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SUBJECT: Rev 8 to CMIP-12, "Classification of Emergency for Oconee Nuclear Station."

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DUKE POWER

July 19, 1990

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

Subject: McGuire Nuclear Station
Docket Nos. 50-369 and 50-370
Catawba Nuclear Station
Docket Nos. 50-413 and 50-414
Oconee Nuclear Station
Docket Nos. 50-269, 50-270, and 50-287
Crisis Management Implementing Procedures

Gentlemen:

Attached for NRC use and review is a revision to the following
Duke Power Company Crisis Management Implementing Procedure:

CMIP-12 Rev. 8

Please delete privacy material in the form of personal
telephone numbers prior to placing in the Public Document Room.

By copy of this letter two revisions are being provided to NRC,
Region II, Atlanta.

Very truly yours,

Hal B. Tucker

JAR:jar

Attachment

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July 19, 1990
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NRC Resident Inspector
McGuire Nuclear Station

NRC Resident Inspector
Catawba Nuclear Station

NRC Resident Inspector
Oconee Nuclear Station

w/o attachment

R.E. Harris
GS 801.01

DUKE POWER COMPANY
CRISIS MANAGEMENT
IMPLEMENTING PROCEDURES

June 1, 1990

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June 1, 1990

CRISIS MANAGEMENT IMPLEMENTING PROCEDURE

CMIP-12

Classification of Emergency for
Oconee Nuclear Station

Rev. 7
June 1, 1990

R E Harris
Approved By

6/6/90
Date

CMIP-12
CLASSIFICATION OF EMERGENCY FOR
OCONEE NUCLEAR STATION

1.0 SYMPTOMS

1.1 Notification of Unusual Event

- 1.1.1 Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant.
- 1.1.2 No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety occurs.

1.2 Alert

- 1.2.1 Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.
- 1.2.2 Loss of one fission product barrier.
- 1.2.3 Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

1.3 Site Area Emergency

- 1.3.1 Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.
- 1.3.2 Loss of two fission product barriers.
- 1.3.3 Releases do not, nor are they expected to, exceed EPA Protective Action Guideline exposure levels outside the Site Boundary.

1.4 General Emergency

- 1.4.1 Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.
- 1.4.2 Loss of two fission product barriers and failure or imminent failure of the third barrier.
- 1.4.3 Releases, if made, could be expected to exceed EPA Protective Action Guideline exposure levels outside the Site Boundary.

2.0 IMMEDIATE ACTIONS

- 2.1 Compare actual plant conditions to the Emergency Action Level(s) listed in Enclosure 4.1 then declare the appropriate Emergency Class as indicated.

If a change in the emergency class is made, perform steps 2.2, 2.3, and 2.4 below.

- 2.2 Instruct the State/County Communicator to notify the state(s) and counties per CMIP-13 of any change in the emergency class. If the emergency class is SITE AREA EMERGENCY or GENERAL EMERGENCY, determine protective action recommendations per CMIP-1 and transmit these recommendations.

NOTE: Notifications to the state(s) and counties must be made within 15 minutes whenever there is a change in the emergency classification.

- 2.3 Announce the change in the emergency class to all CMC personnel and to the Emergency Coordinator at the TSC.
- 2.4 Instruct the NRC Communicator in the CMC Plant Assessment Group to notify NRC immediately and within one hour per CMIP-15.

3.0 SUBSEQUENT ACTIONS

- 3.1 To de-escalate or close out the Emergency, compare plant conditions to the Initiating Conditions of Enclosure 4.1.

Notify state(s), counties, and NRC by verbal summary of any reduction or termination in the emergency class followed by a written summary within eight (8) hours.

