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	TOC 1	TOC 2	Document Type	Document Number	Sht/Sec	Changes	Rev	Status
old	EPIA	EPOC	PROC	RA-EP-01500			0002	APPROVED
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Davis-Besse Nuclear Power Station

EMERGENCY PLAN IMPLEMENTING PROCEDURE

RA-EP-01500

EMERGENCY CLASSIFICATION

REVISION 03

Prepared by: B. W. Cope

Procedure Owner: Director – Organizational Development

Effective Date: JUL 10 2003

Procedure Classification:

__X__ Safety Related

_____ Quality Related

_____ Non-Quality Related

LEVEL OF USE:

IN-FIELD REFERENCE

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides guidelines for conditions at which specific emergency classifications must be declared.

2.0 REFERENCES

2.1 Developmental

2.1.1 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

2.1.2 Updated Safety Analysis Report, DBNPS

2.1.3 Davis-Besse Nuclear Power Station Emergency Plan

2.1.4 Technical Specifications, DBNPS Unit No. 1, Appendix A and B to License No. NPF3

2.1.5 NUMARC NESP-007, Methodology for Development of Emergency Action Levels, Revision 1

2.1.6 Davis-Besse Offsite Dose Calculation Manual

2.1.7 NRC Branch Position on acceptable deviation to Appendix 1 to NUREG-0654/FEMA-REP-1 dated July 11, 1994.

2.2 Implementation

2.2.1 RA-EP-01600, Unusual Event

2.2.2 RA-EP-01700, Alert

2.2.3 RA-EP-01800, Site Area Emergency

2.2.4 RA-EP-01900, General Emergency

2.2.5 RA-EP-02710, Reentry

2.2.6 RA-EP-02720, Recovery Organization

2.2.7 RA-EP-02810, Tornado

2.2.8 RA-EP-02820, Earthquake

2.2.9 RA-EP-02830, Flooding

2.2.10 RA-EP-02840, Explosion

2.2.11 RA-EP-02850, Hazardous Chemical and Oil Spills

2.2.12 DB-OP-02544, Security Events

2.2.13 DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube Rupture

2.2.14 DB-CH-01814, Steam Generator Leak Rate Determination

2.2.15 Technical Specifications

2.2.16 Davis-Besse Offsite Dose Calculation Manual

3.0 DEFINITIONS

3.1 ALERT - Event(s) are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the DBNPS. Any releases are expected to be limited to small fractions of the EPA Protective Action Guidelines exposure levels.

3.2 CORE MELT SEQUENCE - A situation in which the core would be uncovered and there is no means for restoring cooling to the core. Without cooling, overheating and melting of the fuel will occur.

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

3.4 FUNCTIONAL - A system, subsystem, train, component or device though degraded in equipment condition or configuration, is FUNCTIONAL if it is capable of maintaining respective system parameters within acceptable design limits.

3.5 GENERAL EMERGENCY - Event(s) are in progress or have occurred which involve actual or imminent substantial core degradation or melting with the potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

3.6 LOSS - A state of inoperability in which FUNCTIONAL AND OPERABLE status cannot be maintained. A system, subsystem, train, component or device is NOT LOST if its FUNCTIONALITY is assured.

3.7 OPERABLE - A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified functions(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s), are also capable of performing their stated support function(s).

3.8 SITE AREA EMERGENCY - Event(s) are in progress or have occurred which involve actual or likely major failures of the DBNPS functions needed for the protection of the public. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near the site boundary.

3.9 TRANSITORY EVENT - An event which is classifiable in accordance with RA-EP-01500, Emergency Classification, but becomes a lower classification or non-classifiable event before being declared.

3.10 UNUSUAL EVENT - Event(s) are in progress or have occurred which indicate a potential degradation of the level of safety of the DBNPS. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

4.0 RESPONSIBILITIES

4.1 The Shift Manager shall be responsible for the initial implementation of this procedure.

4.2 The individual having formal control as Emergency Director is the final authority on upgrading or downgrading the emergency classification. This responsibility to classify an event may not be delegated.

5.0 INITIATING CONDITIONS

5.1 Station personnel report an abnormal or unusual situation to the operating shift crew, or they observe an off-normal event.

5.2 A supplementary action step in a plant procedure (e.g., the Emergency Operating Procedure, Alarm Procedure, Abnormal Procedures, etc.) refers to this procedure for classification of the indicated plant conditions.

6.0 PROCEDURE

6.1 Classification of Emergency:

6.1.1 When indications of abnormal occurrences are received by the Control Room staff, the Shift Manager shall:

a. Verify the indications of the off-normal event or reported sighting.

b. Ensure that the immediate actions (e.g., use of the Emergency Operating Procedure and Abnormal Procedures) are taken for the safe and proper operation of the plant.

c. Compare the abnormal conditions with those listed in the Index of Emergency Action Levels (EAL).

d. Turn to the appropriate tab which corresponds to the condition picked from the EAL Index.

NOTE 6.1.1.e

The specific emergency action levels described in this procedure are not all inclusive. The Emergency Director shall declare an appropriate emergency classification whenever, in his judgment, the station status warrants such a declaration. A "Miscellaneous" category is included to provide guidance in classifying events not specifically listed elsewhere.

CAUTION 6.1.1.e

Many of the emergency action levels described in this procedure are not intended to be used during maintenance and/or testing situations where abnormal temperature, pressure, equipment status, etc., is expected. Each EAL contains information on the Mode(s) of Operation during which it is applicable.

e. Assess the information available from valid indications or reports and classify the situation.

1. When an event is classified, the Shift Manager shall become the Emergency Director during activation of the Davis-Besse Emergency Plan and shall be responsible for coordinating the actions of the emergency organization until relieved.

2. The Unit Supervisor may assume the Emergency Director duties only if the Shift Manager is not in the Control Room or is incapable of performing those duties.

3. The Shift Engineer (Shift Technical Advisor) may assume the Emergency Director duties only if neither the Shift Manager nor the Unit Supervisor is in the Control Room and capable of performing those duties.

4. Upon arrival in the Control Room, the Emergency Assistant Plant Manager or Emergency Plant Manager may relieve the Emergency Director.

5. The Emergency Plant Manager may assume the Emergency Director duties from the Technical Support Center (TSC) if the TSC and Emergency Control Center/Emergency Operations Facility (ECC/EOF) are activated.

6. The Emergency Director shall remain in the Control Room until the TSC and ECC/EOF have been activated.

CAUTION 6.1.1.f

1. If it appears that several emergencies of different classes have occurred at the same time, the highest classification indicated should be declared.

2. If a Transitory Event has occurred, notification of the offsite agencies is still required.

f. Use the RA-EP-01600, Unusual Event; RA-EP-01700, Alert; RA-EP-01800, Site Area Emergency; or RA-EP-01900, General Emergency procedure to ensure that immediate notification requirements are met and the proper Emergency Plan response is taken.

