\_ Time: \_\_\_\_\_

- 4.16 Notify the Emergency Coordinator of the change in protective action recommendations.

4.16.1 Request Emergency Coordinator to notify the NRC EOC of the change in protective action recommendations.

**NOTE:** Announcements should be made approximately every **30 minutes**. Provide current plant status also.

- 4.17 Announce the current protective action recommendation **AND** plant status to EOF personnel.

**NOTE:** SSG will manage the staffing sheets and route to the EOF Director.

- 4.18 Evaluate the need for 24-hour staffing and instruct managers to prepare for it if needed. Telephone numbers and staffing sheets are available in the emergency procedures cart.
- 4.19 **WHEN** termination criteria are met, **GO TO** Step 5.0 of Enclosure 3.1 (Emergency Classification Tracking Sheet).

**5. Termination**

- 5.1 **IF** Terminating from an Alert or Site Area Emergency,  
**THEN** GO TO Step 5.3.
- 5.2 **IF** In a General Emergency,  
**THEN** Discuss with the NRC Director of Site Operations (NRCDSO) and the SEPD that the termination criteria have been met.

5.2.1 Secure agreement from the two directors to terminate the event.

5.2.2 Document names and time decision made below.

	<u>NAME</u>	<u>Telephone Numbers</u>	<u>Time</u>
SEPD	_____	8-1(803)737-8500	_____
NRCDSO	_____	(In person in EOF)	_____

- 5.3 Request Offsite Communications Manager to complete message form and send it in accordance with RP/0/B/1000/015C, (Offsite Communications From The Emergency Operations Facility) to terminate the emergency.

- 5.4 **IF** terminating from an Alert or a Site Area Emergency,  
**THEN** notify the following agencies.

	<u>NAME</u>	<u>Telephone Numbers</u>
SEPD	_____	8-1(803)737-8500

5.4.1 **IF** the SEOC has **NOT** been activated,  
**THEN** contact the County Directors of Emergency Planning (CEPD).

Oconee CEPD \_\_\_\_\_ 8-1(864)638-4200

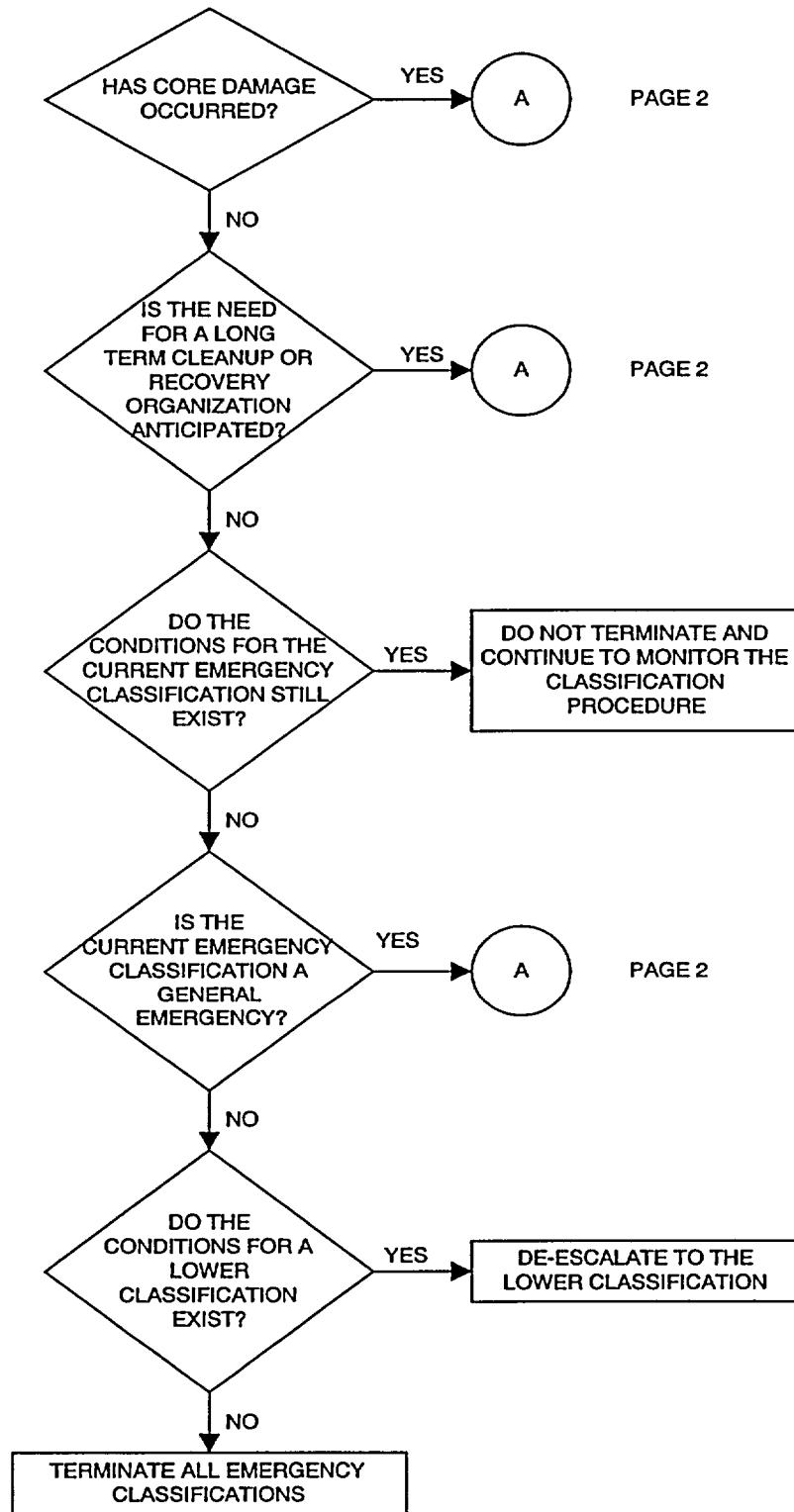
Pickens CEPD \_\_\_\_\_ 8-1(864)898-5943



