GO2-16-104
Enclosure 1, Attachment 3

Emergency Action Level (EAL) Classification Matrix (Wallcharts)

(For information only)

		GENERAL EMERGENCY	SITE AREA EMERGENCY	ALERT	UNUSUAL EVENT
R	1 Rad Effluent	Release of gaseous radioactivity resulting in offsite dose greater than 1,000 mrem TEDE or 5,000 mrem thyroid CDE **RG1.1** 1 2 3 4 5 DEF (1) Reading on any Table 3 effluent radiation monitor GT column "GE" for GE 15 min. OR (2) Dose assessment using actual meteorology indicates doses GT 1,000 mrem TEDE or GT 5000 mrem thyroid CDE at or beyond the SITE BOUNDARY (Notes 1, 2, 3, 4) **RG1.2** 1 2 3 4 5 DEF Field survey results indicate EITHER of the following at or beyond the SITE BOUNDARY: • Closed window dose rates GT 1,000 mR/hr expected to continue for GE 60 min. • Analyses of field survey samples indicate thyroid CDE GT 5,000 mrem for 60 min. of inhalation. (Notes 1, 2)	Release of gaseous radioactivity resulting in offsite dose greater than 100 mrem TEDE or 500 mrem thyroid CDE **RS1.1** 1 2 3 4 5 DEF (1) Reading on any Table 3 effluent radiation monitor GT column "SAE" for GE 15 min. OR (2) Dose assessment using actual meteorology indicates doses GT 100 mrem TEDE or GT 500 mrem thyroid CDE at or beyond the SITE BOUNDARY (Notes 1, 2, 3, 4) **RS1.2** 1 2 3 4 5 DEF Field survey results indicate EITHER of the following at or beyond the SITE BOUNDARY: • Closed window dose rates GT 100 mR/hr expected to continue for GE 60 min. • Analyses of field survey samples indicate thyroid CDE GT 500 mrem for 60 min. of inhalation. (Notes 1, 2)	Release of gaseous or liquid radioactivity resulting in offsite dose greater than 10 mrem TEDE or 50 mrem thyroid CDE **RA1.1** 1 2 3 4 5 DEF (1) Reading on any Table 3 effluent radiation monitor GT column "ALERT" for GE 15 min. OR (2) Dose assessment using actual meteorology indicates doses GT 10 mrem TEDE or GT 50 mrem thyroid CDE at or beyond the SITE BOUNDARY (Notes 1, 2, 3, 4) **RA1.2** 1 2 3 4 5 DEF Analysis of a liquid effluent sample indicates a concentration or release rate that would result in doses GT 10 mrem TEDE or GT 50 mrem thyroid CDE at or beyond the SITE BOUNDARY for 60 min. of exposure (Notes 1, 2) **RA1.3** 1 2 3 4 5 DEF Field survey results indicate EITHER of the following at or beyond the SITE BOUNDARY: • Closed window dose rates GT 10 mR/hr expected to continue for GE 60 min. • Analyses of field survey samples indicate thyroid CDE GT 50 mrem for 60 min. of inhalation. (Notes 1, 2)	Release of gaseous or liquid radioactivity greater than 2 times the ODCM limits for 60 minutes or longer **RU1.1** 1 2 3 4 5 DEF (1) Reading on any Table 3 effluent radiation monitor GT column "UE" for GE 60 min. OR (2) Sample analyses for a gaseous or liquid release indicates a concentration or release rate > 2 x ODCM limits for GE 60 min. (Notes 1, 2, 3)
Abnormal Rad Levels / Rad Effluent	2 Irradiated Fuel Event	Spent fuel pool level cannot be restored to at least the top of the fuel racks for 60 minutes or longer **RG2.1** 1 2 3 4 5 DEF Spent fuel pool level cannot be restored to at least 0.5 ft for GE 60 min. (Note 1)	Spent fuel pool level at the top of the fuel racks **RS2.1** 1 2 3 4 5 DEF Lowering of spent fuel pool level to 0.5 ft	Significant lowering of water level above, or damage to, irradiated fuel **RA2.1** 1 2 3 4 5 DEF Uncovery of irradiated fuel in the REFUELING PATHWAY **RA2.2** 1 2 3 4 5 DEF Damage to irradiated fuel resulting in a release