1. Transitory Events

a. IF the emergency starts at a higher classification, but before the event is classified, the event is mitigated to a lower classifications,
THEN

1. Identify current emergency classification status on the Initial Notification Form and provide a brief description of the transitory event.

b. IF the emergency is mitigated before an emergency classification can be made and no emergency classification initiating condition exists,
THEN
1. The Shift Manager, or designee, will contact the Emergency Offsite Manager (EOM). The EOM will collect the needed information and phone the State of Ohio, Ottawa County, and Lucas County Emergency Management Agencies. If the agencies can not be contacted, the EOM will fax the information to the offsite agencies and the Supervisor – Emergency Preparedness, or designee, will provide a follow-up phone call the following morning.

c. IF it is discovered that an emergency classification was missed during a review, i.e., logs, paper work, etc.
THEN
1. The Shift Manager, or designee, will contact the Emergency Offsite Manager (EOM). The EOM will collect the needed information and phone the State of Ohio, Ottawa County, and Lucas County Emergency Management Agencies. If the agencies can not be contacted, the EOM will fax the information to the offsite agencies and the Supervisor – Emergency Preparedness, or designee, will provide a follow-up phone call the following morning.

g. Continually evaluate the plant conditions to ensure the proper emergency classification is being utilized and the classification is upgraded as conditions dictate in accordance with Steps 6.1.1.c. through 6.1.1.e.

h. Downgrade the emergency classification as conditions improve, utilizing Section 6.2 as a guide.

6.2 Downgrading Emergency Classification:

6.2.1 Compare the existing conditions with information contained in Tab 10, Downgrading Guidelines.

6.2.2 Downgrade the emergency classification, if appropriate.

6.2.3 Continue to observe existing conditions.

6.2.4 Upon downgrading of the emergency classification refer to RA-EP-01600, Unusual Event; RA-EP-01700, Alert; RA-EP-01800, Site Area Emergency; or continue to Section 6.3, Terminating Emergency Classification.

6.2.5 Perform any necessary reentry actions per RA-EP-02710, Reentry.

6.3 Terminating Emergency Classification

6.3.1 Existing conditions have been compared with the Emergency Action Levels and judgment made that conditions have stabilized and termination is appropriate.

6.3.2 Compare the existing conditions with information contained in Tab 11, Termination Guidelines.

6.3.3 Terminate emergency classification.

6.3.4 Perform any necessary reentry actions per RA-EP-02710, Reentry.

NOTE 6.3.5

Recovery actions are required for all classifiable emergencies.

6.3.5 Perform any necessary recovery actions per RA-EP-02720, Recovery Organization.

INDEX OF EMERGENCY ACTION LEVEL CONDITIONS

INDEX OF EMERGENCY ACTION LEVEL CONDITIONS

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

A. FAILURE OF A PRIMARY RELIEF VALVE

Condition	Indication(s)	Emergency Classification
1. Failure of safety related safety valve, or relief valve, to close following a pressure reduction	1. Indication of flow through Pressurizer Reliefs (as indicated on Panel C5798, C5799 and C5705) AND 2. RCS Pressure drop to <1600 psig	Unusual Event RA-EP-01600 All Modes

See Also: Abnormal RCS Leak Rate (2-A-1 thru 4)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

B. CORE FUEL DAMAGE

Condition	Indication(s)	Emergency Classification
1. High reactor coolant activity sample requiring plant shutdown per T.S. 3.4.8	1. Confirmed primary coolant activity sample results indicate > T.S. 3.4.8 AND 2. Plant shutdown required and in progress	Unusual Event RA-EP-01600 Modes 1 & 2
2. Very high coolant activity	Confirmed primary coolant sample results indicate >300 μCi/gram DOSE EQUIVALENT I-131	Alert RA-EP-01700 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

B. CORE FUEL DAMAGE (Cont.)

Condition	Indication(s)	Emergency Classification
3. Core damage with inadequate core cooling determined	1. Confirmed primary coolant sample results indicate: A. DOSE EQUIVALENT I-131 >T.S. 3.4.8 OR B. 100 / E μCi/gram specific activity, AND 2. The incore thermocouples indicate superheated conditions in the core	Site Area Emergency RA-EP-01800 All Modes
4. Core damage with other plant conditions making a release of large amounts of radioactivity possible	1. Confirmed primary coolant sample results indicate >300 μCi/gram DOSE EQUIVALENT I-131 AND 2. Incore thermocouple temperatures correspond to region 3 or 4 of DB-OP-02000 Figure 2 AND 3. A. Containment radiation level is > 10^4 R/hr (RE 4596A/RE 4596B) OR B. SFAS level 4 trip (Containment high-high pressure)	General Emergency RA-EP-01900 All Modes

See Also: Loss of Fission Product Barriers (1-C-1)
Abnormal Containment Atmosphere (1-D-1 thru 3)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

B. CORE FUEL DAMAGE (Cont.)

Condition	Indication(s)	Emergency Classification
5. Core melt situations	1. Any sequence of events has occurred in which severe core damage (such as core melting) has taken place AND 2. A failure of containment is ready to take place (imminent)	General Emergency RA-EP-01900 All Modes

NOTE

Examples of some scenarios which could place the plant in this conditions are:

1. Either a small or large LOCA occurs with a concurrent failure of the ECCS to perform, leading to severe core degradation or melting

OR

2. A transient is initiated by a loss of the main feedwater system followed by a failure of the auxiliary feedwater system for an extended period with core melting resulting

OR

3. A transient occurs requiring operating of shutdown systems with failure to trip which results in core damage, or additional failures of core cooling and makeup systems occur which lead to a core melt

OR

4. A failure of offsite and onsite power along with total loss of auxiliary feedwater makeup capability occurs for several hours which leads to a core melt

OR

5. A small LOCA occurs with initially successful ECCS, however, a subsequent failure of RCS heat removal systems over a period of several hours leads to a core melt.

See Also: Loss of Fission Product Barriers (1-C-1)
Abnormal Containment Atmosphere (1-D-1 through 3)
Abnormal RCS Leak Rate (2-A-1 through 4)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

C. LOSS OF FISSION PRODUCT BARRIERS

Condition	Indication(s)	Emergency Classification
1. Loss of 2 of 3 fission product barriers with a potential loss of the 3rd barrier	Any TWO of the following conditions exist and the third is ready to take place (imminent): 1. Fuel clad rupture as indicated by confirmed primary coolant sample results indicating >300 μCi/gm DOSE EQUIVALENT I-131 2. A rupture of the RCS has been confirmed with the leak rate >50 gpm. (Makeup tank level decreasing at a rate greater than 2 inches per minute) 3. Containment integrity has been breached and cannot be restored. Refer to T.S. 3.6.1.3 and T.S. 3.6.3.1.	General Emergency RA-EP-01900 All Modes

See Also: Abnormal RCS Leak Rate (2-A-1 thru 4)
Major Steam Leak (5-A-1 thru 3)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

D. ABNORMAL CONTAINMENT ATMOSPHERE

Condition	Indication(s)	Emergency Classification
1. Abnormal containment radiation and temperature	Both of the following: 1. Containment radiation level corresponds to an Alert as determined from the Containment Radiation EAL Plot on pages 19 or 20 AND 2. Containment average air temperature indicates >170°F (TI1356, 1357, 1358)	Alert RA-EP-01700 All Modes
2. High containment radiation pressure and temperature	1. Containment radiation levels correspond to a Site Area Emergency as determined from the Containment Radiation EAL Plot on pages 19 or 20 AND 2. A. Containment average air temperature indicates >200°F (TI1356, 1357, 1358) OR B. Safety Features Actuation System (SFAS) level 2 has activated	Site Area Emergency RA-EP-01800 All Modes

See Also: Abnormal RCS Leak Rate (2-A-1 thru 4)
Loss of Fission Product Barriers (1-C-1)
Core Fuel Damage (1-B-1 thru 5)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

