December 13, 2010

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Emergency Classification

Prepared by: Lori Glander — Print Name — Signature — 12/6/10 — Date

Approval: Brian Sullivan — Print Name — Signature — 12/6/10 — Date

Effective Date: December 15, 2010

This procedure excluded from further ENN-LI-100 reviews.

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Emergency Classification

1.0 PURPOSE

To describe the method for classification of emergencies at IPEC as a Notification of Unusual Event (NUE), Alert, Site Area Emergency (SAE) or General Emergency (GE). It also described actions to take regarding Out-of-Service instruments that are used to evaluate EAL's.

2.0 REFERENCES

2.1 Indian Point Energy Center Emergency Plan

2.2 NUMARC/NESP-007, Revision 2, Methodology for Development of Emergency Action Levels

2.3 IP-EP-AD13 IPEC Emergency Action Level Technical Bases

2.4 Enhancements to Emergency Preparedness Programs for Hostile Action, May 2005 (Revised November 18, 2005)

2.5 IP-EP-AD40 Equipment Important to Emergency Response

3.0 DEFINITIONS

Refer to Reference 2.3

4.0 RESPONSIBILITIES

4.1 The Shift Manager (Control Room Supervisor if the Shift Manager is unavailable or incapacitated) of the **affected unit** shall implement this procedure for the initial emergency classification. For classifiable events that potentially impact both units (security, natural or man-made events), the Shift Managers for each unit shall confer about the need to classify the event. If it is determined that emergency classification is warranted, the **Unit 2** Shift Manager shall declare the event in accordance with this procedure. Once an initial emergency classification has been made, the unit Shift Manager making the initial declaration shall be responsible for any subsequent emergency classifications, regardless of which unit is affected, until such time as relieved by the on-call Emergency Director.

4.2 The Shift Manager, upon initial emergency classification, shall assume the role of Emergency Director and shall act as the Emergency Director until relieved by the On-Call Emergency Director or other qualified Emergency Director (Plant Operations Manager).

4.3 The Emergency Director is responsible for overall command and control of the emergency response, including classifications; notifications, PARs and ensuring all resources are available to mitigate emergency conditions. The Emergency Director is the final authority for determining the emergency classification level (initial

classification, upgrading, or terminating to recovery). This authority may not be delegated.

4.4 Initial and subsequent emergency classification shall be made within 15 minutes following the identification of a classifiable event to ensure that prompt notification, mobilization, protective and corrective actions are taken.

4.5 Upon becoming aware of any condition or event that they believe may warrant an upgrade in emergency classification, Emergency Response Organization members shall promptly inform the Emergency Director via their chain of command.

4.6 A broad spectrum of discretion in classifying events is provided under Category 9.0 "Other". In using the Category 9.0 "Other" and in classifying emergencies under circumstances which are not a straight-forward use of the EALs, ERO members should be mindful than an approach is needed which is conservative with respect to public, plant, and personnel safety and with respect to ensuring the adequacy of personnel and technical support. Conservative decisions must be made if the Emergency Director has any doubt regarding the health and safety of the public.

5.0 DETAILS

5.1 Recognizing an Emergency

NOTE

All classifications are to be based upon VALID indications, reports or conditions. Indications, reports or conditions are considered VALID when they are verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

5.1.1 When indications of abnormal conditions or events are received, personnel will verify the symptoms/indications and then compare with the Emergency Action Levels (Attachment 1) and Fission Product Barrier Thresholds (Attachment 2).

5.1.2 Identify the highest applicable emergency classification level (if multiple EALs are exceeded) for which an EAL has been met or exceeded considering the following:

(a) The plant condition existing at the time the abnormal condition exists:

- Hot (Average reactor coolant temperature > 200°F)
- Cold (Average reactor coolant temperature ≤ 200°F)
- Defueled (no irradiated fuel in the reactor vessel)

(b) **IF** conditions warrant the issuance of offsite Protective Action Recommendations (PARs), **THEN** the classification of General Emergency is required.

(c) **IF** plant conditions indicate a possible radiological release or a release is in progress or suspected, **THEN** evaluate the applicability of offsite dose-based EALs (IP-EP-310, Dose Assessment).

(d) **IF** a classification level was met or exceeded but the classifiable condition no longer exists (a lesser classification level may or may not still be appropriate), **THEN** refer to Section 5.4, Transitory Events, Spikes and Spurious Indications.