of radioactivity AND High alarm on any of the following radiation monitors: • ARM-RIS-1 Reactor Building Fuel Pool Area • ARM-RIS-2 Reactor Building Fuel Pool Area • ARM-RIS-34 Reactor Building Elevation 606 • REA-RIS-609A-D Rx Bldg Vent **RA2.3** 1 2 3 4 5 DEF Lowering of spent fuel pool level to 10 ft	Unplanned loss of water level above irradiated fuel **RU2.1** 1 2 3 4 5 DEF UNPLANNED water level drop in the REFUELING PATHWAY as indicated by EITHER of the following: • SFP level LE 22.3 ft • SFP low level alarm AND UNPLANNED rise in area radiation levels as indicated by any of the following radiation monitors: • ARM-RIS-1 Reactor Building Fuel Pool Area • ARM-RIS-2 Reactor Building Fuel Pool Area • ARM-RIS-34 Reactor Building Elevation 606
	3 Area Radiation Levels			Radiation levels that IMPEDE access to equipment necessary for normal plant operations, cooldown or shutdown **RA3.1** 1 2 3 4 5 DEF (1) Dose rates GT 15 mR/hr in Control Room (ARM-RIS-19) or CAS (by survey) OR (2) An UNPLANNED event results in radiation levels that prohibit or IMPEDE access to any Table 9 rooms or areas (Note 5)	
E ISFSI	1 Confinement Boundary	None	None	None	Damage to a loaded cask CONFINEMENT BOUNDARY **EU1.1** Storage Operations Damage to a loaded canister (MPC) CONFINEMENT BOUNDARY as indicated by measured dose rates on a loaded overpack GT EITHER: • 20 mrem/hr (gamma + neutron) on the top of the overpack • 100 mrem/hr (gamma + neutron) on the side of the overpack, excluding inlet and outlet ducts
H Hazards	1 Security	None	HOSTILE ACTION within the PROTECTED AREA **HS1.1** 1 2 3 4 5 DEF A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the Security Sergeant or Security Lieutenant	HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat within 30 minutes **HA1.1** 1 2 3 4 5 DEF (1) A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by the Security Sergeant or Security Lieutenant OR (2) A validated notification from NRC of an aircraft attack threat within 30 min. of the site	Confirmed SECURITY CONDITION or threat **HU1.1** 1 2 3 4 5 DEF (1) A SECURITY CONDITION that does not involve a HOSTILE ACTION as reported by the Security Sergeant or Security Lieutenant OR (2) Notification of a credible security threat directed at the site OR (3) A validated notification from the NRC providing information of an aircraft threat
	2 Seismic Event	None	None	See CA6.1/MA8.1 for potential for upgrade to an Alert based on degraded safety system performance or damage	Seismic event GT OBE levels **HU2.1** 1 2 3 4 5 DEF Seismic event GT Operating Basis Earthquake (OBE) as indicated by H13.P851.S1.5-1 (OPERATING BASIS EARTHQUAKE EXCEEDED) activated
	3 Natural or Tech. Hazard	None	None	See CA6.1/MA8.1 for potential for upgrade to an Alert based on degraded safety system performance or damage	Hazardous event **HU3.1** 1 2 3 4 5 DEF (1) A tornado strike within the PROTECTED AREA OR (2) Volcanic ash fallout requiring plant shutdown **HU3.2** 1 2 3 4 5 DEF Internal room or area FLOODING of a magnitude sufficient to require manual or automatic electrical isolation of a SAFETY SYSTEM component needed for the current operating mode **HU3.3** 1 2 3 4 5 DEF (1) Movement of personnel within the PROTECTED AREA is IMPEDED due to an offsite event involving hazardous materials (e.g., an offsite chemical spill, 618-11 event or toxic gas release) OR (2) A hazardous event that results in on-site conditions sufficient to prohibit the plant staff from accessing the site via personal vehicles (Note 7)
