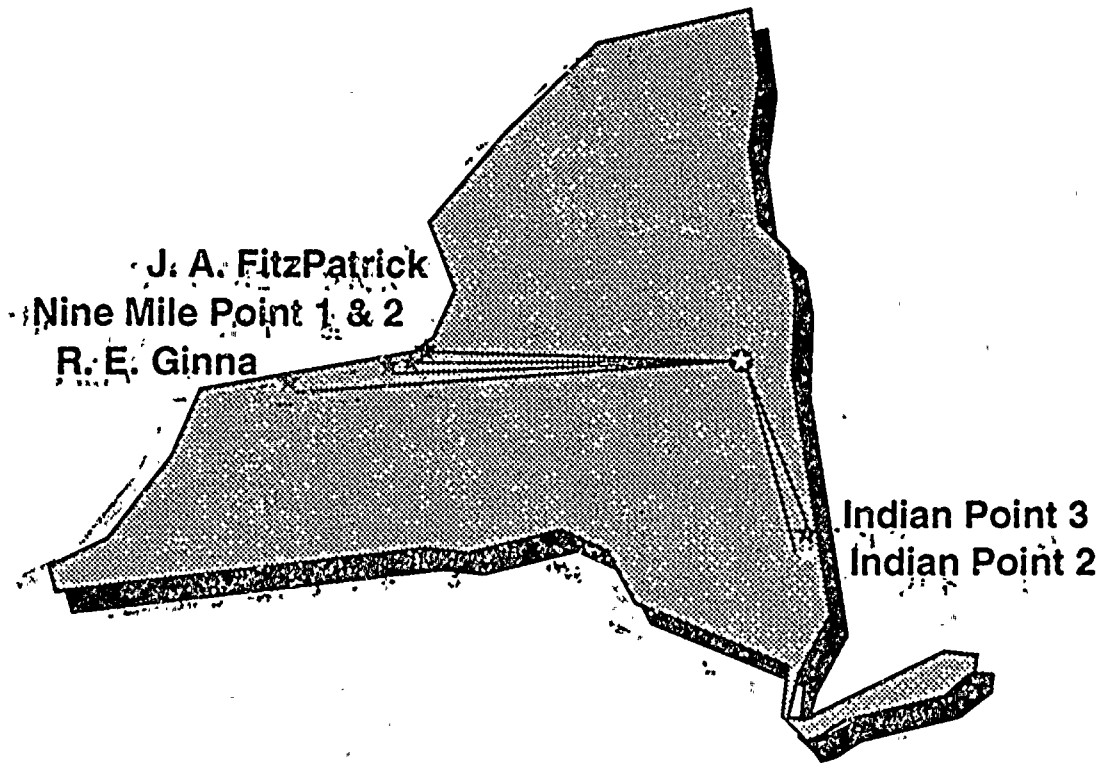


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5/13/94

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# New York State Emergency Action Level Upgrade Project



Rochester Gas & Electric  
R. E. Ginna Nuclear Power Station

EAL Generation Package

**OSSI**

Operations Support Services, Inc.  
233 Water Street 2nd Floor Plymouth, MA 02360



# EAL Upgrade Project

Plant Specific EAL  
Guideline  
(PEG)

**R.E. Ginna**

**OSSI**

Operations Support Services, Inc.  
233 Water Street 2nd Floor  
Plymouth, MA 02360





# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: AU1

Any unplanned release of gaseous or liquid radioactivity to the environment that exceeds two times the radiological Technical Specifications for 60 minutes or longer.

Op. Mode

Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AU1.1

A valid reading on one or more of the following monitors that exceeds the "value shown" (site specific monitors) which indicates that the release may have exceeded the above criterion and indicates the need to assess the release with (site specific procedure):

RD-2 Containment Purge Releases

RD-2.1 Containment Mini-Purge Releases

RD-5 Ventilation System Releases

RD-6.1 Gas Decay Tank Releases

RD-7.1 Liquid Waste Release

Monitors

R-11 Containment Vent Particulate Monitor

R-12 Containment Vent Noble Gas Monitor

R-13 Auxiliary Building Particulate Monitor

R-14 Auxiliary Building Noble Gas Monitor

R-15 Air Ejector and Gland Steam Exhaust Monitor

R-18 Liquid Waste Disposal Monitor

"Value Shown"

1.62E6 cpm

7.80E6 cpm

2.20E4 cpm

6.40E5 cpm

4.00E5 cpm

3.60E5 cpm

Note: If the monitor readings are sustained for longer than 60 minutes and the required assessments cannot be completed within this period, then the declaration must be made based on the valid reading.

AU1.2

Valid reading on perimeter radiation monitoring system greater than 0.10 mR/hr above normal background for 60 minutes (for sites having telemetered perimeter monitors).

AU1.2

Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates with a release duration of 60 minutes or longer in excess of two times (site specific technical specifications).

Liquid Releases:

Two times 10CFR20, Appendix B, Table II, Column 2, or  
4x10 E-4 uCi/ml for dissolved or entrained noble gases

Gaseous Releases:

≤ 1000 mrem/yr whole body and ≤ 6000 mrem/yr skin dose from noble gases  
≤ 3000 mrem/yr any organ from I-131, I-133, tritium and particulates with ≥ 8 day half lives

These are determined via methods in ODCM

AU1.4

Valid indication on automatic real-time dose assessment capability greater than (site specific values) for 60 minutes or longer (for sites having such capability).

[illegible]

DATE: 11/11/73

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

The term "Unplanned", as used in this context, includes any release for which a radioactive discharge permit was not prepared, or a release that exceeds the conditions (e. g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit.

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

Unplanned releases in excess of two times the site technical specifications that continue for 60 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. The final integrated dose (which is very low in the Unusual Event emergency class) is not the primary concern here; it is the degradation in plant control implied by the fact that the release was not isolated within 60 minutes. Therefore, it is not intended that the release be averaged over 60 minutes. For example, a release of 4 times T/S for 30 minutes does not exceed this initiating condition. Further, the Shift Supervisor (Emergency Coordinator) Director should not wait until 60 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 60 minutes.

~~For sites that have eliminated effluent technical specifications as provided in NRC Generic Letter 89-01, the corresponding maximum limit from the site's Offsite Dose Calculation Manual should be used as the numeric basis of EAL.~~

~~10CFR50.72 requires a non-emergency four hour report for release that exceeds 2 times maximum permissible concentration (MPC) in unrestricted areas averaged over a period of one hour.~~

~~There is generally more than one applicable technical specification (e. g., air dose rate, organ dose rate, organ doses, release rate, etc.). Often, effluent monitor alarms are based on instantaneous release rate. Depending on the source term, other technical specifications may be more applicable specifications.~~

~~Monitor indications are should be calculated on the basis of the methodology of the site Offsite Dose Calculation Manual (ODCM), or other site procedures that are used to demonstrate compliance with 10CFR20. Annual average meteorology should be is used where allowed.~~

~~In EAL 2, the 0.10 mR/hr value is based on a proration of two times the 500 mR/yr basis of the 10CFR20 non-occupational MPC limits, rounded down to 0.10 mR/hr. If other site-specific values are applicable, these should be used.~~

~~Some sites may find it advantageous to address gaseous and liquid releases with separate initiating conditions and EALs.~~

~~The alarm setpoints for the listed monitors are conservatively set to ensure Technical Specification radioactivity release limits are not exceeded. The "value shown" for each monitor is two times the calculated Technical Specification release rates as specified in P-9 section 2.4.~~

~~The values assigned to EAL AU1-2 are based on two times the Technical Specification values given in: Amendment No. 24, Articles 3.9.1.1 through 3.9.2.3~~

~~Ginna design does not utilize telemetered perimeter monitors.~~

~~Ginna design does not utilize automatic real-time dose assessment.~~

## References:

1. EPIP 2-3 Emergency Release Rate Determination Rev.4

2. P-9 Radiation Monitoring System Rev. 67

3. EPIP 2-18 Control Room Dose Assessment

4. R. E. Ginna Nuclear Power Plant Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3

5. "Calculations for NUMARC EALs" by P.S. Poffleit File EAL.XLS

6. RD-15.0 ODCM

subprogram

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# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: AU2

Unexpected Increase in plant radiation or airborne concentration.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AU2.1

(Site-specific) Spent fuel pool (reactor cavity during refueling) water level cannot be restored and maintained above the spent fuel pool low water level alarm setpoint indication of uncontrolled water level decrease in the reactor refueling cavity with all irradiated fuel assemblies remaining covered by water.

AU2.3

(Site-specific) radiation reading for irradiated spent fuel in dry storage.

AU2.2

Uncontrolled water level decrease in the spent fuel pool and fuel transfer canal with all irradiated fuel assemblies remaining covered by water.

AU2.4

Valid Any sustained direct area radiation monitor readings  $\geq 100$  times the alarm setpoint or offscale high resulting from an uncontrolled process increase by a factor of 1000 over normal\* levels.  
\* Normal levels can be considered as the highest reading in the past twenty-four hours excluding the current peak value.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

All of the above events tend to have long lead times relative to potential for radiological release outside the site boundary, thus impact to public health and safety is very low.

In light of Reactor Cavity Seal failure, incidents at two different PWRs and loss of water in the Spent Fuel Pit/Fuel Transfer Canal at a BWR all occurring since 1984, explicit coverage of these types of events via EALs #1 and #2 is appropriate given their potential for increased doses to plant staff. Classification as an Unusual Event is warranted as a precursor to a more serious event.

~~For EAL AU2.1, the spent fuel pool low water level alarm setpoint of 20 in. below top of pool is actuated by LC-661. The operator may observe the low water level condition, if possible, and attempt water level restoration as long as water level remains above the top of irradiated fuel. Water level restoration instructions for loss of refueling cavity water level during refueling are performed in accordance with ER-SFP.1 "Loss of Spent Fuel Pit Cooling". The words "with all irradiated fuel assemblies remaining covered by water" were deleted as it is unnecessary. AA2.2 requires declaration of an Alert if the fuel becomes uncovered.~~

~~For the BWR Mark III containment designs, the fuel transfer canal is directly connected to the spent fuel pool and reactor cavity when there could exist the possibility of uncovering irradiated fuel in the fuel transfer canal. Therefore, EAL AU2.1 addresses the conditions for which this EAL is applicable.~~

~~EAL #3 AU2.3 applies to plants with licensed dry storage of older irradiated spent fuel to address degradation of this spent fuel. One utility uses values of 2 R/hr at the face of any dry storage module or 1 R/hr one foot away from a damaged module. Ginna design does not utilize dry storage for spent fuel.~~

~~EAL #4 AU2.4 addresses unplanned increases in in-plant radiation levels that represent a degradation in the control of radioactive material, and represent a potential degradation in the level of safety of the plant. Indication of area radiation levels increasing to  $\geq 100$  times the alarm setpoint or offscale hi has been selected because these values are more readily identifiable than a multiple of "normal" levels. Since ARM setpoints are nominally set one decade over normal levels, 100 times the alarm setpoint or offscale hi provides an equivalent threshold. This EAL escalates to an Alert per IC AA3, if the increases impair the level of safe operation. Only sustained ARM readings are considered in this EAL to avoid unnecessary emergency declaration due to momentary and temporary radiation levels that briefly exceed 100 times the alarm setpoint.~~

## Reference:

1. AOI 17.0.3
2. ARP-SGF
3. RF 65 series
4. ER-SFP.1 "Loss of Spent Fuel Pit Cooling"



# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: AA1

Any unplanned release of gaseous or liquid radioactivity to the environment that exceeds 200 times radiological Technical Specifications for 15 minutes or longer.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AA1.1

A valid reading on one or more of the following monitors that exceeds the "value shown" (site-specific monitors) which indicates that the release may have exceeded the above criterion and indicates the need to assess the release with (site-specific procedure):

RD-2 Containment Purge Releases

RD-2.1 Containment Mini-Purge Releases

RD-5 Ventilation System Releases

RD-6.1 Gas Decay Tank Releases

RD-7.1 Liquid Waste Release

Monitors

3-12 Containment Vent Noble Gas Monitor

3-14 Auxiliary Building Noble Gas Monitor

3-15 Air Ejector and Gland Steam Exhaust Monitor

3-18 Liquid Waste Disposal Monitor

"Value Shown"

1.07E7 cpm

1.61E6 cpm

2.31E7 cpm

offscale hi

Note: If the monitor readings are sustained for longer than 15 minutes and the required assessments cannot be completed within this period, then the declaration must be made based on the valid reading.

AA1.3

Valid reading on perimeter radiation monitoring system greater than 10.0 mR/hr sustained for 15 minutes or longer. (for sites having telemetered perimeter monitors)

AA1.2

Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates with a release duration of 15 minutes or longer in excess of (200 x site-specific technical specifications) for 15 minutes or longer:

Liquid Releases:

200 times 10CFR20, Appendix B, Table II, Column 2

4x10 E-2 uCi/ml for dissolved or entrained noble gases

Gaseous Releases:

≤ 100 rem/yr whole body and ≤ 600 rem/yr skin dose from noble gases

≤ 300 rem/yr any organ from I-131, I-133, tritium and particulates with ≤ 8 day half lives

These are determined via methods in QDCM

AA1.4

Valid indication on automatic real-time dose assessment capability greater than (200 x site-specific technical specifications) for 15 minutes or longer. (for sites having such capability)



# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

This event escalates from the Unusual Event by escalating the magnitude of the release by a factor of 100. Prorating the 500 mR/yr criterion for both time (8766 hr/yr and the 200 multiplier, the associated site boundary dose rate would be 10 mR/hr. The required release duration was reduced to 15 minutes in recognition of the increased severity.

~~For sites that have eliminated effluent technical specifications as provided in NRC Generic Letter 89-021, the corresponding maximum limit from the site's Offsite Dose Calculation Manual, multiplied by 200, should be used as the numeric basis for this EAL.~~

~~Monitor indications should be calculated on the basis of the methodology of the EPIP 2-18 Control Room Dose Assessment and/or site Offsite Dose Calculation Manual (ODCM), or other site procedures that are used to demonstrate compliance with 10CFR20 and/or 10CFR50 Appendix I requirements -- adjusted upwards by a factor of 200. Annual average meteorology should be is used where allowed.~~

~~In EAL #3, AA1.1, the 10 mR/hr value is based on a proration of 200 times the 500 mR/yr basis of the 10CFR20 non-occupational MPC limits, rounded down to 10 mR/hr. If other site-specific values are applicable, these should be used. The values for the gaseous effluent radiation monitors are based upon not exceeding 10 mR/hr at the site boundary as a result of the release.~~

~~These conversion factors are based upon the mixture of noble gas present in reactor coolant during the 1/25/82 tube rupture - normal operations.~~

~~Since there is no high range monitor associated with liquid effluent monitor R-18 and 200x T.S. value is beyond it's upper scale, an indication of "offscale hi" is conservatively used.~~

~~RGE design does not utilize telemetered perimeter monitors.~~

~~RGE design does not utilize automatic real-time dose assessment.~~

## References:

1. EPIP 2-3 Emergency Release Rate Determination
2. P-9 Radiation Monitoring System
3. EPIP 2-18 Control Room Dose Assessment
4. R. E. Ginna Nuclear Power Plant Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
5. "Calculations for NUMARC EALs" by P.S. Polleit File EAL.XLS



# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: AA2

Major damage to irradiated fuel or loss of water level that has or will result in the uncovering of irradiated fuel outside the reactor vessel.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AA2.1

A (site-specific setpoint) Confirmed sustained alarm on one or more of the following radiation monitors resulting from an uncontrolled fuel handling process: (site-specific monitors)

- : R-2, Containment Area Monitor: 50 mR/hr
- : R-5, Spent Fuel Pit: 25 mR/hr
- : R-12 Containment Noble Gas

AA2.3

Water level less than (site-specific) feet for the reactor refueling cavity that will result in irradiated fuel uncovering.

AA2.2

Report of visual observation of irradiated fuel uncovered.

AA2.4

Water level less than (site-specific) feet for the spent fuel pool and fuel transfer canal that will result in irradiated fuel uncovering.

# Plant Specific EAL Codeline (A,H,S)

## R.E. Ginna

### Bases

This IC applies to spent fuel requiring water coverage and is not intended to address spent fuel which is licensed for dry storage, which is discussed in NUMARC IC AU2, "Unexpected Increase in Plant Radiation or Airborne Concentration."

NUREG-0818, "Emergency Action Levels for Light Water Reactors," forms the basis for these EALs. ~~Each site should also define its~~ The above EALs are defined by the specific area where irradiated fuel is located such as reactor cavity, reactor vessel, or spent fuel pool.

The radiation monitor alarm associated with this EAL must be confirmed to avoid unnecessary declaration of an emergency due to a spurious alarm signal.

There is time available to take corrective actions, and there is little potential for substantial fuel damage. In addition, NUREG/CR-4982, "Severe Accident in Spent Fuel Pools in Support of Generic Safety Issue 82," July 1987, indicates that even if corrective actions are not taken, no prompt fatalities are predicted, and that risk of injury is low. In addition, NRC Information Notice No. 90-08, "Kr-85 Hazards from Decayed Fuel" presents the following in its discussion:

"In the event of a serious accident involving decayed spent fuel, protective actions would be needed for personnel on site, while offsite doses (assuming an exclusion area radius of one mile from the plant site) would be well below the Environmental Protection Agency's Protective Action Guides. Accordingly, it is important to be able to properly survey and monitor for Kr-85 in the event of an accident with decayed spent fuel.

There is no indication that water level in the spent fuel pool or refueling cavity has dropped to the level of the fuel other than by visual observation. Since AA2.2 addresses visual observation of fuel uncover, EAL AA2.3 is unnecessary. Since there is no level indicating system in the fuel transfer canal, visual observation of loss of water level would also be required. EAL AA2.4 is unnecessary.

~~Licensees may wish to reevaluate whether Emergency Action Levels specified in the emergency plan and procedures governing decayed fuel handling activities appropriately focus on concern for onsite workers and Kr-85 releases in areas where decayed spent fuel accidents could occur, for example, the spent fuel pool working floor. Furthermore, licensees may wish to determine if emergency plans and corresponding implementing procedures address the means for limiting radiological exposures of onsite personnel who are in other areas of the plant. Among other things, moving onsite personnel away from the plume and shutting of building air intakes downwind from the source may be appropriate."~~

Thus, an Alert Classification for this event is appropriate. Escalation, if appropriate, would occur via Abnormal Rad level/Radiological Effluent or Shift Supervisor (Emergency Coordinator) Director judgement.

### References:

1. P-9 Radiation Monitoring System Rev. 67



# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: AA3

Release of radioactive material or increases in radiation levels within the facility that impedes operation of systems required to maintain safe operations or to establish or maintain cold shutdown.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AA3.1

~~Valid Sustained area radiation monitor reading greater than 15 mR/hr in areas requiring continuous occupancy to maintain plant safety functions:~~  
~~the:~~

~~Control Room - R-1. Control Room Monitor~~

~~OR~~

~~CAS - by area survey and SAS - by area survey.~~

~~-(Site-specific) list-~~

AA3.2

~~One or more sustained abnormal valid (site-specific) radiation monitor readings greater than (site-specific) 8 R/hr values in areas requiring infrequent access to maintain plant safety functions.~~

~~-(Site-specific)-list.~~

~~Reactor Containment Building~~

~~Auxiliary Building~~

~~Turbine Building~~

~~Emergency Diesel Building~~

~~Screen House~~

~~Standby Auxiliary Feedwater Building~~

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Valid means that a radiation monitor reading has been confirmed by the operators to be correct. Only prolonged ARM readings are considered in this EAL to avoid unnecessary emergency declaration due to momentary and temporary radiation levels that briefly exceeds 8 R/hr.

This IC addresses increased radiation levels that impede necessary access to operating stations, or other areas containing equipment that must be operated manually, in order to maintain safe operation or perform a safe shutdown. It is this impaired ability to operate the plant that results in the actual or potential substantial degradation of the level of safety of the plant. The cause and/or magnitude of the increase in radiation levels is not a concern of this IC. The Shift Supervisor (Emergency Coordinator) Director must consider the source or cause of the increased radiation levels and determine if any other IC may be involved. For example, a dose rate of 15 mR/hr in the control room may be a problem in itself. However, the increase may also be indicative of high dose rates in the containment due to a LOCA. In this latter case, an SAE or GE may be indicated by the fission product barrier matrix ICs.

~~At multiple unit sites, the example EALs could result in declaration of an Alert at one unit due to a radioactivity release or radiation shine resulting from a major accident at the other unit. This is appropriate if the increase impairs operations at the operating unit.~~

This IC is not meant to apply to increases in the containment dome radiation monitors as these are events which are addressed in the fission product barrier matrix ICs. Nor is it intended to apply to anticipated temporary increases due to planned events (e. g., incore detector movement, radwaste container movement, deplete resin transfers, etc.)

~~Emergency planners developing the (site specific) lists may refer to the site's Ginna's off-normal operating procedures, emergency operating procedures, the 10CFR50 Appendix R analysis, and/or, the analyses performed in response to Section 2.1.6b or NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-term Recommendations" were considered when identifying areas containing safe shutdown equipment. With regard to the NUREG-0578 analyses, do not use the dose rates postulated therein as a basis for the radiation monitor reading for this IC, as the NUREG-0578 analyses address general emergency conditions.~~

Areas requiring continuous occupancy at Ginna include the control room and, as appropriate to the site, any other control stations that are manned continuously, such as a radwaste control room or a Central Alarm Station, and SAS if CAS becomes uninhabitable. The value of 15 mR/hr is derived from the GDC 19 value of 5 rem in 30 days with adjustment for expected occupancy times. Although Section III.D.3 of NUREG-0737, "Clarification of TMI Action Plan Requirements", provides that the 15 mR/hr value can be averaged over the 30 days, the value is used here without averaging, as a 30 day duration implies an event potentially more significant than an Alert.

~~For other areas requiring infrequent access, the radiation level is (site specific) value(s) should be based on abnormal radiation levels which result in exposure control measures intended to maintain doses within normal occupational exposure guidelines and limits (i. e., 10CFR20), and in doing so, will impede necessary access. For many areas, it may be possible to establish a single generic EAL that represents a multiple of the normal radiation levels (e. g., 1000 times normal). However, areas that have normally high dose rates may require a lower multiple (e. g., 10 times normal).~~

Area radiation levels at or above 8 R/hr are indicative of radiation fields which may limit personnel access or adversely affect equipment whose operation may be needed to assure adequate core cooling or shutdown the reactor. This basis of the 8 R/hr is described in a Niagara Mohawk Power Corp. memo dated 3/18/93 File Code NMP31027 "Exposure Guidelines For Unusual/Accident Conditions, Rev 1." The areas selected are consistent with those listed in HA3.1 and represent those structures which house systems and equipment necessary for the safe operation and shutdown of the plant.

## Reference:

1. P-9 Radiation Monitoring System Rev. 67

2. Niagara Mohawk Power Corp. memo 3/18/93 File Code NMP31027 "Exposure Guidelines For Unusual/Accident Conditions, Rev 1."