5.2 Initial Emergency Declaration from the Control Room

NOTE

IF the condition or event requiring initial classification potentially affects both units (security, natural or man-made events), **THEN** the Unit Shift Managers shall contact each other and confer on the need to declare. Upon concurrence, the **Unit 2** Shift Manager shall make the appropriate emergency classification and assume the role of Emergency Director.

5.2.1 The Shift Manager (Control Room Supervisor if the Shift Manager is unavailable or incapacitated) shall announce to the Control Room operating staff:

(a) That an emergency has been declared.

(b) The emergency classification level.

(c) That the (Unit 2 or Unit 3) Shift Manager (Control Room Supervisor if the Shift Manager is unavailable or incapacitated) has assumed the role of Emergency Director.

5.2.2 Implement procedure **IP-EP-210 "Central Control Room"**

5.3 While in a Classified Emergency

5.3.1 Emergency response personnel shall continuously review the Emergency Action Levels (Attachment 1) and Fission Product Barrier Thresholds (Attachment 2) to ensure appropriate event classification.

5.3.2 If an Emergency Action Level threshold is exceeded for an emergency classification higher than currently declared, the Emergency Director shall re-classify the event to the appropriate level and initiate all required notifications.

5.4 Transitory Events, Spikes and Spurious Indications

5.4.1 Transitory events that result in exceeding the Emergency Action Level criteria for event declaration, but which are terminated before they are declared, should still be identified, documented and reported (10CFR50.72), but not declared to implement the Emergency Plan.

5.4.2 In the case of a "spike" in a plant indication or event which rapidly exceeds and then decreases below an Emergency Action Level threshold, entry into the Emergency Plan or escalation to a higher classification "in retrospect" is not appropriate unless the "spike" is indicative of continuing degrading conditions which will lead to an escalated emergency classification level. Examples include momentary steam generator level shrink following reactor trip or brief wind gusts in excess of classifiable levels.

5.4.3 Spurious alarms or parameters, which are known to be invalid indicators of actual plant conditions or of the emergency classification, should not be used to declare emergency classifications.

5.5 Compensatory Measures for Out-of-Service EAL Instruments.

5.5.1 IP-EP-AD40 provides guidance when planning to take an instrument OOS (Out of Service) that is used to determine an EAL condition or following an unplanned loss of the instrument.

6.0 INTERFACES

6.1 IP-EP-210, Central Control Room

6.2 IP-EP-220, Technical Support Center

6.3 IP-EP-310, Dose Assessment

6.4 IP-EP-410, Protective Action Recommendations

6.5 IP-EP-510, Meteorological, Radiological & Plant Data Acquisition System

6.6 IP-EP-340, Meteorological Information & Data Acquisition System (MIDAS)

6.7 IP-EP-520, Modular Emergency Assessment & Notification System (MEANS)

6.8 IP-EP-AD40, Equipment Important to Emergency Response

7.0 RECORDS

Any logs or forms completed by members of the ERO during an actual declared emergency are permanent quality records.

8.0 REQUIREMENTS AND COMMITMENTS

NONE

9.0 ATTACHMENTS

9.1 Emergency Action Levels

9.2 Fission Product Barrier Thresholds

9.1 - Emergency Action Levels

CATEGORY 1.0 CSFST STATUS

Category	General	Site Area	Alert	Unusual Event
1.1 Subcriticality	**1.1.3 {> 200°F}** RED path in F-0.1, Subcriticality **AND** Actual or imminent entry into either: RED Path in F-0.2, Core Cooling **OR** Red Path in F-0.3, Heat Sink	**1.1.2 {> 200°F}** RED path in F-0.1 Subcriticality **AND** ALL manual attempts at tripping the reactor from the Control Room have failed to reduce power range **< 5%**	**1.1.1 {> 200°F}** Any Failure of an automatic trip signal to reduce power range **< 5%** **AND** Manual trip is successful	
1.2 Core Cooling	**1.2.2 {> 200°F}** RED path in F-0.2,Core Cooling **AND** Functional restoration actions taken and procedures not effective within **15 min**.	**1.2.1 {> 200°F}** ORANGE or RED path in F-0.2, Core Cooling		
1.3 Heat Sink		**1.3.1 {> 200°F}** RED path in F-0.3, HEAT SINK **AND** Feed & Bleed is required		
1.4 Integrity			**1.4.1 {> 200°F}** RED Path on F-0.4, Integrity	
1.5 Containment	**1.5.1 {> 200°F}** RED Path F-0.5, Containment resulting from loss of coolant.			