	4 Fire	None	None	See CA6.1/MA8.1 for potential for upgrade to an Alert based on degraded safety system performance or damage	FIRE potentially degrading the level of safety of the plant **HU4.1** 1 2 3 4 5 DEF A FIRE is not extinguished within 15 min. of any of the following FIRE detection indications (Note 1): • Report from the field (i.e., visual observation) • Receipt of multiple (more than 1) fire alarms or indications • Field verification of a single fire alarm AND The FIRE is located within any Table 5 area **HU4.2** 1 2 3 4 5 DEF Receipt of a single fire alarm (i.e., no other indications of a FIRE) AND The fire alarm is indicating a FIRE within any Table 5 area AND The existence of a FIRE is not verified within 30 min. of alarm receipt (Note 1) **HU4.3** 1 2 3 4 5 DEF (1) A FIRE within the ISFSI or plant PROTECTED AREA not extinguished within 60 min. of the initial report, alarm or indication (Note 1) OR (2) A FIRE within the ISFSI or plant PROTECTED AREA that requires firefighting support by an offsite fire response agency to extinguish
	5 Hazardous Gases	None	None	Gaseous release IMPEDING access to equipment necessary for normal plant operations, cooldown or shutdown **HA5.1** 1 2 3 4 5 DEF Release of a toxic, corrosive, asphyxiant or flammable gas into any Table 9 rooms or areas AND Entry into the room or area is prohibited or IMPEDED (Note 5)	
	6 Control Room Evacuation	None	Inability to control a key safety function from outside the Control Room **HS6.1** 1 2 3 4 5 An event has resulted in plant control being transferred from the Control Room to the Remote Shutdown Panel or Alternate Remote Shutdown Panel AND Control of any of the following key safety functions is not reestablished within 15 min. (Note 1): • Reactivity (Modes 1 and 2 **only**) • RPV water level • RCS heat removal	Control Room evacuation resulting in transfer of plant control to alternate locations **HA6.1** 1 2 3 4 5 DEF An event has resulted in plant control being transferred from the Control Room to the Remote Shutdown Panel or Alternate Remote Shutdown Panel	None
	7 Judgment	Other conditions existing which in the judgment of the Emergency Director warrant declaration of General Emergency **HG7.1** 1 2 3 4 5 DEF Other conditions exist which, in the judgment of the Emergency Director, indicate that events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.	Other conditions existing which in the judgment of the Emergency Director warrant declaration of Site Area Emergency **HS7.1** 1 2 3 4 5 DEF Other conditions exist which, in the judgment of the Emergency Director, indicate that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts, (1) toward site personnel or equipment that could lead to the likely failure of or, (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the SITE BOUNDARY.	Other conditions existing which in the judgment of the Emergency Director warrant declaration of an Alert **HA7.1** 1 2 3 4 5 DEF Other conditions exist which, in the judgment of the Emergency Director, indicate that events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.	Other conditions existing which in the judgment of the Emergency Director warrant declaration of a UE **HU7.1** 1 2 3 4 5 DEF Other conditions exist which, in the judgment of the Emergency Director, indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of SAFETY SYSTEMS occurs.