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: AS1

Boundary dose resulting from an actual or imminent release of gaseous radioactivity exceeds 100 mRem TEDE mR Whole Body or 500 mR Child CDE Thyroid for the actual or projected duration of the release.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AS1.1

A valid reading on one or more of the following monitors that exceeds or is expected to exceed the value shown indicates that the release may have exceeded the above criterion and indicates the need to assess the release with (site specific procedure)

EPIP 2-18, "Control Room Dose Assessment," Rev. 2, effective date 10/28/92:

Monitors	Value Shown
R-12A Containment Vent Noble Gas Monitor	6.00E0 $\mu\text{Ci/cc}$
R-14A Auxiliary Building Noble Gas Monitor	5.33E-1 $\mu\text{Ci/cc}$
R-15A Air Ejector and Gland Steam Exhaust Monitor	1.15E1 $\mu\text{Ci/cc}$

Note: If the monitor reading(s) is sustained for longer than 15 minutes and the required assessments cannot be completed within this period, then the declaration must be made based on the valid reading.

AS1.3

Valid dose assessment capability indicates dose consequences greater than 100 mR TEDE whole body or 500 mR child CDE thyroid.

AS1.2

A valid reading sustained for 15 minutes or longer on perimeter radiation monitoring system greater than 100 mR/hr. (for sites having telemetered perimeter monitors)

AS1.4

Field survey results indicate site boundary dose rates exceeding 100 mR/hr TEDE expected to continue for more than one hour; or analyses of field survey samples indicate child CDE thyroid dose commitment of 500 mR for one hour of inhalation.



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

The 100 mR TEDE integrated dose in this initiating condition is based on the proposed 10CFR20 annual average population exposure. This value also provides a desirable gradient (one order of magnitude) between the Alert, Site Area Emergency, and General Emergency classes. It is deemed that exposures less than this limit are not consistent with the Site Area Emergency class description. The 500 mR integrated ~~child thyroid~~ CDE thyroid dose was established in consideration of the 1:5 ratio of the EPA Protective Action Guidelines for TEDE whole body and CDE thyroid.

~~Integrated doses are generally not monitored in real time. In establishing the emergency action levels, it is suggested that a duration of one hour be assumed, and that the EALs be based on a site boundary dose of 100 mR/hour whole body TEDE or 500 mR/hour CDE Thyroid child thyroid, whichever is more limiting (depends on source term assumptions). If individual site analyses indicate a longer or shorter duration for the period in which the substantial portion of the activity is released, these dose rates should be adjusted.~~

~~The values shown were determined utilizing EPIP 2-18 "Control Room Dose Assessment" based upon whole body exposure. The calculations made the assumption of neutral stability and an 8 mph wind speed. These conditions represent annual average meteorology. EPIP 2-18 specifies that whole body dose is limiting with respect to emergency classification and protective action recommendations based upon the assumption of a noble gas to iodine ratio of 1E-4.~~

~~Although EPIP 2-18 provides for R-31/32 release determinations, the variability of results based upon the number of ARV's and/or SV's precludes the use of any single monitor default value for these monitors.~~

~~The ESAR NUREG 1228 source terms applicable to each monitored pathway should be have been used in conjunction with annual average meteorology in determining indications for the monitors on that pathway.~~

~~Ginna design does not utilize telemetered perimeter monitors.~~

## References:

1. P-9 Radiation Monitoring System
2. EPIP 2-18 Control Room Dose Assessment
3. ESAR Table 2.3
4. R. E. Ginna Nuclear Power Plant Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
5. "Calculations for NUMARC EALs" by P.S. Poifflet File EAL.XLS

# Plant Specific EAL (Modeline (A,H,S)

R.E. Ginna

IC#: AG1

Boundary dose resulting from an actual or imminent release of gaseous radioactivity exceeds 1000 mRem TEDE mR-Whole Body or 5000 mR Child CDE Thyroid for the actual or projected duration of the release using actual meteorology.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

AG1.1

A valid reading on one or more of the following monitors that exceeds or is expected to exceed the value shown indicates that the release may have exceeded the above criterion and indicates the need to assess the release with (site specific procedure)

EPIP 2-18, "Control Room Dose Assessment.":

Monitors	"Value Shown"
R-12A Containment Vent Noble Gas Monitor	6.00E1 $\mu\text{Ci/cc}$
R-14A Auxiliary Building Noble Gas Monitor	5.33E0 $\mu\text{Ci/cc}$
R-15A Air Ejector and Gland Steam Exhaust Monitor	1.15E2 $\mu\text{Ci/cc}$

Note: If the monitor reading(s) is sustained for longer than 15 minutes and the required assessments cannot be completed within this period, then the declaration must be made based on the valid reading.

AG1.3

Valid dose assessment capability indicates dose consequences greater than 1000 mR TEDE whole body or 5000 mR Child CDE thyroid.

AG1.2

A valid reading sustained for 15 minutes or longer on perimeter radiation monitoring system greater than 1000 mR/hr. [for sites having telemetered perimeter monitors]

AG1.4

Field survey results indicate site boundary dose rates exceeding 1000 mR/hr TEDE expected to continue for more than one hour; or analyses of field survey samples indicate child CDE thyroid dose commitment of 5000 mR for one hour of inhalation.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

The 1000 mR ~~TEDE whole body~~ and the 5000 mR ~~CDE child thyroid~~ integrated dose are based on the EPA protective action guidance which indicates that public protective actions are indicated if the dose exceeds 1 rem ~~TEDE whole body~~ or 5 rem ~~CDE child thyroid~~. This is consistent with the emergency class description for a General Emergency. This level constitutes the upper level of the desirable gradient for the Site Area Emergency. Actual meteorology is specifically identified in the initiating condition since it gives the most accurate dose assessment. Actual meteorology (including forecasts) should be used whenever possible.

~~Integrated doses are generally not monitored in real time. In establishing the dose rate emergency action levels, it is suggested that a duration of one hour be assumed, and that the EALs be based on site boundary doses for either whole body TEDE or child thyroid CDE thyroid, whichever is more limiting (depends on source term assumptions(s)). If individual site analyses indicate a longer or shorter duration for the period in which the substantial portion of the activity is released, these dose rates should be adjusted.~~

~~The values shown were determined utilizing EPIP 2-18 "Control Room Dose Assessment" based upon whole body exposure. The calculations made the assumption of neutral stability and an 8 mph wind speed. These conditions represent annual average meteorology. EPIP 2-18 specifies that whole body dose is limiting with respect to emergency classification and protective action recommendations based upon the assumption of a noble gas to iodine ratio of 1E-4.~~

~~Although EPIP 2-18 provides for R-31/32 release determinations, the variability of results based upon the number of ARV's and/or SV's precludes the use of any single monitor default value for these monitors.~~

~~The FSAR NUREG 1228 source terms applicable to each monitored pathway should be have been used in conjunction with annual average meteorology in determining indications for the monitors on that pathway.~~

~~Ginna design does not utilize telemetered perimeter monitors.~~

## References:

1. P-9 Radiation Monitoring System
2. EPIP 2-18 Control Room Dose Assessment
3. FSAR Table 2.3
4. R. E. Ginna Nuclear Power Plant Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
5. "Calculations for NUMARC EALs" by P.S. Polleit File EAL.XLS



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HU1

Natural and destructive phenomena affecting the protected area.

Op. Mode  
Applicability ☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HU1.1

~~(Site-specific) method indicates felt earthquake.~~  
~~Earthquake felt inplant by one or more plant operations personnel~~  
~~AND~~  
~~Confirmation of earthquake of an intensity greater than 0.01g as indicated by red LED on strong motion accelerometer event indicator per SC-5 "Earthquake Emergency Plan".~~

HU1.3

Assessment by the control room that an event precluding access to a plant area has occurred.

(See HA1.3 for list of plant areas.)

HU1.5

Report by plant personnel of an unanticipated explosion within protected area boundary resulting in visible damage to permanent structure or equipment.

HU1.7

~~(Site-specific) occurrences-Deer Creek flooding over entrance road bridge OR Lake level > 252 ft. OR Screen House Suction Bay water level < 15 feet (low-low level alarm)~~

HU1.2

Report by plant personnel of tornado striking within plant protected area boundary.

HU1.4

Vehicle crash into or projectile which impacts plant structures or systems within protected area boundary.

HU1.6

Report of turbine failure resulting in casing penetration or damage to turbine or generator seals.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

The protected area boundary is typically that part within the security isolation zone and is defined in the site security plan. The Ginna protected area boundary is illustrated in the site plot plan.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be factor in escalating the emergency class.~~

~~For EAL #HU1.1 should be developed on site specific basis. Ginna seismic instrumentation actuates at 0.01 g. Damage may be caused to some portions of the site, but should not affect ability of safety functions to operate. Method of detection can be is based on instrumentation, validated by a reliable source, or operator assessment. As defined in the EPRI-sponsored "Guidelines for Nuclear Plant Response to an Earthquake", dated October 1989, a "felt earthquake" is:~~

~~"An earthquake of sufficient intensity such that : (a) the inventory ground motion is felt at the nuclear plant site and recognized as an earthquake based on a consensus of control room operators on duty at the time, and (b) for plants with operable seismic instrumentation, the seismic switches of the plant are activated. For most plants with seismic instrumentation, the seismic switches are set at an acceleration of about 0.01 g."~~

EAL #HU1.2 is based on the assumption that a tornado striking (touching down) within the protected boundary may have potentially damaged plant structures containing functions or systems required for safe shutdown of the plant. If such damage is confirmed visually or by other in-plant indications, the event may be escalated to Alert.

EAL #HU1.3 allows for the control room to determine that an event has occurred and take appropriate action based on personal assessment as opposed to verification (i. e., an earthquake is felt but does not register on any plant-specific instrumentation, etc.).

EAL #HU1.4 is intended to address such items as plane or helicopter crash, ~~or on some sites, train crash, or barge crash~~ or impacts of other projectiles that may potentially damage plant structures containing functions and systems required for safe shutdown of the plant. If the crash is confirmed to affect a plant vital area, the event may be escalated to Alert.

For EAL #HU1.5, only those explosions of sufficient force to damage permanent structures or equipment within the protected area should be considered. As used here, an explosion is a rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment, that potentially imparts significant energy to near by structures and materials. No attempt is made in this EAL to assess the actual magnitude of the damage. The occurrence of the explosion with reports of evidence of damage (e. g., deformation, scorching) is sufficient for declaration. The Shift Supervisor (Emergency Coordinator) Director also needs to consider any security aspects of the explosion, if applicable.

EAL #HU1.6 is intended to address main turbine rotating component failures of sufficient magnitude to cause observable damage to the turbine casing or to the seals of the turbine generator. Of major concern is the potential for leakage of combustible fluids (lubricating oils) and gases (hydrogen cooling) to the plant environs. Actual fires and flammable gas build up are appropriately classified via HU2 and HU3. This EAL is consistent with the definition of an Unusual Event while maintaining the anticipatory nature desired and recognizing the risk to non-safety related equipment. Escalation of the emergency classification is based on potential damage done by missiles generated by the failure or by the radiological releases ~~for a BWR, or in conjunction with a steam generator tube rupture, for a PWR.~~ These latter events would be classified by the radiological ICs or fission product barrier ICs. For EAL #HU1.6, operating mode applicability is limited to Power Operations only since other modes of operation require that the turbine generator be secured or isolated from the vessel.

EAL #HU1.7 covers high and low lake water level conditions that could other (site specific phenomena such as hurricane, flood, or seiche). These EALs can also be precursors of more serious events. In particular, sites subject to severe weather as defined in the NUMARC station blackout initiatives, should include an EAL based on activation of the severe weather mitigation procedures (e. g., precautionary shutdowns, diesel testing, staff call-outs, etc.). Deer creek flooding over entrance road bridge may preclude emergency response personnel access and egress. Lake water level  $\geq$  252 ft. corresponds to design levels. Screen House Suction Bay level  $\leq$  15 ft. corresponds to the lo-lo level alarm point and which requires load reduction below 50%. Reference:

1. SC-4 High Water (Flood) Emergency Plan
2. SC-4.1 Low Screenhouse Water Level
3. SC-5 Earthquake Emergency Plan
4. Site Plot Plan
5. Interoffice Memo "Screenhouse Pump Bay Water Level" dated 1/24/94 to Terry White from William Rapin and Jeffrey Wayland

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: HU2      Fire within protected area boundary not extinguished within 15 minutes of detection.

Op. Mode  
Applicability      ☐ 1 (Pwr Ops)   ☐ 2 (HSB)   ☐ 3 (HSD)   ☐ 4 (CSD)   ☐ 5 (Refuel)   ☐ 6 (Defuel)   ☒ All

HU2.1

Confirmed fire in buildings or areas contiguous to any of the following (site-specific) areas not extinguished within 15 minutes of control room notification or verification of a control room alarm:

~~-(Site-specific)-list~~

Intermediate Building

ISC

Service Building

Contaminated Storage Building

Control Building

Reactor Containment Building

Auxiliary Building

Turbine Building

Emergency Diesel Building

Standby Auxiliary Feedwater Building

Screen House

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

The purpose of this IC is to address the magnitude and extent of fires that may be potentially significant precursors to damage to safety systems. This excludes such items as fires within administration buildings, waste-basket fires, and other small fires of no safety consequence. This IC applies to buildings and areas that are not contiguous or immediately adjacent to plant vital areas. ~~Verification of the alarm in this context means those actions taken in the control room to determine that the control room alarm is not spurious.~~

Escalation to a higher emergency class is by IC HA2, "Fire Affecting the Operability of Plant Safety Systems Required for the Current Operating Mode".

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## Reference:

Site Plot Plan



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HU3      Release of toxic or flammable gases deemed detrimental to safe operation of the plant.

Op. Mode  
Applicability

☐ 1 (Pwr Ops)   ☐ 2 (HSB)   ☐ 3 (HSD)   ☐ 4 (CSD)   ☐ 5 (Refuel)   ☐ 6 (Defuel)   ☒ All

HU3.1

Report or detection of toxic or flammable gases that could enter or have entered within the site protected area boundary in amounts that can affect the health of plant personnel or safe operation of the plant normal operation of the plant.

HU3.2

Report by local, county or state officials for potential evacuation of site personnel based on offsite event.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This IC is based on releases in concentrations within the site protected area boundary that will affect the health of plant personnel or affecting the safe operation of the plant with the plant being within the evacuation area of an offsite event (i. e., tanker truck accident releasing toxic gases, etc.). The evacuation area is as determined from the DOT Evacuation Tables for Selected Hazardous Materials, in the DOT Emergency Response Guide for Hazardous Materials.

~~Multi unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## References:

SC-6 Near or On-site Toxic or Flammable Gas Release

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HU4

Confirmed security event which indicates a potential degradation in the level of safety of the plant.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HU4.1

Bomb device discovered within plant protected area but and outside the following plant vital areas:

Control Building  
Reactor Containment Building  
Auxiliary Building  
Turbine Building  
Emergency Diesel Building  
Standby Auxiliary Feedwater Building  
Screen House  
Central Alarm Station

HU4.2

Other security events as determined from ~~(site-specific)~~ Safeguards Contingency Plan.



# Plant Specific EAL Modeline (A,H,S)

R.E. Ginna

## Bases

This EAL is based on ~~(site-specific) Site Security Plan~~ the Ginna Security Contingency Plan. Security events which do not represent at least a potential degradation in the level of safety of the plant, are reported under 10CFR73.71 or in some cases under 10CFR50.72. The plant protected area boundary is typically that part within the security isolation zone and is defined in the ~~(site-specific) security plan~~ Ginna Security Contingency Plan. Plant vital areas are also defined within the Ginna Security Contingency Plan. Bomb devices discovered within the plant vital area would result in EAL escalation.

## Reference:

1. BEG Security Contingency Plan

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: HU5

Other conditions existing which in the judgement of the Shift Supervisor (Emergency Coordinator) Director warrant declaration of an Unusual Event.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

HU5.1

Other conditions exist which in the judgement of the Shift Supervisor (Emergency Coordinator) Director indicate a potential degradation of the level of safety of the plant.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This EAL is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Shift Supervisor (Emergency Coordinator) Director to fall under the Unusual Event emergency class.

From a broad perspective, one area that may warrant Shift Supervisor (Emergency Coordinator) Director judgement is related to likely or actual breakdown of site specific event mitigating actions. Examples to consider include inadequate emergency response procedures, transient response either unexpected or not understood, failure or unavailability of emergency systems during an accident in excess of that assumed in accident analysis, or insufficient availability of equipment and/or support personnel.

Specific example of actual events that may require Shift Supervisor (Emergency Coordinator) Director judgement for Unusual Event declaration are listed here for consideration. However, this list is by no means all inclusive and is not intended to limit the discretion of the site to provide further examples:

- ~~Aircraft crash onsite~~ (Aircraft crash onsite is addressed in EAL HU1.5.)
- ~~Train derailment onsite~~ (Trains are not used on Ginna site.)
- ~~Near site explosion which may adversely affect normal site activities~~ (Explosions are addressed in EAL HU4.1)
- ~~Near site release of toxic or flammable gas which may adversely affect normal site activities~~ (Toxic or flammable gas release is addressed in EAL HU3.1 and EAL HU3.2.)
- Uncontrolled RCS cooldown due to secondary depressurization

It is also intended that the Shift Supervisor (Emergency Coordinator) Director judgement not be limited by any list of events as defined here or as augmented by the site. This list is provided solely as examples for consideration and it is recognized that actual events may not always follow a pre-conceived description.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HA1 Natural and destructive phenomena affecting the plant vital area.

Op. Mode  
Applicability ☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

## HA1.1

~~(Site specific) method-~~  
~~Earthquake felt inplant by one or more plant operations personnel~~  
~~and~~  
~~Confirmation of earthquake of an intensity greater than 0.08g as determined by TEG 2.1 per~~  
~~SC-5 "Earthquake Emergency Plan".~~  
~~Operating Basis Earthquake (OBE).~~

## HA1.3

~~Report of any visible structural damage to equipment needed for safe plant operation on any of~~  
~~the following plant structures:~~  
~~• Reactor building • Intake building • Ultimate heat sink • Refueling water storage tank •~~  
~~• Diesel generator building • Turbine building • Condensate storage tank • Control room •~~  
~~• Other (site specific) structures~~  
~~Control Building, Reactor Containment Building, Auxiliary Building~~  
~~Turbine Building, Emergency Diesel Building, Standby Auxiliary Feedwater Building~~  
~~Screen House, Central Alarm Station~~

## HA1.5

~~Vehicle crash affecting or projectile impact which precludes personnel access to or damages~~  
~~equipment in plant vital areas. (See HA3.1 for list of vital areas.)~~

## HA1.7

~~Site specific occurrences, Flood water accumulating on screenhouse operating floor OR Lake level > 253 ft. OR Screen House Suction Bay water level < 13 feet~~

## HA1.2

~~Tornado or high winds striking plant vital areas: Tornado or high winds greater than~~  
~~(site specific) mph strike within the protected area boundary.~~

~~Sustained winds greater than 75 mph~~

~~OR~~

~~Tornado strikes a plant vital area~~

~~(see HA1.3 for list of plant vital areas.)~~

## HA1.4

~~(Site specific) indications in the control room.~~

## HA1.6

~~Turbine failure generated missiles result in any visible structural damage to or penetration of any~~  
~~of the following plant areas: plant vital equipment~~



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Each of these EALs is intended to address events that may have resulted in a plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial "report" should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage. Escalation to a higher emergency class, if appropriate, will be based on System Malfunction, Fission Product Barrier Degradation, Abnormal Rad Releases/Radiological Effluent, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~

EAL #HA1.1 ~~should be~~ is based on ~~(site-specific)~~ FSAR design basis of 0.08 g. Seismic events of this magnitude can cause damage to safety functions.

EAL #HA1.2 ~~should be~~ is based on ~~(site-specific)~~ FSAR design basis assumed "severe environmental loading" condition of sustained 75 mph winds (> 1 min.). Wind loads of this magnitude can cause damage to safety functions.

EAL #HA1.3 should specify ~~(site-specific)~~ structures containing systems and functions required for safe plant operation safe shutdown of the plant.

EAL #HA1.4 ~~should specify specifies the types of instrumentation or indications including judgements which are to be used to assess occurrence. The methods by which natural and destructive phenomena are indicated in the control room are adequately given by the means in which EAL HA1.1, 1.2 and 1.3 are determined. Therefore there is no need for this EAL.~~

EAL #HA1.5 is intended to address such items as plane or helicopter crash, ~~or on some sites~~, train crash, or barge crash into a plant vital area.

EAL #HA1.6 ~~is intended to addresses~~ the threat to safety related equipment imposed by missiles generated by main turbine rotating component failures. ~~The is (site-specific) list of areas should include all areas containing involved structures are~~ safety-related equipment, their controls, and their power supplies. This EAL is, therefore, consistent with the definition of an ALERT in that if missiles have damaged ~~or penetrated areas containing~~ safety-related equipment the potential exists for substantial degradation of the level of safety of the plant.

EAL #HA1.7 covers high and low lake water level conditions that could other (site-specific) phenomena such as flood, result in loss of vital plant equipment. Flood water accumulating on the screen house operating floor or lake levels > 253 ft. corresponds to levels threatening vital equipment. Screen House Suction Bay level < 13 ft. corresponds to the elevation which results in the motor-driven firewater pump suction bowls becoming uncovered.

## Reference:

1. SC-4 High Water (Flood) Emergency Plan
2. SC-4.1 Low Screenhouse Water Level
3. SC-5 Earthquake Emergency Plan
4. RGE FSAR Section 3.3.2.1.4
5. EPIP 2-2 Obtaining Meteorological Data and Forecasts and thier Use in Emergency Dose Assessment
6. Interoffice Memo "Screenhouse Pump Bay Water Level" dated 1/24/94 to Terry White from William Rapin and Jeffrey Wayland



Plant Specific EAL Codeline (A,H,S)  
R.E. Ginna

IC#: HA2

Fire or explosion affecting the operability of plant safety systems required to establish or maintain safe shutdown.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HA2.1

The following conditions exist:

a. Fire or explosion in any of the following (site-specific) areas:

Control Building, Reactor Containment Building, Auxiliary Building

Turbine Building, Emergency Diesel Building, Standby Auxiliary Feedwater Building

Screen House

AND

b. Affected system parameter indications show degraded performance or plant personnel report visible damage to permanent structures or equipment within the structures or equipment within the specified area.

# Plant Specific EAL Guideline (A,H,S)

## R.E. Ginna

### Bases

~~(Site-specific) The listed~~ areas containing functions and systems required for the safe shutdown of the plant ~~should be specified.~~ ~~(Site-specific) The RGE~~ safe shutdown analysis should be consulted for equipment and plant areas required for the applicable mode. This will make it easier to determine if the fire or explosion is potentially affecting one or more redundant trains of safety systems. Escalation to a higher emergency class, if appropriate, will be based on System Malfunction, Fission Product Barrier Degradation, Abnormal Rad Releases/Radiological Effluent, or Emergency Director Judgement ICs.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. Ginna is a single unit site.~~

With regard to explosions, only those explosions of sufficient force to damage permanent structures or equipment required for safe operation within the identified plant areas should be considered. As used here, an explosion is a rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment, that potentially imparts significant energy to nearby structures and materials. The inclusion of a "report of visible damage" should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage. The occurrence of the explosion with reports of evidence of declaration of an Alert and the activation of the TSC will provide the Shift Supervisor (Emergency Coordinator) Director with the resources needed to perform these damage assessments. The Shift Supervisor (Emergency Coordinator) Director also needs to consider any security aspects of the explosions, if applicable.