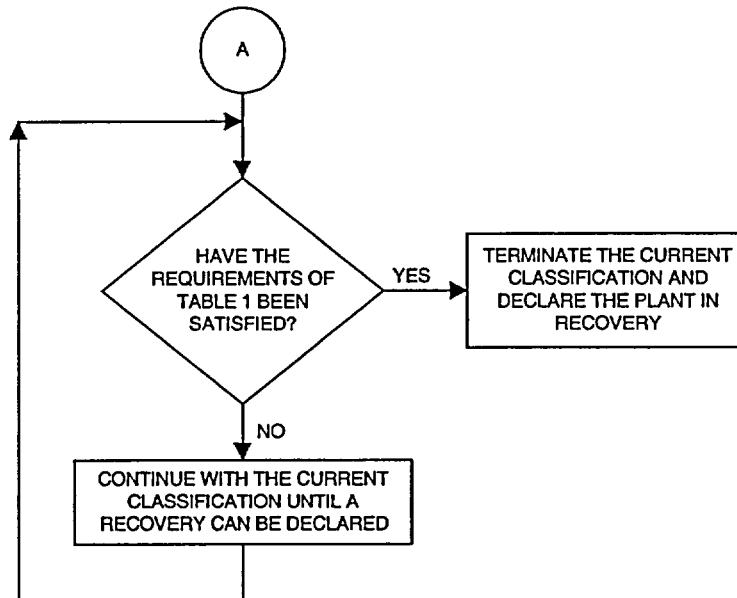
Emergency Classification Tracking Sheet

- 5.5 **IF** terminating from an emergency involving dam failure (Keowee or Jocassee),  
**THEN** discuss termination with Hydro Central (Refer to Section 6 of the Emergency Telephone Directory, Keowee Hydro Project Dam/Dike Notification). {6}
  
- 5.6 Establish Recovery Organizations if needed.
  - 5.6.1 **GO TO** Enclosure 3.3, (Recovery Guidelines).
  - 5.6.2 **IF** Recovery Organizations are **NOT** required,  
**THEN** GO TO Step 5.7.
  
- 5.7 Request Emergency Planning to provide a copy of the License Event Report (LER) to state and county agencies at the time it is sent to the NRC.

### Emergency Classification Termination Criteria



**Emergency Classification Termination  
Criteria**



**TABLE 1**

RECOVERY CONDITIONS	
___	NO NEW EVACUATION OR SHELTERING PROTECTIVE ACTIONS ARE ANTICIPATED
___	CONTAINMENT PRESSURE IS LESS THAN DESIGN PRESSURE
___	CONTAINMENT HYDROGEN LEVELS ARE BEING MAINTAINED WITHIN LIMITS
___	LONG TERM CORE/DEBRIS COOLING HAS BEEN ESTABLISHED
___	THE RISKS FROM RECRITICALITY ARE ACCEPTABLY LOW
___	RADIATION PROTECTION IS MONITORING ACCESS TO RADIOLOGICALLY HAZARDOUS AREAS
___	OFF-SITE CONDITIONS DO NOT LIMIT PLANT ACCESS
___	THE NEWS DIRECTOR, NRC OFFICIALS, AND STATE REPRESENTATIVES HAVE BEEN CONSULTED TO DETERMINE THE AFFECTS OF TERMINATION ON THEIR ACTIVITIES
___	THE RECOVERY ORGANIZATION IS READY TO ASSUME CONTROL OF RECOVERY OPERATIONS