9.1 - Emergency Action Levels

CATEGORY 2.0 REACTOR FUEL

Category	General	Site Area	Alert	Unusual Event
2.1 Coolant Activity		**2.1.3 {> 200°F}** Coolant activity **> 300 µCi/cc** I-131 equivalent and any of the following: RED path on F-0.4, INTEGRITY Primary system leakage exceeding capacity **(> 75 gpm)** of a single charging pump RCS subcooling < SI initiation setpoint due to RCS leakage [Unit 2] R-41 **> 1.2E-5 µCi/cc or** R-42 off-scale due to RCS leakage [Unit 3] R-11 **> 1.2E-5 µCi/cc or** R-12 **> 0.05 µCi/cc**	**2.1.2 {> 200°F}** Coolant Activity **> 300 µCi/cc** I-131 equivalent	**2.1.1 {All}** Coolant sample activity in excess of Technical Specification limits
2.2 Containment Radiation	**2.2.3 {> 200°F}** Containment Radiation monitor R-25 or R-26 **> 68 R/HR**	**2.2.2 {> 200°F}** Containment Radiation monitor R-25 or R-26 **> 17 R/HR**	**2.2.1 {> 200°F}** [Unit 2] R-41 **> 1.2E-5 µCi/cc or** R-42 off-scale due to RCS leakage [Unit 3] R-11 **> 1.2E-5 µCi/cc or** R-12 **> 0.05 µCi/cc**	

9.1 - Emergency Action Levels

CATEGORY 2.0 REACTOR FUEL

Category	General	Site Area	Alert	Unusual Event
2.3 Refueling Accidents or Other Radiation Monitors			**2.3.2 {All}** Confirmed sustained alarm on any of the following radiation monitors resulting from fuel damage caused by an uncontrolled fuel handling process: • R-2/R-7 Vapor Containment Area Monitors • R-5 Fuel Storage Building Area Monitor • R-25/26 Vapor Containment High Radiation Area Monitors • R-12 Containment Gas Activity [Unit 3] **2.3.3 {All}** Report of visual observation of (Unit 2 or Unit 3) irradiated fuel uncovered	**2.3.1 {All}** [Unit 2] or [Unit 3] Spent fuel pool (reactor cavity during refueling) water level cannot be restored and maintained: • above the Technical Specification minimum water level [Unit 2] • above the spent fuel pool low water level alarm setpoint [Unit 3]

9.1 - Emergency Action Levels

CATEGORY 3.0 REACTOR COOLANT SYSTEM

Category	General	Site Area	Alert	Unusual Event
3.1 RCS Leakage		**3.1.3 {>200°F, ≤ 200°F }** RVLIS cannot be maintained [Unit 2] > **41%** [Unit 3] > **33%** with no RCPs running OR With the reactor vessel head removed, it is reported that water level in the Reactor Vessel is dropping in an uncontrolled manner and core uncovery is likely	**3.1.2 {>200°F}** Primary system leakage exceeding capacity **(> 75 gpm)** of single charging pump	**3.1.1 {>200°F}** Unidentified or pressure boundary leakage **> 10 gpm** **OR** Identified leakage **> 25 gpm**
3.2 Primary to Secondary Leakage		**3.2.2 {>200°F}** Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage exceeding capacity **(> 75 gpm)** of a single charging pump **3.2.3 {>200°F}** Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > Technical Specification limit in any steam generator **AND** Coolant activity **> 300 µCi/cc** of I-131 equivalent		**3.2.1 {>200°F}** Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > Technical Specifications limit in any steam generator
3.3 RCS Subcooling			**3.3.1 {>200°F}** RCS subcooling < SI initiation setpoint due to RCS leakage	

9.1 - Emergency Action Levels

CATEGORY 4.0 CONTAINMENT

Category	General	Site Area	Alert	Unusual Event
4.1 Containment Integrity Status	**4.1.4 {>200°F}** Confirmed **Phase "B"** isolation signal following confirmed LOCA with less than minimum containment cooling safeguards equipment operating, Table 4.3 **AND** Any indicators of fuel clad loss, Table 4.1 **4.1.5 {>200°F}** **EITHER:** Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure **OR** Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions **AND** Any indications of fuel clad damage, Table 4.2	**4.1.2 {>200°F}** Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure **OR** Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions		**4.1.1 {>200°F}** Both doors open on a VC airlock for **> 4 hrs**. **OR** Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment for **> 4 hrs**. **OR** Any **Phase "A"** or **Phase "B"** or containment ventilation isolation valve(s) not closed when required which results in a radiological release pathway to the environment