4.0 ENCLOSURES

4.1 Emergency Action Level(s) for Emergency Classes Event No.

| | <u>Page(s)</u> |
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| 4.1.1 Primary Coolant Leak | 1 & 2 |
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| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|--|---|--|
| <p>1. REACTOR SHUTDOWN REQUIRED BY RCS LEAKAGE TS 3.1.6</p> | <p>1. RCS LEAKAGE GREATER THAN OR EQUAL TO 50 GPM</p> | <p>1. RCS LEAKAGE GREATER THAN AVAILABLE MAKEUP PUMP CAPACITY</p> | <p>1. SMALL AND LARGE LOCAS WITH FAILURE OF ECCS-LEADS TO CORE MELT.</p> |
| <p>OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATION</p> | <p>OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS</p> | <p>1. OPERATING MODE: STARTUP THRU POWER OPERATIONS</p> | <p>- LOCA SAE #1 EAL AND EITHER Loss of all injection or imminent loss of injection capability</p> |
| <p>Reactor shutdown initiated pursuant to TS 3.1.6</p> | <p><u>Primary or Primary/Secondary</u></p> | <p><u>Primary or Primary/Secondary</u></p> | <p>OR Plant conditions require entry into inadequate core cooling section of EOP.</p> |
| <p><u>AND ANY ONE OF THE FOLLOWING</u></p> | <p>- Leak \geq 50 gpm</p> | <p>- Full HPI unable to maintain subcooling $>0^{\circ}$F</p> | <p>2. LOCA WITH INITIALLY SUCCESSFUL ECCS WITH SUBSEQUENT FAILURE OF ECCS HEAT SINK AND FAILURE OF CONTAINMENT HEAT REMOVAL CAPABILITY</p> |
| <p>- Primary leakage (unidentified) exceeds 1 gpm</p> | <p>AND Subcooling $> 0^{\circ}$F</p> | <p>2. STEAM LINE BREAK WITH P/S LEAK GREATER THAN OR EQUAL TO 50 GPM</p> | <p>- LOCA SAE #1 EAL AND Loss of LPI heat removal</p> |
| <p>- Total primary leakage (identified) exceeds 10 gpm</p> | <p>AND Leak CANNOT be isolated.</p> | <p>OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS</p> | <p>AND Loss of heat removal capability of RBCUs.</p> |
| <p>- Total primary leakage (including returnable) exceeds 30 gpm</p> | <p>2. STEAM LINE BREAK OUTSIDE CONTAINMENT WITH P/S LEAK GREATER THAN OR EQUAL TO 10 GPM</p> | <p><u>INSIDE CONTAINMENT WITH INDICATION OF FAILED FUEL</u></p> | <p>- Steam line pressure rapidly decreasing</p> |
| <p>- SG tube leakage (Unit 1-.3 gpm Unit 2&3 - 1 gpm)</p> | <p>OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS</p> | <p>AND</p> | <p>SG tube leak \geq 50 gpm</p> |
| <p>- Any reactor coolant leakage evaluated as unsafe</p> | <p>- Steam line pressure rapidly decreasing</p> | <p>AND</p> | <p>Valid RIA 57 or 58 HIGH alarm (630 R/hr)</p> |
| <p>- Any leakage exists through the RCS strength boundary (except SG tubes)</p> | <p><u>AND EITHER OF THE FOLLOWING</u></p> | <p><u>OUTSIDE CONTAINMENT</u></p> | <p>- Unisolable steam line break</p> |
| | <p>SG tube leak \geq 10 gpm</p> | <p>AND</p> | <p>SG tube leak \geq 50 gpm</p> |
| | <p>OR Field Monitoring Teams measure activity at the Protected Area Fence:</p> | | |
| | <p>\geq 2 mR/hr</p> | | |

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

2. FAILURE OF A PRESSURIZER PORV
TO CLOSE FOLLOWING REDUCTION
OF APPLICABLE PRESSURE

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- Acoustical monitor flow
indication

AND

PZR level increasing with
decreasing RCS pressure

AND

QT temp and pressure alarms

3. STEAM GENERATOR TUBE LEAK WITH
LOSS OF OFFSITE POWER

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- SG tube leak \geq 10 gpm

AND

Subcooling $>$ 0°F

AND

Loss of 6900V power to
all RCPs

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. HIGH RCS ACTIVITY

- Total failed fuel is between 1% - 5% per Chemistry analysis
- Total activity of RCS due to isotopes with half lives longer than 30 minutes exceeds 224/E μ ci/ml when the RX is critical
- I-131 on secondary side exceeds 1.4 μ ci/ml