1. PRIMARY SYSTEM EVENTS

D. ABNORMAL CONTAINMENT ATMOSPHERE (Cont.)

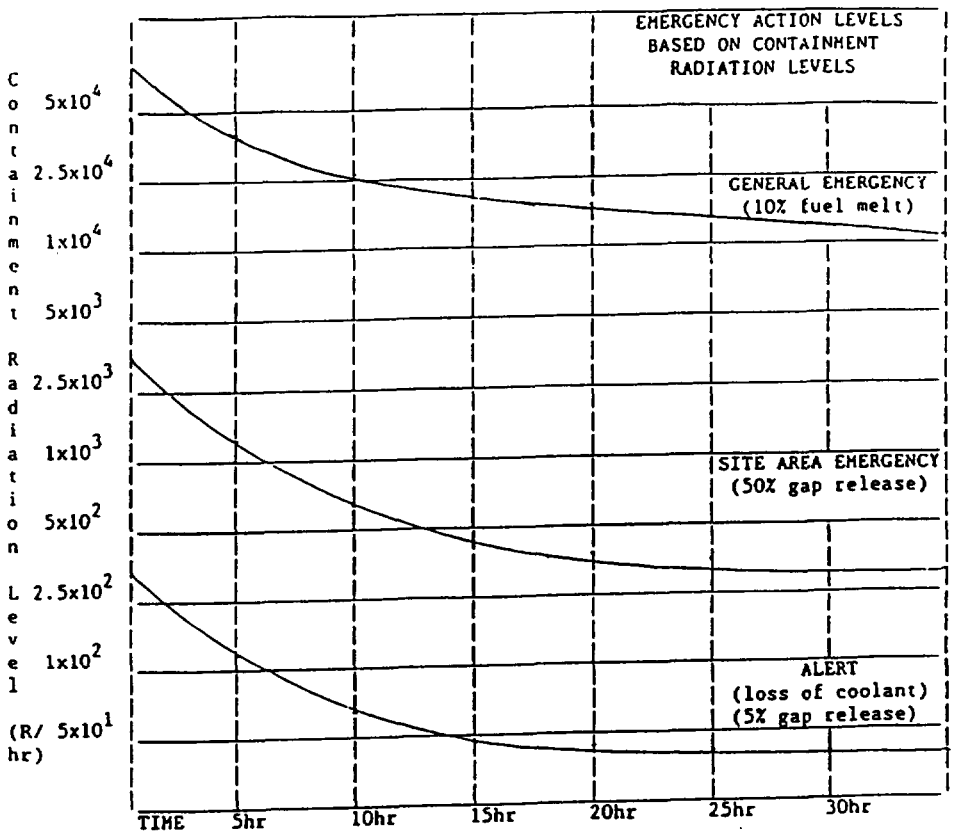
Condition	Indication(s)	Emergency Classification
3. Very high containment radiation and pressure	1. Containment radiation level correlates to a General Emergency as determined from the Containment Radiation EAL Plot on pages 19 or 20 AND 2. SFAS level 4 actuation (Containment high-high pressure)	General Emergency RA-EP-01900 All Modes

See Also: Abnormal RCS Leak Rate (2-A-1 thru 4)
Loss of Fission Product Barrier (1-C-1)
Core Fuel Damage (1-B-1 thru 5)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

CONTAINMENT RADIATION EAL PLOT

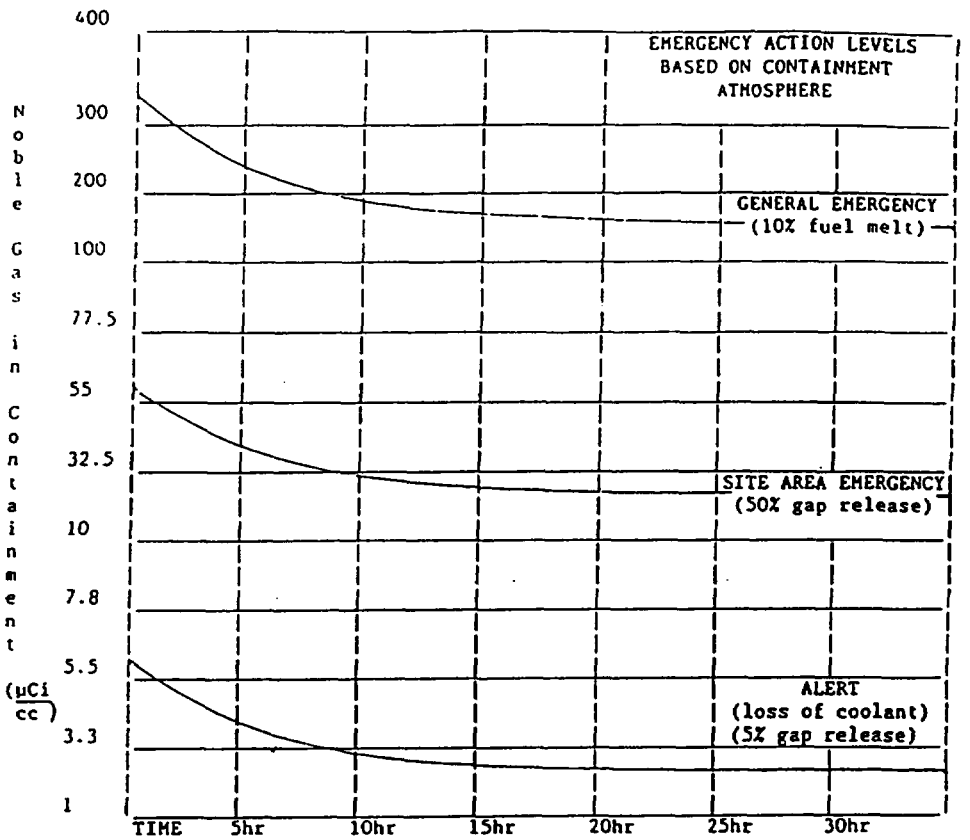


CONTAINMENT RADIATION EAL PLOT INSTRUCTIONS

The curves represent readings for monitors RE 4596A or B, Containment High Range Radiation Detector. The procedure for their use is as follows:

1. Determine the time after reactor shutdown
2. Determine the RE 4596 Channel A or B radiation reading
3. Find the point on the figure where these two numbers intersect
4. Read the classification level of the line immediately below this point. This is the classification to use in correlation to the "Abnormal Containment Atmosphere" section of the Emergency Action Levels.