### Reference:

### Site Plot Plan

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HA3

Release of toxic or flammable gases within a facility structure which jeopardizes operation of systems required to maintain safe operations or to establish or maintain cold shutdown.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HA3.1

Report or detection of toxic gases within a the following facility structures in concentrations that will be life threatening to plant personnel:

Control Building  
Reactor Containment Building  
Auxiliary Building  
Turbine Building  
Emergency Diesel Building  
Standby Auxiliary Feedwater Building  
Screen House

HA3.2

Report or detection of flammable gases within a the following structures in concentrations that will preclude access to equipment necessary for affect the safe operation of the plant:

Control Building  
Reactor Containment Building  
Auxiliary Building  
Turbine Building  
Emergency Diesel Building  
Standby Auxiliary Feedwater Building  
Screen House



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This IC is based on gases that have entered a plant structure precluding access to equipment necessary for affecting the safe operation of the plant. This IC applies to buildings and areas contiguous to plant vital areas or other significant buildings or areas (i. e., Service Water Pump house). The intent of this IC is not to include buildings (i. e., warehouses) or other areas that are not contiguous or immediately adjacent to plant vital areas. It is appropriate that increased monitoring be done in areas that are not contiguous or immediately adjacent to plant vital areas. emergency class, if appropriate, will be based on System Malfunction, Fission Product Barrier Degradation, Abnormal Rad Releases/Radiological Effluent, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. IP-3 and IP-2 have no shared safety systems and the protected area boundaries are separated by several hundred feet, so it is unlikely that the release of toxic or flammable gases at one unit would affect the other. Ginna is a single unit site.~~

## Reference:

Site Plot Plan

# Plant Specific EAL (Modeline (A,H,S)

R.E. Ginna

IC#: HA4

Security event in a plant protected area.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HA4.1

Intrusion into plant protected area by an adversary a hostile force.

HA4.2

Other security events as determined from ~~(site-specific)~~ Ginna Security Safeguards  
Contingency Plan.



# Plant Specific EAL (Modeline (A,H,S)

R.E. Ginna

## Bases

This class of security events represents an escalated threat to plant safety above that contained in the Unusual Event. For the purposes of this IC, intrusion by unauthorized personnel inside the a civil disturbance which penetrates the protected area boundary can be considered a significant security threat a hostile force. Intrusion into a vital area by a hostile force unauthorized personnel will escalate this event to a Site Area Emergency.

~~Multi unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginnais a single unit site.



# Plant Specific EAL (●) deline (A,H,S)

R.E. Ginna

IC#: HA5

Control room evacuation has been initiated.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HA5.1

Entry into ~~(site-specific) procedure~~ AP-CR.1 Control Room Inaccessability for control room evacuation.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

With the control room evacuated, additional support, monitoring and direction through the Technical Support Center and/or other Emergency ~~Response Facilities Operations Center~~ is necessary. Inability to establish plant control from outside the control room will escalate this event to a Site Area Emergency.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. Ginna is a single unit site.~~

## Reference:

AP-CR.1 Control Room Inaccessibility

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HA6

Other conditions existing which in the judgement of the Shift Supervisor (Emergency Coordinator) Director warrant declaration of an Alert.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HA6.1

Other conditions existing which in the judgement of the Shift Supervisor (Emergency Coordinator) Director indicate that plant safety systems may be degraded and that increased monitoring of plant functions is warranted.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This EAL is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Shift Supervisor (Emergency Coordinator) to fall under the Alert emergency class.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: HS1

Security event in a plant vital area.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HS1.1

Intrusion into the following plant security vital areas by an adversary or hostile force as determined by the Security Shift Supervisor:

Control Building  
Reactor Containment Building  
Auxiliary Building  
Turbine Building  
Emergency Diesel Building  
Standby Auxiliary Feedwater Building  
Screen House Central Alarm Station  
Secondary Alarm Station

HS1.2

Other security events as determined from (site-specific) Ginna Security Safeguards Contingency Plan.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This class of security events represents an escalated threat to plant safety above that contained in the Alert IC in that an adversary has ~~a hostile force has~~ progressed from the protected area to the vital area.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. Ginna is a single unit site.~~

The Ginna protected area boundary is illustrated on the site plot plan

## Reference:

1. Ginna Security Contingency Plan
2. Site Plot Plan





# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HS2

Control room evacuation has been initiated and ~~plant control~~ of core cooling cannot be established.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HS2.1

The following conditions exist:

a. Control room evacuation has been initiated.

AND

b. Control of core cooling the plant cannot be established per ~~(site-specific) procedure~~  
AP-CR.1 Control Room Inaccessibility within (site-specific) 20 minutes.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Expeditious transfer of safety systems has not occurred but fission product barrier damage may not yet be indicated. ~~(Site-specific) The time for transfer is based on analysis or assessments as to how quickly control must be reestablished without core uncovering and/or core damage. This time should not exceed 15 minutes. Ginna Appendix B submittal indicates that 20 minutes is the maximum time for which control of plant safety systems should occur under worst case conditions.~~ In cold shutdown and refueling modes, operator concern is directed toward maintaining core cooling such as is discussed in Generic Letter 88-17, "Loss of Decay Heat Removal." In power operation, hot standby, and hot shutdown modes, operator concern is primarily directed toward maintaining critical safety functions and thereby assuring fission product barrier integrity. Escalation of this event, if appropriate, would be by Fission Product Barrier Degradation, Abnormal Rad Releases/Radiological Effluent, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs.

With respect to protection of the public and safe plant operations, "plant control" must focus primarily on the ability to maintain the reactor in a cooled condition. Therefore, it is appropriate to change the IC and EAL so that it emphasizes the need for core cooling when controlling the plant from outside the Control Room.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. Ginna is a single unit site.~~

## Reference:

AP-CR.1 Control Room Inaccessability  
Appendix B Section 6.4.5 page 6-35

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HS3

Other conditions which in the judgement of the Shift Supervisor (Emergency Coordinator) ~~Director~~ warrant declaration of Site Area Emergency.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HS3.1

Other conditions which in the judgement of the Shift Supervisor (Emergency Coordinator)  
~~Director~~ warrant declaration of Site Area Emergency.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

This EAL is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the ~~Shift Supervisor (Emergency Coordinator) Director~~ to fall under the emergency class description for Site Area Emergency.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: HG1 Security event resulting in loss of ability to reach and maintain cold shutdown.

Op. Mode  
Applicability ☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HG1.1

Loss of ~~plant~~ physical control of ~~from~~ the control room due to security event.

AND

Loss of physical control of the remote shutdown capability due to security event.

HG1.2

Loss of physical control of the remote shutdown capability due to security event.



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This IC encompasses conditions under which a hostile force has taken physical control of vital area required to reach and maintain safe shutdown. The concern here is the loss of ability to shutdown the reactor and maintain core cooling. Therefore this EAL has been modified to reflect a loss of plant control from both the control room and remote shutdown panels.

Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in how rapidly a General Emergency is declared. Ginna is a single unit site.



# Plant Specific EAL ~~C~~odeline (A,H,S)

R.E. Ginna

IC#: HG2

Other conditions existing which in the judgement of the Shift Supervisor (Emergency Coordinator) Director warrant declaration of General Emergency.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

HG2.1

Other conditions existing which in the judgement of the Shift Supervisor (Emergency Coordinator) Director indicate: (1) actual or imminent substantial core degradation with potential for loss of containment, or (2) potential for uncontrolled radionuclide releases. These releases can reasonably be expected to exceed EPA PAG plume exposure levels outside the site boundary.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This EAL is intended to address unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Shift Supervisor (Emergency Coordinator) Director to fall under the General Emergency class.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in how rapidly a General Emergency is declared.~~  
Ginna is a single unit site.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SU1

Loss of all offsite power to essential busses for greater than 15 minutes.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

SU1.1

The following conditions exist:

a. Loss of power to ~~(site-specific)~~ :

Station Auxiliary Transformer 12A

Station Auxiliary Transformer 12B

for greater than 15 minutes.

AND

b. ~~At least (site-specific) Both emergency diesel generators are capable of supplying power to its associated safeguards buses 14/18 (EDG 1A) and 16/17 (EDG 1B) emergency generators are supplying power to emergency buses.~~



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Prolonged loss of offsite AC power sources reduces required redundancy and potentially degrades the level of safety of the plant by rendering the plant more vulnerable to a complete loss of AC power (station blackout). Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## Reference:

RGE-6 "4160V Electrical Distribution System"

RGE-7 "480V Distribution"

# Plant Specific EAL ~~Model~~ (A,H,S)

R.E. Ginna

IC#: SU2

Inability to reach required shutdown within Technical Specification Limits.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SU2.1

Plant is not brought to required operating mode within ~~(site-specific)~~ Technical Specifications  
LCO Action Statement Time.



# Plant Specific EAL deline (A,H,S)

R.E. Ginna

3

## **Bases**

Limiting Conditions of Operation (LCOs) require the plant to be brought to a required shutdown mode when the Technical Specification required configuration cannot be restored. Depending on the circumstances, this may or may not be an emergency or precursor to a more severe condition. In any case, the initiation of plant shutdown required by the site Technical Specification requires a one hour report under 10CFR50.72 (b) non-emergency events. The plant is within its safety envelope when being shut down within the allowable action statement time in the Technical Specifications. An immediate Notification of an Unusual Event is required when the plant is not brought to the required operating mode within the allowable action statement time in the Technical Specifications. Declaration of an Unusual Event is based on the time at which the LCO-specified action statement time period elapses under the site Technical Specifications and is not related to how long a condition may have existed. Other required Technical Specification shutdowns that involve precursors to more serious events are addressed by other System malfunction Hazards, or Fission Product Barrier Degradation ICs.

## Reference:

Technical Specifications Section 3.0



# Plant Specific EAL deline (A,H,S)

R.E. Ginna



IC#: SU3

Unplanned loss of most or all safety system annunciation or indication in the control room for greater than 15 minutes.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SU3.1

The following conditions exist:

a. ~~Loss of most or all (site specific) annunciators or indications on one or more Main Control Board Panels A, AA, B, C, D, E, F, G associated with safety systems for greater than 15 minutes.~~

AND

b. ~~Compensatory non-alarming indications - are is available.~~

AND

c. In the opinion of the Shift Supervisor, the loss of the annunciators or indicators requires increased surveillance to safely operate the unit(s).

AND

d. Annunciator or indicator loss does not result from planned action.

# Plant Specific EAL ~~●~~ deline (A,H,S)

R.E. Ginna

## Bases

This IC and its associated EAL are intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment.

Recognition of the availability of computer based indication equipment is considered (SPDS, plant computer, etc.)

"Unplanned" loss of annunciators or indicator excludes scheduled maintenance and testing activities.

"Compensatory non-alarming indications: in this context includes computer based information such as SPDS . This should include all computer systems available for this use depending on specific plant design and subsequent retrofits. ~~The words "Compensatory non-alarming indications are is available."~~ have been deleted because they are unnecessary. SA4.1 requires declaration of an Alert based on thier loss.

~~Quantification of "Most" is arbitrary, however, it is estimated that if approximately 75% of the safety system annunciators or indicators are lost there is an increased risk that a degraded plant condition could go undetected.~~ It is not intended that plant personnel perform a detailed count of instrumentation lost but the use of the value as a judgement by the Shift Supervisor as the threshold for determining the severity of the plant conditions. This judgement is supported by the specific opinion of the Shift Supervisor that additional operating personnel will be required to provide increased monitoring of system operation to safely operate the unit(s).

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptable power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this EAL due to difficulty associated with assessment of plant conditions. The loss of specific, or several, safety system indicators should remain a function of that specific system or component operability status. This will be addressed by their specific Technical Specification. The initiation of a Technical Specification imposed plant shutdown related to the instrument loss will be reported via 10CFR50.72. If the shutdown is not in compliance with the Technical Specification action, the Unusual Event is based on SU2, Inability to Reach Required Shutdown Within Technical Specification Limits."

~~(Site specific)~~ Annunciators ~~or indicator~~ for this EAL must include those identified in the Abnormal Operating procedures, in the Emergency Operating Procedures, and in other EALs (e. g., area, process, and/or effluent rad monitors, etc.).

Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

Due to the limited number of safety systems in operation during cold shutdown, refueling, and defueled modes, no IC is indicated during these modes of operation.

This Unusual Event will be escalated to an Alert if a transient is in progress during the loss of annunciation or indication.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: SU4

Fuel clad degradation.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

SU4.1

~~(Site specific) Letdown Line Monitor R-9 radiation monitor readings > 2 R/hr indicating fuel-clad degradation greater than Technical Specification allowable limits.~~

SU4.2

~~(Site specific) coolant sample activity value indicating fuel-clad degradation greater than Technical Specification allowable limits,  $\geq 100\%$  of 84/E  $\mu\text{Ci/gm}$  total specific activity or  $\geq 0.2 \mu\text{Ci/gm}$  dose equivalent I-131 and the conditions of Tech. Spec. 3.1.4.3b are exceeded~~

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

This IC is included as an Unusual Event because it is considered to be a potential degradation in the level of safety of the plant and a potential precursor of more serious problems.

EAL #SU4.1 ~~addresses (site specific) radiation monitor readings such as BWR air ejector monitors, PWR failed fuel monitors, etc., that provide indication of fuel clad integrity.~~ addresses letdown line monitor reading (2 R/hr) which corresponds to 1% fuel failure(bases for the Tech. Spec. coolant activity limits).

EAL #SU4.2 addresses coolant samples exceeding total specific coolant activity and coolant technical specifications ~~for iodine spike~~. Escalation of this IC to the Alert level is via the fission product barrier degradation monitoring ICs.

## Reference:

1. Tech Specs section 3.1.4
2. P-9 "Radiation Monitoring System"
3. EPIP 2-16 Section 6.2.1.b



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SU5

RCS leakage.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SU5.1

Either of the following conditions exist:

a. Unidentified or pressure boundary leakage greater than 10 gpm

OR

b. Identified leakage greater than 25 gpm.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

This IC is included as an Unusual Event because it may be a precursor of more serious conditions and, as a result, is considered to be a potential degradation of the level of safety of the plant. The 10 gpm value for the unidentified and pressure boundary leakage was selected as it is observable with normal control room indications. Lesser values must generally be determined through time-consuming surveillance test (e. g., mass balances). The EAL for identified leakage is set at a higher value due to the lesser significance of identified leakage in comparison to unidentified or pressure boundary leakage. In either case, escalation of this IC to the Alert level is via Fission Product Barrier Degradation ICs or IC SA3, "Inability to Maintain Plant in Cold Shutdown."

Only operating modes in which there is fuel in the reactor coolant system and the system is pressurized are specified.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: SU6

Unplanned loss of all onsite or offsite communications capabilities.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

SU6.1

Either of the following conditions exist:

a. Loss of all (site-specific-list) of the following onsite communications capability affecting the ability to perform routine operations:

Plant telephone system: touchtone dial system, interfaces with PA system

sound powered phones

refueling crew circuit

control room to relay room, containment vessel, auxiliary building and intermediate building

control room to turbine building

control room to RG&E Energy Operations

control room to Emergency Survey Center (Radiation Plan only)

Appendix R radio repeater/paging system

OR

b. Loss of all (site-specific-list) of the following offsite communications capability:

Radiological Emergency Communications System (RECS)

Emergency Notification System (For communicating with NRC)

Health Physics Network

Plant telephone system: touchtone dial system

FM based stations:

control room to/from RG&E Line Operator

ISC, Emergency Survey Center and Security Office with walkie talkies



# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

The purpose of this IC and its associated EALs is to recognize a loss of communications capability that either defeats the plant operations staff ability to perform routine tasks necessary for plant operations or the ability to communicate problems with offsite authorities. The loss of offsite communications ability is expected to be significantly more comprehensive than the condition addressed by 10CFR50.72.

~~(Site specific list)~~ The onsite communications loss must encompass the loss of all means of routine communications (i. e., phones, sound powered phone systems, page party system and radios/walkie talkies).

~~(Site specific list)~~ The offsite communications loss must encompass the loss of all means of communications with offsite authorities. This should include ENS, Bell lines, FAX transmissions, and dedicated EPP phone systems. This EAL is intended to be used only when extraordinary means are being utilized to make communications possible (relaying of information from radio transmissions, individuals being sent to offsite locations, etc.).

## Reference:

A-56, Revision 19, Communication Systems at Ginna Station

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SU7

Unplanned loss of required DC power during cold shutdown or refueling mode for greater than 15 minutes.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☒ 4 (CSD) ☒ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SU7.1

Either ~~Both~~ of the following conditions exist:

a. Unplanned loss of vital DC power to required DC busses based on ~~(site-specific)~~  $\leq 105$  vdc  
bus voltage indications on 125 vdc batteries 1A and 1B

AND

b. Failure to restore power to at least one required DC bus within 15 minutes from the time of  
loss.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

The purpose of this IC and its associated EALs is to recognize a loss of DC power compromising the ability to monitor and control the removal of decay heat during cold shutdown or refueling operations. This EAL is intended to be anticipatory in as much as the operating crew may not have necessary indication and control of equipment needed to respond to the loss.

Unplanned is included in this IC and EAL to preclude the declaration of an emergency as a result of planned maintenance activities. Routinely plants will perform maintenance on a train related basis during shutdown periods. It is intended that the loss of the operating (operable) train is to be considered. If this loss results in the inability to maintain cold shutdown, the escalation to an Alert will be per SA3 "Inability to Maintain Plant in Cold Shutdown."

~~(Site-specific)~~ The bus voltage should be based on the minimum bus voltage necessary for the operation of safety related equipment. This voltage value should incorporate a margin of at least 15 minutes of operation before the onset of inability to operate those loads. This voltage is usually near the minimum voltage selected when battery sizing is performed. Typically the value for the entire battery set is approximately 105 volts per cell. For a 56 string battery set the minimum voltage is typically 1.81 volts per cell.

## Reference:

1. RGE-9 "Instrument Bus and DC Power System"

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SA1

Loss of all offsite power and loss of all onsite AC power to essential busses during cold shutdown or refueling mode.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☒ 4 (CSD) ☒ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SA1.1

The following conditions exist:

a. Loss of power to ~~(site-specific)~~ :

Station Auxiliary Transformer 12A

AND

Station Auxiliary Transformer 12B

AND

b. Failure of ~~(site-specific)~~ both emergency diesel generators to supply power to their associated safeguards buses 14/18 (EDG 1A) and 16/17 (EDG 1B) ~~emergency generators are supplying power to emergency buses.~~

AND

c. Failure to restore power to busses 14/18 (EDG 1A) OR 16/17 (EDG 1B) ~~at least one emergency bus~~ within 15 minutes from the time of loss of both offsite and onsite AC power.

# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

## Bases

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, containment heat removal, Spent Fuel Heat Removal and the Ultimate Heat Sink. When in cold shutdown, refueling, or defueled mode the event can be classified as an Alert, because of the significantly reduced decay heat, lower temperature and pressure, increasing the time to restore one of the emergency busses, relative to that specified for the Site Area Emergency EAL. Escalating to the Site Area Emergency, if appropriate, is by Abnormal Rad Levels/Radiological Effluent, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

Note that Defuel mode is not applicable to this IC because the IC is specifically written for cold shutdown and refuel modes.

## Reference:

1. RGE-6 Electrical Distribution System

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SA2

Failure of Reactor Protection system Instrumentation to complete or initiate an automatic reactor ~~scram trip~~ once a Reactor Protection system setpoint has been exceeded and/or manual ~~scram trip~~ was not successful.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SA2.1

~~(Site specific) indication(s) exist that indicate that Reactor Protection system setpoint was exceeded and automatic scram did not occur, and a successful manual scram occurred.~~

~~ORANGE or RED path in F-0.1 Subcriticality~~

~~and~~

~~Emergency Boration is required.~~

# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

## Bases

This EAL addresses any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor to an extent requiring emergency boration. This condition indicates failure of the automatic and/or manual protection system to trip scram the reactor to the extent which precludes the reactor being made sub-critical. This condition is more than a potential degradation of a safety system in that a front line automatic protection system did not function in response to a plant transient and thus the plant safety has been compromised, and design limits of the fuel may have been exceeded. An Alert is indicated because conditions exist that lead to potential loss of fuel clad or RCS. ~~Reactor Protection system setpoint being exceeded (rather than limiting safety system setpoint being exceeded) is specified here because failure of the automatic protection system is the issue.~~ A manual trip scram is any set of actions by the reactor operator(s) at the reactor control console which causes control rods to be rapidly inserted into the core and brings the reactor subcritical (e. g., reactor trip button). ~~Failure of manual scram would escalate the event to a Site Area Emergency.~~

This IC and resulting EAL have been specifically modified to more accurately define the condition described by the generic bases as applied to pressurized water reactors. The failure of automatic initiation of a reactor trip followed by successful manual initiation actions which can be rapidly taken at the reactor control console does not pose a potential loss of either fuel clad or RCS boundaries. It is the continued criticality under conditions requiring a reactor scram which poses the potential threat to RSC or fuel clad integrity. If an ORANGE path exists on F-0.1, CRITICALITY, there has been a failure to shut down the reactor, but without substantial heat generation. These conditions represent a potential loss of the fuel clad boundary, and thus warrant a declaration of ALERT. CSFST Subcriticality - ORANGE path is entered based on failure of the intermediate range startup rate monitors to indicate negative or zero following reactor trip. A manual trip is any set of actions by the reactor operator(s) at the reactor control console which causes control rods to be rapidly inserted into the core and brings the reactor subcritical (e. g., reactor trip button). It is also important to note that the failure of the reactor protection system to initiate an automatic trip does not infer actual or potential failures of other systems nor is it, in and of itself, a precursor to fission product barrier degradation. The RPS serves no other safety function but to initiate reactor trips. Therefore, once the reactor has been successfully tripped, failures in the RPS system can have no plant safety impact. If immediate manual actions to trip the reactor are successful following recognition of an automatic trip failure, there is no threat to either plant safety or fission product integrity related to the automatic trip failure. This deviation is consistent with the philosophy of making accurate vs. conservative classifications.

## References:

1. F-0.1 "Subcriticality"
2. FR-S.1 "Response to Reactor Restart/ATWS"
3. FR-S.2 "Response to Loss of Core Shutdown"

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SA3      Inability to maintain plant in cold shutdown.

Op. Mode  
Applicability      ☐ 1 (Pwr Ops)   ☐ 2 (HSB)   ☐ 3 (HSD)   ☒ 4 (CSD)   ☒ 5 (Refuel)   ☐ 6 (Defuel)   ☐ All

SA3.1

The following conditions exist:

~~a. Loss of (site specific) Technical Specification required functions to maintain cold shutdown.~~

~~—AND~~

b. Reactor coolant temperature increase that either:

- ~~• Exceeds 200 °F cold shutdown temperature limit Technical Specification~~

~~OR~~

- ~~• Results in uncontrolled temperature rise approaching 200 °F cold shutdown temperature limit technical specification.~~



# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

## Bases

This EAL addresses complete loss of functions required for core cooling during refueling and cold shutdown modes. Escalation to Site Area Emergency or General Emergency would be via Abnormal Rad Levels/Radiological Effluent or ~~Shift Supervisor (Emergency Coordinator) Director~~ Judgement ICs.