2. ABNORMAL COOLANT TEMPERATURE AND/OR PRESSURE OUTSIDE TS LIMITS

OPERATING MODE: ABOVE COLD SHUTDOWN

- An event has occurred which requires operation in the Thermal Shock Operating Region
- TS pressure/temperature (NDT) limits violated

1. SEVERE LOSS OF FUEL CLADDING

- Total failed fuel \geq 5% per Chemistry analysis - Condition 1
- Area or process RIA monitors in the RB equal or exceed limits stated in Enclosure 4.2

1. DEGRADED CORE WITH POSSIBLE LOSS OF COOLABLE GEOMETRY

- Average of five highest CETC reading \geq 700°F
- RB hydrogen concentration \geq 0.5% and increasing at a rate of $>$ 0.1% per hour
- Valid RIA 57 or 58 HIGH Alarm (630 R/hr)

LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH A POTENTIAL FOR LOSS OF 3RD BARRIER

LOSS OF CLADDING BARRIER

- Total failed fuel is \geq 5% per Chemistry analysis - Condition 2
- RIA 57 or 58 ALERT Alarm (2500 R/hr)
- Plant conditions require entry into inadequate core cooling section of EOP.

LOSS OF CONTAINMENT BARRIER

- RB penetration(s) are not isolated
- RB H² concentration is $>$ 9%
- Containment leakage exceeds 5.6E6 ml/hr
- RB pressure $>$ 59 psig

LOSS OF RCS PRESSURE BARRIER

- LOCA \geq 50 gpm (non-isolable fault)
- SG tube leak \geq 50 gpm

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. RAPID DEPRESSURIZATION OF
SECONDARY SIDE

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- Visual observation of non-isolable leak on main steam line requiring plant shutdown
- Steam line pressure rapidly decreasing
- Steam line break requiring isolation pursuant to the emergency operating procedure.

STEAM LINE BREAK OUTSIDE
CONTAINMENT WITH P/S LEAK
GREATER THAN OR EQUAL TO 10 GPM

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- Steam line pressure rapidly decreasing

AND EITHER OF THE FOLLOWING

SG tube leak \geq 10 gpm

OR

Field Monitoring Teams measure activity at the Protected Area Fence:

\geq 2 mR/hr

1. STEAM LINE BREAK WITH
P/S LEAK GREATER THAN
OR EQUAL TO 50 GPM

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

INSIDE CONTAINMENT WITH
INDICATION OF FAILED FUEL

- Steam line pressure rapidly decreasing

AND

SG tube leak \geq 50 gpm

AND

Valid RIA 57 or 58 HIGH alarm (630 R/hr)

OUTSIDE CONTAINMENT

- Unisolable steam line break

AND

SG tube leak \geq 50 gpm

ENCLOSURE 4.1.4
HIGH RADIATION/RADIOLOGICAL EFFLUENTS

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| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|--|--|---|
| 1. RADIOLOGICAL EFFLUENT TS LIMITS EXCEEDED | 1. HIGH RADIATION LEVEL OR HIGH AIRBORNE CONTAMINATION | 1. ACCIDENTAL RELEASE OF GASES | 1. ACCIDENTAL RELEASE OF GASES |
| <p>- Gaseous/Liquid effluent being released exceed TS 3.9 or 3.10 as determined by HP or Chemistry Procedures</p> | <p>- Area or process RIA monitors exceed limits stated in Enclosure 4.2</p> <p>- Activity detected at the Protected Area fence: ≥ 2 mR/hr WB</p> | <p>- RIA 45 ALERT Alarm</p> <p>AND RIA 46 reading > 230 cpm</p> <p>- Calculations determine dose rates or Field Monitoring Teams measure activity at the Site Boundary: ≥ 50 mR/hr WB or 250 mR/hr Thyroid</p> | <p>- RIA 45 ALERT Alarm</p> <p>AND RIA 46 reading 4,600 cpm</p> <p>- Dose calculations or field monitoring team measurements result in a 2 hour dose projection at the site boundary of: ≥ 1 Rem Whole Body OR ≥ 5 Rem Thyroid</p> |
| | 2. RADIOLOGICAL EFFLUENTS EXCEEDING 10 TIMES TS | | |
| | <p>- Gaseous/Liquid effluents being released exceed 10 times TS limits as defined in TS 3.9 or 3.10 as determined by HP or Chemistry Procedures</p> | | |