CONTAINMENT RADIATION EAL PLOT



CONTAINMENT RADIATION EAL PLOT INSTRUCTIONS

The curves represent readings for monitors RE 4597AB or BB, Containment Atmosphere Radiation Detector. The procedure for their use is as follows:

1. Determine the time after reactor shutdown
2. Determine the RE 4597AB or BB Channel 1 or 2 radiation reading
3. Find the point on the figure where these two numbers intersect
4. Read the classification level of the line immediately below this point. This is the classification to use in correlation to the "Abnormal Containment Atmosphere" section of the Emergency Action Levels.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

2. REACTOR COOLANT SYSTEM LEAK RATE

A. ABNORMAL RCS LEAK RATE

Condition	Indication(s)	Emergency Classification
1. Reactor Coolant System leak requiring shutdown per T.S. 3.4.6.2 (includes primary leakage, and primary to secondary leakage)	1. A. Any leakage occurs from the pressure boundary OR B. RCS inventory balance indicates >1 GPM unidentified leakage OR C. Primary to Secondary leakage through the tubes of any one steam generator > 150 GPD OR D. RCS inventory balance indicates >10 GPM identified leakage OR E. Controlled leakage from Reactor Coolant Pump seals is > 10 GPM total OR F. Leakage from any RCS pressure isolation valve listed in T.S. Table 3.4-2 >5 GPM AND 2. Plant shutdown required and in progress	Unusual Event RA-EP-01600 Modes 1, 2, 3, & 4

See Also: Major Steam Leak (5-A-1 through 3)
Loss of Fission Product Barriers (1-C-1)
Abnormal Radiation Levels at Site Boundary (6-D-1 through 7)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

2. REACTOR COOLANT SYSTEM LEAK RATE

A. ABNORMAL RCS LEAK RATE (Cont.)

Condition	Indication(s)	Emergency Classification
2. Reactor Coolant System leak rate >50 gpm, but within High Pressure Injection capacity (includes primary leakage, and primary to secondary leakage)	1. Makeup tank level decreasing at a rate greater than 2 inches per minute, while RCS temperature remains steady OR 2. RCS inventory balance indicates >50 gpm total leakage	Alert RA-EP-01700 All Modes
3. Reactor Coolant System leak rate >50 gpm, but within High Pressure Injection Capacity (includes primary leakage, and primary to secondary leakage) AND loss of offsite power	1. A. Makeup tank level decreasing at a rate greater than 2 inches per minute, while RCS temperature remains steady OR B. RCS inventory balance indicates >50 gpm total leakage AND 2. The 13.8 KV busses are de-energized	Site Area Emergency RA-EP-01800 All Modes

See Also: Loss of Fission Product Barrier (1-C-1)
Electrical Failures (4-A-1 thru 5)
Safety/Relief Valve Failure (1-A-1)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

2. REACTOR COOLANT SYSTEM LEAK RATE

A. ABNORMAL RCS LEAK RATE (Cont.)

Condition	Indication(s)	Emergency Classification
4. Loss of Coolant Accident > High Pressure Injection system capacity	1. High Pressure Injection system running AND 2. A. RCS pressure/pressurizer level continue to decrease OR B. RCS temperature/ pressure reach saturation conditions	Site Area Emergency RA-EP-01800 All Modes

See Also: Loss of Fission Product Barrier (1-C-1)
Electrical Failures (4-A-1 thru 5)
Failure of a Primary Relief Valve (1-A-1)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

3. SAFETY SYSTEM FUNCTIONS

A. CRD, RPS

Condition	Indication(s)	Emergency Classification
1. An uncontrolled control rod withdrawal from a subcritical reactor	1. Outward control rod motion is indicated without a command for such motion AND 2. The reactor is initially subcritical	Unusual Event RA-EP-01600 Modes 2, 3, 4, 5
2. Failure of Reactor Protection System (RPS) to initiate and complete a trip which brings the reactor subcritical.	1. Any time plant parameters meet conditions requiring a trip AND 2. RPS fails to initiate and complete a trip (either automatic or manual) which brings the reactor subcritical	Alert RA-EP-01700 Modes 1 & 2
3. Transient requiring operation of shutdown systems with failure to trip the reactor (continued power generation but no core damage immediately evident).	1. Any time plant parameters meet conditions requiring a trip AND 2. RPS fails to initiate and complete a trip (either automatic or manual) which brings the reactor subcritical AND 3. Power interruption from the Control Room fails to bring the reactor subcritical.	Site Area Emergency RA-EP-01800 Modes 1 & 2

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

3. SAFETY SYSTEM FUNCTIONS

B. SW, DH, CCW, MU, HPI, LPI/DH, MFW, AFW

Condition	Indication(s)	Emergency Classification
1. Complete loss of any functions needed for plant cold shutdown	Loss of the Low Pressure Injection/Decay Heat System (BOTH TRAINS)	Alert RA-EP-01700 Modes 1, 2, 3 & 4
2. Inability to maintain plant in cold shutdown	1. Loss of any cooling system function needed to maintain cold shutdown (Decay Heat, Component Cooling Water, Service Water) (BOTH TRAINS). AND 2. a. An operational mode change due to temperature increase. OR b. A 30°F rise in RCS temperature. OR c. Core cooling by feed and bleed has been initiated.	Alert RA-EP-01700 Modes 5 & 6

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

3. SAFETY SYSTEM FUNCTIONS

B. SW, DH, CCW, MU, HPI, LPI/DH, MFW, AFW (Continued)

Condition	Indication(s)	Emergency Classification
3. Complete loss of any function needed for plant hot shutdown	Loss of any of the following systems: 1. Service Water System (BOTH TRAINS) OR 2. Component Cooling Water (BOTH TRAINS) OR 3. A. Makeup System AND B. High Pressure Injection System (BOTH TRAINS) OR 4. A. Main Feedwater System AND B. Auxiliary Feedwater System AND C. Motor Driven Feed Pump	Site Area Emergency RA-EP-01800 Modes 1,2,3 & 4
4. Loss of water level in the reactor vessel that has or will uncover fuel in the reactor vessel	1. Loss of any cooling system function needed to maintain cold shutdown (Decay Heat, Component Cooling Water, Service Water) (BOTH TRAINS). AND 2. Indication that the core is uncovered (e.g. incores indicate superheat, containment radiation levels increasing, source range detectors increasing, etc.).	Site Area Emergency RA-EP-01800 Modes 5 & 6

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

3. SAFETY SYSTEM FUNCTIONS

C. LOSS OF CONTROL ROOM ALARMS, INDICATION, OR COMMUNICATIONS

Condition	Indication(s)	Emergency Classification
1. Communication capability lost to an extent requiring plant shutdown or other significant loss of assessment	Complete loss of the plant telephone system AND Gai-tronics system	Unusual Event RA-EP-01600 All Modes
2. Most or all alarms (annunciators) lost	Any simultaneous loss of all annunciator alarms AND the station computer	Alert RA-EP-01700 Modes 1 & 2
3. Most or all alarms (annunciators) lost and plant transient initiated or in progress	1. Complete loss of all annunciator alarms AND 2. Loss of the station computer AND 3. Plant transient in progress	Site Area Emergency RA-EP-01800 Modes 1 & 2

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

4. ELECTRICAL FAILURES

A. AC

Condition	Indication(s)	Emergency Classification
1. Loss of offsite power or loss of onsite AC power capability	1. Loss of power to A and B busses from the following transformers: A. Startup 01 AND B. Startup 02 AND C. Aux 11 OR 2. A. Loss of power to C-1 AND D-1 busses from AC AND BD transformers. AND B. Onsite power capability has been degraded to either 4160 VAC vital bus C-1 or D-1 powered from a diesel generator. OR 3. Loss of all diesel generators.	Unusual Event RA-EP-01600 All Modes
2. AC power capability to vital busses reduced to a single power source for greater than 15 minutes such that any additional single failure would result in a station blackout.	1. Loss of power to C-1 AND D-1 busses from AC AND BD transformers for greater than 15 minutes. AND 2. Onsite power capability has been degraded to either 4160 VAC vital bus C-1 or D-1 powered from a diesel generator.	Alert RA-EP-01900 Modes 1,2,3 & 4

NOTE

Diesel generator includes the Emergency Diesel Generators and Station Blackout Diesel Generator.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

4. ELECTRICAL FAILURES

A. AC (Continued)

Condition	Indication(s)	Emergency Classification
3. Loss of offsite power and loss of all onsite AC power	4160 VAC vital busses C-1 AND D-1 de-energized longer than momentarily during transfers (see below for extended loss)	Alert RA-EP-01700 All Modes
4. Loss of offsite power and loss of onsite AC power for more than 15 minutes	4160 VAC vital busses C-1 AND D-1 de-energized more than 15 minutes	Site Area Emergency RA-EP-01800 All Modes
5. Prolonged loss of all offsite power and prolonged loss of all onsite AC power.	1. Loss of power to A and B busses from the following transformers: A. Startup 01 AND B. Startup 02 AND C. Aux 11 AND 2. 4160 VAC vital busses C-1 AND D1 are de-energized for more than 15 minutes. AND 3. A. Restoration of at least one vital bus within 4 hours is NOT likely. OR B. Indication of continuing degradation of core cooling based on fission product barrier monitoring.	General Emergency RA-EP-01900 Modes 1,2,3 & 4

See Also: Abnormal RCS Leak Rate With a Loss of Offsite Power (2-A-3).