For PWRs, this IC and its associated EAL are based on concerns raised by Generic Letter 88-17, "Loss of Decay Heat Removal." A number of phenomena such as pressurization, vortexing, steam generator U-tube draining, RCS level differences when operating at a mid-loop condition, decay heat removal system design, and level instrumentation problems can lead to conditions where decay heat removal is lost and core uncover can occur. NRC analyses show that sequences that can cause core uncover in 15 to 20 minutes and severe core damage within an hour after decay heat removal is lost. Under these conditions, RCS integrity is lost and fuel clad integrity is lost or potentially lost, which is consistent with a Site Area Emergency. ~~(Site-specific)~~ indicators for these EALs are those methods used by the plant in response to Generic Letter 88-17 which include core exit temperature monitoring and RCS water level monitoring. In addition, radiation monitor readings may also be appropriate as an indicator of this condition.

A reactor coolant temperature increase that approaches or exceeds the cold shutdown technical specification limit warrants declaration of an Alert irrespective of the availability of technical specification required functions to maintain cold shutdown. The concern of this IC is the loss of ability to maintain the plant in cold shutdown which is defined by reactor coolant temperature and not the operability of equipment which supports removal of heat from the reactor.

"Uncontrolled" means that system temperature increase is not the result of planned actions by the plant staff.

The EAL guidance related to uncontrolled temperature rise is necessary to preserve the anticipatory philosophy of NUREG-0654 for events starting from temperatures much lower than the cold shutdown temperature limit.

Escalation to the Site Area Emergency is by IC SS5, "Loss of Water Level in the Reactor Vessel that has or will Uncover Fuel in the Reactor Vessel," or by Abnormal Rad Levels/Radiological Effluent ICs.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## Reference:

1. AP-RHR-1 "Loss of RHR"
2. Tech Specs, section 1.2
3. AP-RHR-2 "Loss of RHR While Operating at Reduced RCS Inventory Conditions"

# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

IC#: SA4

Unplanned loss of most or all safety system annunciation or indication in control room with either (1) a significant transient in progress, or (2) compensatory non-alarming indicators are unavailable.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SA4.1

The following conditions exist:

a. Loss of most or all ~~(site specific)~~ annunciators or indicators on one or more Main Control Board Panels: A, AA, B, C, D, E, F, G associated with safety systems for greater than 15 minutes.

AND

b. In the opinion of the Shift Supervisor, the loss of the annunciators or indicators requires increased surveillance to safely operate the unit(s).

AND

c. Annunciator or indicator loss does not result from planned action.

AND

d. Either of the following:

- A significant plant transient is in progress

OR

- ~~Compensatory non-alarming indications~~ PPCS, SAS, are is unavailable.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

This IC and its associated EAL are intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment during a transient. Recognition of the availability of computer based indication equipment is considered (SPDS, plant computer, etc.).

"Planned" loss of annunciators or indicators included scheduled maintenance and testing activities.

~~Quantification of "Most" is arbitrary, however, it is estimated that if approximately 75% of the safety system annunciators or indicators are lost, there is an increase risk that a degraded plant condition could go undetected.~~ It is not intended that plant personnel perform a detailed count of the instrumentation lost but the use of the value as a judgement by the Shift Supervisor as the threshold for determining the severity of the plant conditions. This judgement is supported by the specific opinion of the Shift Supervisor that additional operating personnel will be required to provide increased monitoring of system operation to safely operate the unit(s).

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptable power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this EAL due to difficulty associated with assessment of plant conditions. The loss of specific, or several, safety system indicators should remain a function of that specific system or component operability status. This will be addressed by the specific Technical Specification. The initiation of a Technical Specification imposed plant shutdown related to the instrument loss will be reported via 10CFR50.72. If the shutdown is not in compliance with the Technical Specification action, the Unusual Event is based on SU2 "Inability to Reach Required Shutdown Within Technical Specification Limits."

~~(Site specific)~~ Annunciators or indicators for this EAL must include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (e. g., area, process, and/or effluent rad monitors, etc.).

"Significant Transient" includes response to automatic or manually initiated functions such as scrams, runbacks involving greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or greater.

"Compensatory non-alarming indications" in this context includes computer based information such as SPDS. This should include all computer systems available for this use depending on specific plant design and subsequent retrofits. If both a major portion of the annunciation system and all computer monitoring are unavailable to the extent that the additional operating personnel are required to monitor indications, the Alert is required.

Due to the limited number of safety systems in operation during cold shutdown, refueling and defueled modes. No IC is indicated during these modes of operation. This Alert will be escalated to a Site Area Emergency if the operating crew cannot monitor the transient in progress.

# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

C#: SA5

AC power capability to essential busses reduced to a single power source for greater than 15 minutes such that any additional single failure would result in station blackout.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SA5.1

The following conditions exist:

1. Loss of power to (site-specific) Available emergency bus AC power reduced to only one of the following sources for > 15 min.:

for greater than 15 minutes.

—AND

2. Onsite power capability has been degraded to one (train-of) emergency bus(es) powered from a single onsite power source due to the loss of:  
site-specific list):

- : EDG 1A
- : EDG 1B
- : Station Auxiliary Transformer 12A
- : Station Auxiliary Transformer 12B



# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

## Bases

This IC and the associated EALs are intended to provide an escalation from IC SU1 "Loss of All Offsite Power to Essential Busses for Greater than 15 Minutes." The condition indicated by this IC is the degradation of the offsite power with a concurrent failure of one emergency generator to supply power to its emergency busses. Another related condition could be the loss of all offsite power and loss of onsite emergency diesels with only one train of emergency busses being backed from the unit main generator, or the loss of onsite emergency diesels with only one train of emergency busses being backed from offsite power. The subsequent loss of this single power source would escalate the event to a Site Area Emergency in accordance with IC SS1 "Loss of All Offsite and Loss of All Onsite AC Power to Essential Busses."

Example EAL #SA5.1b should be expanded to identify the control room indication of the status of offsite-specific power sources and distribution busses that, if unavailable, establish a single failure vulnerability.

~~At multi-unit stations, the EALs should allow credit for operation of installed design features, such as cross-ties or swing diesels, provided that abnormal or emergency operating procedures address their use. However, these stations must also consider the impact of this condition on other shared safety functions in developing the site-specific EAL.~~

~~Ginna is a single unit site.~~

## Reference:

1. RGE-6 "4160V Electrical Distribution"
2. RGE-7 "480v Distribution"

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SS1      Loss of all offsite power and loss of all onsite AC power to essential busses.

Op. Mode  
Applicability      ☒ 1 (Pwr Ops)   ☒ 2 (HSB)   ☒ 3 (HSD)   ☐ 4 (CSD)   ☐ 5 (Refuel)   ☐ 6 (Defuel)   ☐ All

SS1.1

The following conditions exist:

a. Loss of power to ~~(site-specific)~~ :

Station Auxiliary Transformer 12A

Station Auxiliary Transformer 12B

AND

b. ~~Failure of (site-specific) both emergency diesel generators to supply power to any essential bus (14/18 - EDG 1A and 16/17 - EDG 1B) emergency generators are supplying power to emergency buses.~~

AND

c. ~~Failure to restore power to buses 14/18 OR 16/17 at least one emergency bus within 15 minutes from the time of loss of both offsite and onsite AC power.~~





# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, Containment Heat Removal and the Ultimate Heat Sink. Prolonged loss of all AC power will cause core uncovering and loss of containment integrity, thus this event can escalate to a General Emergency. The (site-specific) time duration should be selected to exclude transient or momentary power losses, but should not exceed 15 minutes.

## Reference:

1. REG-6 "4160v Electrical Distribution System"
2. REG-7 "480v Distribution"

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

IC#: SS2

Failure of Reactor Protection system Instrumentation to complete or initiate an automatic reactor ~~scram~~ trip once a Reactor Protection system setpoint has been exceeded and/or manual ~~scram~~ trip was not successful, and there is power generation.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SS2.1

~~(Site specific) indications exist that automatic and manual scram were not successful.~~

RED path in F-0.1 SUBCRITICALITY

AND either:

Emergency boration is inoperative

OR

Power range not  $\leq$  5% within 15 min. of initiation of emergency boration



# Plant Specific EAL Celine (A,H,S)

R.E. Ginna

## Bases

This condition addresses:

Any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor.

AND

Reactor power  $\geq$  5%

Automatic and manual scram are not considered successful if action away from the reactor control console was required to scram the reactor.

CSFST Subcriticality - RED path is entered based on failure of power range indication to decrease below 5% following a reactor trip. This portion of the EAL addresses any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor to an extent that the reactor is producing more heat load for which the safety systems were designed. This condition indicates failure of both the automatic and manual protection systems to trip the reactor in conjunction with a failure of alternate boration systems to reduce reactor power below decay heat levels. The combination of failure of both front line and backup protection systems to function in response to a plant transient, along with the continued production of heat poses a direct threat to fuel clad and RCS integrity and thus warrants declaration of a Site Area Emergency.

15 minutes is specified to allow time for emergency boration to be effective and provides a discriminator between SA2.1 and SS2.1. The classification should be made as soon as it is apparent that emergency boration is not or will not be effective in reducing reactor power below 5%.

Under these conditions, the reactor is producing more heat than the maximum decay heat load for which the safety systems are designed. A Site Area Emergency is indicated because conditions exist that lead to imminent loss or potential loss of both fuel clad and RCS. Although this IC may be viewed as redundant to the Fission Product Barrier Degradation IC, its inclusion is necessary to better assure timely recognition and emergency response. Escalation of this event to a General Emergency would be via Fission Product Barrier Degradation or Shift Supervisor (Emergency Coordinator) Director Judgement ICs.

## Reference:

1. F-0.1 "Subcriticality"
2. FR-S.1 "Response to Reactor Restart/ATWS"
3. FR-S.2 "Response to Loss of Core Shutdown"



# Plant Specific EAL Codeline (A,H,S)

R.E. Ginna

IC#: SS3

Loss of all vital DC power.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SS3.1

Loss of all vital DC power based on ~~(site-specific)~~ ≤105 vdc bus voltage indications on 125 vdc batteries 1A and 1B for greater than 15 minutes.

# Plant Specific EAL Guideline (A,H,S)

R.E. Ginna

## Bases

Loss of all DC power compromises ability to monitor and control plant safety functions. Prolonged loss of all DC power will cause core uncovering and loss of containment integrity when there is significant decay heat and sensible heat in the reactor system. Escalation to a General Emergency would occur by Abnormal Rad Levels/Radiological Effluent, Fission Product Barrier Degradation, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## Reference:

1. RGE-9 "Instrument Bus and DC Power Supply System"

Plant Specific EAL Guidelines (A,H,S)  
R.E. Ginna

IC#: SS4 Complete loss of function needed to achieve or maintain hot shutdown.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SS4.1

Complete loss of any (site-specific) function required for hot shutdown as indicated by RED  
path on F-0.3, HEAT SINK



# Plant Specific EAL Guideline (A,H,S)

## R.E. Ginna

### Bases

This EAL addresses complete loss of functions, including ultimate heat sink and reactivity control, required for hot shutdown with the reactor at pressure and temperature. Under these conditions, there is an actual major failure of a system intended for protection of the public. Thus, declaration of a Site Area Emergency is warranted. Escalation to a General Emergency would occur by Abnormal Rad Levels/Radiological Effluent, Fission Product Barrier Degradation, or Shift Supervisor (Emergency Coordinator) Director Judgement ICs.

Loss of subcriticality is covered at the Site Area Emergency level by EAL SS2. Loss of system functions required to maintain hot shutdown would result in a RED path on the HEAT SINK CSFST.

Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class. Ginna is a single unit site.

### Reference:

Tech Specs, section 3.1

# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

IC#: SS5

Loss of RPV water level ~~in the reactor vessel~~ that has or will uncover fuel in the RPV ~~reactor vessel~~.

Op. Mode  
Applicability

☐ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☒ All

SS5.1

Loss of RPV reactor vessel water level as indicated by:

~~a. Loss of all decay heat removal cooling as determined by (site-specific) procedure~~

AND

~~b. (Site-specific) indicators that the core is or will be uncovered. With the RCS intact, BVLIS indication cannot be maintained above 43% 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 uncover is likely.

# Plant Specific EAL Outline (A,H,S)

R.E. Ginna

## Bases

Under the conditions specified by this IC, severe core damage can occur and reactor coolant system pressure boundary integrity may not be assured. For BWRs, it is intended to address concerns raised by NRC Office for Analysis and Evaluation of Operational Data (AEOD) Report AEOD/EG09, "BWR Operating Experience Involving Inadvertent Draining of the Reactor Vessel," dated August 8, 1986. This report states:

~~In broadest terms, the dominant causes of inadvertent reactor vessel draining are related to the operational and design problems associated with the residual heat removal system when it is entering into or exiting from the shutdown cooling mode. During this transitional period, water is drawn from the reactor vessel, cooled by the residual heat removal system heat exchangers (from the cooling provided by the service water system), and returned to the reactor vessel. First, there are piping and valves in the residual heat removal system which are common to both the shutdown cooling mode and other modes of cooling. These valves, when improperly positioned, provide a drain path for reactor coolant to flow from the reactor vessel to the suppression pool or the radwaste system. Second, establishing or making such evolutions vulnerable to personnel and procedural errors, the residual heat removal system valves that could be activated during shutdown cooling. Collectively, these factors have contributed to the inadvertent draining of the reactor vessel.~~

For PWRs, this IC covers sequences such as prolonged boiling following loss of decay heat removal.

~~Uncovery of the fuel irrespective of the event that causes fuel uncovery is justification alone for declaring a Site Area Emergency. Since other events could lead to fuel uncovery in cold shutdown or refuel other than a loss of decay heat removal capability, it is inappropriate to base the EAL on this one event. For other operating modes, fuel uncovery is a loss of the Fuel Clad and RCS barriers which requires declaration of a Site Area Emergency.~~

~~RVLIS dynamic range indications are not utilized in this EAL since the RCPs would not be running under conditions where vessel level is approaching TAF.~~

Thus, declaration of a Site Area Emergency is warranted under the conditions specified by the IC. Escalation to a General Emergency is via radiological effluence IC AG1.

## Reference:

1. FR-C.1 "Response to Inadequate Core Cooling"

# Plant Specific EAL 'eline (A,H,S)

R.E. Ginna

IC#: SS6      Inability to monitor a significant transient in progress.

Op. Mode  
Applicability      ☒ 1 (Pwr Ops)   ☒ 2 (HSB)   ☒ 3 (HSD)   ☐ 4 (CSD)   ☐ 5 (Refuel)   ☐ 6 (Defuel)   ☐ All

SS6.1

All of the following conditions exist:

a. ~~Loss of (site-specific) annunciators or indicators on one or more Main Control Board Panels~~  
~~A, AA, B, C, D, E, F, G associated with safety systems~~  
 AND

b. ~~Compensatory non-alarming indications PPCS and SAS are is unavailable.~~  
 AND

c. ~~Indications needed to monitor (site-specific) one or more of the following plant parameters~~  
~~safety functions are unavailable:~~  
~~Reactor Power, Intermediate range SUR, Source Range counts, Source Range SUR, Core Exit~~  
~~TCs, indication of RCPs running, RVLIS, RCS Pressure, RCS Hot/Cold Leg Temperature, SG~~  
~~Narrow Range level, FW Flow, SG Pressure, Containment Pressure, Containment Level,~~  
~~Containment Radiation, PZR Level~~  
 AND

d. Transient in progress.



# Plant Specific EAL Outline (A,H,S)

R.E. Ginna

## Bases

This IC and its associate EAL are intended to recognize the inability of the control room staff to monitor the plant response to a transient. A Site Area Emergency is considered to exist if the control room staff cannot monitor safety functions needed for protection of the public.

~~(Site-specific)~~ Annunciators for this EAL should be limited to include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (e. g., rad monitors, etc.).

"Compensatory non-alarming indications" in this context includes computer based information such as SPDS. This should include all computer systems available for this use depending on specific plant design and subsequent retrofits.

"Significant Transient" includes response to automatic or manually initiated functions such as scrams, runbacks involving greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or greater.

~~(Site-specific)~~ Indications needed to monitor safety functions necessary for protection of the public must include control room indications, computer generated indications and dedicated annunciation capability. The specific indications should be those used to determine such functions as the ability to shut down the reactor, maintain the core cooled and in a coolable geometry, to remove heat from the core, to maintain the reactor coolant system intact, and to maintain containment intact.

"Planned" actions are excluded from this EAL since the loss of instrumentation of this magnitude is of such significance during a transient that the cause of the loss is not an ameliorating factor.

## Reference:

1. CSEST's F-0.1 thru F-0.6

# Plant Specific EAL Outline (A,H,S)

R.E. Ginna

IC#: SG1

Prolonged loss of all offsite power and prolonged loss of all onsite AC power.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☒ 2 (HSB) ☒ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SG1.1

Prolonged loss of all offsite and onsite AC power as indicated by:

a. Loss of power to ~~both (site-specific)~~ :

- ~~Station Auxiliary Transformer 12A~~
- ~~Station Auxiliary Transformer 12B~~

AND

b. Failure of ~~(site-specific) both emergency diesel generators to supply power to any essential bus (14/18 - EDG 1A and 16/17 - EDG 1B) emergency generators are supplying power to emergency buses.~~

AND

c. At least one of the following conditions exist:

- Restoration of ~~power to~~ at least one ~~essential~~ emergency bus within ~~(site-specific)~~ 4 hours is not likely  
OR
- ~~(Site-specific) indication of continuing degradation of core cooling based on Fission-Product Barrier monitoring ORANGE or RED path on F-0.2, "CORE COOLING."~~





# Plant Specific EAL ~~Baseline~~ (A,H,S)

R.E. Ginna

## Bases

Loss of all AC power compromises all plant safety systems requiring electric power including RHR, ECCS, Containment Heat Removal and the Ultimate Heat Sink. Prolonged loss of all AC power will lead to loss of fuel clad, RCS, and containment. The 4 hours to restore AC power can be based on site blackout coping analysis performed in conformance with 10CFR50.63 and Regulatory Guide 1.155, "Station Blackout", as available, with appropriate allowance for offsite emergency response. Although this IC may be viewed as redundant to the Fission Product Barrier Degradation IC, its inclusion is necessary to better assure timely recognition and emergency response.

This IC is specified to assure that in the unlikely event of prolonged station blackout, timely recognition of the seriousness of the event occurs and that declaration of a General Emergency occurs as early as is appropriate, based on a reasonable assessment of the event trajectory.

The likelihood of restoring at least one emergency bus should be based on a realistic appraisal of the situation since a delay in an upgrade decision based on only a chance of mitigating the event could result in a loss of valuable time in preparing and implementing public protective actions.

In addition, under these conditions, fission product barrier monitoring capability may be degraded. Although it may be difficult to predict when power can be restored, it is necessary to give the Emergency Director a reasonable idea of how quickly (s)he may need to declare a General Emergency based on two major considerations:

1. Are there any present indications that core cooling is already degraded to the point that Loss or Potential Loss of fission product barriers is imminent? (~~Refer to Tables 3 and 4 for more information.~~)

2. If there are no present indications of such core cooling degradation, how likely is it that power can be restored in time to assure that a loss of two barriers with a potential loss of the third barrier can be prevented?

Thus, indication of continuing core cooling degradation must be based on fission product barrier monitoring with particular emphasis on Shift Supervisor (Emergency Coordinator) Director judgement as it relates to imminent loss or potential loss of fission product barriers and degraded ability to monitor fission product barriers.

~~Multi-unit stations with shared safety functions should further consider how this IC may affect more than one unit and how this may be a factor in escalating the emergency class.~~  
Ginna is a single unit site.

## Reference:

1. F-0.2, "CORE COOLING."
2. NRC letter to Dr. Mecredy dated 1/30/92 "RE Ginna Nuclear Power Plant Station Blackout Analysis (TAC M68548)"
3. REG-6 "4160v Electrical Distribution System"
4. REG-7 "480v Distribution"

# Plant Specific EAL Core Eline (A,H,S)

R.E. Ginna

IC#: SG2

Failure of the Reactor Protection System to complete an automatic scram and manual scram was not successful and there is indication of an extreme challenge to the ability to cool the core.

Op. Mode  
Applicability

☒ 1 (Pwr Ops) ☐ 2 (HSB) ☐ 3 (HSD) ☐ 4 (CSD) ☐ 5 (Refuel) ☐ 6 (Defuel) ☐ All

SG2.1

1. ~~RED path in E-0.1 SUBCRITICALITY~~ (Site-specific) indications exist that automatic and manual scram were not successful.

AND

2. Either of the following:

a. ~~(Site-specific) indications exist that the core cooling is extremely challenged.~~  
RED path on the CSEST E-0.2, "CORE COOLING"

OR

b. ~~(Site-specific) indication exists that heat removal is extremely challenged.~~  
RED path on the CSEST of E-0.3, HEAT SINK.

# Plant Specific EAL Guidelines (A,H,S)

R.E. Ginna

## Bases

Automatic and manual scram are not considered successful if action away from the reactor control console is required to scram the reactor.

Under the conditions of this IC and its associated EALs, the efforts to bring the reactor subcritical have been unsuccessful and, as a result, the reactor is producing more heat load for which the safety systems were designed. Although there are capabilities away from the reactor control console, such as emergency boration in PWRs, or standby liquid control in BWRs, the continuing temperature rise indicates that these capabilities are not effective. This situation could be the precursor for a core melt sequence. CSFST Subcriticality - RED path is entered based on failure of power range indication to decrease below 5% following a reactor trip. This portion of the EAL addresses any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor to an extent that the reactor is producing more heat load for which the safety systems were designed. This condition indicates failure of both the automatic and manual protection systems to trip the reactor in conjunction with a failure of alternate boration systems to reduce reactor power below decay heat levels.

For PWRs, the extreme challenge to the ability to cool the core is intended to mean that the core exit temperatures are at or approaching 1200 °F or that the reactor vessel water level is below the top of active fuel. For plants using CSFSTs, this EAL equates to a Core Cooling RED condition. ~~For BWRs, the extreme challenge to the ability to cool the core is intended to mean that the reactor vessel water level is below 2/3 coverage of active fuel.~~

Another consideration is the inability to initially remove heat during the early stages of this sequence. For PWRs, if emergency feedwater flow is insufficient to remove the amount of heat required by design from at least one steam generator, an extreme challenge should be considered to exist. For plants using CSFSTs, this equates to a HEAT Sink RED condition. ~~For BWRs, (site specific) considerations include inability to remove heat via the main condenser, or via the suppression pool or torus (e.g., due to high pool water temperature).~~

In the event either of these challenges exist at a time that the reactor has not been brought below the power associated with the safety system design (typically 3 to 5% power) a core melt sequence exists. In this situation, core declaration can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the fission product barrier matrix declaration to permit maximum offsite intervention time.

## Reference:

1. E-0.1 "SUBCRITICALITY"
2. E-0.2 "CORE COOLING."
3. E-0.3 "HEAT SINK"
4. FR-S.1. Response to Reactor Restart/ATWS
5. FR-S.2. Response to Loss of Core Shutdown

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC1

Barrier: Fuel Cladding

Type: Potential Loss

Description: Critical Safety Function Status

FC1.2 ~~Core cooling~~ - ORANGE or RED path in F-0.2, CORE COOLING

FC1.3 ~~Core cooling~~ - RED path in F-0.3, HEAT SINK

## Bases:

Core Cooling - ORANGE indicates subcooling has been lost and that some clad damage may occur. Heat Sink - RED indicates the ultimate heat sink function is under extreme challenge and thus these two items indicate potential loss of the fuel clad barrier.

