

GENERAL EMERGENCY

SITE AREA EMERGENCY

ALERT

UNUSUAL EVENT

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UNUSUAL EVENT

1 Offsite Rad Conditions
2 Onsite Rad Conditions & Spent Fuel Events
3 CRUCAS Rad
1 Natural or Destructive Phenomena
2 Fire or Explosion
3 Hazardous Gas
4 Security
5 Control Room Evacuation
6 Judgment
E ISFSI

RG1.1 ANY gaseous monitor reading > Table R-1 column "GE" for > 15 min. (Note 1)
Do not delay declaration awaiting dose assessment results
If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values (see EAL RS1.2)

RS1.1 ANY gaseous monitor reading > Table R-1 column "SAE" for > 15 min. (Note 1)
Do not delay declaration awaiting dose assessment results
If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values (see EAL RS1.2)

RA1.1 ANY gaseous monitor reading > Table R-1 column "Alert" for > 15 min. (Note 2)
Confirmed sample analyses for gaseous or liquid releases indicate concentrations or release rates > 200 x P-9 limits for > 15 min. (Note 2)

RU1.1 ANY gaseous or liquid monitor reading > Table R-1 column "UE" for > 60 min. (Note 2)
Confirmed sample analyses for gaseous or liquid releases indicate concentrations or release rates > 2 x P-9 limits for > 60 min. (Note 2)

1 Loss of AC Power
2 Loss of DC Power
3 Criticality & RPS Failure
4 Inability to Reach or Maintain Shutdown Conditions
5 Inst.
6 Comm.
7 Fuel Clad Degradation
8 RCS Leakage

SO1.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses
AND EITHER:
Restoration of at least one 480V safeguards bus within 4 hours is not likely
OR
ORANGE or RED path condition exists F-0.2 Core Cooling

SS1.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses for > 15 min. (Note 4)
AC power capability to 480V safeguards buses reduced to a single power source, Table S-1, for > 15 min. (Note 4)
AND
Any additional single power source failure will result in a complete loss of all 480V safeguards bus power

SA1.1 Loss of all offsite AC power, Table S-1, to 480V safeguards buses for > 15 min. (Note 4)
AC power capability to 480V safeguards buses reduced to a single power source, Table S-1, for > 15 min. (Note 4)
AND
Any additional single power source failure will result in a complete loss of all 480V safeguards bus power

SU1.1 Loss of all offsite AC power, Table S-1, to 480V safeguards buses for > 15 min. (Note 4)
Unplanned sustained positive start rate observed on nuclear instrumentation

Table R-1 Effluent Monitor Classification Thresholds
Table with columns: Monitor, GE, SAE, ALERT, UE. Rows include CDMT Vent Noble Gas, Plant Vent Noble Gas, Air Ejector Noble Gas, Main Steam Line, Liquid Release Effluent, etc.

RA2.1 Alarm on ANY of the following radiation monitors due to damage to irradiated fuel or loss of water level:
R-12 Containment Vent Noble Gas
R-14 Plant Vent Noble Gas
R-5 Spent Fuel Pool

RU2.1 Unplanned water level drop in a reactor refueling pathway as indicated by inability to restore and maintain level > SFP low water level alarm setpoint (Note 3)
Area radiation monitor reading rise on EITHER:
R-2 Containment
OR
R-5 Spent Fuel Pool

SO3.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
All manual actions fail to shut down the reactor as indicated by reactor power > 5%
AND EITHER of the following exist or have occurred:
RED path condition exists F-0.2 Core Cooling
OR
RED path condition exists F-0.3 Heat Sink

SS2.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA3.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU3.1 An unplanned sustained positive start rate observed on nuclear instrumentation

Table H-1 Safe Shutdown Areas
List of areas: Reactor Containment Building, Auxiliary Building, Control Building, Intermediate Building, Emergency Diesel Building(s), SAFW Building, Screenhouse, Cable Tunnel, Battery Rooms

HA1.1 Dose rates > 15 mRem/hr in EITHER of the following areas requiring continuous occupancy to maintain plant safety functions:
Control Room (R-1)
OR
CAS

HU1.1 Seismic event identified by ANY two of the following:
Red LED event indicator on Kinematics ETNA Digital Recorder indicates seismic event detected
Earthquake felt onsite
National Earthquake Information Center (Note 6)

Table S-2 Vital Control Room Panels
Grid with columns A-G and rows for various panels.

Table S-3 Significant Transients
List of transients: Automatic turbine runback > 25% thermal power, Electric load rejection > 25% full electrical load, Reactor trip, Safety injection activation

Table S-4 Communications Systems
Table with columns: System, Onsite (external), Offsite (external). Rows include Commercial phone system, Direct Dial POTS Lines, etc.