9.1 - Emergency Action Levels

CATEGORY 4.0 CONTAINMENT

Category	General	Site Area	Alert	Unusual Event
4.1 Containment Integrity Status (cont.)	**4.1.6 {>200°F}** **EITHER:** Any **Phase "A"** or **Phase "B"** or Containment Ventilation Isolation valve(s) not closed when required following confirmed LOCA **OR** Inability to isolate any primary system discharging outside containment **AND** Radiological release to the environment exists as a result **AND** Any indicators of fuel clad damage, Table 4.2	**4.1.3 {>200°F}** **EITHER:** Any **Phase "A"** or **Phase "B"** or Containment Ventilation Isolation valve(s) not closed when required following confirmed LOCA **OR** Inability to isolate any primary system discharging outside containment **AND** Radiological release to the environment exists as a result		
4.2 SG Tube Rupture w/Secondary Release	**4.2.2 {>200°F}** Unisolable faulted (outside VC) ruptured steam generator **AND** Any indicators of fuel clad damage, Table 4.2	**4.2.1 {>200°F}** Unisolable faulted (outside VC) ruptured steam generator		
4.3 Combustible Gas Concentrations	**4.3.1 {>200°F}** ≥4% Hydrogen concentration in containment			

9.1 - Emergency Action Levels

CATEGORY 4.0 CONTAINMENT

Table 4.1 Fuel Clad Loss Indicators
Coolant activity **> 300 µCi/cc** of I-131 equivalent
Containment radiation monitor R-25/R-26 reading **> 17 R/hr**
RED path in F-0.2, CORE COOLING

Table 4.2 Fuel Clad Damage Indicators
ORANGE or RED path in F-0.2, CORE COOLING
RED path in F-0.3, HEAT SINK
AND
Heat sink is required
Coolant activity **> 300 µCi/cc** of I-131 equivalent
Containment radiation monitor R-25/R-26 reading **> 17 R/hr**

Table 4.3 Minimum Containment Cooling Safeguards Equipment	
Fan Cooler Units Operating	Spray Pumps Required
< 3	2
3	1
5	0

9.1 - Emergency Action Levels CATEGORY 5.0 RADIOACTIVITY RELEASE				
Category	**General**	**Site Area**	**Alert**	**Unusual Event**
5.1 Effluent Monitors	**5.1.4 {All}** A valid reading on any monitors Table 5.1 column "GE" for **> 15 min.** unless dose assessment can confirm releases are below Table 5.2 column "GE" within this time period.	**5.1.3 {All}** A valid reading on any monitors Table 5.1 column "SAE" for **> 15 min.** unless dose assessment can confirm releases are below Table 5.2 column "SAE" within this time period.	**5.1.2 {All}** A valid reading on any monitors Table 5.1 column "Alert for **> 15 min.** unless dose assessment can confirm releases are below Table 5.2 column "Alert" within this time period.	**5.1.1 {All}** A valid reading on any monitors Table 5.1 column "NUE" for **> 60 min.** unless sample analysis can confirm release rates **<** Table 5.1 column "NUE" within this time period.
5.2 Dose Projections/ Environmental Measurements/ Release Rates	**5.2.5 {All}** Dose projections or field surveys resulting from an actual imminent release which indicate doses/dose rates > Table 5.2 column "GE" at the site boundary or beyond.	**5.2.4 {All}** Dose projections or field surveys resulting from an actual imminent release which indicate doses/dose rates > Table 5.2 column "SAE" at the site boundary or beyond.	**5.2.2{All}** Confirmed sample analysis for gaseous or liquid release rates >Table 5.1 column "Alert" limits for **> 15 min.** **5.2.3 {All}** Dose projections or field surveys resulting from an actual imminent release which indicate doses/dose rates > Table 5.2 column "Alert" at the site boundary or beyond.	**5.2.1 {All}** Confirmed sample analysis for gaseous or liquid release rates **>** Table 5.1 column "NUE" limits for **> 60 min.**