## Reference:

1. CSFST F-0.2, Core Cooling, Revision 3
2. CSFST F-0.3, Heat Sink, Revision 3

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC2

Barrier: Fuel Cladding

Type: Loss

Description: Primary Coolant Activity Level

FC2.1 Coolant activity greater than ~~(site specific) value~~ 300  $\mu$ Ci/cc of I-131

## Bases:

This ~~(site specific)~~ value corresponds to 300  $\mu$ Ci/cc I-131 equivalent. Assessment by the NUMARC EAL Task Force indicates that this amount of coolant activity is well above that expected for iodine spikes and corresponds to about 2% to 5% fuel clad damage. This amount of clad damage indicates significant clad heating and thus the fuel clad barrier is considered lost.

There is no equivalent "Potential Loss" EAL for this item.

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC3

Barrier: Fuel Cladding

Type: Loss

Description: Core Exit Thermocouple Readings

FC3.1 Greater than ~~(site specific)~~ 1200 °F

## Bases:

The "Loss" EAL ~~(site specific)~~ reading should correspond to significant superheating of the coolant. This value typically corresponds to the temperature reading that indicates core cooling - RED in fuel clad barrier EAL #1 which is usually about 1200 °F.

## Reference:

1. CSFST F-0.2, Core Cooling, Revision 3
2. FR-C.1, Response to Inadequate Core Cooling, Revision Z



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC3

Barrier: Fuel Cladding

Type: Potential Loss

Description: Core Exit Thermocouple Readings

FC3.2 Greater than ~~(site-specific)~~ 700 °F

## Bases:

The "Potential Loss" EAL ~~(site-specific)~~ reading should correspond to loss of subcooling. This value typically corresponds to the temperature reading that indicates core cooling - ORANGE in fuel clad barrier EAL #1 which is usually about 700 to 900 °F. Note: This condition is a subset of CSEST F-0.2 CORE COOLING

## Reference:

1. CSEST F-0.2, Core Cooling, Revision 3
2. FR-C.1, Response to Inadequate Core Cooling, Revision 7



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC4

Barrier: Fuel Cladding

Type: Potential Loss

Description: Reactor Vessel Water Level

FC4.1 RVLIS  $\leq 43\%$  w/ no RCPs running (46% adverse containment)

## Bases:

There is no "Loss" EAL corresponding to this item because it is better covered by the other fuel clad barrier "Loss" EALs.

The ~~(site-specific)~~ value for the "Potential Loss" EAL corresponds to the top of the active fuel. For sites using CSFSTs, the "Potential Loss" EAL is defined by the Core Cooling - ORANGE path. The ~~(site-specific)~~ value in this EAL should be consistent with the CSFST value.

Note: Adverse containment values should be used whenever containment pressure is greater than 4 psig or containment radiation is greater than 10E+5.

Note: This condition is a subset of CSFST F-0.2 CORE COOLING

## Reference:

F-0.2, Core Cooling, Revision 3

FR-C.2, Response to Degraded Core Cooling, Revision 6, step 9.a

FR-C.2, Response to Degraded Core Cooling, Revision 6, Note, pg 3



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC5

Barrier: Fuel Cladding

Type: Loss

Description: Containment Radiation Monitor Reading

FC5.1 Containment rad monitor reading greater than ~~(site-specific)~~ 100 R/hr

## Bases:

The ~~(site-specific)~~ reading is a value which indicates the release of reactor coolant, with elevated activity indicative of fuel damage, into the containment. The reading should be calculated assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with a concentration of 300  $\mu\text{Ci/gm}$  dose equivalent I-131 into the containment atmosphere. Reactor coolant concentrations of this magnitude are several times larger than the maximum concentrations (including iodine spiking) allowed within technical specifications and are therefore indicative of fuel damage (approximately 2-5 % clad failure depending on core inventory and RCS volume). This value is higher than that specified for RCS barrier loss EAL #4. Thus, this EAL indicates a loss of both the fuel clad barrier and a loss of RCS barrier.

There is no "Potential Loss" EAL associated with this item.

## References:

P-9, Radiation Monitoring System, Revision 6Z, Section 2.2.2.6, pg P-9:2



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC6

Barrier: Fuel Cladding

Type: Loss

Description: Other (site specific) indications

FC6.1 ~~(Site-specific) as applicable~~ Failed Fuel Monitor (R-9) reading > 10,000 mRem/hr

## Bases:

This EAL is to cover other ~~(site-specific)~~ indications that may indicate loss or potential loss of the fuel clad barrier, including indications from containment air monitors or any other ~~(site-specific)~~ instrumentation. At Ginna, Failed Fuel Monitor reading of 10,000 mRem/hr corresponds to 5% fuel failures.

## Reference:

1. P-9, Radiation Monitoring System, Section 2.2.2.6, pg P-9:2
2. EPIP 2-16, Core Damage Estimation



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC6

Barrier: Fuel Cladding

Type: Loss

Description: Other (site specific) indications

FC6.1 ~~(Site-specific) as applicable~~ Failed Fuel Monitor (R-9) reading > 10,000 mRem/hr

## Bases:

This EAL is to cover other ~~(site-specific)~~ indications that may indicate loss or potential loss of the fuel clad barrier, including indications from containment air monitors or any other ~~(site-specific)~~ instrumentation. At Ginna, Failed Fuel Monitor reading of 10,000 mRem/hr corresponds to 5% fuel failures.

## Reference:

1. P-9, Radiation Monitoring System, Section 2.2.2.6, pg P-9:2
2. EPIP 2-16, Core Damage Estimation

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC6

Barrier: Fuel Cladding

Type: Potential Loss

Description: Other (site-specific) Indications

FC6.2 ~~(Site-specific) as applicable.~~ None

## Bases:

~~This EAL is to cover other (site-specific) indications that may indicate loss or potential loss of the fuel clad barrier, including indications from containment air monitors or any other (site-specific) instrumentation.~~



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS1

Barrier: RCS

Type: Potential Loss

Description: Critical Safety Function Status

RCS1.1 ~~RCS integrity~~ - Red path on F-0.4, INTEGRITY

RCS1.2 ~~Heat Sink~~ - Red path on F-0.3, HEAT SINK

## Bases:

This EAL is for PWRs using Critical Safety Function Status Tree (CSFST) monitoring and functional recovery procedures. ~~For more information, please refer to Section 3.9 of this report.~~ RED path indicates an extreme challenge to the safety function derived from appropriate instrument readings, and these CSFs indicate a potential loss of RCS barrier.

There is no "Loss" EAL associated with this item.

## References:

1. CSFST F-0.3 HEAT SINK
2. CSFST F-0.4 INTEGRITY



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS2

Barrier:

Type:

Description: RCS Leak Rate

RCS2.1 Greater than available makeup capacity as indicated by ~~a loss of RCS subcooling~~ RCS subcooling  $\leq$  EOP Fig. MIN SUBCOOLING

## Bases:

The "Loss" EAL addresses conditions where leakage from the RCS is greater than available inventory control capacity such that a loss of subcooling has occurred. The loss of subcooling is the fundamental indication that the inventory control systems are inadequate in maintaining RCS pressure and inventory against the mass loss through the leak.

## Reference:

E-0. REACTOR TRIP OR SAFETY INJECTION

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS2

Barrier: RCS

Type: Potential Loss

Description: RCS Leak Rate

RCS2.2 ~~Unisolable RCS leak exceeding the capacity of one charging pump in the normal charging mode~~ Primary system leakage  $\geq$  46 gpm.

## Bases:

The "Potential Loss" EAL is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control System which is considered as ~~one two centrifugal~~ charging pumps discharging to the charging header. In conjunction with the SG Tube Rupture "Potential Loss" EAL this assures that any event that results in significant RCS inventory shrinkage or loss (e. g., events leading to reactor scram and ECCS actuation) will result in no lower than an "Alert" emergency classification.

## Reference:

FSAR Table 9.3.6



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS3

Barrier: RCS

Type: Loss

Description: SG Tube Rupture

RCS3.1 ~~(site specific) indication that a SG is ruptured and has an unisolable secondary line break~~ Unisolable secondary side line break with SG tube rupture as identified in E-3 "Steam Generator Tube Rupture"

## Bases:

This EAL is intended to address the full spectrum of Steam Generator (SG) tube rupture events in conjunction with containment barrier "Loss" EAL #4 and fuel clad barrier EALs. The "Loss" EAL addresses ruptured SG(s) with an unisolable secondary line break corresponding to the loss of 2 or 3 fission product barriers (RCS barrier and containment barrier - this EAL will always result in containment barrier "Loss" EAL #4). This allows the direct release of radioactive fission and activation products to the environment. Resultant offsite dose rates are a function of many variables. Examples include: coolant activity, actual leak rate, SG carry over, iodine partitioning, and meteorology. Therefore, dose assessment in accordance with IC AG1, "Site Boundary Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity that Exceeds 1000 mR Whole Body or 5000 mR Child Thyroid for the Actual or Projected Duration of the Release Using Actual Meteorology", is required when there is indication that the fuel matrix/clad is potentially lost.

~~(Site specific)~~ indication should be consistent with the diagnostic activities of the emergency operating procedures (EOPs), ~~if available~~. This should include indication of reduction in primary coolant inventory, increased secondary radiation levels, and an uncontrolled or complete depressurization of the ruptured SG. Secondary radiation increases should be observed via radiation monitoring of condenser air ejector discharge, SG blowdown, mains steam, and/or SG sampling system. Determination of the "uncontrolled" depressurization of the ruptured SG should be based on indication that the pressure decrease in the ruptured steam generator is not a function of operator action. This should prevent declaration based on a depressurization that results from an EOP induced cooldown of the RCS that does not involve the prolonged release of contaminated secondary coolant from the affected SG to the environment. This EAL should encompass steam breaks, feed breaks, and stuck open safety or relief valves.

## References:

1. E-3 "Steam Generator Tube Rupture"

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS3

Barrier: RCS

Type: Potential Loss

Description: SG Tube Rupture

RCS3.2

~~(site specific) indication that a SG is ruptured and the primary-to-secondary leak rate exceeds the capacity of one charging pump in the normal charging mode SG tube rupture as identified in E-3 "Steam Generator Tube Rupture"~~

AND

Primary to secondary leakage is  $\geq 46$  gpm

## Bases:

The "Potential Loss" EAL is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control system which is considered as one ~~centrifugal~~ charging pump discharging to the charging header. In conjunction with the RCS leak rate "Potential Loss" EAL this assures that any event that results in significant RCS inventory shrinkage or loss (e. g., events leading to reactor scram and ECCS actuation) will result in no lower than an "Alert" emergency classification.

## References:

1. E-3 "Steam Generator Tube Rupture"

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS4

Barrier: RCS

Type: Loss

Description: Containment Radiation Monitoring

RCS4.1 Containment radiation monitor reading greater than ~~(site specific)~~ 10 R/hr

## Bases:

The 10 R/hr reading is a value which indicates the release of reactor coolant to the containment. The reading should be calculated assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with normal operating concentrations (i. e., within T/S) into the containment atmosphere. This reading will be less than that specified for fuel clad barrier EAL #5. Thus, this EAL would be indicative of a RCS leak only. If the radiation monitor reading increased to that specified by fuel clad barrier EAL #3, fuel damage would also be indicated.

However, if the site-specific physical location of the containment radiation monitor is such that radiation from a cloud of released RCS gases could not be distinguished from radiation from nearby piping and components containing elevated reactor coolant activity, this EAL should be omitted and other site-specific indications of RCS leakage substituted.

There is no "Potential Loss" EAL associated with this item.

## Reference:

1. F-0.5, Containment, Revision 2
2. FR-Z.1, Response to High Containment Radiation Level, Revision 3
3. EPIP 2-16, Core Damage Estimation



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS5

Barrier: RCS

Type: Loss

Description: Other (Site-specific) indications

RCS5.1 ~~(Site-specific) as available~~ None

## Bases:

This EAL is to cover other ~~(site-specific)~~ indications that may indicate loss or potential loss of the RCS barrier, including indications from containment air monitors or any other ~~(site-specific)~~ instrumentation.



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS5

Barrier: RCS

Type: Potential Loss

Description: Other (site-specific) indications

RCS5.2 ~~(Site-specific) as applicable. None.~~

## Bases:

This EAL is to cover other (site-specific) indications that may indicate loss or potential loss of the RCS barrier, including indications from containment air monitors or any other (site-specific) instrumentation.

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: RCS6

Barrier: RCS

Type: Loss/Pot. Loss

Description: Shift Supervisor (Emergency Coordinator) Director Judgement

RCS6.1 Any condition in the judgment of the Emergency Director that indicates loss or potential loss of the RCS barrier.

## Bases:

This EAL addresses any other factors that are to be used by the Shift Supervisor (Emergency Coordinator) Director in determining whether the RCS barrier is lost or potentially lost. In addition, the inability to monitor the barrier should also be incorporated in this EAL as a factor in Shift Supervisor (Emergency Coordinator) Director judgement that the barrier may be considered lost or potentially lost. (See also IC SG1, "Prolonged Loss of All Offsite Power and Prolonged Loss of All Onsite AC Power", for additional information.)

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC1

Barrier: Primary Containment

Type: Potential Loss

Description: Critical Safety Function Status

PC1.1 ~~Containment - Red path~~ F-0.5, CONTAINMENT

## Bases:

This EAL is for PWRs using Critical Safety Function Status Tree (CSFST) monitoring and functional recovery procedures. ~~For more information, please refer to Section 3.9 of this report.~~ RED path indicates an extreme challenge to the safety function derived from appropriate instrument readings and/or sampling results, and thus represents a potential loss of containment. Conditions leading to a containment RED path result from RCS barrier and/or fuel clad barrier loss. Thus, this EAL is primarily a discriminator between Site Area Emergency and General Emergency representing a potential loss of the third barrier.

There is no "Loss" EAL associated with this item.

## Reference:

F-0.5, CONTAINMENT, Revision 2

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC2

Barrier: Primary Containment

Type: Loss

Description: Containment Pressure

PC2.1 Rapid ~~unexplained~~ uncontrolled decrease in Containment Pressure following initial increase

PC2.2 Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions, i.e. unexpected changes occur in these parameters that are not explainable due to operator actions or automatic system actions.

## Bases:

Rapid unexplained loss of pressure (i. e., not attributable to containment spray or Fan Cooling Units or condensation effects) following an initial pressure increase indicates a loss of containment integrity. Containment pressure and sump levels should increase as a result of the mass and energy release into containment from a LOCA. Thus, sump level or pressure not increasing indicates containment bypass (V-sequence) and a loss of containment integrity.

## Reference:

1. Alarm response procedure, AR-C-18, Revision 6
2. Alarm response procedure, AR-C-19, Revision 4
3. R. E. Ginna Updated FSAR, Figure 6.2-3 through 6.2-5

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC2

Barrier: Primary Containment

Type: Potential Loss

Description: Containment Pressure

PC2.3 ~~(site-specific)~~ 60 psig and increasing

PC2.4 ~~Explosive mixture exists~~ ≥4 % hydrogen concentration in containment

PC2.5 ~~Containment pressure greater than containment depressurization system setpoint with less than one full train of depressurization equipment operating~~ Safety injection signal due to LOCA with less than the minimum containment cooling safeguards equipment operating:  
CNMT pressure <28 psig: 2 CNMT Recirc Fans  
CNMT pressure ≥28 psig: 2 CNMT Spray Pumps OR 2 CNMT Recirc Fans and 1 CNMT Spray Pump

## Bases:

The ~~(site-specific)~~ 60 psig for potential loss of containment is based on the containment design pressure. Existence of an explosive mixture (4 % hydrogen) means a hydrogen and oxygen concentration of at least the lower deflagration limit curve exists. The indications of potential loss under this EAL corresponds to some of those leading to the RED path in EAL #1 above and may be declared by those sites using CSFSTs. As described above, this EAL is primarily a discriminator between Site Area Emergency and General Emergency representing a potential loss of the third barrier.

The ~~second third~~ potential loss EAL represents a potential loss of containment in that the containment heat removal/depressurization system (~~e.g.,~~ containment sprays, Recirc. Fans, ice-condenser fans, etc., but not including containment venting strategies) are either lost or performing in a degraded manner, as indicated by containment pressure greater than the setpoint at which the equipment was supposed to have actuated.

## Reference:

1. R. E. Ginna Nuclear Power Plant Technical Specifications, Table 3.5-4, pg 3.5-17
2. R. E. Ginna UFSAR, Section 6.2.2.1.2.4, pg 6.2-28
3. R. E. Ginna Nuclear Power Plant Technical Specifications, Article 5.2.1, pg 5.2-1
4. ER-Z.1, Response to High Containment Pressure, Revision 3
5. R. E. Ginna UFSAR, Section 6.2.2.1, pg 6.2-24b
6. R. E. Ginna UFSAR, Section 6.2.2.2, pg 6.2-32 and Figure 6.2-11

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC3

Barrier: Primary Containment

Type: Loss

Description: Containment Isolation Valve Status After Containment Isolation

PC3.1

Either:

CI or CVI isolation required and CI or CVI valve(s) not closed when required following confirmed LOCA

OR

Inability to isolate any primary system discharging outside containment

AND

downstream radiological release pathway to the environment exists

## Bases:

This EAL is intended to address incomplete containment isolation that allows direct release to the environment. It represents a loss of the containment barrier.

The phrase "OR Inability to isolate any primary system discharging outside containment" has been added to capture unisolatable leaks from those primary systems which extend beyond the containment boundary but which either do not have automatic isolation functions or provide a direct or indirect release path for reactor coolant outside the containment.

There is no "Potential Loss" EAL associated with this item.

## Reference:

ER-2.1 "Response to High Containment Pressure"



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC4

Barrier: Primary Containment

Type: Loss

Description: SG Secondary Side Release with Primary to Secondary Leakage

PC4.1 Release of secondary side to atmosphere with primary to secondary leakage greater than tech spec allowable of 0.1 GPM per steam generator

## Bases:

This EAL addresses SG tube ruptures. Secondary side releases to atmosphere include those from the condenser air ejector, atmospheric dump valves, and mainsteam safety valves. For smaller breaks, not exceeding the normal charging capacity threshold in RCS barrier "Potential Loss" EAL #2 (RCS leak rate) or EAL #3 (SG tube rupture), this EAL results in an Unusual Event. For larger breaks, RCS barrier "Loss" or "Potential Loss" EAL #2 would result in an Alert. For SG tube ruptures which may involve multiple steam generators or unisolable secondary line breaks, this EAL would exist in conjunction with RCS barrier "Loss" EAL #3 and would result in a Site Area Emergency. Escalation to General Emergency would be based on "Potential Loss" of the fuel clad barrier.

## Reference:

R.E. Ginna Technical Specifications Section 3.1.5.2



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC5

Barrier: Primary Containment

Type: Potential Loss

Description: Significant Radioactive Inventory in Containment

PC5.1 Containment radiation monitor reading greater than ~~(site-specific)~~ 1000 R/hr

## Bases:

The ~~(site-specific)~~ 1000 R/hr reading is a value which indicates significant fuel damage well in excess of the EALs associated with both loss of fuel clad and loss of RCS barriers. As stated in Section 3.8, a major release of radioactivity requiring offsite protective actions from core damage is not possible unless a major failure of fuel cladding allows radioactive material to be released from the core into the reactor coolant. Regardless of whether containment is challenged, this amount of activity in containment, if released, could have such severe consequences that it is prudent to treat this as a potential loss of containment, such that a General Emergency declaration is warranted. NUREG-1228 "Source Estimations During Incident Response to Severe Nuclear Power Plant Accidents," indicates that such conditions do not exist when the amount of clad damage is less than 20%. Unless there is a ~~(site-specific)~~ analysis justifying a higher value, it is recommended that a radiation monitor reading corresponding to >20% fuel clad damage be specified here.

There is no "Loss" EAL associated with this item.

## Reference:

EPIP 1-0, Ginna Station Event Evaluation and Classification, Revision 13  
EPIP 2-16, Core Damage Estimation  
Technology for Energy Report No. R-81-012



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC6

Barrier: Primary Containment

Type: Potential Loss

Description: Core Exit Thermocouples

PC6.1 Core exit thermocouples in excess of 1200 °F and restoration procedures FR-C.1. Response to Inadequate Core Cooling, FR-C.2. Response to Degraded Core Cooling, and FR-C.3. Response to Saturated Core Cooling, not effective within 15 minutes

PC6.2 Core exit thermocouples in excess of 700 °F with ~~reactor vessel level~~ RVLIS <43% (no RCPs) [46% adverse containment] and restoration procedures FR-C.1. Response to Inadequate Core Cooling, FR-C.2. Response to Degraded Core Cooling and FR-C.3. Response to Saturated Core Cooling, not effective within 15 minutes

## Bases:

In this EAL, the function restoration procedures are those emergency operating procedures that address the recovery of the core cooling critical safety functions. The procedure is considered effective if the temperature is decreasing or if the vessel water level is increasing.

The conditions in this potential loss EAL represent imminent melt sequence which, if not corrected, could lead to vessel failure and an increased potential for containment failure. In conjunction with the core exit thermocouple EALs in the fuel and RCS barrier columns, this EAL would result in the declaration of a General Emergency -- loss of two barriers and the potential loss of a third. If the function restoration procedures are ineffective, there is not "success" path.

Severe accident analyses (e. g., NUREG-1150) have concluded that function restoration procedures can arrest core degradation within the reactor vessel in a significant fraction of the core damage scenarios, and that the likelihood of containment failure is very small in these events. Given this, it is appropriate to provide a reasonable period to allow function restoration procedures to arrest the core melt sequence. Whether or not procedures will be effective should be apparent within 15 minutes. The Shift Supervisor (Emergency Coordinator) Director should make the declaration as soon as it is determined that the procedures have been, or will be effective. The reactor vessel level chosen should be consistent with the emergency response guides applicable to the facility.

There is no "Loss" EAL associated with this item.

Note: Adverse containment values should be used whenever containment pressure is greater than 4 psig or containment radiation is greater than 10E+5.