Table 3 Effluent Monitor Classification Thresholds

	Release Point	Monitor	GE	SAE	Alert	UE
Gaseous	Reactor Building Exhaust	PRM-RE-1B (I)	----	----	----	6.00E+03 cps
		PRM-RE-1C (H)	2.00E+04 cps	2.00E+03 cps	4.00E+02 cps	----
	Turbine Building Exhaust	TEA-RIS-13	8.35E-02 µCi/cc	8.35E-03 µCi/cc	8.35E-04 µCi/cc	1.02E-04 µCi/cc
	Radwaste Building Exhaust	WEA-RIS-14	3.45E-01 µCi/cc	3.45E-02 µCi/cc	3.45E-03 µCi/cc	1.98E-03 µCi/cc
Liquid	Radwaste Effluent	FDR-RIS-606	----	----	----	2 X HI-HI alarm
	TSW Effluent	TSW-RIS-5	----	----	----	3.00E-05 µCi/cc
	Service Water Process A Service Water Process B	SW-RIS-604 SW-RIS-605	----	----	----	1.00E+02 cps 1.00E+02 cps

Table 9 Safe Operation & Shutdown Rooms/Areas

Room/Area	Modes Applicability
RW 467' Radwaste Control Room (RHR flush to RW tanks)	3
RW 467' Vital Island (RHR-V-9 disconnect)	3
RB 422' B RHR Pump Rm (local pump temperatures)	3
RB 454' B RHR Pump Rm (operate RHR-V-85B)	3

Table 5
Plant Structures Containing Safe Shutdown Systems or Components

- Vital portions of the Rad Waste/Control Building:
  - 467' elevation vital island
  - 487' elevation cable spreading room
  - Main Control Room and vertical cable chase
  - 525' elevation HVAC area
- Reactor Building
- Vital portions of the Turbine Building
  - DEH pressure switches
  - RPS switches on turbine throttle valves
  - Main steam line radiation monitors
  - Turbine Building ventilation radiation monitors
  - Main steam line piping up to MS-V-146 and the first stop valves
- Standby Service Water Pump Houses
- Diesel Generator Building

Table 9 Safe Operation & Shutdown Rooms/Areas

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RB 422' B RHR Pump Rm (local pump temperatures)	3
RB 454' B RHR Pump Rm (operate RHR-V-85B)	3

Notes

1. The Emergency Director should declare the event promptly upon determining that time limit has been exceeded, or will likely be exceeded
2. If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded the specified time limit
3. If the effluent flow past an effluent monitor is known to have stopped, indicating that the release path is isolated, the effluent monitor reading is no longer VALID for classification purposes
4. The pre-calculated effluent monitor values presented in EALs RA1.1, RS1.1 and RG1.1 should be used for emergency classification assessments until the results from a dose assessment using actual meteorology are available
5. If the equipment in the listed room or area was already inoperable or out-of-service before the event occurred, then no emergency classification is warranted
6. If CONTAINMENT CLOSURE is re-established prior to exceeding the 30-minute time limit, declaration of a General Emergency is **not** required
7. This EAL does not apply to routine traffic impediments such as fog, snow, ice, or vehicle breakdowns or accidents
8. A manual scram action is any operator action, or set of actions, which causes the control rods to be rapidly inserted into the core, and does **not** include manually driving in control rods or implementation of boron injection strategies

Modes: 1 Power Operations | 2 Startup | 3 Hot Shutdown | 4 Cold Shutdown | 5 Refueling | DEF Defueled

ENERGY NORTHWEST

13.1.1A
EAL Classification Matrix
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ALL CONDITIONS

M — System Malfunct.