9.1 - Emergency Action Levels

CATEGORY 5.0 RADIOACTIVITY RELEASE

Category	General	Site Area	Alert	Unusual Event
5.3 Area Radiation Levels			**5.3.2 {All}** Sustained area radiation levels **> 15 mRem/hr** in **EITHER:** Control Room **OR** Central Alarm Station and Secondary Alarm Station **5.3.3 {All}** Sustained abnormal area radiation levels **> 8 R/hr** within any areas, Table 5.3 **AND** Access is required for safe operation or shutdown	**5.3.1 {All}** Any sustained direct ARM readings **> 100 x alarm or** offscale high resulting from an uncontrolled process

9.1 - Emergency Action Levels

CATEGORY 5.0 RADIOACTIVITY RELEASE

Table 5.1 Effluent Monitor Classification Thresholds

Monitor		GE	SAE	Alert	UE
Unit 2	R-27	44 µCi/cc (1200 Ci/sec)	4.4 µCi/cc (120 Ci/sec)	4.4E-1 µCi/cc (12 Ci/sec)	4.4E-3 µCi/cc (1.2E-1 Ci/sec)
	R-44	N/A	N/A	N/A	4.4E-3 µCi/cc
	R-54	N/A	N/A	Off Scale (>4E-2 uCi/cc)	2.5E-3 µCi/cc
	R-49	N/A	N/A	2.7E-2 µCi/cc	2.7E-4 µCi/cc
Unit 3	R-27	44 µCi/cc (1200 Ci/sec)	4.4 µCi/cc (120 Ci/sec)	4.4E-1 µCi/cc (12 Ci/sec)	4.4E-3 µCi/cc (1.2E-1 Ci/sec)
	R-14	N/A	N/A	N/A	4.4E-3 µCi/cc
	R-18	N/A	N/A	Off Scale (>4E-2 uCi/cc)	2.5E-3
	R-19	N/A	N/A	2.7E-2	2.7E-4

Table 5.2

Dose Projection/Env. Measurement Classification Thresholds

	GE	SAE	Alert
TEDE	1000 mRem	100 mRem	10 mRem
CDE Thyroid	5000 mRem	500 mRem	N/A
External Exposure Rate	1000 mRem/hr	100 mRem/hr	10 mRem/hr
Thyroid exposure rate (for 1 hr. of inhalation)	5000 mRem/hr	500 mRem/hr	N/A

9.1 - Emergency Action Levels

CATEGORY 5.0 RADIOACTIVITY RELEASE

Table 5.3 Plant Areas

UNIT 2	UNIT 3
• Condensate Storage Tank • RWST • Service Water Intake Structure • Service Water Valve Pit East • Fuel Storage Building • Primary Auxiliary Building/Fan House • 480 Volt Switchgear Room (Control Building) • Cable Spreading Room/Electrical Tunnel • Diesel Generator Building/Fuel Tank Area • Auxiliary Feedwater Pump Building • Battery Room (Control Building 33' 0" ele.)	• Auxiliary Feedpump Building • P.A.B. • Fuel Storage Building • Control Building • Service Water Pumps • Refueling Water Tank • Diesel Fuel Tank • Vital Area Access to Containment • Appendix R Diesel Generator • Backup Service Water

9.1 - Emergency Action Levels

CATEGORY 6.0 ELECTRICAL FAILURES

Category	General	Site Area	Alert	Unusual Event
6.1 Loss of AC Power Sources	**6.1.5 {>200°F}** Loss of all 480 volt safeguards bus (5A, 2A/3A, 6A) AC power AND EITHER: Power restoration to required core cooling systems is not likely in ≤ 4 hrs. OR Actual or imminent entry into ORANGE or RED path on F-0.2, "CORE COOLING"	**6.1.4 {>200°F}** Loss of AC power to all 480 volt safeguard busses (5A, 2A/3A, 6A) for > 15 min. AND Inability to power required core cooling systems with alternate power sources for > 15 min.	**6.1.2 {≤200°F, Defuel}** Loss of AC power to all 480 volt busses (5A, 2A/3A, 6A) for **> 15 min.** **6.1.3 {Hot}** AC power capability to 480 volt safeguard busses (5A, 2A/3A, 6A) reduced to only one Table 6.1 source for **> 15 min.**	**6.1.1 {All}** Unplanned loss of offsite power capability to all 480V safeguard busses (5A, 2A/3A, 6A) for > 15 min.
6.2 Loss of DC Power Sources		**6.2.2 {> 200°F}** Loss of bus voltage **(< 105 vdc)** for **> 15 min.** on all of the DC Busses.		**6.2.1 {≤200°F}** [Unit 2] Unplanned loss of bus voltage **(< 105 vdc)** for > 15 min. on any DC Bus resulting in the loss of decay heat removal capability [Unit 3] Unplanned loss of bus voltage **(< 105 vdc)** for > 15 min. on all of the DC Busses