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

4. ELECTRICAL FAILURES

B. DC

Condition	Indication(s)	Emergency Classification
1. Loss of all onsite DC power	All in plant DC busses de-energized (see below for extended loss)	Alert RA-EP-01700 All Modes
2. Loss of all vital onsite DC power for more than 15 minutes	All in plant DC busses de-energized for more than 15 minutes	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

5. SECONDARY SYSTEM EVENTS

A. MAJOR STEAM LEAK

Condition	Indication(s)	Emergency Classification
1. Rapid depressurization of secondary side	1. A. Increasing containment pressure (if leak is inside containment) OR B. Unusually loud noise OR C. Visual sighting outside containment AND 2. Valid Steam and Feedwater Rupture Control System (SFRCS) automatic initiation on low main steam line pressure	Unusual Event RA-EP-01600 Modes 1, 2, 3 & 4
2. Steam line break with >10 gpm primary to secondary leak rate	1. Indication of a major steam leak (see 5.A.1) AND 2. Main steam line radiation monitor(s) indicate increased activity (RE 600/609) AND 3. RCS leak rate >10 gpm as indicated by: A. Makeup tank decreasing >1/2 inch per minute OR B. RCS inventory balance indicates >10 gpm leak rate OR C. DB-CH-01814, Steam Generator Leak Determination	Alert RA-EP-01700 Modes 1, 2, 3 & 4

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

5. SECONDARY SYSTEM EVENTS

A. MAJOR STEAM LEAK (Cont.)

Condition	Indication(s)	Emergency Classification
3. Steam line break with >50 gpm primary to secondary leakage AND indication of fuel damage	1. Indication of a major steam leak (see 5.A.1) AND 2. Main steam line radiation Monitor(s) indicate increased activity (RE 600/ 609) AND 3. RCS leak rate >50 gpm as indicated by: A. Makeup tank decreasing >2 inches per minute OR B. RCS inventory balance indicates >50 gpm leak rate AND 4. Confirmed primary coolant sample results indicate activity above acceptable limits of T.S. 3.4.8	Site Area Emergency RA-EP-01800 Modes 1, 2, 3 & 4

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

5. SECONDARY SYSTEM EVENTS

B. MAIN STEAM SAFETY VALVE FAILURE

Condition	Indication(s)	Emergency Classification
1. Failure of safety related safety valves, or relief valves, to close following a pressure reduction	1. Rapid and continuing decrease in steam generator pressure to <500 psig AND 2. Visual or audible observation of a safety valve being open	Unusual Event RA-EP-01600 Modes 1,2,3 & 4

See Also: Major Steam Leak (5-A-1 through 5-A-3)

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

A. HIGH RADIATION LEVELS WITHIN THE PROTECTED AREA

Condition	Indication(s)	Emergency Classification
1. Radiation levels or airborne contamination which indicates a severe degradation in the control of radioactive materials (such as an increase of a factor of 1000 in direct radiation readings)	1. A. An area radiation survey indicates radiation levels >1000 times normal OR B. Airborne radioactivity sample indicates activity levels >1000 times normal OR C. If an area of the plant is inaccessable, a radiation monitor reading indicating radiation levels >1000 times normal	Alert RA-EP-01700 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

B. FUEL HANDLING ACCIDENT

Condition	Indication(s)	Emergency Classification
1. Fuel handling accident which results in the release of radioactivity to containment or fuel handling area	Direct information from fuel handling personnel indicating that an irradiated fuel assembly has been damaged and radioactive gases are escaping	Alert RA-EP-01700 All Modes
2. Major damage to spent fuel in containment or fuel handling area (e.g., large object damages fuel or water loss below fuel level)	1. Indications of fuel handling accident which results in the release of radioactivity to containment or spent fuel pool area AND 2. A. SFAS Incident Level 1 actuation on radiation in Containment. OR B. Valid alarm on a radiation detector monitoring spent fuel in Containment or the fuel handling area. OR C. Isolation of ventilation in containment or spent fuel pool area based on radiation.	Site Area Emergency RA-EP-01800 All Modes

NOTE

The USAR analyzed fuel handling accident (Chapter 15) postulates the failure of 56 fuel pins from an assembly at maximum burnup, 72 hours after reactor shutdown.

Fuel repair activities involving the handling of an individual fuel pin are covered under the maintenance exception of Section 6.1.1.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

C. ABNORMAL EFFLUENT RELEASE

Condition	Indication(s)	Emergency Classification
1. Effluent release > limits allowed by the Offsite Dose Calculation Manual (ODCM): ODCM Section 2.3.1 ODCM Section 2.4.1 ODCM Section 3.3.1 ODCM Section 3.7.1 ODCM Section 3.8.1	The following combination: 1. Any confirmed effluent release exceeding the limits of the ODCM. OR 2. A high alarm is received on any of the following Radiation Monitoring System monitors for greater than 15 minutes during a release (alarm setpoint established by the Chemistry Department) A. 1878A or B, Miscellaneous Waste Outlet OR B. 1770A or B, Clean Waste Outlet OR C. 1822A or B, Waste Gas Outlet AND 3. The associated discharge valve fails to close (automatically OR manually) AND 4. Chemistry/Radiation Protection Section confirms that an ODCM limit has been exceeded.	Unusual Event RA-EP-01600 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

C. ABNORMAL EFFLUENT RELEASE (Cont.)

Condition	Indication(s)	Emergency Classification
2. Effluent release >10 times limits allowed by the Offsite Dose Calculation Manual (ODCM): ODCM Section 2.3.1 ODCM Section 2.4.1 ODCM Section 3.3.1 ODCM Section 3.7.1 ODCM Section 3.8.1	The following combination: 1. Any confirmed effluent release exceeding the ODCM Limits by >10 times the limits OR 2. A high alarm is received on any of the following Radiation Monitoring System monitors at 10 times setpoint (as established by the Chemistry Department) A. 1878A or B, Miscellaneous Waste Outlet OR B. 1770A or B, Clean Waste Outlet OR C. 1822A or B, Waste Gas Outlet AND 3. The associated discharge valve fails to close (automatically OR manually) AND 4. Chemistry/Radiation Protection Section confirms that an ODCM limit has been exceeded.	Alert RA-EP-01700 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

D. ABNORMAL RADIATION LEVELS AT SITE BOUNDARY

NOTE 6.D.1

RE 4598 indication is based on average meteorological conditions: stability class D, wind speed 10 mph.