SU4.1 Plant is not brought to required operating mode within Technical Specifications LCO required action completion time

HA1.2 Tornado striking or sustained high winds > 75 mph resulting in EITHER:
Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HA2.1 Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HU2.1 Tornado striking within Protected Area boundary
OR
Sustained high winds > 75 mph

SO2.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses
AND EITHER:
Restoration of at least one 480V safeguards bus within 4 hours is not likely
OR
ORANGE or RED path condition exists F-0.2 Core Cooling

SS2.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA2.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU2.1 Unplanned loss of 6 or more annunciator panels, Table S-2, or > 75% of MCB indications for > 15 min. (Note 4)
A significant transient is in progress, Table S-3
AND
Compensatory indications are unavailable (PPCS)

HA1.3 Internal flooding in ANY Table H-1 area resulting in EITHER:
An electrical shock hazard that precludes access to operate or monitor ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HA3.1 Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HU3.1 Internal flooding that has the potential to affect ANY safety-related structure, system, or component required by Technical Specifications for the current operating mode in ANY Table H-1 area

SO3.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
All manual actions fail to shut down the reactor as indicated by reactor power > 5%
AND EITHER of the following exist or have occurred:
RED path condition exists F-0.2 Core Cooling
OR
RED path condition exists F-0.3 Heat Sink

SS3.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA3.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU3.1 An unplanned sustained positive start rate observed on nuclear instrumentation

HA1.4 Turbine failure-generated projectiles resulting in EITHER:
Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HA4.1 Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HU4.1 Turbine failure resulting in casing penetration or damage to turbine or generator seals

SO4.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses
AND EITHER:
Restoration of at least one 480V safeguards bus within 4 hours is not likely
OR
ORANGE or RED path condition exists F-0.2 Core Cooling

SS4.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA4.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU4.1 Plant is not brought to required operating mode within Technical Specifications LCO required action completion time

HA1.5 Lake level > 253 ft
OR
Screen House Suction Bay water level < 16 ft or < 14.5 ft by manual level measurement

HA5.1 Visible damage to ANY safety-related structure, system, or component within ANY Table H-1 area
OR
Control Room indication of degraded performance of ANY safety-related structure, system, or component within ANY Table H-1 area

HU5.1 Deer Creek flooding over entrance road bridge hand rail
OR
Lake level > 252 ft
OR
Screen House Suction Bay water level < 17 ft or < 15.5 ft by manual level measurement

SO5.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses
AND EITHER:
Restoration of at least one 480V safeguards bus within 4 hours is not likely
OR
ORANGE or RED path condition exists F-0.2 Core Cooling

SS5.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA5.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU5.1 Unplanned loss of 6 or more annunciator panels, Table S-2, or > 75% of MCB indications for > 15 min. (Note 4)
A significant transient is in progress, Table S-3
AND
Compensatory indications are unavailable (PPCS)

HG4.1 A hostile action has occurred which plant personnel are unable to operate equipment required to maintain safety functions

HA6.1 A validated notification from NRC of an airiner attack threat within 30 min. of the site

HU6.1 A security condition that does not involve a hostile action as reported by Security Shift Supervision
OR
A credible site-specific security threat notification
OR
A validated notification from NRC providing information of an aircraft threat

SO6.1 Loss of all offsite and all onsite AC power, Table S-1, to 480V safeguards buses
AND EITHER:
Restoration of at least one 480V safeguards bus within 4 hours is not likely
OR
ORANGE or RED path condition exists F-0.2 Core Cooling

SS6.1 An automatic trip failed to shut down the reactor as indicated by reactor power > 5%
AND
Manual actions taken at the reactor control console failed to shut down the reactor as indicated by reactor power > 5%

SA6.1 An automatic trip failed to shut down the reactor
AND
Manual actions taken at the reactor control console successfully shut down the reactor as indicated by reactor power < 5%

SU6.1 Unplanned loss of 6 or more annunciator panels, Table S-2, or > 75% of MCB indications for > 15 min. (Note 4)
A significant transient is in progress, Table S-3
AND
Compensatory indications are unavailable (PPCS)

Notes
1. The ED should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time
2. The ED should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the release duration has exceeded, or will likely exceed, the applicable time...

Table F-1 Fission Product Barrier Matrix
Table with columns: Fuel Clad Barrier, Reactor Coolant System Barrier, Containment Barrier. Rows include CSFST, Core Exit TCs, Inventory, Radiation / Coolant Activity, Isolation Status, Judgment.

Modes: 1 Power Operation, 2 Startup, 3 Hot Shutdown, 4 Hot Standby, 5 Cold Shutdown, 6 Refuel, D Defueled

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