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. LOSS OF FUNCTIONS NEEDED TO MAINTAIN PLANT COLD SHUTDOWN

OPERATING MODE: COLD SHUTDOWN
THRU REFUELING

- Unable to maintain core temperature $< 200^{\circ}\text{F}$

2. DEGRADED FUNCTION OF SYSTEM(S) NEEDED TO MAINTAIN PLANT HOT SHUTDOWN CONDITIONS

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- No HPI flow available
- HPI forced cooling initiated

3. ANTICIPATED TRANSIENT WITHOUT SCRAM

OPERATING MODE: POWER
OPERATION

- 2 or more RPS channels trip without automatic reactor trip

AND

Control rods are capable of being inserted (manual trip or driven) from the control room

1. LOSS OF FUNCTIONS NEEDED FOR PLANT HOT SHUTDOWN

OPERATING MODE: HOT SHUTDOWN
THRU POWER OPERATIONS

- SSF feeding steam generators
- HPI forced cooling unable to maintain subcooling $> 0^{\circ}\text{F}$
- Unable to maintain reactor subcritical

2. ANTICIPATED TRANSIENT WITHOUT SCRAM

OPERATING MODE: POWER
OPERATIONS

- 2 or more RPS channels trip without automatic reactor trip

AND

Control rods remain withdrawn and **CANNOT** be manually tripped or inserted from the control room

1. TRANSIENT INITIATED BY LOSS OF FDM AND CONDENSATE SYSTEMS FOLLOWED BY FAILURE OF EFDN FOR AN EXTENDED PERIOD

- Inability to feed steam generators from ANY source

AND

- HPI forced cooling not available

2. TRANSIENT REQUIRING RX TRIP WITH FAILURE TO SCRAM AND FAILURE OF CORE COOLING

- 2 or more RPS channels trip without automatic reactor trip

AND

Emergency actions per EOP fail to bring reactor subcritical

AND

RCS Subcooling $\leq 0^{\circ}\text{F}$

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. LOSS OF OFFSITE AC POWER OR LOSS OF ONSITE AC POWER CAPABILITY

OPERATING MODE: ABOVE COLD SHUTDOWN

- Shutdown initiated pursuant to T.S. 3.7
- Loss of off-site AC power and unit auxiliaries being powered through CT4 or CT5

1. LOSS OF OFFSITE AC POWER AND LOSS OF ALL ONSITE AC POWER

OPERATING MODE: COLD SHUTDOWN THRU REFUELING

- Main Feeder Bus 1 and 2 de-energized > 15 minutes

OPERATING MODE: ABOVE COLD SHUTDOWN:

- Main Feeder Bus 1 and 2 de-energized > 1 but < 15 minutes

2. LOSS OF ALL VITAL ONSITE DC POWER

OPERATING MODE: ABOVE COLD SHUTDOWN

- Momentary loss of DC power to all vital panelboards > 1 but < 15 minutes

3. STEAM GENERATOR TUBE LEAK WITH LOSS OF OFFSITE AC POWER

OPERATING MODE: ABOVE COLD SHUTDOWN

- SG tube leak \geq 10 gpm

AND
Subcooling Margin > 0°F

AND
Loss of 6900V power to all RCPs

1. LOSS OF OFFSITE AC POWER AND LOSS OF ALL ONSITE AC POWER

OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS

- Main Feeder Bus 1 and 2 de-energized > 15 minutes

2. LOSS OF ALL VITAL ONSITE DC POWER

OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS

- Sustained loss of DC power to all vital panelboards for > 15 minutes

1. FAILURE OF OFFSITE AND ONSITE AC POWER ALONG WITH THE TOTAL LOSS OF EFDM MAKEUP CAPABILITY

OPERATING MODE: ABOVE COLD SHUTDOWN

- No AC power (Blackout)