Condition	Indication(s)	Emergency Classification
1. Projected or actual site boundary radiation levels that indicata a potential dose of about 1 mrem at the site boundary if continued over 2 hours.	1. Station Vent RE 4598 Channel 1 reading ≥ 3.6E-3 μci/cc (Noble Gas) for 2 hours OR 2. 0.5 mrem/hr measured at the Site Boundary for 2 hours	Alert RA-EP-01700 All Modes

NOTE 6.D.2

RE 4598 indications are based on adverse meteorological conditions: stability class F, wind speed 2 mph.

Condition	Indication(s)	Emergency Classification
2. Projected or measured site boundary Total Effective Dose Equivalent (TEDE) rate ≥ 50 mrem/hr for ½ hour.	1. Station Vent RE 4598 Channel 1 (Noble Gas) indicates 1.6E-2 μci/cc or greater for ½ hour OR 2. 50 mrem/hr by direct measurement at the site boundary for ½ hour	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

D. ABNORMAL RADIATION LEVELS AT SITE BOUNDARY (Cont.)

NOTE 6.D.3, 6.D.4 and 6.D.5

RE 4598 indications are based on adverse meteorological conditions: stability class F, wind speed 2 mph.

3. Projected or measured site boundary TEDE rate ≥ 500 mrem/hr for 2 minutes	1. Station Vent RE 4598 Channel 1 (Noble Gas) indicates 1.6E-1 μci/cc or greater for 2 minutes OR 2. 500 mrem/hr by direct measurement at the site boundary for 2 minutes	Site Area Emergency RA-EP-01800 All Modes
4. Projected or measured site boundary thyroid dose rate ≥ 250 mrem/hr for ½ hour	1. Station Vent RE 4598 Channel 3 (Iodine) indicates 3.7E-6 μci/cc or greater for ½ hour OR 2. Radioiodine of 7.9E-8 μci/cc by direct measurement at the Site Boundary for ½ hour	Site Area Emergency RA-EP-01800 All Modes
5. Projected or measured site boundary thyroid dose rate ≥ 2500 mrem/hr for 2 minutes	1. Station Vent RE 4598 Channel 3 (Iodine) indicates 3.7E-5 μci/cc or greater for 2 minutes OR 2. Radioiodine of 7.8E-7 μci/cc by direct measurement at the Site Boundary for 2 minutes	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

6. RADIATION RELEASE EVENTS

D. ABNORMAL RADIATION LEVELS AT SITE BOUNDARY (Cont.)

NOTE 6.D.6 and 6.D.7

RE 4598 indications are based on adverse meteorological conditions: stability class D, wind speed 10 mph.

6. Projected or measured TEDE rate of 1 rem/hr or greater at the Site Boundary.	1. Station Vent RE 4598 Channel 1 (Noble Gas) indicates 6.9E-1 μci/cc or greater. OR 2. 1 rem/hr by direct measurement at the Site Boundary.		General Emergency RA-EP-01900 All Modes
7. Projected or measured thyroid dose rate of 5 rem/hr or greater at the Site Boundary	1. Station Vent RE 4598 Channel 3 (Iodine) indicates 1.8E-3 μci/cc or greater. OR 2. Radioiodine of 1.7E-6 μci/cc by direct measurement at the Site Boundary.		General Emergency RA-EP-01900 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

A. FIRE

Condition	Indication(s)	Emergency Classification
1. Fire within the plant lasting lasting more than 10 minutes	1. Any fire within the protected area lasting more than 10 minutes from the initiation of fire suppression (manually OR automatically), NO safety systems affected OR 2. Any fire which requires offsite assistance	Unusual Event RA-EP-01600 All Modes
2. Fire potentially affecting safety systems	Any fire at the station that has the potential to damage or degrade a safety system	Alert RA-EP-01700 All Modes
3. Fire resulting in the loss of redundant trains of a safety system	Any fire that defeats the capability of both trains of a safety system	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

B. AIRCRAFT CRASH

Condition	Indication(s)	Emergency Classification
1. Aircraft crash onsite or unusual aircraft activity over facility	Control room informed by station personnel who have made a visual sighting	Unusual Event RA-EP-01600 All Modes
2. Aircraft crash, affecting plant structures	Control room informed by station personnel who have made a visual sighting	Alert RA-EP-01700 All Modes
3. Aircraft crash damaging vital structures by impact or fire.	1. Control room informed by station personnel who have made a visual sighting AND 2. Instrumentation readings on vital systems indicate equipment problems	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

C. TRAIN DERAILMENT

Condition	Indication(s)	Emergency Classification
1. Train derailment onsite	1. Control room informed by station personnel who have made a visual sighting AND 2. A. Station structures have been damaged OR B. Danger to station personnel exists	Unusual Event RA-EP-01600 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

D. EXPLOSION

Condition	Indication(s)	Emergency Classification
1. Near or onsite explosion	Control room informed by station personnel who have made a visual sighting	Unusual Event RA-EP-01600 All Modes
2. Onsite explosion affecting plant operations	1. Control room informed by station personnel who have made a visual sighting AND 2. Instrumentation readings on plant systems indicate equipment problems	Alert RA-EP-01700 All Modes
3. Explosion causing severe damage to safe shutdown equipment	Explosion causing loss of: 1. Makeup system AND HPI system OR 2. Ability to supply feedwater to the OTSG's	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

RA-EP-02840, Explosion, contains further detailed information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

E. TOXIC OR FLAMMABLE GAS

Condition	Indication(s)	Emergency Classification
1. Near or onsite toxic or flammable gas release	1. Report or detection of toxic or flammable gases that could enter within the Owner Controlled Area in amounts that can affect normal operation of the plant. OR 2. Report by local, county or State officials for potential evacuation of Owner Controlled Area personnel based on offsite events.	Unusual Event RA-EP-01600 All Modes
2. Entry into facility environs of uncontrolled toxic or flammable gas	1. Report or detection of toxic or flammable gas within a Protected Area structure in concentrations that will be threatening to plant personnel. OR 2. Report or detection of toxic or flammable gases within a Protected Area structure in concentrations that will affect the safe operation of the plant.	Alert RA-EP-01700 All Modes

NOTE

RA-EP-02850, Hazardous Chemical and Oil Spills, contains further information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

E. TOXIC OR FLAMMABLE GAS (Continued)

Condition	Indication(s)	Emergency Classification
3. Entry of uncontrolled flammable gases into vital areas. Entry of uncontrolled toxic gases into vital areas where lack of access to the area constitutes a safety problem. (Plant not in cold shutdown.)	1. Report or detection of toxic or flammable gases within Vital Areas where lack of access to the area prevents operation of BOTH TRAINS of a safety system.	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

RA-EP-02850, Hazardous Chemical and Oil Spills, contains further detailed information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

F. TURBINE DAMAGE

Condition	Indication(s)	Emergency Classification
1. Turbine rotating component failure causing rapid plant shutdown	1. High turbine vibration trip AND 2. Reactor trip	Unusual Event RA-EP-01600 Modes 1 & 2
2. Turbine failure causing casing penetration	Control room informed by Station personnel who have made a visual inspection of turbine casing	Alert RA-EP-01700 Modes 1 & 2

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

G. MISSILE IMPACT

Condition	Indication(s)	Emergency Classification
1. Missile impact from whatever source on the facility	Control room informed by Station personnel of any missile	Alert RA-EP-01700 All Modes
2. Missile impact causing severe damage to safe shutdown equipment	1. Control Room informed by Station personnel of any missile impact on safe shutdown equipment AND 2. Instrumentation readings on safe shutdown equipment indicate equipment problems	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