## 1. Recovery Guidelines

The Recovery Manger shall be responsible for the following:

- 1.1 Make a PA announcement as follows:

“Agreement has been reached between Duke, the State of South Carolina and the NRC that the General Emergency classification is terminated. Recovery Operations are being initiated at the site. Actions are underway to determine when people who have been evacuated from their homes can return. As this information is made available, it will be released to the public.”

- 1.2 Establish a Recovery Organization to handle offsite consequences.

- 1.2.1 The offsite recovery organization will stay at the EOF and work with the counties and state if radiological conditions exist beyond the ONS site boundary.

- 1.2.2 The onsite recovery organization will be established by the Emergency Coordinator.

- 1.3 Make the following assignments:

Recovery Manager \_\_\_\_\_

Radiological Assessment Manager \_\_\_\_\_

Field Monitoring Coordinator \_\_\_\_\_

Emergency Planning Manager \_\_\_\_\_

Sites Services Group Manager \_\_\_\_\_

- 1.4 Assure staffing for long-term operation.

<b>NOTE:</b> Once recovery has been determined, the emergency notification message forms are no longer used.
--

- 1.5 Contact the SEPD to discuss work in progress at the EOF and determine communication channels and notifications expected.

- 1.6 Discuss with each manager the activities they have in progress.

**Enclosure 3.3**  
**Recovery Guidelines**

RP/0/B/1000/020  
Page 2 of 2

- 1.7 Radiological Assessment Responsibilities
  - 1.7.1 Provide ingestion pathway dose assessments
  - 1.7.2 Provide ongoing communications with DHEC Nuclear Emergency Planning
  - 1.7.3 Evaluate environmental concentrations within the radiological footprint
  - 1.7.4 Provide technical assistance to Joint Information Center
  - 1.7.5 Help plan for reactor building purge as needed
- 1.8 Emergency Planning Responsibilities
  - 1.8.1 Communications to the State and County Emergency Directors
  - 1.8.2 Review information being released through the news medium
- 1.9 Sites Services Group Manager Responsibilities
  - 1.9.1 Assure ANI (insurance) is set up for public inquiry
  - 1.9.2 Provide services as required
- 1.10 Joint Information Center Responsibilities
  - 1.10.1 Providing news releases
  - 1.10.2 Work with media/public to reduce rumors
- 1.11 Responsibilities of the Site's Outage Manager
  - 1.11.1 Provide Recovery Manager with updates on work in progress at the site
- 1.12 Keep the Emergency Operations Facility activated and staffed until consensus is reached by Duke and State of South Carolina there is no basis for continuous staffing.
  - 1.12.1 Record time and date that Emergency Operations Facility/Joint Information Center were closed.
    - A. EOF/JIC Closed \_\_\_\_\_  
Time/Date

**Enclosure 3.4**  
**Emergency Preparedness Acronyms**

RP/0/B/1000/020  
Page 1 of 1

BSHWM	Bureau of Solid and Hazardous Waste Management
CEPD	County Emergency Preparedness Director/Division
DHEC	Department of Health and Environmental Control
EC	Emergency Coordinator
EOF	Emergency Operations Facility
EOFD	Emergency Operations Facility Director
EPA	Emergency Preparedness Agency
FAX	Facsimile
FEOC	Forward Emergency Operations Center (Clemson)
FTS-2000	NRC Emergency Telephone Communication System
LEC	Law Enforcement Center
NEP	Nuclear Emergency Planning (BSHWM)
NRCDSO	Nuclear Regulatory Commission Director of Site Operations
NRC EOC	Nuclear Regulatory Commission Emergency Operations Center
OSC	Operational Support Center
PAR	Protective Action Recommendations
SCC	State/County Communicator
SEPD	State Emergency Preparedness Director/Division
SEOC	State Emergency Operations Center (Columbia)
SSG	Site Services Group
SWP	State Warning Point
TSC	Technical Support Center

**1. PIP References**

1. PIP O-98-04996
2. PIP O-99-00743
3. PIP O-99-03527
4. PIP O-99-03971
5. PIP O-99-04165
6. PIP O-01-03460
7. PIP O-02-01452