AND

Inability to feed steam generators from ANY source

ENCLOSURE 4.1.7
FIRES AND SECURITY ACTIONS

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| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|--|---|---|---|
| <p>1. FIRE WITHIN PLANT LASTING MORE THAN 10 MINUTES</p> <hr/> <p>NOTE: Within the plant means: Aux Bldg, TB, RB, Keowee Hydro</p> <ul style="list-style-type: none">- Efforts to extinguish a fire within the plant last > 10 minutes <p>2. SECURITY THREAT OR ATTEMPTED ENTRY OR SABOTAGE (SEE NOTE*)</p> <hr/> <ul style="list-style-type: none">- Discovery of bomb within the site boundary- Civil disturbance (hostile)- Intrusion/Attempted Intrusion (Protected Area)- Hostage situation/extortion <p>NOTE*: RP/O/B/1000/07 shall be used in conjunction with all security related emergency classifications</p> | <p>1. FIRE POTENTIALLY AFFECTING SAFETY SYSTEMS</p> <hr/> <ul style="list-style-type: none">- Visual observation of fire potentially affecting safety equipment required by Technical Specifications for current mode of operation- Fire in the Control Room requiring evacuation and Unit being maintained at hot shutdown from the auxiliary shutdown panel <p>2. ONGOING SECURITY COMPROMISE (SEE NOTE*)</p> <hr/> <ul style="list-style-type: none">- Adversaries commandeer an area of the plant but not control over unit shutdown capability- Discovery of breached barrier (security-related) caused by intrusion or sabotage in Vital Area- Discovery of bomb in the Protected Area | <p>1. FIRE COMPROMISING THE FUNCTIONS OF SAFETY SYSTEMS</p> <hr/> <ul style="list-style-type: none">- Observation of a fire causing the loss of redundant trains of safety equipment required by Technical Specs. for current mode of operation- Fire in Control Room requiring evacuation and Unit cannot be maintained at hot shutdown from the auxiliary shutdown panel <p>2. IMMINENT LOSS OF PHYSICAL CONTROL OF THE PLANT (SEE NOTE*)</p> <hr/> <ul style="list-style-type: none">- Physical attack resulting in imminent occupancy of vital areas as defined in the ONS Security Safeguards Plan- Discovery of bomb in the Vital Areas | <p>1. ANY MAJOR INTERNAL OR EXTERNAL EVENT WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO THE PLANT</p> <hr/> <ul style="list-style-type: none">- Unit cannot be maintained at hot shutdown from any location <p>2. LOSS OF PHYSICAL CONTROL OF THE PLANT (SEE NOTE*)</p> <hr/> <ul style="list-style-type: none">- Physical attack resulting in unauthorized personnel occupying the CR or any other vital areas |

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. DAMAGE TO SPENT FUEL WITH
RELEASE OF RADIOACTIVITY

- Activity at protected area fence:
 ≥ 2 mR/hr WB

UNIT 1
CONTAINMENT

- Valid RIA 2, 3, or 4 HIGH Alarm or RIA 49 HIGH alarm

AND

Open flow path exists from containment

FUEL HANDLING BUILDING

- Valid RIA 6 HIGH Alarm or RIA 41 ALERT alarm

AND

RIA 46 HIGH Alarm
(verified by RIA 45)

AND

Release rate calculations using vent sample analysis and flow rate data are in excess of 10 times limits established by Technical Specifications

(continued)

1. MAJOR DAMAGE TO SPENT FUEL WITH
RELEASE OF RADIOACTIVITY

CONTAINMENT

- Valid RIA 57/58 HIGH Alarm (630 R/hr)
- Valid RIA 2, 3, or 4 HIGH alarm and RIA 49 offscale high

AND

Dose rate inside RB coupled with RB leak rate results in calculated dose rate at Site Boundary:

≥ 50 mR/hr WB or 250 mR/hr Thyroid

FUEL HANDLING BUILDING

UNIT 1

- Valid RIA-6 HIGH or RIA 41 ALERT Alarm

AND

RIA 45 ALERT alarm

AND

RIA 46 reading > 3000 cpm

UNITS 2 & 3

- Valid RIA-6 HIGH or RIA 41 ALERT Alarm

AND

RIA 45 ALERT alarm

AND

RIA 46 reading ≥ 230 cpm

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

1. DAMAGE TO SPENT FUEL WITH
RELEASE OF RADIOACTIVITY

UNITS 2 or 3

CONTAINMENT

- Valid RIA 2, 3, or 4 HIGH Alarm or RIA 49 ALERT alarm

AND

Open flow path exists from containment

FUEL HANDLING BUILDING

- Valid RIA 6 HIGH Alarm or RIA 41 ALERT alarm

AND

RIA 46 ALERT Alarm
(verified by RIA 45)