	GENERAL EMERGENCY	SITE AREA EMERGENCY	ALERT	UNUSUAL EVENT
1 Loss of Emergency AC Power	Prolonged loss of all offsite and all onsite AC power to emergency buses **MG1.1** 1 2 3 Loss of all offsite AND all onsite AC power capability to emergency buses SM-7 and SM-8 AND EITHER: Restoration of emergency bus SM-7 or SM-8 in LT 4 hours is not likely (Note 1) OR RPV level cannot be restored and maintained GT -186 in. Loss of all emergency AC and vital DC power sources for 15 minutes or longer **MG1.2** 1 2 3 Loss of all offsite AND all onsite AC power capability to emergency buses SM-7 and SM-8 for GE 15 min. (Note 1) AND Indicated voltage is LT 108 VDC on both 125 VDC buses DP-S1-1 and DP-S1-2 for GE 15 min. (Note 1)	Loss of all offsite and all onsite AC power capability to emergency buses for 15 minutes or longer **MS1.1** 1 2 3 Loss of all offsite and all onsite AC power capability to emergency buses SM-7 and SM-8 for GE 15 min. (Note 1)	Loss of all **but one** AC power source to emergency buses for 15 minutes or longer **MA1.1** 1 2 3 AC power capability, Table 2, to emergency buses SM-7 and SM-8 reduced to a single power source for GE 15 min. (Note 1) AND Any additional single power source failure will result in loss of all AC power to emergency buses SM-7and SM-8	Loss of all offsite AC power capability to emergency buses for 15 minutes or longer **MU1.1** 1 2 3 Loss of all offsite AC power capability, Table 2, to emergency buses SM-7 and SM-8 for GE 15 min. (Note 1) **Table 2 AC Power Sources** **Offsite** • Startup Transformer TR-S • Backup Transformer TR-B • Backfeed 500 KV power through Main Transformers (if already aligned in modes 4, 5, def **only**) **Onsite** • DG1 • DG2 • Main Generator via TR-N1/N2
2 Loss of Vital DC Power		Loss of all vital DC power for 15 minutes or longer **MS2.1** 1 2 3 Indicated voltage is LT 108 VDC on both 125 VDC buses DP-S1-1 and DP-S1-2 for GE 15 min. (Note 1)	None	None
3 Loss of Control Room Indications	None	None	UNPLANNED loss of Control Room indications for 15 minutes or longer with a significant transient in progress **MA3.1** 1 2 3 An UNPLANNED event results in the inability to monitor one or more Table 10 parameters from within the Control Room for GE 15 min. (Note 1) AND Any Table 11 transient event in progress **Table 10 Safety System Parameters** • Reactor power • RPV level • RPV pressure • Primary containment pressure • Wetwell level • Wetwell temperature **Table 11 Transient Events** • Reactor scram • Runback GT 25% thermal reactor power • Electrical load rejection GT 25% full electrical load • ECCS injection • Thermal power oscillations GT 10%	UNPLANNED loss of Control Room indications for 15 minutes or longer **MU3.1** 1 2 3 An UNPLANNED event results in the inability to monitor one or more Table 10 parameters from within the Control Room for GE 15 min. (Note 1)
4 RCS Activity	None	**Table 5** **Plant Structures Containing Safe Shutdown Systems or Components** • Vital portions of the Rad Waste/Control Building: - 467' elevation vital island - 487' elevation cable spreading room - Main Control Room and vertical cable chase - 525' elevation HVAC area • Reactor Building • Vital portions of the Turbine Building - DEH pressure switches - RPS switches on turbine throttle valves - Main steam line radiation monitors - Turbine Building ventilation radiation monitors - Main steam line piping up to MS-V-146 and the first stop valves • Standby Service Water Pump Houses • Diesel Generator Building	Reactor coolant activity greater than Technical Specification allowable limits **MU4.1** 1 2 3 SJAE CONDSR OUTLET RAD HI-HI alarm (P602) **MU4.2** 1 2 3 Coolant activity GT 0.2 µCi/gm dose equivalent I-131
5 RCS Leakage	None			RCS leakage for 15 minutes or longer **MU5.1** 1 2 3 (1) RCS unidentified or pressure boundary leakage GT 10 gpm for GE 15 min. OR (2) RCS identified leakage GT 25 gpm for GE 15 min. OR (3) Leakage from the RCS to a location outside containment GT 25 gpm for GE 15 min.
6 RPS Failure	None **Table 4 Communication Methods** System / Onsite / ORO / NRC Plant Public Address (PA) System: X Plant Telephone System: X, X Plant Radio System Operations and Security Channels: X Offsite calling capability from the Control Room via direct telephone and fax lines: X, X Long distance calling capability on the commercial phone system: X, X	Inability to shut down the reactor causing a challenge to RPV water level or RCS heat removal **MS6.1** 1 2 An automatic OR manual scram fails to shut down the reactor AND All actions to shut down the reactor are not successful as indicated by reactor power GT 5% AND EITHER: RPV level cannot be restored and maintained above -186 in. or cannot be determined OR WW temperature and RPV pressure cannot be maintained below the HCTL	Automatic or manual scram fails to shut down the reactor, and subsequent manual actions taken at the reactor control consoles are not successful in shutting down the reactor **MA6.1** 1 2 An automatic OR manual scram fails to shut down the reactor AND Manual scram actions taken at the reactor control console (mode switch in shutdown, manual push buttons or ARI) are not successful in shutting down the reactor as indicated by reactor power GT 5% (Note 8)	Automatic or manual scram fails to shut down the reactor **MU6.1** 1 2 An automatic OR manual scram did not shut down the reactor AND A subsequent automatic scram OR manual scram action taken at the reactor control console (mode switch in shutdown, manual push buttons or ARI) is successful in shutting down the reactor as indicated by reactor power LE 5% (APRM downscale) (Note 8)
7 Loss of Comm.		None	None	Loss of all onsite or offsite communications capabilities **MU7.1** 1 2 3 (1) Loss of all Table 4 onsite communication methods OR (2) Loss of all Table 4 ORO communication methods OR (3) Loss of all Table 4 NRC communication methods
8 Hazardous Event Affecting Safety Systems	None	**Table 8 Hazardous Events** • Seismic event • Internal or external FLOODING event • High winds • Tornado strike • FIRE • EXPLOSION • Volcanic ash fallout • Other events with similar hazard characteristics as determined by the Shift Manager	Hazardous event affecting a SAFETY SYSTEM needed for the current operating mode **MA8.1** 1 2 3 The occurrence of any Table 8 hazardous event AND EITHER: Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM needed for the current operating mode OR The event has caused VISIBLE DAMAGE to a SAFETY SYSTEM component or structure, Table 5, needed for the current operating mode	None
F Fission Product Barrier Degradation	**FG1.1** 1 2 3 Loss of any two barriers AND Loss or potential loss of the third barrier (Table F-1)	**FS1.1** 1 2 3 Loss or potential loss of any two barriers (Table F-1)	**FA1.1** 1 2 3 Any loss or any potential loss of EITHER Fuel Clad or RCS barrier (Table F-1)	None