H. CONTROL ROOM EVACUATION

Condition	Indication(s)	Emergency Classification
1. Evacuation of control room anticipated or required	Any evacuation of the control room anticipated or required with control of shutdown systems established from local stations within 15 minutes	Alert RA-EP-01700 All Modes
2. Evacuation of control room and control of shutdown systems NOT established from local stations in 15 minutes	Any evacuation of the control room with shutdown control NOT established locally within 15 minutes	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

7. HAZARDS TO STATION OPERATIONS

I. SECURITY THREAT

Condition	Indication(s)	Emergency Classification
1. Security threat or attempted entry or attempted sabotage	1. Report by plant personnel of a security threat with a potential for industrial sabotage (i.e. attempted forcible entry into a vital area, armed entry into the protected area, discovery of suspected bombs or incendiary devices, etc.) OR 2. Site Specific Credible Threat	Unusual Event RA-EP-01600 All Modes
2. Ongoing security compromise	1. Report by a member of the security force that a security emergency is in progress OR 2. Protected Area Intrusion OR 3. Protected Area Credible Threat of Imminent Attack	Alert RA-EP-01700 All Modes
3. Loss of physical control of the plant is ready to take place (imminent)	Physical attack on the plant involving imminent occupancy of the Control Room OR local shutdown stations that control vital equipment	Site Area Emergency RA-EP-01800 All Modes
4. Loss of physical control of the facility	1. Physical attack on the plant which has resulted in occupation of the control room OR 2. Unauthorized personnel in control of vital plant equipment	General Emergency RA-EP-01900 All Modes

NOTE

DB-OP-02544, Security Events contain further detailed information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

8. NATURAL EVENTS (WITHIN OTTAWA COUNTY)

A. EARTHQUAKE

Condition	Indication(s)	Emergency Classification
1. Any earthquake felt in-plant or detected on station seismic instrumentation	Any earthquake felt in-plant OR detected by station seismic instrumentation	Unusual Event RA-EP-01600 All Modes
2. Earthquake > Operating Basis Earthquake (OBE) levels	1. Ground motion felt AND 2. OBE alarm on seismic alarm panel C5764A	Alert RA-EP-01700 All Modes
3. Earthquake >Safe Shutdown Earthquake (SSE) levels	1. Ground motion felt AND 2. SSE alarm on seismic alarm panel C5764A	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

RA-EP-02820, Earthquake, contains further detailed information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

8. NATURAL EVENTS (WITHIN OTTAWA COUNTY)

B. TORNADO

Condition	Indication(s)	Emergency Classification
1. Any tornado onsite	Control room informed by station personnel who have made a visual sighting of a tornado crossing the site boundary	Unusual Event RA-EP-01600 All Modes
2. Any tornado striking facility	Control room informed by station personnel who have made a visual sighting of a tornado striking the facility	Alert RA-EP-01700 All Modes

NOTE

RA-EP-02810, Tornado, contains further detailed information.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

8. NATURAL EVENTS (WITHIN OTTAWA COUNTY)

C. HURRICANE FORCE WINDS

Condition	Indication(s)	Emergency Classification
1. Hurricane force winds (greater than 74 mph)	Control room informed of hurricane force winds forecast for Ottawa County	Unusual Event RA-EP-01600 All Modes
2. Hurricane force winds near design basis levels (greater than 74 mph, but less than 90 mph)	1. Control Room informed of hurricane force winds occurring in Ottawa County AND 2. Two successive 15 minute averages from the station meteorological tower are of winds of 74 mph to 90 mph	Alert RA-EP-01700 All Modes
3. Hurricane force winds > design basis levels (greater than 90 mph)	1. Control room informed of hurricane force winds occurring in Ottawa County AND 2. Two successive 15 minute averages from the station meteorological tower are of winds above 90 mph	Site Area Emergency RA-EP-01800 Modes 1,2,3&4

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

8. NATURAL EVENTS (WITHIN OTTAWA COUNTY)

D. FLOODING, LOW WATER

Condition	Indication(s)	Emergency Classification
1. 50 year flood or low water, surge or seiche	Forebay level observed to be: 1. High (>580 feet IGLD) OR 2. Low (<562 feet IGLD)	Unusual Event RA-EP-01600 All Modes
2. Flood, low water, surge or seiche near design levels	Forebay level observed to be: 1. High (584 feet IGLD) OR 2. Low (<560 feet IGLD)	Alert RA-EP-01700 All Modes
3. Flood, low water, surge or seiche > design levels with plant not in cold shutdown	Forebay level observed to be: 1. High (>584 feet IGLD) OR 2. Low (<558 feet IGLD)	Site Area Emergency RA-EP-01800 Modes 1,2,3,&4

NOTE

RA-EP-02830, Flooding, contains further detailed information on high water situations.

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

9. MISCELLANEOUS

Condition	Indication(s)	Emergency Classification
1. Inability to reach required shutdown within technical specification limits.	Plant is NOT brought to a required operating mode within a Technical Specification Limiting Condition for Operation (LCO) Action Statement Time.	Unusual Event RA-EP-01600 Modes 1,2,3,&4
2. Miscellaneous	Other plant conditions exist that warrant increased awareness on the part of the plant operations staff or State and/or local offsite authorities which are not covered under any other existing station procedures.	Unusual Event RA-EP-01600 All Modes
3. Miscellaneous	Other plant conditions exist that warrant precautionary activation of the Technical Support Center and Emergency Control Center and placing other key emergency personnel on standby.	Alert RA-EP-01700 All Modes
4. Miscellaneous	Other plant conditions exist that warrant activation of emergency centers and monitoring teams or a precautionary notification to the public near the site.	Site Area Emergency RA-EP-01800 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

9. MISCELLANEOUS (Cont.)

Condition	Indication(s)	Emergency Classification
5. Miscellaneous	Other plant conditions exist, from whatever source, that make release of large amounts of radioactivity in a short time period possible, e.g., any core melt situation.	General Emergency RA-EP-01900 All Modes

NOTE

Personal judgment plays an important role in ensuring that during any specific event the appropriate actions are performed.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

10. DOWNGRADING GUIDELINES

A. Existing conditions no longer meet the emergency criteria
AND
it appears unlikely that conditions will deteriorate further.

B. Nonroutine releases of radioactive material to the environment are under control or terminated.

C. Any fire, flood, earthquake, or similar emergency conditions are controlled or have ceased.

D. All specified corrective actions have occurred
OR
the plant has been placed in the appropriate operational mode.

E. All required notifications have been completed.

F. Agreement between the Control Room, Technical Support Center and the Emergency Control Center/Emergency Operations Facility that downgrading is appropriate (if they were activated).

G. After issuance of offsite protective actions has occurred, State and County officials must concur with the downgrading.

TABLE OF EMERGENCY ACTION LEVEL CONDITIONS

11. TERMINATING GUIDELINES

A. The conditions which caused the emergency have stabilized, are under control, and are unlikely to deteriorate further.

B. No surveillance relative to offsite protective actions is needed, except for the control of foodstuffs, water, and offsite contamination, or environmental assessment activities.

C. Radiation levels in affected plant areas are acceptable, and/or are stable or decreasing.

D. Releases of radioactive material to the environment greater than Offsite Dose Calculation Manual are under control or have ceased.