9.1 - Emergency Action Levels

CATEGORY 6.0 ELECTRICAL FAILURES

Table 6.1 Safeguard Bus AC Power Sources

UNIT 2	UNIT 3
• 480 V EDG 21 • 480 V EDG 22 • 480 V EDG 23 • Unit Auxiliary transformer* • Station Auxiliary transformer* • 13.8 KV gas turbine auto transformer* * With 86P or 86BU tripped, all offsite power supplies must be considered as one power supply.	• 480V EDG 31 • 480V EDG 32 • 480V EDG 33 • Unit Auxiliary transformer • Station Auxiliary transformer • 13W92 feeder • 13W93 feeder • Appendix R Diesel

9.1 - Emergency Action Levels CATEGORY 7.0 EQUIPMENT FAILURES				
Category	**General**	**Site Area**	**Alert**	**Unusual Event**
7.1 Technical Specifications/ Requirements				**7.1.1 {>200°F}** Plant is not brought to required operating mode within Technical Specifications LCO Action Statement Time.
7.2 System Failures or Control Room Evacuation		**7.2.5 {All}** Control Room evacuation AND Plant control cannot be established per AOP-SSD-1 in [Unit 2] ≤ 15 min. [Unit 3] ≤ 30 min.	**7.2.2 {>200°F}** Turbine failure generated missiles which causes or potentially causes any required safety related system or structure to become inoperable. **7.2.3 {All}** Entry into AOP-SSD-1 **7.2.4 {≤200°F}** Reactor coolant temperature cannot be maintained ≤ **200°F**	**7.2.1 {>200°F}** Report of main turbine failure requiring turbine trip resulting in: Damage to turbine generator seals causing a release of *lubricating oil or hydrogen* **OR** Turbine casing penetration

9.1 - Emergency Action Levels

CATEGORY 7.0 EQUIPMENT FAILURES

Category	General	Site Area	Alert	Unusual Event
7.3 Loss of Indications/ Alarms/ Communication Capability		**7.3.4 {>200°F}** Loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels **AND** Loss of ability to monitor critical safety function status **AND** A significant plant transient in progress	**7.3.3 {>200°F}** Unplanned loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels for > 15 min. **AND** Increased surveillance is required for safe plant operation **AND EITHER:** A significant plant transient in progress **OR** [Unit 2] PICS [Unit 3] CFMS and QSPDS are unavailable	**7.3.1 {>200°F}** Unplanned loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels for **> 15 min.** **AND** Increased surveillance is required for safe plant operation **7.3.2 {All}** Loss of all communications capability affecting the ability to EITHER: Perform routine operations **OR** Notify offsite agencies or personnel

9.1 - Emergency Action Levels

CATEGORY 8.0 HAZARDS

Category	General	Site Area	Alert	Unusual Event
8.1 Security Threats	**8.1.10 {All}** A Hostile Force has taken control of plant equipment such that plant personnel are unable to operate equipment required to maintain safety functions.	**8.1.7 {All}** Intrusion into a plant Vital Area by a Hostile Force **8.1.8 {All}** Any security event which represents actual or likely failures of plant systems needed to protect the public. **8.1.9 {All}** Notification from the site security force that an armed attack, explosive attack, airliner impact or other Hostile Action is occurring or has occurred within the Protected Area	**8.1.4 {All}** Any security event which represents an actual substantial degradation of the level of safety of the plant **8.1.5 {All}** A validated notification from NRC of an airliner attack threat < 30 minutes away **8.1.6 {All}** Notification from the site security force that an armed attack, explosive attack, airliner impact or other Hostile Action is occurring or has occurred within the OCA.	**8.1.1 {All}** Notification of any credible site specific security threat by the Security Shift Supervisor or outside agency. **8.1.2 {All}** Indication of attempted sabotage within the plant Protected Area **8.1.3 {All}** A validated notification from NRC providing information of an aircraft threat.