## Reference:

1. F-0.2. Core Cooling CSFST, Revision 3
2. FR-C.2. Response to Degraded Core Cooling, Revision 6, step 9.a
3. FR-C.2. Response to Degraded Core Cooling, Revision 6, Note, pg 2

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC7

Barrier: Primary Containment

Type: Loss

Description: Other (site-specific) indications

PC7.1

~~(Site-specific) as applicable Both doors open on containment airlock~~

~~OR~~

~~Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment~~

## Bases:

This EAL should cover other ~~(site-specific)~~ indications that may unambiguously indicate loss or potential loss of the containment barrier, including indications from area or ventilation monitors in containment annulus or other contiguous buildings. ~~If site emergency operating procedures provide for venting of the containment during an emergency as a means of preventing catastrophic failure, a loss EAL should be included for the containment barrier. This EAL should be declared as soon as such venting is imminent. Containment venting as part of recovery actions is classified in accordance with the radiological effluent ICs.~~

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC7

Barrier: Primary Containment

Type: Potential Loss

Description: Other (site-specific) indications

PC7.2 (Site-specific) as applicable. None

## Bases:

This EAL should cover other (site-specific) indications that may unambiguously indicate loss or potential loss of the containment barrier, including indications from area or ventilation monitors in containment annulus or other contiguous buildings. ~~If site emergency operating procedures provide for venting of the containment during an emergency as a means of preventing catastrophic failure, a loss EAL should be included for the containment barrier. This EAL should be declared as soon as such venting is imminent. Containment venting as part of recovery actions is classified in accordance with the radiological effluent ICs.~~

# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: PC8

Barrier: Primary Containment

Type: Loss/Pot. Loss

Description: Emergency Director Judgement

PC8.1 Any condition in the judgment of the Shift Supervisor (Emergency Coordinator) Director that indicates loss or potential loss of the containment barrier

## Bases:

This EAL addresses any other factors that are to be used by the Shift Supervisor (Emergency Coordinator) Director in determining whether the containment barrier is lost or potentially lost. In addition, the inability to monitor the barrier should also be incorporated in this EAL as a factor in Shift Supervisor (Emergency Coordinator) Director judgement that the barrier may be considered lost or potentially lost. (See also IC SG1, "Prolonged Loss of All Offsite Power and Prolonged Loss of All Onsite AC Power", for additional information.)



# Plant Specific EAL Guideline (FPB)

R.E. Ginna

PWR FPB IC#: FC1

Barrier:

Type:

Description: Critical Safety Function Status

FC1.1

~~Core cooling - Red path in E-0.2.~~ CORE COOLING

## Bases:

Core Cooling - RED indicates significant superheating and core uncover and is considered to indicate loss of the Fuel Clad Barrier.

## Reference:

1. CSFST E-0.2, Core Cooling, Revision 3

**Fission Product Barrier**  
**Evaluation**

Revision 0

**Rochester Gas and Electric Company**

R. E. Ginna Nuclear Power Station

**OSSI**

Operations Support Services, Inc.  
233 Water Street 2nd Floor Plymouth, MA 02360

Evaluation of  
Ginna Fission Product Barrier  
Emergency Action Levels

The Fission Product Barrier (FPB) degradation category for a PWR plant is illustrated in the following table which is designated "Table 4" in NESP-007, Revision 2.

The Initiating Condition (IC) for each of the four emergency classifications (Unusual Event, Alert, Site Area Emergency, and General Emergency) are designated FU1, FA1, FS1, and FG1, respectively.

Each IC is defined by one or more EALs or combination of EALs which are indicative of a loss or potential loss of one or more of the three fission product barriers. The three fission product barriers are:

- Fuel Clad (FC)
- Reactor Coolant System (RCS)
- Primary Containment (PC)

NESP-007, Revision 2, prescribes example EALs for each of the three fission product barriers. An EAL is defined by one or more plant conditions. For example, there are seven FC barrier example EALs, eight RCS barrier example EALs, and eleven PC example EALs. Each EAL may consist of one or more conditions representing a loss of the barrier and a potential loss of the barrier. Some EALs may have only loss conditions, others only potential loss conditions, some have both loss and potential loss conditions. Each EAL is given a sequential number in Table 4. In the following list, NESP-007 EALs with a defined condition (i. e., labeled as needing "site-specific" input in Table 4) are identified with a "yes", and those without a defined condition (i. e. labeled "not applicable" in Table 4) are identified with a "no":

<u>Barrier</u>	<u>EAL #</u>	<u>NUMARC</u>		<u>Ginna</u>	
		<u>Loss</u>	<u>Pot. Loss</u>	<u>Loss</u>	<u>Pot. Loss</u>
FC	1a	Yes	Yes	Yes(FC1.1)	Yes(FC1.2)
	1b	No	Yes	No	Yes(FC1.3)
	2	Yes	No	Yes(FC2.1)	No
	3	Yes	Yes	Yes(FC3.1)	Yes(FC3.2)
	4	No	Yes	No	Yes(FC4.1)
	5	Yes	No	Yes(FC5.1)	No
	6	Yes	Yes	Yes(FC6.1)	No
RCS	7	Yes	Yes	Yes(FC7.1)	Yes(FC7.1)
	1a	No	Yes	No	Yes(RCS1.1)
	1b	No	Yes	No	Yes(RCS1.2)
	2	Yes	Yes	Yes(RCS2.1)	Yes(RCS2.2)
	3a	Yes	Yes	Yes(RCS3.1)	No
	3b	Yes	No	No	Yes(RCS3.2)
	4	Yes	No	Yes(RCS4.1)	No
PC	5	Yes	Yes	No	No
	6	Yes	Yes	Yes(RCS6.1)	Yes(RCS6.1)
	1	No	Yes	No	Yes(PC1.1)
	2a	Yes	Yes	Yes(PC2.1)	Yes(PC2.3)
	2b	Yes	Yes	Yes(PC2.2)	Yes(PC2.4)
	2c	No	Yes	No	Yes(PC2.5)
	3	Yes	No	Yes(PC3.1)	No
	4	Yes	No	Yes(PC4.1)	No
	5	No	Yes	No	Yes(PC5.1)
	6a	No	Yes	No	Yes(PC6.1)
	6b	No	Yes	No	Yes(PC6.2)
	7	Yes	Yes	Yes(PC7.1)	No
	8	Yes	Yes	Yes(PC8.1)	Yes(PC8.1)

Based on the classification key given at the beginning of Table 4, the number of example EALs, and the number of loss and potential loss conditions, the set of conditions that can yield a given emergency classification can be computed.

The maximum, theoretically possible set of conditions that can yield an Unusual Event classification is given in column 1 of Table A. These consist of the PC loss and PC potential loss conditions.

The maximum, theoretically possible set of conditions that can yield an Alert classification is given in column 1 of Table B. These consist of FC loss and potential loss conditions, and RCS loss and potential loss conditions.

The maximum, theoretically possible set of conditions that can yield a Site Area Emergency classification is given in column 1 of Table C. These consist of any of the following conditions:

- Loss of FC and RCS, or



- Potential loss of FC and RCS, or
- Potential loss of FC or RCS  
and  
Loss of another barrier

The third set of conditions listed above can be represented by the following conditions to eliminate reference to "loss of another barrier":

- Potential loss of FC and loss of RCS, or
- Potential loss of FC and loss of PC, or
- Potential loss of RCS and loss of FC, or
- Potential loss of RCS and loss of PC

The maximum, theoretically possible set of conditions that can yield a General Emergency classification is given in column 1 of Table D. These consist of the following conditions:

- Loss of any two barriers, and
- Potential loss of a third

These conditions can be represented by the following conditions to correlate barrier loss and potential loss to the three specific barriers:

- Loss of FC and loss of RCS and potential loss of PC, or
- Loss of RCS and loss of PC and potential loss of FC, or
- Loss of PC and loss of FC and potential loss of RCS

Note that the loss of all three barriers justifies a General Emergency classification as well.

Since the EAL conditions are listed numerically in Table 4, Tables A through D utilize a similar numbering system which is modified by letter abbreviations to define each set of conditions. For example, condition "FC2-loss" corresponds to a loss of the Fuel Clad barrier due to primary coolant activity level greater than 300  $\mu\text{Ci/gm}$  I-131. Similarly, "RCS1b-pot. loss" corresponds to a potential loss of the Reactor Coolant System barrier due to a Critical Safety Function Status Heat Sink-RED condition, and so on.



An evaluation of each condition or set of conditions listed in Tables A through D is made to determine if it properly defines the appropriate threshold for the classification. If a condition or set of conditions is appropriate, a comment reflecting this conclusion is recorded in the "Remarks" column. If a condition or set of conditions is determined to be inappropriate, it is lined out and the reason for this conclusion is similarly recorded in the "Remarks" column. Where additional space is required to complete comments, the comments are recorded by number in Appendix 1 of this document. The numbers of the comments are recorded in the "Remarks" column with the associated condition or set of conditions to which they apply.

A summary of the results of the fission product barrier evaluation is presented in Appendix 2.





**RECOGNITION CATEGORY F**  
**FISSION PRODUCT BARRIER DEGRADATION**  
**INITIATING CONDITION MATRIX TABLE 4 PWR**

UNUSUAL EVENT		ALERT		SITE AREA EMERGENCY		GENERAL EMERGENCY	
<b>FU1</b>	Any loss or any potential loss of containment  Op. Modes: Power operation Hot Shutdown	<b>FA1</b>	Any loss or any potential loss of either fuel clad or RCS.  Op. Modes: Power operation Hot Shutdown	<b>FS1</b>	Loss of both fuel clad and RCS. OR Potential loss of both fuel clad and RCS OR Potential loss of either fuel clad or RCS, and loss of any additional barrier.  Op. Modes: Power operation Hot Shutdown	<b>FG1</b>	Loss of any two barriers AND Potential loss of third barrier.  Op. Modes: Power operation Hot Shutdown

**NOTES:**

- Although the logic used for these initiating conditions appears overly complex, it is necessary to reflect the following considerations:
  - The fuel clad barrier and the RCS barrier are weighted more heavily than the containment barrier (see Sections 3.4 and 3.8 for more information on this point). Unusual Event ICs associated with RCS and Fuel Clad barriers are addressed under System Malfunction ICs.
  - At the Site Area Emergency level, there must be some ability to dynamically assess how far present conditions are for General Emergency. For example, if Fuel Clad barrier and RCS barrier "Loss" EALs existed, this would indicate to the Emergency Director that, in addition to offsite dose assessments, continual assessments of radioactive inventory and containment integrity must be focused on. If, on the other hand, both Fuel Clad barrier and RCS barrier "Potential Loss" EALs existed, the Emergency Director would have more assurance that there was no immediate need to escalate to a General Emergency.
  - The ability to escalate to higher emergency classes as an event gets worse must be maintained. For example, RCS leakage steadily increasing would represent an increasing risk to public health and safety.
- Fission Product Barrier ICs must be capable of addressing event dynamics. Thus, the EAL Reference Tables 3 and 4 state that IMMINENT (i. e., within 1 to 2 hours) loss or potential loss should result in a classification as if the affected threshold(s) are already exceeded, particularly for the higher emergency classes.

**RECOGNITION CATEGORY F**  
**INITIATING CONDITION MATRIX TABLE 4 PWR**  
**Fuel Clad Barrier Example EALs**

<u>Loss</u>	<u>Potential Loss</u>
1. <u>Critical Safety Function Status</u> Core cooling - red	Core cooling - orange OR Heat sink - red
2. <u>Primary Coolant Activity</u> Coolant activity greater than (site-specific) value	Not applicable
3. <u>Core Exit Thermocouple Readings</u> Greater than (site-specific) °F	Greater than (site-specific) °F
4. <u>Reactor Vessel Water Level</u> Not applicable	Level less than (site-specific) value
5. <u>Containment Radiation Monitoring</u> Containment rad monitor reading greater than (site-specific) R/hr	Not applicable
6. <u>Other (site-specific) Indication</u> (site-specific) as applicable	(site-specific) as applicable
7. <u>Emergency Director Judgment</u> Any condition in the judgment of the Emergency Director that indicates loss or potential loss of the fuel clad barrier	
<p>Determine which combination of the three barriers are lost or have a potential loss and use the following key to classify the event. Also, an event for multiple events could occur which result in the conclusion that exceeding the loss or potential loss thresholds is imminent (i. e., within 1 to 2 hours). In this imminent loss situation, use judgment and classify as if the thresholds are exceeded.</p>	

**RECOGNITION CATEGORY F**  
**INITIATING CONDITION MATRIX TABLE 4 PWR**  
**RCB Barrier Example EALs**

<u>Loss</u>	<u>Potential Loss</u>
1. <u>Critical Safety Function Status</u> Not applicable	RCB Integrity - red OR Heat sink - red
2. <u>RCB Leak Rate</u>  Greater than available makeup capacity as indicated by a loss of RCB subcooling	Unsolable leak exceeding the capacity of one charging pump in the normal charging mode
3. <u>SG Tube Rupture</u>  (site-specific) indication that a SG is ruptured AND has an non-isolable secondary line break OR (site-specific) indication that a SG is ruptured AND a prolonged release of contaminated secondary coolant is occurring from the affected SG to the environment	(site-specific) indication that a SG is ruptured AND the primary-to-secondary leak rate exceeds the capacity of one charging pump in the normal charging mode
4. <u>Containment Radiation Monitoring</u>  Containment radiation monitor reading greater than (site-specific) R/hr	Not applicable
5. <u>Other (site-specific) Indications</u>  (site-specific) as applicable	(site-specific) as applicable
6. <u>Emergency Director Judgment</u>  Any condition in the judgment of the Emergency Director that indicates loss or potential loss of the RCS barrier	

**RECOGNITION CATEGORY F**  
**INITIATING CONDITION MATRIX TABLE 4 PWR**  
**Containment Barrier Example EALs**

<u>Loss</u>	<u>Potential Loss</u>
1. <u>Critical Safety Function Status</u> Not applicable	Containment - red
2. <u>Containment Pressure</u>  Rapid unexplained decrease following initial increase OR Containment pressure or sump level response not consistent with LOCA conditions	(site-specific) psig and increasing OR Explosive mixture exists OR Containment pressure greater than containment depressurization system setpoint with less than one full train of depressurization equipment operating
3. <u>Containment Isolation Valve Status after Containment Isolation</u>  Valve(s) not closed AND downstream pathway to the environment exists	Not applicable
4. <u>SG Secondary Side Release with Primary-to-Secondary Leakage</u>  Release of secondary side to atmosphere with primary to secondary leakage greater than tech spec allowable	Not applicable
5. <u>Significant Radioactive Inventory in Containment</u>  Not applicable	Containment radiation monitor reading greater than (site-specific) R/hr



**RECOGNITION CATEGORY F**  
**INITIATING CONDITION MATRIX TABLE 4 PWR**  
**Containment Barrier Example EALs**

<u>Loss</u>	<u>Potential Loss</u>
6. <u>Core Exit Thermocouple Readings</u> Not applicable	Core exit thermocouples in excess of 1200°F AND restoration procedures not effective within 15 minutes OR Core exit thermocouples in excess of 700 °F with reactor vessel level below top of active fuel AND restoration procedures not effective within 15 minutes
7. <u>Other (site-specific) Indications</u> (site-specific) as applicable	(site-specific) as applicable
8. <u>Emergency Director Judgment</u> Any condition in the judgment of the Emergency Director that indicates loss or potential loss of the containment barrier	





**Table A - Ginna Fission Product Barrier****Unusual Events**

<u>NESP-007</u>	<u>Remarks</u>
<b>Loss or pot. loss of PC</b>	
PC1-loss	Condition not supported in PEG.
PC2a-loss	1
PC2b-loss	2
PC2c-loss	Condition not supported in PEG.
PC3-loss	3
PC4-loss	Secret
PC5-loss	Condition not supported in PEG.
PC6a-loss	Condition not supported in PEG.
PC6b-loss	Condition not supported in PEG.
PC7-loss	Airlock
PC8-loss	Subsumed in "Judgment" EAL.
PC1-pot.-loss	4
PC2a-pot.-loss	5
PC2b-pot.-loss	6
PC2c-pot.-loss	7
PC3-pot.-loss	Condition not supported in PEG.
PC4-pot.-loss	Condition not supported in PEG.
PC5-pot.-loss	8
PC6a-pot.-loss	9
PC6b-pot.-loss	10
PC7-pot.-loss	Condition not supported in PEG.
PC8-pot.-loss	Subsumed in "Judgment" EAL.



Table B - Ginna Fission Product Barrier

## Alerts

NESP-007Remarks

## Loss or pot. loss of FC

FC1a-loss	11
FC1b-loss	Condition not supported in PEG.
FC2-loss	Act5%
FC3-loss	9
FC4-loss	Condition not supported in PEG.
FC5-loss	18
FC6-loss	FFM5%
FC7-loss	Subsumed in "Judgment" EAL.
FC1a-pot-loss	12
FC1b-pot-loss	13
FC2-pot-loss	Condition not supported in PEG.
FC3-pot-loss	14
FC4-pot-loss	15
FC5-pot-loss	Condition not supported in PEG.
FC6-pot-loss	Condition not supported in PEG.
FC7-pot-loss	Subsumed in "Judgment" EAL.

## Loss or pot. loss of RCS

RCS1a-loss	Condition not supported in PEG.
RCS1b-loss	Condition not supported in PEG.
RCS2-loss	Nosubcool
RCS3a-loss	17
RCS3b-loss	Condition not supported in PEG.
RCS4-loss	Radts
RCS5-loss	Condition not supported in PEG.
RCS6-loss	Subsumed in "Judgment" EAL.
RCS1a-pot-loss	Intred
RCS1b-pot-loss	19
RCS2-pot-loss	Ichgplk
RCS3a-pot-loss	Condition not supported in PEG.
RCS3b-pot-loss	20
RCS4-pot-loss	Condition not supported in PEG.
RCS5-pot-loss	Condition not supported in PEG.
RCS6-pot-loss	Subsumed in "Judgment" EAL.

**Table C -- Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<b>Loss of FC and RCS</b>	
FC1a-loss + RCS1a-loss	Condition not supported in PEG.
FC1a-loss + RCS1b-loss	Condition not supported in PEG.
FC1a-loss + RCS2-loss	11
FC1a-loss + RCS3a-loss	11
FC1a-loss + RCS3b-loss	Condition not supported in PEG.
FC1a-loss + RCS4-loss	11
FC1a-loss + RCS5-loss	Condition not supported in PEG.
FC1a-loss + RCS6-loss	Subsumed in "Judgment" EAL.
FC1b-loss + RCS1a-loss	Condition not supported in PEG.
FC1b-loss + RCS1b-loss	Condition not supported in PEG.
FC1b-loss + RCS2-loss	Condition not supported in PEG.
FC1b-loss + RCS3a-loss	Condition not supported in PEG.
FC1b-loss + RCS3b-loss	Condition not supported in PEG.
FC1b-loss + RCS4-loss	Condition not supported in PEG.
FC1b-loss + RCS5-loss	Condition not supported in PEG.
FC1b-loss + RCS6-loss	Condition not supported in PEG.
FC2-loss + RCSa1a-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss	Condition not supported in PEG.
FC2-loss + RCS2-loss	22
FC2-loss + RCS3a-loss	17, SGTRrel
FC2-loss + RCS3b-loss	Condition not supported in PEG.
FC2-loss + RCS4-loss	22
FC2-loss + RCS5-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCSa1a-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss	9
FC3-loss + RCS3a-loss	9
FC3-loss + RCS3b-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss	9
FC3-loss + RCS5-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss	Subsumed in "Judgment" EAL.
FC4-loss + RCS1a-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss	Condition not supported in PEG.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC4-loss ——— + — RCS2-loss	Condition not supported in PEG.
FC4-loss ——— + — RCS3a-loss	Condition not supported in PEG.
FC4-loss ——— + — RCS3b-loss	Condition not supported in PEG.
FC4-loss ——— + — RCS4-loss	Condition not supported in PEG.
FC4-loss ——— + — RCS5-loss	Condition not supported in PEG.
FC4-loss ——— + — RCS6-loss	Condition not supported in PEG.
FC5-loss ——— + — RCS1a-loss	Condition not supported in PEG.
FC5-loss ——— + — RCS1b-loss	Condition not supported in PEG.
FC5-loss ——— + — RCS2-loss	21 Rad5%
FC5-loss ——— + — RCS3a-loss	17
FC5-loss ——— + — RCS3b-loss	Condition not supported in PEG.
FC5-loss ——— + — RCS4-loss	21
FC5-loss ——— + — RCS5-loss	Condition not supported in PEG.
FC5-loss ——— + — RCS6-loss	Subsumed in "Judgment" EAL.
FC6-loss ——— + — RCS1a-loss	Condition not supported in PEG.
FC6-loss ——— + — RCS1b-loss	Condition not supported in PEG.
FC6-loss ——— + — RCS2-loss	2FFM5% + Nosubcool
FC6-loss ——— + — RCS3a-loss	17
FC6-loss ——— + — RCS3b-loss	Condition not supported in PEG.
FC6-loss ——— + — RCS4-loss	23
FC6-loss ——— + — RCS5-loss	Condition not supported in PEG.
FC6-loss ——— + — RCS6-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS1a-loss	Condition not supported in PEG.
FC7-loss ——— + — RCS1b-loss	Condition not supported in PEG.
FC7-loss ——— + — RCS2-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS3a-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS3b-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS4-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS5-loss	Subsumed in "Judgment" EAL.
FC7-loss ——— + — RCS6-loss	Subsumed in "Judgment" EAL.
<b>Pot. loss of FC and RCS</b>	
FC1a-pot. loss ——— + — RCS1a-pot. loss	11
FC1a-pot. loss ——— + — RCS1b-pot. loss	11
FC1a-pot. loss ——— + — RCS2-pot. loss	11

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC1a-pot. loss + RCS3a-pot. loss	Condition not supported in PEG.
FC1a-pot. loss + RCS3b-pot. loss	11
FC1a-pot. loss + RCS4-pot. loss	Condition not supported in PEG.
FC1a-pot. loss + RCS5-pot. loss	Condition not supported in PEG.
FC1a-pot. loss + RCS6-pot. loss	Subsumed in "Judgment" EAL.
FC1b-pot. loss + RCS1a-pot. loss	13, HSred
FC1b-pot. loss + RCS1b-pot. loss	13
FC1b-pot. loss + RCS2-pot. loss	13
FC1b-pot. loss + RCS3a-pot. loss	Condition not supported in PEG.
FC1b-pot. loss + RCS3b-pot. loss	13
FC1b-pot. loss + RCS4-pot. loss	Condition not supported in PEG.
FC1b-pot. loss + RCS5-pot. loss	Condition not supported in PEG.
FC1b-pot. loss + RCS6-pot. loss	Subsumed in "Judgment" EAL.
FC2-pot. loss + RCS1a-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS1b-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS2-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS3a-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS3b-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS4-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS5-pot. loss	Condition not supported in PEG.
FC2-pot. loss + RCS6-pot. loss	Condition not supported in PEG.
FC3-pot. loss + RCS1a-pot. loss	14, 25
FC3-pot. loss + RCS1b-pot. loss	14
FC3-pot. loss + RCS2-pot. loss	14
FC3-pot. loss + RCS3a-pot. loss	Condition not supported in PEG.
FC3-pot. loss + RCS3b-pot. loss	14
FC3-pot. loss + RCS4-pot. loss	Condition not supported in PEG.
FC3-pot. loss + RCS5-pot. loss	Condition not supported in PEG.
FC3-pot. loss + RCS6-pot. loss	Subsumed in "Judgment" EAL.
FC4-pot. loss + RCS1a-pot. loss	15, 24
FC4-pot. loss + RCS1b-pot. loss	15
FC4-pot. loss + RCS2-pot. loss	15
FC4-pot. loss + RCS3a-pot. loss	Condition not supported in PEG.
FC4-pot. loss + RCS3b-pot. loss	15
FC4-pot. loss + RCS4-pot. loss	Condition not supported in PEG.