E. The potential for an uncontrolled release of radioactive material is at an acceptable, low level.

F. Containment pressure is within Technical Specification requirements related to the existing mode of operation.

G. The reactor is in a stable, safe shutdown condition and long-term core cooling is available, as required.

H. Any fire, flood, earthquake, or similar emergency conditions no longer exist.

I. All offsite notifications are complete.

J. Offsite conditions will not limit access of personnel and resources.

K. Discussions have been held with those federal, state and local organizations that have mobilized in support of the emergency, and that are in direct communication with DBNPS.

L. The Technical Support Center (TSC) staff, if activated, has evaluated plant status with respect to Technical Specifications and concurs with termination of the emergency.

7.0 FINAL CONDITIONS

Abnormal plant conditions have been terminated and an Emergency Director is no longer required.

8.0 RECORDS

8.1 The following quality assurance records are completed by this procedure and shall be listed on the Nuclear Records List, captured, and submitted to Nuclear Records Management in accordance with NG-NA-00106:

8.1.1 None

8.2 The following non-quality assurance records are completed by this procedure and may be captured and submitted to Nuclear Records Management in accordance with NG-NA-00106:

8.2.1 None

ATTACHMENT 1: SUMMARY OF EMERGENCY ACTION LEVELS

GRP	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
1	A-1 Failure of safety related relief			
	B-1 High RCS activity requiring shutdown	B-2 Very high RCS activity	B-3 Core damage with inadequate core cooling	B-4 Core damage with large release of radioactivity possible
				B-5 Core melt situation
				C-1 Loss of 2 of 3 Fission product barriers
		D-1 Abnormal CTMT radiation and temperature	D-2 High CTMT radiation, pressure, and temperature	D-3 Very high CTMT radiation and pressure
2	A-1 RCS leak rate requiring shutdown	A-2 RCS leak rate >50 GPM but < HPI capacity	A-3 RCS leak rate>50GPM but <HPI capacity and loss of site power	
			A-4 LOCA > HPI	
3	A-1 Startup accident	A-2 Failure of Rx protect system (ATWS)	A-3 Failure of Rx protection system to complete a manual trip	
		B-1 Loss of LPI	B-3 Loss of SW, CCW, MU, HPI or feedwater	
		B-2 Loss of DH, CCW, SW while shutdown	B-4 Loss of water level while drained down	
	C-1 Loss of communications	C-2 Loss of annunciator and station computer	C-3 Loss of annunicator and computer during transient	
4	A-1 Loss of offsite power or onsite AC	A-2 Vital bus power reduced to a single source	A-4 Loss of offsite power and site AC>15 min	A-5 Prolonged station blackout
		A-3 Loss of offsite power and onsite AC	B-2 Loss of onsite DC>15 min	
		B-1 Loss of all onsite DC		
5	A-1 Major Stm leak	A-2 Major Stm leak with >10 GPM primary to secondary leakage	A-3 Major Stm leak with > 50 GPM primary to secondary leakage and fuel damage indicated	
	B-1 Failure of Stm safety valve to close			

CAUTION:

THIS ATTACHMENT IS FOR INFORMATION ONLY - UTILIZE THE ACTUAL EAL TEXT WHEN CLASSIFYING.

GRP	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
6		A-1 Radiation level >1000 times normal		
		B-1 Fuel handling accident results in release	B-2 Fuel handling accident results in SFAS actuation or ventilation trip due to radiation	
	C-1 Effluent release > Allowed Limits	C-2 Effluent>10 times Allowed Limits		
		D-1 Projected dose 1 mrem at site boundary	D-2, D-3, D-4, D-5: High dose rates at site boundary	D-6, D-7: Very high dose rates at site boundary
7	A-1 Fire lasting more than 10 min.	A-2 Fire affecting safety system	A-3 Fire resulting in loss of safety system	
	B-1 Aircraft crash onsite or unusaul aircraft activity	B-2 Aircraft crash affecting plant structures	B-3 Aircraft crash damaging vital system	
	C-1 Train derailment onsite	D-2 Onsite explosion affecting plant operations	D-3 Explosion damaging hot shutdown equip	
	D-1 Onsite explosion			
	E-1 Toxic or flammable gas release near or onsite	E-2 Toxic or flammable gas release in plant	E-3 Toxic or flammable gas release in vital area	
	F-1 Turbine failure causing plant shutdown	F-2 Turbine failure with casing penetration	G-2 Missile impact damaging hot shut-down equipment	
		G-1 Missile impact on plant structure		
		H-1 Evacuation of control room	H-2 Evacuation of CTRM and local control not established in 15 min	
	I-1 Security threat	I-2 Ongoing security compromise	I-3 Loss of physical control imminent	I-4 Loss of physical control of the plant
8	A-1 Any earthquake	A-2 Earthquake>OBE	A-3 Earthquake > SSE	
	B-1 Tornado onsite	B-2 Tornado striking facility		
	C-1 Hurricane force winds forecast	C-2 Winds >74 mph < 90 mph	C-3 Winds > 90 mph	
	D-1 50 year flood or low water	D-2 Flood or low water at design levels	D-3 Flood or low water > design levels	
9	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous

CAUTION:

THIS ATTACHMENT IS FOR INFORMATION ONLY - UTILIZE THE ACTUAL EAL TEXT WHEN CLASSIFYING.

COMMITMENTS

Section	Reference	Comments
Table of EALs, throughout	TERMS O 05702	Reliable instrument readings where applicable
Table of EALs, EAL 7-A-2	TERMS O 13375	Fire at alert level needing offsite assistance
Table of EALs, EAL 3-C-3	TERMS O 13377	Deleted 15 minute time duration for loss of all annunciators at Site Area Emergency
Table of EALs, EAL 8-A-1	TERMS O 13380	Unusual Event declared if earthquake is felt but not detected by monitors
Table of EALs, EAL 7-F-1	TERMS O 13383	Add turbine failure Unusual Event
Table of EALs, EAL 4-A-3	TERMS O 13384	Alert EAL for loss of onsite and offsite power
Caution 6.1.1.e.	TERMS O 13477 TERMS O 13482	Reviewed/revised EAL applicability mode of plant operation
Table of EALs, EAL 2-A-2	TERMS 0 13525	Clarify indications of > 50 gpm RCS leak
Table of EALs, EAL 7-A-1	TERMS O 13601	Make fire Unusual Event conform to NUREG 0654
Section 6.1.1.e.3.	TERMS O 13670	Specifies conditions under which the Shift Manager (STA) may assume Emergency Director duties
Table of EALs, EAL 8-A-2 and 8-A-3	TERMS O 13672	OBE and SSE Earthquakes
Table of EALs, throughout	TERMS O 14181	Highlighting of AND and OR
Table of EALs, EAL 1-B-1 thru 1-B-5	TERMS O 14855	Clarify fuel failure

COMMITMENTS (Continued)

Section	Reference	Comments
Table of EALs, EAL 3-A-3	TERMS O 14974	Ensure ATWS conditions are correctly classified.
Table of EALs throughout	TERMS O 14986	Cross reference to other EALs
Table of EALs, EAL 1-D-2	TERMS O 14988	High containment radiation, pressure and temperature indicated by any SFAS function activated
Table of EALs, EAL 1-C-1	TERMS O 15157	Clarify loss of fission product barriers
Section 3.2	TERMS O18734	Definition of a core melt Sequence
Table of EALs, EAL 1-C-1	TERMS Q 00052	EAL for loss of containment integrity
Entire Procedure	TERMS Q 03113	Procedure for Emergency Classification