9.1 - Emergency Action Levels

CATEGORY 8.0 HAZARDS

Category	General	Site Area	Alert	Unusual Event
8.2 Fire or Explosion			**8.2.3 {All}** Fire or explosion in any plant area, Table 8.1, which causes or potentially causes any required safety related system or structure to become inoperable	**8.2.1 {All}** Confirmed fire in or contiguous to any plant area, Table 8.1 not extinguished in ≤ 15 min. of Control Room notification. **8.2.2 {All}** Report by plant personnel of an explosion within Protected Area boundary resulting in visible damage to non-vital permanent structures or equipment.

9.1 - Emergency Action Levels

CATEGORY 8.0 HAZARDS

Category	General	Site Area	Alert	Unusual Event
8.3 Man-Made Events			**8.3.4{All}** Vehicle crash or projectile impact which causes or potentially causes any required safety related system or structure to become inoperable, Table 8.1 **8.3.5 {All}** Report or detection of toxic or flammable gases within a plant area, Table 8.1, in concentrations that will be life threatening to plant personnel or preclude access to equipment (even when using personal protective equipment) needed for safe plant operation	**8.3.1 {All}** Vehicle crash into or projectile which impacts plant safety related structures or systems within Protected Area boundary **8.3.2 {All}** Report or detection of toxic or flammable gases that could enter or have entered within the Protected Area boundary in amounts that could affect the health of plant personnel or safe plant operation **OR** Report by local, county or state officials, for potential evacuation of site personnel based on offsite event **8.3.3 {All}** Accident Conditions affecting a loaded cask CONFINEMENT BOUNDRY Cask Tip-Over OR Dropped Cask Resulting in Cask Tip-Over

9.1 - Emergency Action Levels

CATEGORY 8.0 HAZARDS

Category	General	Site Area	Alert	Unusual Event
8.4 Natural Events			**8.4.4 {All}** Earthquake felt inplant based upon a consensus of Control Room Operators on duty AND Kinemetrics Strong Motion Accelographs in the Unit 3 VC produce an alarm in the Control Room **AND** Amber and red Peak Shock Annunciators indicate seismic activity **8.4.5 {All}** Sustained winds **> 90 mph** onsite **OR** Tornado strikes a plant vital area, Table 8.1 **8.4.6 {All}** Assessment by the Control Room personnel that a natural event has occurred which causes or potentially causes any required safety system or structure to become inoperable, Table 8.1 **8.4.7 {All}** River level **≥ 15'** (Ø MSL) **OR** Low service water bay (intake structure) level resulting in a loss of	**8.4.1 {All}** Earthquake felt in plant based upon a consensus of Control Room Operators on duty AND EITHER Kinemetrics Strong Motion Accelographs in the Unit 3 VC produce an alarm in the Control Room **OR** At least one amber Peak Shock Annunciator is lit **8.4.2 {All}** Report by plant personnel of tornado within plant Protected Area boundary **8.4.3 {All}** River level ≥ **14.5'** (Ø MSL) **OR** Service water bay (intake structure) level **< -4'5"** (Ø MSL)

9.1 - Emergency Action Levels

CATEGORY 8.0 HAZARDS

Table 8.1 Plant Areas

Unit 2	Unit 3
• Condensate Storage Tank • RWST • Service Water Pump Structure • Service Water Valve Pit East • Fuel Storage Building • Primary Auxiliary Building/Fan House • Vapor Containment Building • 480 Volt Switchgear Room (Control Bldg.) • Cable Spreading Room/Electrical Tunnel • Central Control Room • Diesel Generator Building/Fuel Tank Area • Auxiliary Feedwater Pump Building • Battery Room (Control Bldg. 33'0" ele.) • Central Alarm Station	• Auxiliary Feedpump Building • P.A.B. • CAS/SAS • Fuel Storage Building • Control Building • Control Room • Service Water Pumps • Refueling Water Tank • EDG Rooms • Diesel Fuel Tanks • Vital Area Access to Containment • Appendix R Diesel Generator • Backup Service Water