**Table C – Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC4-pot. loss — + RCS5-pot. loss	Condition not supported in PEG.
FC4-pot. loss — + RCS6-pot. loss	Subsumed in "Judgment" EAL.
FC5-pot. loss — + RCS1a-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS1b-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS2-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS3a-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS3b-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS4-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS5-pot. loss	Condition not supported in PEG.
FC5-pot. loss — + RCS6-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS1a-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS1b-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS2-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS3a-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS3b-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS4-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS5-pot. loss	Condition not supported in PEG.
FC6-pot. loss — + RCS6-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS1a-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS1b-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS2-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS3a-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS3b-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS4-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS5-pot. loss	Subsumed in "Judgment" EAL.
FC7-pot. loss — + RCS6-pot. loss	Subsumed in "Judgment" EAL.
<b>Pot. loss of FC and loss of RCS</b>	
FC1a-pot. loss — + RCS1a-loss	Condition not supported in PEG.
FC1a-pot. loss — + RCS1b-loss	Condition not supported in PEG.
FC1a-pot. loss — + RCS2-loss	12. CCorange
FC1a-pot. loss — + RCS3a-loss	12
FC1a-pot. loss — + RCS3b-loss	Condition not supported in PEG.
FC1a-pot. loss — + RCS4-loss	12
FC1a-pot. loss — + RCS5-loss	Condition not supported in PEG.

**Table C – Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1a-pot. loss</del> + <del>RCS6-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1b-pot. loss</del> + <del>RCS1a-loss</del>	Condition not supported in PEG.
<del>FC1b-pot. loss</del> + <del>RCS1b-loss</del>	Condition not supported in PEG.
<del>FC1b-pot. loss</del> + <del>RCS2-loss</del>	12
<del>FC1b-pot. loss</del> + <del>RCS3a-loss</del>	12
<del>FC1b-pot. loss</del> + <del>RCS3b-loss</del>	Condition not supported in PEG.
<del>FC1b-pot. loss</del> + <del>RCS4-loss</del>	12
<del>FC1b-pot. loss</del> + <del>RCS5-loss</del>	Condition not supported in PEG.
<del>FC1b-pot. loss</del> + <del>RCS6-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-pot. loss</del> + <del>RCS1a-loss</del>	Condition not supported in PEG.
<del>FC12-pot. loss</del> + <del>RCS1b-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS2-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS3a-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS3b-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS4-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS5-loss</del>	Condition not supported in PEG.
<del>FC2-pot. loss</del> + <del>RCS6-loss</del>	Condition not supported in PEG.
<del>FC3-pot. loss</del> + <del>RCS1a-loss</del>	Condition not supported in PEG.
<del>FC3-pot. loss</del> + <del>RCS1b-loss</del>	Condition not supported in PEG.
<del>FC3-pot. loss</del> + <del>RCS2-loss</del>	14
<del>FC3-pot. loss</del> + <del>RCS3a-loss</del>	14
<del>FC3-pot. loss</del> + <del>RCS3b-loss</del>	Condition not supported in PEG.
<del>FC3-pot. loss</del> + <del>RCS4-loss</del>	14
<del>FC3-pot. loss</del> + <del>RCS5-loss</del>	Condition not supported in PEG.
<del>FC3-pot. loss</del> + <del>RCS6-loss</del>	Subsumed in "Judgment" EAL.
<del>FC4-pot. loss</del> + <del>RCS1a-loss</del>	Condition not supported in PEG.
<del>FC4-pot. loss</del> + <del>RCS1b-loss</del>	Condition not supported in PEG.
<del>FC4-pot. loss</del> + <del>RCS2-loss</del>	15
<del>FC4-pot. loss</del> + <del>RCS3a-loss</del>	15
<del>FC4-pot. loss</del> + <del>RCS3b-loss</del>	Condition not supported in PEG.
<del>FC4-pot. loss</del> + <del>RCS4-loss</del>	15
<del>FC4-pot. loss</del> + <del>RCS5-loss</del>	Condition not supported in PEG.
<del>FC4-pot. loss</del> + <del>RCS6-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-pot. loss</del> + <del>RCS1a-loss</del>	Condition not supported in PEG.
<del>FC6-pot. loss</del> + <del>RCS1b-loss</del>	Condition not supported in PEG.



**Table C – Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC6-pot. loss ———+—— RCS2-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— RCS3a-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— RCS3b-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— RCS4-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— RCS5-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— RCS6-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— RCS1a-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— RCS1b-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— RCS2-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— RCS3a-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— RCS3b-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— RCS4-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— RCS5-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— RCS6-loss	Subsumed in "Judgment" EAL.
<b>Pot. loss of FC and loss of PC</b>	
FC1a-pot. loss ———+—— PC1-loss	Condition not supported in PEG.
FC1a-pot. loss ———+—— PC2a-loss	1. Cont press dec
FC1a-pot. loss ———+—— PC2b-loss	2. Inc loca resp
FC1a-pot. loss ———+—— PC2c-loss	Condition not supported in PEG.
FC1a-pot. loss ———+—— PC3-loss	3. Fallisol
FC1a-pot. loss ———+—— PC4-loss	12
FC1a-pot. loss ———+—— PC5-loss	Condition not supported in PEG.
FC1a-pot. loss ———+—— PC6a-loss	Condition not supported in PEG.
FC1a-pot. loss ———+—— PC6b-loss	Condition not supported in PEG.
FC1a-pot. loss ———+—— PC7-loss	12
FC1a-pot. loss ———+—— PC8-loss	Subsumed in "Judgment" EAL.
FC1b-pot. loss ———+—— PC1-loss	Condition not supported in PEG.
FC1b-pot. loss ———+—— PC2a-loss	1
FC1b-pot. loss ———+—— PC2b-loss	2
FC1b-pot. loss ———+—— PC2c-loss	Condition not supported in PEG.
FC1b-pot. loss ———+—— PC3-loss	3
FC1b-pot. loss ———+—— PC4-loss	13
FC1b-pot. loss ———+—— PC5-loss	Condition not supported in PEG.
FC1b-pot. loss ———+—— PC6a-loss	Condition not supported in PEG.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC1b-pot. loss + PC6b-loss	Condition not supported in PEG.
FC1b-pot. loss + PC7-loss	13
FC1b-pot. loss + PC8-loss	Subsumed in "Judgment" EAL.
FC2-pot. loss + PC1-loss	Condition not supported in PEG.
FC2-pot. loss + PC2a-loss	Condition not supported in PEG.
FC2-pot. loss + PC2b-loss	Condition not supported in PEG.
FC2-pot. loss + PC2c-loss	Condition not supported in PEG.
FC2-pot. loss + PC3-loss	Condition not supported in PEG.
FC2-pot. loss + PC4-loss	Condition not supported in PEG.
FC2-pot. loss + PC5-loss	Condition not supported in PEG.
FC2-pot. loss + PC6b-loss	Condition not supported in PEG.
FC2-pot. loss + PC6a-loss	Condition not supported in PEG.
FC2-pot. loss + PC6b-loss	Condition not supported in PEG.
FC2-pot. loss + PC7-loss	Condition not supported in PEG.
FC2-pot. loss + PC8-loss	Condition not supported in PEG.
FC3-pot. loss + PC1-loss	Condition not supported in PEG.
FC3-pot. loss + PC2a-loss	1
FC3-pot. loss + PC2b-loss	2
FC3-pot. loss + PC2c-loss	Condition not supported in PEG.
FC3-pot. loss + PC3-loss	3
FC3-pot. loss + PC4-loss	14
FC3-pot. loss + PC5-loss	Condition not supported in PEG.
FC3-pot. loss + PC6a-loss	Condition not supported in PEG.
FC3-pot. loss + PC6b-loss	Condition not supported in PEG.
FC3-pot. loss + PC7-loss	14
FC3-pot. loss + PC8-loss	Subsumed in "Judgment" EAL.
FC4-pot. loss + PC1-loss	Condition not supported in PEG.
FC4-pot. loss + PC2a-loss	1
FC4-pot. loss + PC2b-loss	2
FC4-pot. loss + PC2c-loss	Condition not supported in PEG.
FC4-pot. loss + PC3-loss	3
FC4-pot. loss + PC4-loss	15
FC4-pot. loss + PC5-loss	Condition not supported in PEG.
FC4-pot. loss + PC6a-loss	Condition not supported in PEG.
FC4-pot. loss + PC6b-loss	Condition not supported in PEG.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC4-pot. loss ———+—— PC7-loss	14
FC4-pot. loss ———+—— PC8-loss	Subsumed in "Judgment" EAL.
FC5-pot. loss ———+—— PC1-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC2a-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC2b-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC2c-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC3-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC4-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC5-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC6b-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC6a-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC6b-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC7-loss	Condition not supported in PEG.
FC5-pot. loss ———+—— PC8-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC1-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC2a-loss	1
FC6-pot. loss ———+—— PC2b-loss	2
FC6-pot. loss ———+—— PC2c-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC3-loss	3
FC6-pot. loss ———+—— PC4-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC5-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC6a-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC6b-loss	Condition not supported in PEG.
FC6-pot. loss ———+—— PC7-loss	40
FC6-pot. loss ———+—— PC8-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— PC1-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— PC2a-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— PC2b-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— PC2c-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— PC3-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— PC4-loss	Subsumed in "Judgment" EAL.
FC7-pot. loss ———+—— PC5-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— PC6a-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— PC6b-loss	Condition not supported in PEG.
FC7-pot. loss ———+—— PC7-loss	Subsumed in "Judgment" EAL.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC7-pot. loss + FC8-loss	Subsumed in "Judgment" EAL.
Pot. loss of RCS and loss of FC	
RCS1a-pot. loss + FC1a-loss	Condition not supported in PEG.
RCS1a-pot. loss + FC1b-loss	11
RCS1a-pot. loss + FC2-loss	22
RCS1a-pot. loss + FC3-loss	9
RCS1a-pot. loss + FC4-loss	Condition not supported in PEG.
RCS1a-pot. loss + FC5-loss	21
RCS1a-pot. loss + FC6-loss	FFM5% + Intred
RCS1a-pot. loss + FC7-loss	Subsumed in "Judgment" EAL.
RCS1b-pot. loss + FC1a-loss	11
RCS1b-pot. loss + FC1b-loss	Condition not supported in PEG.
RCS1b-pot. loss + FC2-loss	19
RCS1b-pot. loss + FC3-loss	9
RCS1b-pot. loss + FC4-loss	Condition not supported in PEG.
RCS1b-pot. loss + FC5-loss	19
RCS1b-pot. loss + FC6-loss	19, FFM5% + HSred
RCS1b-pot. loss + FC7-loss	Subsumed in "Judgment" EAL.
RCS2-pot. loss + FC1a-loss	11
RCS2-pot. loss + FC1b-loss	Condition not supported in PEG.
RCS2-pot. loss + FC2-loss	20
RCS2-pot. loss + FC3-loss	9
RCS2-pot. loss + FC4-loss	Condition not supported in PEG.
RCS2-pot. loss + FC5-loss	20
RCS2-pot. loss + FC6-loss	FFM5% + Ichgplk
RCS2-pot. loss + FC7-loss	Subsumed in "Judgment" EAL.
RCS3a-pot. loss + FC1a-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC1b-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC2-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC3-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC4-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC5-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC6-loss	Condition not supported in PEG.
RCS3a-pot. loss + FC7-loss	Condition not supported in PEG.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3b-pot. loss + FC1a-loss</del>	11
<del>RCS3b-pot. loss + FC1b-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + FC2-loss</del>	20
<del>RCS3b-pot. loss + FC3-loss</del>	9
<del>RCS3b-pot. loss + FC4-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + FC5-loss</del>	20
<del>RCS3b-pot. loss + FC6-loss</del>	20
<del>RCS3b-pot. loss + FC7-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-pot. loss + FC1a-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC1b-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC2-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC3-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC4-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC5-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC6-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + FC7-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC1a-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC1b-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC2-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC3-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC4-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC5-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC6-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + FC7-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC1a-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC1b-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss + FC2-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC3-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC4-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss + FC5-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC6-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss + FC7-loss</del>	Subsumed in "Judgment" EAL.
 <b>Pot. loss of RCS and loss of PC</b>	
<del>RCS1a-pot. loss + PC1-loss</del>	Condition not supported in PEG.



**Table C -- Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
RCS1a-pot. loss + PC2a-loss	1
RCS1a-pot. loss + PC2b-loss	2
RCS1a-pot. loss + PC2c-loss	Condition not supported in PEG.
RCS1a-pot. loss + PC3-loss	3
RCS1a-pot. loss + PC4-loss	47
RCS1a-pot. loss + PC5-loss	Condition not supported in PEG.
RCS1a-pot. loss + PC6a-loss	Condition not supported in PEG.
RCS1a-pot. loss + PC6b-loss	Condition not supported in PEG.
RCS1a-pot. loss + PC7-loss	40
RCS1a-pot. loss + PC8-loss	Subsumed in "Judgment" EAL.
RCS1b-pot. loss + PC1-loss	Condition not supported in PEG.
RCS1b-pot. loss + PC2a-loss	1
RCS1b-pot. loss + PC2b-loss	2
RCS1b-pot. loss + PC2c-loss	Condition not supported in PEG.
RCS1b-pot. loss + PC3-loss	3
RCS1b-pot. loss + PC4-loss	19
RCS1b-pot. loss + PC5-loss	Condition not supported in PEG.
RCS1b-pot. loss + PC6a-loss	Condition not supported in PEG.
RCS1b-pot. loss + PC6b-loss	Condition not supported in PEG.
RCS1b-pot. loss + PC7-loss	19
RCS1b-pot. loss + PC8-loss	Subsumed in "Judgment" EAL.
RCS2-pot. loss + PC1-loss	Condition not supported in PEG.
RCS2-pot. loss + PC2a-loss	1
RCS2-pot. loss + PC2b-loss	2
RCS2-pot. loss + PC2c-loss	Condition not supported in PEG.
RCS2-pot. loss + PC3-loss	3
RCS2-pot. loss + PC4-loss	1chgplk + Secret
RCS2-pot. loss + PC5-loss	Condition not supported in PEG.
RCS2-pot. loss + PC6a-loss	Condition not supported in PEG.
RCS2-pot. loss + PC6b-loss	Condition not supported in PEG.
RCS2-pot. loss + PC7-loss	40
RCS2-pot. loss + PC8-loss	Subsumed in "Judgment" EAL.
RCS3a-pot. loss + PC1-loss	Condition not supported in PEG.
RCS3a-pot. loss + PC2a-loss	Condition not supported in PEG.
RCS3a-pot. loss + PC2b-loss	Condition not supported in PEG.

**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3a-pot. loss + PC2e-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC3-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC4-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC5-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC6a-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC6b-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC7-loss</del>	Condition not supported in PEG.
<del>RCS3a-pot. loss + PC8-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC1-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC2a-loss</del>	1
<del>RCS3b-pot. loss + PC2b-loss</del>	2
<del>RCS3b-pot. loss + PC2c-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC3-loss</del>	3
<del>RCS3b-pot. loss + PC4-loss</del>	20
<del>RCS3b-pot. loss + PC5-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC6a-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC6b-loss</del>	Condition not supported in PEG.
<del>RCS3b-pot. loss + PC7-loss</del>	20
<del>RCS3b-pot. loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-pot. loss + PC1-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC2a-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC2b-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC2c-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC3-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC4-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC5-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC6a-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC6b-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC7-loss</del>	Condition not supported in PEG.
<del>RCS4-pot. loss + PC8-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + PC1-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + PC2a-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + PC2b-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + PC2c-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss + PC3-loss</del>	Condition not supported in PEG.





**Table C - Ginna Fission Product Barrier  
Site Area Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS5-pot. loss</del> + <del>PC4-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss</del> + <del>PC5-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss</del> + <del>PC6a-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss</del> + <del>PC6b-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss</del> + <del>PC7-loss</del>	Condition not supported in PEG.
<del>RCS5-pot. loss</del> + <del>PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC1-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss</del> + <del>PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC2c-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss</del> + <del>PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC5-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss</del> + <del>PC6a-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss</del> + <del>PC6b-loss</del>	Condition not supported in PEG.
<del>RCS6-pot. loss</del> + <del>PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-pot. loss</del> + <del>PC8-loss</del>	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<b>Loss of FC + loss of RCS + pot. loss of PC</b>	
<del>FC1a-loss + RCS1a-loss + PC1-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2a-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2b-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2c-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC3-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC4-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC5-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC6a-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC6b-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC7-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC8-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC1-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2a-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2b-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2c-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC3-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC4-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC5-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC6a-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC6b-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC7-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC8-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC1-pot. loss</del>	4, Contred
<del>FC1a-loss + RCS2-loss + PC2a-pot. loss</del>	11, 26, CCred
<del>FC1a-loss + RCS2-loss + PC2b-pot. loss</del>	6, H2
<del>FC1a-loss + RCS2-loss + PC2c-pot. loss</del>	11, 27
<del>FC1a-loss + RCS2-loss + PC3-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC4-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC6a-pot. loss</del>	11, CCred
<del>FC1a-loss + RCS2-loss + PC6b-pot. loss</del>	11, 27, 28, CCred
<del>FC1a-loss + RCS2-loss + PC7-pot. loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC8-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS3a-loss + PC1-pot. loss</del>	4, 11
<del>FC1a-loss + RCS3a-loss + PC2a-pot. loss</del>	11, 26

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1a-loss + RCS3a-loss + PC2b-pot-loss</del>	11, 6
<del>FC1a-loss + RCS3a-loss + PC2c-pot-loss</del>	11, 29
<del>FC1a-loss + RCS3a-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC5-pot-loss</del>	11
<del>FC1a-loss + RCS3a-loss + PC6a-pot-loss</del>	11, 9
<del>FC1a-loss + RCS3a-loss + PC6b-pot-loss</del>	11, 30
<del>FC1a-loss + RCS3a-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS3b-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS4-loss + PC1-pot-loss</del>	11, 4
<del>FC1a-loss + RCS4-loss + PC2a-pot-loss</del>	11, 26
<del>FC1a-loss + RCS4-loss + PC2b-pot-loss</del>	11, 6
<del>FC1a-loss + RCS4-loss + PC2c-pot-loss</del>	11, 29
<del>FC1a-loss + RCS4-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC5-pot-loss</del>	11, 8
<del>FC1a-loss + RCS4-loss + PC6a-pot-loss</del>	11, 9
<del>FC1a-loss + RCS4-loss + PC6b-pot-loss</del>	11, 30
<del>FC1a-loss + RCS4-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS5-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2c-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1a-loss + RCS5-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC1-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC2a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC2b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC2c-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1b-loss + RCS1a-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC4-pot-loss</del>	Condition not supported in PEG.

Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1b-loss + RCS1b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1b-loss + RCS3b-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC8-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC2-loss + RCS1a-loss + PC1-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC2a-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC2b-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC2c-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC3-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC4-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC5-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC6a-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC6b-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC7-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1a-loss + PC8-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC1-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC2a-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC2b-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC2c-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC3-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC4-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC5-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC6a-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC6b-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC7-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS1b-loss + PC8-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS2-loss + PC1-pot.-loss	4
FC2-loss + RCS2-loss + PC2a-pot.-loss	26
FC2-loss + RCS2-loss + PC2b-pot.-loss	6
FC2-loss + RCS2-loss + PC2c-pot.-loss	32, Act5% + Dep stpt pres
FC2-loss + RCS2-loss + PC3-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS2-loss + PC4-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS2-loss + PC5-pot.-loss	9
FC2-loss + RCS2-loss + PC6a-pot.-loss	9
FC2-loss + RCS2-loss + PC6b-pot.-loss	10
FC2-loss + RCS2-loss + PC7-pot.-loss	Condition not supported in PEG.
FC2-loss + RCS2-loss + PC8-pot.-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS3a-loss + PC1-pot.-loss	4
FC2-loss + RCS3a-loss + PC2a-pot.-loss	26

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC2-loss + RCS3a-loss + PC2b-pot.-loss</del>	6
<del>FC2-loss + RCS3a-loss + PC2c-pot.-loss</del>	33, Act5% + SGTRrel
<del>FC2-loss + RCS3a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC5-pot.-loss</del>	8
<del>FC2-loss + RCS3a-loss + PC6a-pot.-loss</del>	9
<del>FC2-loss + RCS3a-loss + PC6b-pot.-loss</del>	10
<del>FC2-loss + RCS3a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS3b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS4-loss + PC1-pot.-loss</del>	4
<del>FC2-loss + RCS4-loss + PC2a-pot.-loss</del>	26
<del>FC2-loss + RCS4-loss + PC2b-pot.-loss</del>	6
<del>FC2-loss + RCS4-loss + PC2c-pot.-loss</del>	35, Addressed in Act5%+Dep stpt pres. above.
<del>FC2-loss + RCS4-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC5-pot.-loss</del>	8
<del>FC2-loss + RCS4-loss + PC6a-pot.-loss</del>	9
<del>FC2-loss + RCS4-loss + PC6b-pot.-loss</del>	10
<del>FC2-loss + RCS4-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS5-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC2-loss + RCS5-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS5-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC1-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC2a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC2b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC2c-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS5-loss + PC3-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS5-loss + PC4-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC5-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC6a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC6b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC7-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS6-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC3-loss + RCS1a-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1a-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC3-loss + RCS1b-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS1b-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS2-loss + PC1-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC2a-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC2b-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC2c-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS2-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS2-loss + PC5-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC6a-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC6b-pot-loss</del>	9, 11
<del>FC3-loss + RCS2-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS2-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC3-loss + RCS3a-loss + PC1-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC2a-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC2b-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC2c-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3a-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3a-loss + PC5-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC6a-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC6b-pot-loss</del>	9, 11
<del>FC3-loss + RCS3a-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3a-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC3-loss + RCS3b-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC3-loss + RCS3b-loss + PC6a-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC3-loss + RCS3b-loss + PC6b-pot-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC7-pot-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS4-loss + PC1-pot-loss	9, 11
FC3-loss + RCS4-loss + PC2a-pot-loss	9, 11
FC3-loss + RCS4-loss + PC2b-pot-loss	9, 11
FC3-loss + RCS4-loss + PC2c-pot-loss	9, 11
FC3-loss + RCS4-loss + PC3-pot-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC4-pot-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC5-pot-loss	9, 11
FC3-loss + RCS4-loss + PC6a-pot-loss	9, 11
FC3-loss + RCS4-loss + PC6b-pot-loss	9, 11
FC3-loss + RCS4-loss + PC7-pot-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS5-loss + PC1-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC2a-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC2b-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC2c-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC3-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC4-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC5-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC6a-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC6b-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC7-pot-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC1-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC2a-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC2b-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC2c-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC3-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC4-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC5-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC6a-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC6b-pot-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC7-pot-loss	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC3-loss + RCS6-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC4-loss + RCS1a-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1a-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS1b-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.





**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC4-loss + RCS3a-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.

**Table D -- Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC4-loss + RCS5-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS5-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS6-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1a-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC1-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC2a-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC2b-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC2c-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC3-pot.-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS1b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.