Table F-1 Fission Product Barrier Threshold Matrix

	FC - Fuel Clad Barrier		RCS - Reactor Coolant System Barrier		PC - Containment Barrier	
	Loss	**Potential Loss**	**Loss**	**Potential Loss**	**Loss**	**Potential Loss**
A RPV Water Level	SAG entry required	RPV level cannot be restored and maintained GT -161 in. or cannot be determined.	RPV level cannot be restored and maintained GT -161 in. or cannot be determined.	None	None	SAG entry required
B RCS Leak Rate	None	None	UNISOLABLE break in any of the following: • Main Steam Line • RCIC Steam Line • RWCU • Feedwater OR Emergency RPV Depressurization is required	UNISOLABLE primary system leakage that results in exceeding EITHER: RB area temperature alarm level (PPM 5.3.1 Table 23) OR RB area radiation alarm level (PPM 5.3.1 Table 24)	UNISOLABLE primary system leakage that results in exceeding EITHER: RB area maximum safe operating temperature (PPM 5.3.1 Table 23) OR RB area maximum safe operating radiation (PPM 5.3.1 Table 24)	None
C PC Conditions	None	None	PC pressure GT 1.68 psig due to RCS leakage	None	UNPLANNED rapid drop in PC pressure following PC pressure rise OR PC pressure response not consistent with LOCA conditions	PC pressure GT 45 psig OR Explosive mixture exists inside PC (H_2 GE 6% and O_2 GE 5%) OR WW temperature and RPV pressure cannot be maintained below the HCTL
D PC Rad / RCS Activity	Containment Radiation Monitor CMS-RIS-27E or CMS-RIS-27F reading GT 3,600 R/hr OR Primary coolant activity GT 300 µCi/gm Dose Equivalent I-131	None	Containment Radiation Monitor CMS-RIS-27E or CMS-RIS-27F reading GT 70 R/hr	None	None	Containment Radiation Monitor CMS-RIS-27E or CMS-RIS-27F reading GT 14,000 R/hr
E PC Integrity or Bypass	None	None	None	None	UNISOLABLE direct downstream pathway to the environment exists after PC isolation signal OR Intentional PC venting per EOPs	None
F Emergency Director Judgment	Any condition in the opinion of the Emergency Director that indicates loss of the fuel clad barrier	Any condition in the opinion of the Emergency Director that indicates potential loss of the Fuel Clad barrier	Any condition in the opinion of the Emergency Director that indicates loss of the RCS barrier	Any condition in the opinion of the Emergency Director that indicates potential loss of the RCS barrier	Any condition in the opinion of the Emergency Director that indicates loss of the Containment barrier	Any condition in the opinion of the Emergency Director that indicates potential loss of the Containment barrier

