

UNUSUAL EVENT

ALERT

SITE AREA EMERGENCY

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1	RADIOLOGICAL CONDITIONS	MEASURED EFFLUENTS	Confirmed sample analysis for gaseous or liquid release indicates concentrations or release rates greater than Offsite Dose Calculation Manual limits.	Confirmed sample analysis for gaseous or liquid release indicates concentrations or release rates greater than 10 times Offsite Dose Calculation Manual limits.	Site boundary dose resulting from an actual or imminent release of gaseous radioactivity for an actual or projected duration such that either of the following limits may be exceeded: • TEDE > 100 mR/hr • thyroid CDE > 500 mR/hr	
		AREA & AIRBORNE RADIATION LEVELS		Unexpected area or airborne radiation levels 1000 times normal which could require off-site impact assessment.	Site boundary dose resulting from an actual or imminent release of gaseous radioactivity for an actual or projected duration such that either of the following limits may be exceeded: • TEDE > 1000 mR/hr • thyroid CDE > 5000 mR/hr	
2	FUEL DAMAGE	REACTOR WATER I-131	Rx water sample analysis exceeds 1.1 µCi/gm I-131 dose equivalent for > 24 hrs. OR Rx water sample analysis reveals an instantaneous spike of 4 µCi/gm I-131 dose equivalent.	Reactor coolant sample activity > 300 µCi/gm I-131 dose equivalent.		
		AEOG RADIATION LEVELS	Valid AEOG RAD HI-HI alarm (3-0-1) which does not clear within 30 minutes.	Confirmed sample analysis determines that the release rate is > 1.5 Ci/sec.		
		PRIMARY CONTAINMENT RADIATION LEVELS				
		RPV WATER LEVEL				
		REFUEL FLOOR RADIATION LEVEL				
3	COOLANT INVENTORY	CONTAINMENT SUMP FLOW	Reactor coolant leakage into the primary containment from unidentified sources > 5 gpm OR Total reactor coolant leakage into the primary containment > 25 gpm.	Total reactor coolant leakage into the primary containment > 50 gpm.		
		DRYWELL PRESSURE	Drywells pressure > 2.5 psig. AND Drywell floor drain sump HI level alarm energized. AND Drywell equipment drain sump HI level alarm energized.			
		PRIMARY LEAK OUTSIDE CONTAINMENT WITH FAILURE TO ISOLATE				
		ON-SITE OR IN-PLANT FIRES	Any unplanned on-site or in-plant fire not extinguished within 10 minutes.	Any in-plant fire which affects or will likely affect safety system equipment required ASAP : • For continued operation in the current operating mode. • If shutdown, to achieve and maintain cold shutdown conditions.		
4	FIRE	RIVER WATER LEVEL	River water level > 230 ft or < 200 ft.	River water level > 250 ft or < 200 ft.		
		WIND VELOCITY	Sustained wind velocity > 75 mph being experienced on-site.	Sustained wind velocity > 75 mph being experienced on-site.		
		EARTHQUAKE	Any earthquake sensed on-site as recognized by observation or confirmed detection.	Earthquake exceeds the OBE or minor damage to non-nuclear safety class equipment.		
5	NATURAL PHENOMENON	TORNADO	Any on-site tornado.	Any tornado striking a safety class structure as evidenced by physical damage.		

6	LOSS OF POWER	LOSS OF AC POWER CAPABILITY	348KV and 118KV bus voltage becomes zero OR Unplanned loss of both startup transformers OR Unplanned loss of capability of both diesel generators to supply Bus 3 or 4.	No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 3 within 15 minutes. AND No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 4 within 15 minutes.	No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 3 within 15 minutes. AND No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 4 within 15 minutes.	No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 3 AND No off-site or on-site AC power supply is capable of energizing 4160 volt Bus 4 AND either: • Power restoration to at least one (Bus 3 or Bus 4) vital bus not likely within 6 hours OR • RPV water level < TAF.
		LOSS OF DC POWER CAPABILITY				
7	LOSS OF SYSTEMS OR EQUIPMENT	PLANT SHUTDOWN NOT COMPLETED IN ACCORDANCE WITH LCO OF TECH SPECS.	Required plant operating mode change or plant shutdown is not completed within the specified time of a Technical Specification action statement.			
		LOSS OF CR ALARMS OR INDICATORS	Unplanned loss of most or all safety system annunciation or indication (CRP 9-3, 9-4 and 9-5) in the control room for greater than 15 min. AND either: • Plant transient is in progress OR • SPDS is unavailable.			
		LOSS OF COMMUNICATION CAPABILITY	Loss of all on-site or all off-site communications capability.			
8	OTHER HAZARDS OR CONDITIONS	LOSS OF DECAY HEAT REMOVAL CAPABILITY		Reactor coolant temperature cannot be maintained below 212° F.		
		FAILURE TO SCRAM	Automatic or manual SCRAM signal present AND It cannot be determined that the reactor will remain shutdown.	Any explosion which results in damage to in-plant safety systems or vital structures.	Any explosion which renders safe shutdown equipment inoperable.	
		EXPLOSIONS	Any near or on-site explosion.	Any explosion which results in damage to in-plant safety systems or vital structures.	Any explosion which renders safe shutdown equipment inoperable.	
		CRASH IMPACTS	Vehicle crash into safety related structures or systems.	Any crash impact which damages safety related structures or systems.	Any crash impact which renders safe shutdown equipment inoperable.	
9	SECURITY EVENTS	MAIN TURBINE FAILURE	Turbine failure resulting in casing penetration or damage to turbine or generator seals.	Turbine casing penetration resulting in damage to safety systems or vital structures.		
		RELEASE OF HAZARDOUS OR TOXIC SUBSTANCES	Actual or potential release of hazardous substances which may affect personnel safety and plant operation.	Uncontrolled entry of toxic or flammable gas into vital areas of the plant (excluding, to render safe shutdown equipment inoperable).	Uncontrolled entry of toxic or flammable gas into vital areas of the plant which render safe shutdown equipment inoperable.	
		EVACUATION OF THE CONTROL ROOM			Evacuation of the Control Room.	
10	GENERAL CRITERIA	SAFE PLANT OPERATION THREATENED	Security threat with potential to affect safe plant operation.	On-going security threat in progress which has the potential of affecting safe plant operation.		
		LOSS OF PHYSICAL CONTROL OF THE PLANT			Determination that loss of physical control of the plant is imminent.	Determination that loss of physical control of the plant is imminent.