AND

Release rate calculations using vent sample analysis and flow rate data are in excess of 10 times limits established by Technical Specifications

ENCLOSURE 4.1.9
NATURAL DISASTERS AND OTHER HAZARDS

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| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|---|---|---|
| <p>1. EARTHQUAKE DETECTED</p> <hr/> <p>- Tremor felt and strong motion accelerograph actuates (0.01 g)</p> <p>2. LAKE LEVEL (KEONEE)</p> <hr/> <p>- Level < 780 ft. AND Unit shutdown initiated per TS 3.3.7 (LPSW operability)</p> <p>3. DAMAGE FROM AIRCRAFT CRASH TORNADO, MISSILE OR EXPLOSION</p> <hr/> <p>- Damage incurred to equipment/structures within the Site Boundary</p> <p>4. HAZARDOUS SUBSTANCE OR FLAMMABLE GAS RELEASE</p> <hr/> <p>- A spill or release determined to be reportable pursuant to RP/O/B/1000/17, Hazardous Substance Release</p> | <p>1. DESIGN BASIS EARTHQUAKE</p> <hr/> <p>- Tremor felt and seismic trigger alarm actuates (0.05 g)</p> <p>2. DAMAGE FROM AIRCRAFT CRASH, TORNADO, MISSILE OR EXPLOSION</p> <hr/> <p>- Damage observed to safety equipment causing the inability to establish and maintain cold shutdown</p> <p>3. HAZARDOUS SUBSTANCE OR FLAMMABLE GAS RELEASE</p> <hr/> <p>- Uncontrolled entry of a toxic substance or flammable gas into an area of the plant which prevents the operation of equipment necessary to establish and maintain cold shutdown</p> | <p>1. DAMAGE FROM EARTHQUAKE, AIRCRAFT CRASH, TORNADO, MISSILE OR EARTHQUAKE</p> <hr/> <p>OPERATING MODE: ABOVE COLD SHUTDOWN</p> <p>- Damage observed to safety equipment causing the inability to establish and maintain hot shutdown from the control room or the auxiliary shutdown panel</p> <p>- Tremor felt and peak acceleration recorder reading $\geq 0.10g$</p> <p>2. HAZARDOUS SUBSTANCE OR FLAMMABLE GAS RELEASE</p> <hr/> <p>OPERATING MODE: ABOVE COLD SHUTDOWN</p> <p>- Uncontrolled entry of a toxic substance or flammable gas into any area of the plant which prevents the operation of equipment necessary to establish and maintain hot shutdown</p> | <p>1. ANY MAJOR INTERNAL OR EXTERNAL EVENT(S) (i.e., FIRES, FLOODS, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN LEVELS) WHICH CAUSES MASSIVE COMMON DAMAGE TO PLANT SYSTEMS</p> <hr/> <p>- Unit cannot be maintained at hot shutdown from any location</p> |

| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|---|---|---|
| <p>1. ECCS INITIATED</p> <hr/> <p>OPERATING MODE: POWER OPERATIONS</p> <ul style="list-style-type: none">- ES system(s) required to be operable per TS <p>AND</p> <p>Automatic or manual ES actuation on VALID signal or indication</p> <p>AND</p> <p>Water injected to RCS or core as a result of ES actuation</p> <p>2. LOSS OF CONTAINMENT INTEGRITY REQUIRING SHUTDOWN BY TS</p> <hr/> <ul style="list-style-type: none">- Unit shutdown initiated per TS 3.6 (Containment Integrity) <p>3. LOSS OF ES FEATURE OR FIRE PROTECTION SYSTEM FUNCTION REQUIRING SHUTDOWN BY TS</p> <hr/> <ul style="list-style-type: none">- Unit shutdown initiated per TS 3.3 (ES systems)- Unit shutdown initiated per TS 3.17 (Fire Protection Systems includes Keowee Hydro) found inoperable | <p>1. OTHER PLANT CONDITIONS EXIST THAT WARRANT PRECAUTIONARY CLASSIFICATION OF AN ALERT</p> <hr/> <ul style="list-style-type: none">- Emergency Coordinator judgment <p>2. EVACUATION OF CONTROL ROOM</p> <hr/> <ul style="list-style-type: none">- Evacuation of Control Room <p>AND</p> <p>Unit being maintained at hot shutdown from the Auxiliary Shutdown Panel</p> <p>3. LOSS OF ASSESSMENT</p> <hr/> <p>OPERATING MODE: HOT SHUTDOWN THRU POWER OPERATIONS</p> <ul style="list-style-type: none">- Loss of 50% or more of a unit's applicable statalarm panels for > 15 minutes <p>APPLICABLE STATALARM PANELS</p> <p>UNIT 1&3 1SA1-9, 14-16, 18 3SA1-9, 14-16, 18</p> <p>UNIT 2 2SA1-9, 14-16</p> | <p>1. OTHER PLANT CONDITIONS EXIST THAT WARRANT CLASSIFICATION OF A SITE AREA EMERGENCY</p> <hr/> <ul style="list-style-type: none">- Emergency Coordinator or Recovery Manager judgment <p>2. EVACUATION OF CONTROL ROOM</p> <hr/> <ul style="list-style-type: none">- Evacuation of Control Room <p>AND</p> <p>Unit cannot be maintained at hot shutdown from the auxiliary shutdown panel</p> | <p>1. OTHER PLANT CONDITIONS EXIST FROM WHATEVER SOURCE THAT MAKE POSSIBLE A RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PERIOD</p> <hr/> <ul style="list-style-type: none">- Emergency actions per the EOP inadequate core cooling section are unsuccessful |

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

GENERAL EMERGENCY

4. **SIGNIFICANT LOSS OF ASSESSMENT
OR COMMUNICATION CAPABILITY**

- Loss of accident monitoring instrumentation (Table 3.5.6-1) and unit shutdown initiated per TS 3.5.6
- Loss of ONS communications capability with all Offsite Agencies from the Control Room

5. **TREATMENT OF PERSONNEL AT
OFFSITE HOSPITAL**

- Decontamination efforts fail to reduce external contamination below 150 cpm beta-gamma
AND
Health Physics determines that radiological controls are required for offsite medical treatment
- Internal contamination requiring medical assessment/treatment
- External exposure requiring medical assessment/treatment

3. **TURBINE BUILDING FLOOD**

- TB flood requiring use of AP/1,2,3/A/1700/10 procedure
Uncontrollable Flooding of Turbine Building

AREA MONITORS

| <u>Monitor Number</u> | <u>1000 Times Alert Setpoint</u> | | |
|-----------------------|----------------------------------|---------------|---------------|
| | <u>Unit 1</u> | <u>Unit 2</u> | <u>Unit 3</u> |
| RIA-1 | 15,000 | | 35,000 |
| RIA-4 | 40,000 | 55,000 | 80,000 |
| RIA-7 | 25,000 | | |
| RIA-8 | 40,000 | | |
| RIA-9 | 15,000 | | |
| RIA-10 | 15,000 | 35,000 | 50,000 |
| RIA-11 | 10,000 | | 20,000 |
| RIA-12 | 35,000 | | 40,000 |
| RIA-13 | 45,000 | | 50,000 |
| RIA-15 | NIS | | 25,000 |
| RIA-19 | | | 20,000 |

PROCESS MONITORS

| <u>Monitor Number</u> | <u>CPM</u> | | |
|-----------------------|---------------|---------------|---------------|
| | <u>Unit 1</u> | <u>Unit 2</u> | <u>Unit 3</u> |
| RIA-31 | 1,000,000 | | 1,000,000 |
| RIA-47 | 10,000,000 | 1,000,000 | 1,000,000 |
| RIA-48 | 10,000,000 | 1,000,000 | 1,000,000 |
| RIA-49 | 1,400,000 | 1,000,000 | 1,000,000 |
| RIA-49A | 5,000 | - | - |
| RIA-51 | 1,000,000 | 180,000 | 110,000 |