Modes: 1 Power Operations | 2 Startup | 3 Hot Shutdown | 4 Cold Shutdown | 5 Refueling | DEF Defueled

ENERGY NORTHWEST

13.1.1A
EAL Classification Matrix
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HOT CONDITIONS
(RCS GT 200°F)

C — Cold SD/ Refuel System Malfunct.

	GENERAL EMERGENCY	SITE AREA EMERGENCY	ALERT	UNUSUAL EVENT
1 RPV Level	Loss of RPV inventory affecting fuel clad integrity with containment challenged **CG1.1** [4][5] RPV level LT -161 in. for GE 30 min. (Note 1) AND Any of the following indications of containment challenge: • CONTAINMENT CLOSURE not established (Note 6) • Explosive mixture inside PC (H_2 GE 6% and O_2 GE 5%) • UNPLANNED rise in PC pressure • RB area radiation GT any Maximum Safe Operating level (PPM 5.3.1 Table 24) **CG1.2** [4][5] RPV level cannot be monitored for GE 30 min. (Note 1) AND Core uncovery is indicated by any of the following: • UNPLANNED wetwell level rise GT 2 inches (PPM 5.2.1 entry condition) • VALID indication of RB room flooding as identified by high level alarms (PPM 5.3.1 Table 25) • Observation of UNISOLABLE RCS leakage outside primary containment of sufficient magnitude to indicate core uncovery AND Any of the following indications of containment challenge: • CONTAINMENT CLOSURE not established (Note 6) • Explosive mixture inside PC (H_2 GE 6% and O_2 GE 5%) • UNPLANNED rise in PC pressure • RB area radiation GT any Maximum Safe Operating level (PPM 5.3.1 Table 24)	Loss of RPV inventory affecting core decay heat removal capability **CS1.1** [4][5] (1) CONTAINMENT CLOSURE not established AND RPV level LT -129 in. OR (2) CONTAINMENT CLOSURE established AND RPV level LT -161 in. **CS1.2** [4][5] RPV level cannot be monitored for GE 30 min. (Note 1) AND Core uncovery is indicated by any of the following: • UNPLANNED wetwell level rise GT 2 inches (PPM 5.2.1 entry condition) • VALID indication of RB room flooding as identified by high level alarms (PPM 5.3.1 Table 25) • Observation of UNISOLABLE RCS leakage outside primary containment of sufficient magnitude to indicate core uncovery	Significant loss of RPV inventory **CA1.1** [4][5] (1) Loss of RPV inventory as indicated by RPV level LT -50 in. OR (2) RPV level cannot be monitored for GE 15 min. (Note 1) AND UNPLANNED increase in any Table 1 sump or pool levels due to a loss of RPV inventory **Table 1 Sumps/Pool** • Any valid Hi-Hi level alarm on R-1 through R-5 sumps • EDR GE 25 GPM • FDR GE 10 GPM • Wetwell level rise • Observation of UNISOLABLE RCS leakage	Unplanned loss of RPV inventory **CU1.1** [4][5] (1) UNPLANNED loss of reactor coolant results in RPV level less than a required lower limit for GE 15 min. (Note 1) OR (2) RPV level cannot be monitored AND UNPLANNED increase in any Table 1 sump or pool levels due to a loss of RPV inventory **Table 2 AC Power Sources** **Offsite** • Startup Transformer TR-S • Backup Transformer TR-B • Backfeed 500 KV power through Main Transformers (if already aligned in modes 4, 5, def **only**) **Onsite** • DG1 • DG2 • Main Generator via TR-N1/N2