NOTES	
1	To be determined by sample analysis. The following may be used to indicate when analysis should be performed: Gaseous: Stack Gas Rad Mon HI/Alerts referenced by parameters • 3-0-7: STACK GAS RAD MON SYS 1 TRBL • 3-0-8: STACK GAS RAD MON SYS 2 TRBL Liquid: Parameters • 3-6-7: RADWASTE EFFLUENT RAD HI • 3-6-7: DMC CANAL RAD HI • 3-6-8: SERVICE WATER EFFLUENT RAD HI AEOG: Parameters • 3-0-1: AEOG RAD HI - HI
2	Integrated dose to be determined by ASAP : • Direct field monitoring OR • Projected off-site dose correlation.
3	If limits are exceeded, then protective action recommendations should be made per OP 3011.
4	Per VYVPS Safe Shutdown Capability Analysis Figure 2-3, Principal Safe Shutdown Systems are: • RP8 (CRD SCRAM) • SRVs • Core Spray • HPCI • RCIC • RHR Service Water • Service Water
5	Earthquake detection criteria based on receipt of alarm from the seismic monitoring system confirmed by data analysis, multiple indications, observation, or seismic activity reports.
6	See OP 3127, Appendix A "Seismic Damage Indicator Walkdown Check Sheet - SDI List 1 (NBS Components)".
7	See OP 3127, Appendix A "Seismic Damage Indicator Walkdown Check Sheet - SDI List 2 (Safety Related Components)".
8	Each of the following is a means for determining that the reactor will remain shutdown: • all control rods are inserted to or beyond position 02 OR • all control rods are inserted to position 00 except one rod OR • TBC or RE has determined that sufficient control rod density exists.
9	Notification and response for Security Events at this level are performed in accordance with the Physical Security Plan also.

	COOLANT ACTIVITY	RPV WATER LEVEL	DRYWELL RADIATION	DRYWELL PRESSURE	RCS LEAKAGE	PRIMARY CONTAINMENT ISOLATION	COMBUSTIBLE GAS	GENERAL
FUEL CLAD Potential Loss		Uncontrolled decreasing RPV water level AND RPV water level < TAF						Any condition which indicates LOSS or POTENTIAL LOSS of the FUEL CLAD barrier.
RCS Potential Loss		Reactor coolant sample activity > 300 µCi/gm I-131 Dose Equivalent	Containment radiation monitors reading > 1000 R/hr.			Reactor coolant system leak rate > 50 gpm inside the drywell OR Unsolvable reactor coolant leakage outside the drywell as indicated by high reactor building area temperatures or radiation levels.		Any condition which indicates LOSS or POTENTIAL LOSS of the REACTOR COOLANT SYSTEM barrier.
PRIMARY CONTAINMENT Potential Loss		RPV water level < 48 inches.	Containment radiation monitors reading > 10 R/hr	Drywells pressure > 2.5 psig AND Indication of a reactor coolant system leak inside the drywell.			Explosive hydrogen/oxygen mixture exists within either the drywell or torus air space. (i.e.: > 6% H2 and > 5% O2 mixture)	Any condition which indicates LOSS or POTENTIAL LOSS of the PRIMARY CONTAINMENT barrier.
			Containment radiation monitors reading > 5000 R/hr	Rapid uncontrolled pressure decrease following initial increase.		Intentional venting per EOPs or SAGs OR Failure of two in-series PCIS valves to isolate a release pathway OR Observed structural failure OR Unsolvable reactor coolant leakage outside the drywell as indicated by high reactor building area temperatures or radiation levels.		