9.1 - Emergency Action Levels

CATEGORY 9.0

Category	General	Site Area	Alert	Unusual Event
9.1 Other	**9.1.7 {All}** As determined by the Shift Manager or Emergency Director, events are in progress which indicate actual, or imminent core damage and the potential for a large release of radioactive material in excess of EPA PAGs outside the site boundary. **9.1.8 {>200°F}** Any event, as determined by the Shift Manager or Emergency Director, that could lead or has led to a loss of any two fission product barriers and loss or potential loss of the third, Attachment 2.	**9.1.5 {All}** As determined by the Shift Manager or Emergency Director, events are in progress which indicate actual or likely failures of plant systems needed to protect the public. Any releases are not expected to result in exposures which exceed EPA PAGs. **9.1.6 {>200°F}** Any event, as determined by the Shift Manager or Emergency Director, that could lead or has led to **EITHER:** Loss or potential loss of both fuel clad and RCS barrier, Attachment A. **OR** Loss or potential loss of either fuel clad or RCS barrier in conjunction with a loss of containment, Attachment 2.	**9.1.3 {All}** Any event, as determined by the Shift Manager or Emergency Director, that could cause or has caused actual substantial degradation of the level of safety of the plant. **9.1.4 {>200°F}** Any event, as determined by the Shift Manager or Emergency Director, that could lead or has led to a loss or potential loss of either fuel clad or RCS barrier, Attachment 2.	**9.1.1 {All}** Any event, as determined by the Shift Manager or Emergency Director, that could lead to or has led to a potential degradation of the level of safety of the plant. **9.1.2 {>200°F}** Any event, as determined by the Shift Manager or Emergency Director, that could lead to or has led to a loss or potential loss of containment, Attachment 2.

9.2 – Fission Product Barrier Thresholds

FUEL CLADDING BARRIER

Potential Loss	Loss
• ORANGE path in F-0.2, CORE COOLING	• RED path in F-0.2, CORE COOLING
• RED path in F-0.3, HEAT SINK AND Heat sink is required	• Coolant activity **> 300 µCi/cc I-131** equivalent
• Core Exit Thermocouple Readings [Unit 2] **> 700°F** [Unit 3] **> 715 °F**	• Core Exit Thermocouple Readings **> 1200 °F**
• RVLIS [Unit 2] ≤ **41%** [Unit 3] ≤ **33%** w/ no RCPs running	• Containment radiation monitor **R-25 or R-26 > 17 R/hr**
• Emergency Director Judgment	• Emergency Director Judgment

RCS BARRIER

Potential Loss	Loss
• RED path on F-0.4, INTEGRITY	• RCS subcooling < SI initiation setpoint due to RCS leakage
• RED path on F-0.3, HEAT SINK AND Feed & Bleed is required	• Unisolable faulted (outside VC) ruptured steam generator
• Primary system leakage exceeding capacity (**> 75 gpm**) of a single charging pump	[Unit 2] R-41 **> 1.2E-5 µCi/cc or** R-42 off-scale due to RCS leakage [Unit 3] R-11 **> 1.2E-5 µCi/cc or** R-12 **> 0.05 µCi/cc**
• Emergency Director Judgment	• Emergency Director Judgment

9.2 – Fission Product Barrier Thresholds

CONTAINMENT BARRIER

Potential Loss	Loss
• RED path F-0.5, CONTAINMENT • EITHER: Core exit thermocouples **>1200° F** OR Core exit thermocouples [Unit 2] **>700 °F** [Unit 3] **> 715 °F** with RVLIS [Unit 2] **<41%** [Unit 3] **<33%** w/ no RCPs AND Restoration procedures not effective within 15 min. • Confirmed phase "B" isolation signal following confirmed LOCA with less than minimum containment cooling safeguards equipment operating Fan Cooler Units Oper. / Spray Pumps Req'd <3 / 2 3 / 1 5 / 0 • Containment pressure **47 psig** and increasing • ≥**4 %** hydrogen concentration in containment • Containment radiation monitor R-25 or R-26 reading **>68 R/hr** • Emergency Director Judgment	• Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure • EITHER: Any Phase "A" or Phase "B" or containment ventilation isolation valve(s) not closed when required following confirmed LOCA OR Inability to isolate any primary system discharging outside containment AND Radiological release to the environment exists as a result • Both doors open on a VC airlock for > 4 hrs. OR Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment for > 4 hrs. OR Any Phase "A" or Phase "B" or containment ventilation isolation valve(s) not closed when required which results in a radiological release pathway to the environment • Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > Technical Specifications limit in any steam generator • Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions • Emergency Director Judgment