2 Loss of Emergency AC Power	None	None	Loss of all offsite and all onsite AC power to emergency buses for 15 minutes or longer **CA2.1** [4][5][DEF] Loss of all offsite and all onsite AC power capability to emergency buses SM-7 and SM-8 for GE 15 min. (Note 1)	Loss of all but one AC power source to emergency buses for 15 minutes or longer **CU2.1** [4][5][DEF] AC power capability, Table 2, to emergency buses SM-7 and SM-8 reduced to a single power source for GE 15 min. (Note 1) AND Any additional single power source failure will result in loss of all AC power to emergency buses SM-7 and SM-8
3 RCS Temp.	None	**Table 7 RCS Reheat Duration Thresholds** * If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced the EAL is not applicable RCS Status / Containment Closure Status / Heat-up Duration: Intact / N/A / 60 min. * Not intact / established / 20 min. * Not intact / not established / 0 min.	Inability to maintain plant in cold shutdown **CA3.1** [4][5] UNPLANNED increase in RCS temperature to GT 200°F for GT Table 7 duration (Note 1) OR UNPLANNED RPV pressure increase GT 10 psig	UNPLANNED increase in RCS temperature **CU3.1** [4][5] UNPLANNED increase in RCS temperature to GT 200°F **CU3.2** [4][5] Loss of all RCS temperature and RPV water level indication for GE 15 min. (Note 1)
4 Loss of Vital DC Power	None		None	Loss of vital DC power for 15 minutes or longer **CU4.1** [4][5] Indicated voltage LT 108 VDC on required 125 VDC buses DP-S1-1 and DP-S1-2 for GE 15 min. (Note 1)
5 Loss of Comm.	**Table 4 Communication Methods** System / Onsite / ORO / NRC: Plant Public Address (PA) System / X / / Plant Telephone System / X / X / Plant Radio System Operations and Security Channels / X / / Offsite calling capability from the Control Room via direct telephone and fax lines / / X / X Long distance calling capability on the commercial phone system / / X / X	None	None	Loss of all onsite or offsite communications capabilities **CU5.1** [4][5][DEF] Loss of all Table 4 onsite communication methods OR Loss of all Table 4 ORO communication methods OR Loss of all Table 4 NRC communication methods
6 Hazardous Events Affecting Safety Systems		**Table 8 Hazardous Events** • Seismic event • Internal or external FLOODING event • High winds • Tornado strike • FIRE • EXPLOSION • Volcanic ash fallout • Other events with similar hazard characteristics as determined by the Shift Manager	Hazardous event affecting a SAFETY SYSTEM needed for the current operating mode **CA6.1** [4][5] The occurrence of any Table 8 hazardous event AND EITHER: Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM needed for the current operating mode OR The event has caused VISIBLE DAMAGE to a SAFETY SYSTEM component or structure, Table 5, needed for the current operating mode	None

Table 5
Plant Structures Containing Safe Shutdown Systems or Components

- Vital portions of the Rad Waste/Control Building:
  - 467' elevation vital island
  - 487' elevation cable spreading room
  - Main Control Room and vertical cable chase
  - 525' elevation HVAC area
- Reactor Building
- Vital portions of the Turbine Building
  - DEH pressure switches
  - RPS switches on turbine throttle valves
  - Main steam line radiation monitors
  - Turbine Building ventilation radiation monitors
  - Main steam line piping up to MS-V-146 and the first stop valves
- Standby Service Water Pump Houses
- Diesel Generator Building

Modes: 1 Power Operations; 2 Startup; 3 Hot Shutdown; 4 Cold Shutdown; 5 Refueling; DEF Defueled

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