**Table D – Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC5-loss + RCS1b-loss + PC5-pot-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC6a-pot-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC6b-pot-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC8-pot-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC1-pot-loss	4
FC5-loss + RCS2-loss + PC2a-pot-loss	26
FC5-loss + RCS2-loss + PC2b-pot-loss	6
FC5-loss + RCS2-loss + PC2c-pot-loss	32, Rad5% + Dep stpt pres
FC5-loss + RCS2-loss + PC3-pot-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC4-pot-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC5-pot-loss	8
FC5-loss + RCS2-loss + PC6a-pot-loss	9, 11
FC5-loss + RCS2-loss + PC6b-pot-loss	10
FC5-loss + RCS2-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS3a-loss + PC1-pot-loss	4
FC5-loss + RCS3a-loss + PC2a-pot-loss	26
FC5-loss + RCS3a-loss + PC2b-pot-loss	6
FC5-loss + RCS3a-loss + PC2c-pot-loss	33, Rad5% + SGTRrel
FC5-loss + RCS3a-loss + PC3-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC4-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC5-pot-loss	8
FC5-loss + RCS3a-loss + PC6a-pot-loss	9, 11
FC5-loss + RCS3a-loss + PC6b-pot-loss	10
FC5-loss + RCS3a-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS3b-loss + PC1-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC2a-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC2b-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC2c-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC3-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC4-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC5-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC6a-pot-loss	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC5-loss + RCS3b-loss + PC6b-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS4-loss + PC1-pot-loss	4
FC5-loss + RCS4-loss + PC2a-pot-loss	26
FC5-loss + RCS4-loss + PC2b-pot-loss	6
FC5-loss + RCS4-loss + PC2c-pot-loss	34, Addressed in Rad5%+Dep stpt pres, above.
FC5-loss + RCS4-loss + PC3-pot-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC4-pot-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC5-pot-loss	8
FC5-loss + RCS4-loss + PC6a-pot-loss	9, 11
FC5-loss + RCS4-loss + PC6b-pot-loss	10
FC5-loss + RCS4-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS5-loss + PC1-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2a-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2b-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2c-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC3-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC4-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC5-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC6a-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC6b-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC7-pot-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC1-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC2a-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC2b-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC2c-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC3-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC4-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC5-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC6a-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC6b-pot-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC7-pot-loss	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC5-loss + RCS6-loss + PC8-pot. loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS1a-loss + PC1-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC2a-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC2b-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC2c-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC3-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC4-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC5-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC6a-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC6b-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC7-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1a-loss + PC8-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC1-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC2a-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC2b-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC2c-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC3-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC4-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC5-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC6a-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC6b-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC7-pot. loss	Condition not supported in PEG.
FC6-loss + RCS1b-loss + PC8-pot. loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC1-pot. loss	4
FC6-loss + RCS2-loss + PC2a-pot. loss	26
FC6-loss + RCS2-loss + PC2b-pot. loss	6
FC6-loss + RCS2-loss + PC2c-pot. loss	32 FFM5% + Dep stpt pres
FC6-loss + RCS2-loss + PC3-pot. loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC4-pot. loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC5-pot. loss	8
FC6-loss + RCS2-loss + PC6a-pot. loss	9, 11
FC6-loss + RCS2-loss + PC6b-pot. loss	10
FC6-loss + RCS2-loss + PC7-pot. loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC8-pot. loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS3a-loss + PC1-pot. loss	4

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC6-loss + RCS3a-loss + PC2a-pot-loss	26
FC6-loss + RCS3a-loss + PC2b-pot-loss	6
FC6-loss + RCS3a-loss + PC2c-pot-loss	33, FFM + SGTRrel
FC6-loss + RCS3a-loss + PC3-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC4-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC5-pot-loss	8
FC6-loss + RCS3a-loss + PC6a-pot-loss	9, 11
FC6-loss + RCS3a-loss + PC6b-pot-loss	10
FC6-loss + RCS3a-loss + PC7-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS3b-loss + PC1-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2a-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2b-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2c-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC3-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC4-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC5-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC6a-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC6b-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC7-pot-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS4-loss + PC1-pot-loss	4
FC6-loss + RCS4-loss + PC2a-pot-loss	26
FC6-loss + RCS4-loss + PC2b-pot-loss	6
FC6-loss + RCS4-loss + PC2c-pot-loss	35, Addressed in FFM + Dep stpt pres. P.40
FC6-loss + RCS4-loss + PC3-pot-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC4-pot-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC5-pot-loss	8
FC6-loss + RCS4-loss + PC6a-pot-loss	9, 11
FC6-loss + RCS4-loss + PC6b-pot-loss	10
FC6-loss + RCS4-loss + PC7-pot-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC8-pot-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS5-loss + PC1-pot-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC2a-pot-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC2b-pot-loss	Condition not supported in PEG.

**Table D -- Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC6-loss + RCS5-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS5-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC1-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC2a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC2b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC2c-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS6-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS1a-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC3-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC4-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC5-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC6a-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC6b-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC7-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC8-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC1-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2a-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2b-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2c-pot-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC3-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS1b-loss + PC4-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC5-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC6a-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC6b-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC7-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC8-pot.-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC1-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC2a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC2b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC2c-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC3-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC4-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC5-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC6a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC6b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC7-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC1-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC2a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC2b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC2c-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC3-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC4-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC5-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC6a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC6b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC7-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC8-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC1-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC2a-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC2b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC2c-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC3-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC4-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC5-pot.-loss</del>	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS3b-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC1-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC2a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC2b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC2c-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC1-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC2a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC2b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC2c-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC1-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC2a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC2b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC2c-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC6a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC6b-pot-loss</del>	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier  
General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS6-loss + PC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC8-pot-loss</del>	Subsumed in "Judgment" EAL.
<b>Loss of RCS + loss of PC + pot. loss of FC</b>	
<del>RCS1a-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC2c-loss + FC6-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS1a-loss + PC2c-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC3-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC4-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS1a-loss + PC5-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.



**Table D -- Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS1a-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC7-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1a-loss + PC8-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC4-pot-loss</del>	Condition not supported in PEG.





**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS1b-loss + PC2a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC2c-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC3-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC4-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS1b-loss + PC5-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC7-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC8-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC8-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS1b-loss + PC8-loss + FC2-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
RCS1b-loss + PC8-loss + FC3-pot. loss	Condition not supported in PEG.
RCS1b-loss + PC8-loss + FC4-pot. loss	Condition not supported in PEG.
RCS1b-loss + PC8-loss + FC5-pot. loss	Condition not supported in PEG.
RCS1b-loss + PC8-loss + FC6-pot. loss	Condition not supported in PEG.
RCS1b-loss + PC8-loss + FC7-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC1a-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC1b-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC3-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC4-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC1-loss + FC7-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2a-loss + FC1a-pot. loss	36, Cont press dec + CCorange
RCS2-loss + PC2a-loss + FC1b-pot. loss	38, Cont press dec + HSred
RCS2-loss + PC2a-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2a-loss + FC3-pot. loss	38, Cont press dec + CET700
RCS2-loss + PC2a-loss + FC4-pot. loss	38, Cont press dec + RVILStaf
RCS2-loss + PC2a-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2a-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2a-loss + FC7-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC2b-loss + FC1a-pot. loss	36, Inc loca resp + CCorange
RCS2-loss + PC2b-loss + FC1b-pot. loss	38, Inc loca resp + HSred
RCS2-loss + PC2b-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2b-loss + FC3-pot. loss	38, Inc loca resp + CET700
RCS2-loss + PC2b-loss + FC4-pot. loss	38, Inc loca resp + RVILStaf
RCS2-loss + PC2b-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2b-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2b-loss + FC7-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC2c-loss + FC1a-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC1b-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC3-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC4-pot. loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC5-pot. loss	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
RCS2-loss + PC2c-loss + FC6-pot-loss	Condition not supported in PEG.
RCS2-loss + PC2c-loss + FC7-pot-loss	Condition not supported in PEG.
RCS2-loss + PC3-loss + FC1a-pot-loss	36, Failisoi + CCorange
RCS2-loss + PC3-loss + FC1b-pot-loss	38, Failisoi + HSred
RCS2-loss + PC3-loss + FC2-pot-loss	Condition not supported in PEG.
RCS2-loss + PC3-loss + FC3-pot-loss	38, Failisoi + CET700
RCS2-loss + PC3-loss + FC4-pot-loss	38, Failisoi + RVILSta
RCS2-loss + PC3-loss + FC5-pot-loss	Condition not supported in PEG.
RCS2-loss + PC3-loss + FC6-pot-loss	Condition not supported in PEG.
RCS2-loss + PC3-loss + FC7-pot-loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC4-loss + FC1a-pot-loss	38, Secrel + CCorange
RCS2-loss + PC4-loss + FC1b-pot-loss	38, Secrel + HSred
RCS2-loss + PC4-loss + FC2-pot-loss	Condition not supported in PEG.
RCS2-loss + PC4-loss + FC3-pot-loss	38, Secrel + CET700
RCS2-loss + PC4-loss + FC4-pot-loss	38, Secrel + RVILSta
RCS2-loss + PC4-loss + FC5-pot-loss	Condition not supported in PEG.
RCS2-loss + PC4-loss + FC6-pot-loss	Condition not supported in PEG.
RCS2-loss + PC4-loss + FC7-pot-loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC5-loss + FC1a-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC1b-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC2-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC3-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC4-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC5-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC6-pot-loss	Condition not supported in PEG.
RCS2-loss + PC5-loss + FC7-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC1a-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC1b-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC2-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC3-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC4-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC5-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC6-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6a-loss + FC7-pot-loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC1a-pot-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
RCS2-loss + PC6b-loss + FC1b-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC3-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC4-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC6b-loss + FC7-pot. loss	Condition not supported in PEG.
RCS2-loss + PC7-loss + FC1a-pot. loss	40
RCS2-loss + PC7-loss + FC1b-pot. loss	40
RCS2-loss + PC7-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC7-loss + FC3-pot. loss	40
RCS2-loss + PC7-loss + FC4-pot. loss	40
RCS2-loss + PC7-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC7-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC7-loss + FC7-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC8-loss + FC1a-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC8-loss + FC1b-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC8-loss + FC2-pot. loss	Condition not supported in PEG.
RCS2-loss + PC8-loss + FC3-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC8-loss + FC4-pot. loss	Subsumed in "Judgment" EAL.
RCS2-loss + PC8-loss + FC5-pot. loss	Condition not supported in PEG.
RCS2-loss + PC8-loss + FC6-pot. loss	Condition not supported in PEG.
RCS2-loss + PC8-loss + FC7-pot. loss	Subsumed in "Judgment" EAL.
RCS3a-loss + PC1-loss + FC1a-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC1b-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC2-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC3-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC4-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC5-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC6-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC1-loss + FC7-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC2a-loss + FC1a-pot. loss	37, SGTRrel + CCorange
RCS3a-loss + PC2a-loss + FC1b-pot. loss	37, Secrel + HSred
RCS3a-loss + PC2a-loss + FC2-pot. loss	Condition not supported in PEG.
RCS3a-loss + PC2a-loss + FC3-pot. loss	37, Secrel + CET700



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3a-loss + PC2a-loss + FC4-pot. loss</del>	<del>37. Secrel + RVILStaf</del>
<del>RCS3a-loss + PC2a-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2a-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2a-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC2b-loss + FC1a-pot. loss</del>	39
<del>RCS3a-loss + PC2b-loss + FC1b-pot. loss</del>	39
<del>RCS3a-loss + PC2b-loss + FC3-pot. loss</del>	39
<del>RCS3a-loss + PC2b-loss + FC4-pot. loss</del>	39
<del>RCS3a-loss + PC2b-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2b-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC2c-loss + FC1a-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC1b-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC3-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC4-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC2c-loss + FC7-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC3-loss + FC1a-pot. loss</del>	39
<del>RCS3a-loss + PC3-loss + FC1b-pot. loss</del>	39
<del>RCS3a-loss + PC3-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC3-loss + FC3-pot. loss</del>	39
<del>RCS3a-loss + PC3-loss + FC4-pot. loss</del>	39
<del>RCS3a-loss + PC3-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC3-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC3-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC4-loss + FC1a-pot. loss</del>	39
<del>RCS3a-loss + PC4-loss + FC1b-pot. loss</del>	39
<del>RCS3a-loss + PC4-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC4-loss + FC3-pot. loss</del>	39
<del>RCS3a-loss + PC4-loss + FC4-pot. loss</del>	39
<del>RCS3a-loss + PC4-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC4-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC4-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC5-loss + FC1a-pot. loss</del>	Condition not supported in PEG.

**Table D -- Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3a-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC7-loss + FC1a-pot-loss</del>	40
<del>RCS3a-loss + PC7-loss + FC1b-pot-loss</del>	40
<del>RCS3a-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC7-loss + FC3-pot-loss</del>	40
<del>RCS3a-loss + PC7-loss + FC4-pot-loss</del>	40
<del>RCS3a-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC7-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC8-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC8-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC8-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC8-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3a-loss + PC8-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3a-loss + PC8-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC8-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3a-loss + PC8-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC2c-loss + FC6-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**NESP-007Remarks

<del>RCS3b-loss + PC2e-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC3-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC4-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC4-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS3b-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC7-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC2-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS3b-loss + PC8-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS3b-loss + PC8-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2a-loss + FC1a-pot-loss</del>	37
<del>RCS4-loss + PC2a-loss + FC1b-pot-loss</del>	39
<del>RCS4-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2a-loss + FC3-pot-loss</del>	39
<del>RCS4-loss + PC2a-loss + FC4-pot-loss</del>	39

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS4-loss + PC2a-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2a-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2a-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC2b-loss + FC1a-pot. loss</del>	39
<del>RCS4-loss + PC2b-loss + FC1b-pot. loss</del>	39
<del>RCS4-loss + PC2b-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2b-loss + FC3-pot. loss</del>	39
<del>RCS4-loss + PC2b-loss + FC4-pot. loss</del>	39
<del>RCS4-loss + PC2b-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2b-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2b-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC2c-loss + FC1a-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC1b-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC3-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC4-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC2c-loss + FC7-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC3-loss + FC1a-pot. loss</del>	39
<del>RCS4-loss + PC3-loss + FC1b-pot. loss</del>	39
<del>RCS4-loss + PC3-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC3-loss + FC3-pot. loss</del>	39
<del>RCS4-loss + PC3-loss + FC4-pot. loss</del>	39
<del>RCS4-loss + PC3-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC3-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC3-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC4-loss + FC1a-pot. loss</del>	39
<del>RCS4-loss + PC4-loss + FC1b-pot. loss</del>	39
<del>RCS4-loss + PC4-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC4-loss + FC3-pot. loss</del>	39
<del>RCS4-loss + PC4-loss + FC4-pot. loss</del>	39
<del>RCS4-loss + PC4-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC4-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC4-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS4-loss + PC5-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC7-loss + FC1a-pot-loss</del>	40
<del>RCS4-loss + PC7-loss + FC1b-pot-loss</del>	40
<del>RCS4-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC7-loss + FC3-pot-loss</del>	40
<del>RCS4-loss + PC7-loss + FC4-pot-loss</del>	40
<del>RCS4-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC7-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC8-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC8-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC8-loss + FC2-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS4-loss + PC8-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC8-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS4-loss + PC8-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC8-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS4-loss + PC8-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2a-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC2b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2b-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC2c-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2c-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2c-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2c-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2c-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2c-loss + FC5-pot-loss</del>	Condition not supported in PEG.

Table D - Ginna Fission Product Barrier

## General Emergencies

NESP-007Remarks

<del>RCS5-loss + PC2e-loss + FC6-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC2e-loss + FC7-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC1a-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC1b-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC2-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC3-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC4-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC5-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC6-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC3-loss + FC7-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC4-loss + FC1a-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC1b-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC2-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC3-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC4-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC5-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC6-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC4-loss + FC7-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC5-loss + FC1a-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC1b-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC2-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC3-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC4-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC5-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC6-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC5-loss + FC7-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC1a-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC1b-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC2-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC3-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC4-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC5-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC6-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6a-loss + FC7-pot.-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC1a-pot.-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS5-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC7-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC2-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS5-loss + PC8-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS5-loss + PC8-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC1-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC1-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2a-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2a-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2a-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS6-loss + PC2a-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2a-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2b-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2b-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2b-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2b-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2b-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC2c-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC2c-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC3-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC2-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC3-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC3-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC2-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC4-loss + FC6-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS6-loss + PC4-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC5-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC5-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6a-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC1a-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC1b-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC3-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC4-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC6b-loss + FC7-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC7-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC7-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC7-loss + FC2-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC7-loss + FC3-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC7-loss + FC4-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC7-loss + FC5-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC7-loss + FC6-pot-loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC7-loss + FC7-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC8-loss + FC1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC8-loss + FC1b-pot-loss</del>	Subsumed in "Judgment" EAL.

Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
<del>RCS6-loss + PC8-loss + FC2-pot. loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC8-loss + FC3-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC8-loss + FC4-pot. loss</del>	Subsumed in "Judgment" EAL.
<del>RCS6-loss + PC8-loss + FC5-pot. loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC8-loss + FC6-pot. loss</del>	Condition not supported in PEG.
<del>RCS6-loss + PC8-loss + FC7-pot. loss</del>	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier****General Emergencies**NESP-007Remarks**Loss of PC + loss of FC + pot. loss of RCS**

PC1-loss + FC1a-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1a-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC1b-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC2-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC3-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS1b-pot.-loss	Condition not supported in PEG.





**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC1-loss + FC4-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC4-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC5-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC6-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC1-loss + FC7-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC2a-loss + FC1a-loss + RCS1a-pot.-loss	11
PC2a-loss + FC1a-loss + RCS1b-pot.-loss	11
PC2a-loss + FC1a-loss + RCS2-pot.-loss	11
PC2a-loss + FC1a-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC2a-loss + FC1a-loss + RCS3b-pot.-loss	11

**Table D - Ginna Fission Product Barrier  
General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC2a-loss + FC1a-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1a-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1a-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC2a-loss + FC1b-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS2-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2a-loss + FC1b-loss + RCS6-pot-loss	Condition not supported in PEG.
PC2a-loss + FC2-loss + RCS1a-pot-loss	41. Cont press dec + Act5%
PC2a-loss + FC2-loss + RCS1b-pot-loss	41
PC2a-loss + FC2-loss + RCS2-pot-loss	41
PC2a-loss + FC2-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC2-loss + RCS3b-pot-loss	41
PC2a-loss + FC2-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2a-loss + FC2-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2a-loss + FC2-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC2a-loss + FC3-loss + RCS1a-pot-loss	9, 11
PC2a-loss + FC3-loss + RCS1b-pot-loss	9, 11
PC2a-loss + FC3-loss + RCS2-pot-loss	9, 11
PC2a-loss + FC3-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC3-loss + RCS3b-pot-loss	9, 11
PC2a-loss + FC3-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2a-loss + FC3-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2a-loss + FC3-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC2a-loss + FC4-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS2-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2a-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>PC2a-loss + FC5-loss + RCS1a-pot-loss</del>	<del>41, Cont press dec + Rad5%</del>
<del>PC2a-loss + FC5-loss + RCS1b-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC5-loss + RCS2-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC5-loss + RCS3a-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC5-loss + RCS3b-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC5-loss + RCS4-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC5-loss + RCS5-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC5-loss + RCS6-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC6-loss + RCS1a-pot-loss</del>	<del>41, Cont press dec + FFM5%</del>
<del>PC2a-loss + FC6-loss + RCS1b-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC6-loss + RCS2-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC6-loss + RCS3a-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC6-loss + RCS3b-pot-loss</del>	<del>41</del>
<del>PC2a-loss + FC6-loss + RCS4-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC6-loss + RCS5-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC6-loss + RCS6-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS1a-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS1b-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS2-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS3a-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC7-loss + RCS3b-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS4-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2a-loss + FC7-loss + RCS5-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2a-loss + FC7-loss + RCS6-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2b-loss + FC1a-loss + RCS1a-pot-loss</del>	<del>11</del>
<del>PC2b-loss + FC1a-loss + RCS1b-pot-loss</del>	<del>11</del>
<del>PC2b-loss + FC1a-loss + RCS2-pot-loss</del>	<del>11</del>
<del>PC2b-loss + FC1a-loss + RCS3a-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2b-loss + FC1a-loss + RCS3b-pot-loss</del>	<del>11</del>
<del>PC2b-loss + FC1a-loss + RCS4-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2b-loss + FC1a-loss + RCS5-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2b-loss + FC1a-loss + RCS6-pot-loss</del>	<del>Subsumed in "Judgment" EAL.</del>
<del>PC2b-loss + FC1b-loss + RCS1a-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2b-loss + FC1b-loss + RCS1b-pot-loss</del>	<del>Condition not supported in PEG.</del>
<del>PC2b-loss + FC1b-loss + RCS2-pot-loss</del>	<del>Condition not supported in PEG.</del>



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC2b-loss + FC1b-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC1b-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2b-loss + FC1b-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2b-loss + FC1b-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2b-loss + FC1b-loss + RCS6-pot-loss	Condition not supported in PEG.
PC2b-loss + FC2-loss + RCS1a-pot-loss	42, Inc loca resp + Act5%
PC2b-loss + FC2-loss + RCS1b-pot-loss	42
PC2b-loss + FC2-loss + RCS2-pot-loss	42
PC2b-loss + FC2-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC2-loss + RCS3b-pot-loss	42
PC2b-loss + FC2-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2b-loss + FC2-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2b-loss + FC2-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC2b-loss + FC3-loss + RCS1a-pot-loss	9, 11
PC2b-loss + FC3-loss + RCS1b-pot-loss	9, 11
PC2b-loss + FC3-loss + RCS2-pot-loss	9, 11
PC2b-loss + FC3-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC3-loss + RCS3b-pot-loss	9, 11
PC2b-loss + FC3-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2b-loss + FC3-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2b-loss + FC3-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC2b-loss + FC4-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS2-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2b-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.
PC2b-loss + FC5-loss + RCS1a-pot-loss	42, Inc loca resp + Rad5%
PC2b-loss + FC5-loss + RCS1b-pot-loss	42
PC2b-loss + FC5-loss + RCS2-pot-loss	42
PC2b-loss + FC5-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2b-loss + FC5-loss + RCS3b-pot-loss	42
PC2b-loss + FC5-loss + RCS4-pot-loss	Condition not supported in PEG.



Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
<del>PC2b-loss + FC5-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC5-loss + RCS6-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC6-loss + RCS1a-pot-loss</del>	42, inc loca resp + FFM5%
<del>PC2b-loss + FC6-loss + RCS1b-pot-loss</del>	42
<del>PC2b-loss + FC6-loss + RCS2-pot-loss</del>	42
<del>PC2b-loss + FC6-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC6-loss + RCS3b-pot-loss</del>	42
<del>PC2b-loss + FC6-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC6-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC6-loss + RCS6-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS1a-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS1b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS2-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC7-loss + RCS3b-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2b-loss + FC7-loss + RCS5-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2b-loss + FC7-loss + RCS6-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC2c-loss + FC1a-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1a-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC1b-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2c-loss + FC2-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier  
General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>PC2e-loss + FC2-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC2-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC3-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC4-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC5-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC6-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC6-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC6-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC2e-loss + FC6-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC2e-loss + FC6-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2e-loss + FC6-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2e-loss + FC6-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2e-loss + FC6-loss + RCS6-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS2-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS4-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS5-pot-loss	Condition not supported in PEG.
PC2e-loss + FC7-loss + RCS6-pot-loss	Condition not supported in PEG.
PC3-loss + FC1a-loss + RCS1a-pot-loss	11
PC3-loss + FC1a-loss + RCS1b-pot-loss	11
PC3-loss + FC1a-loss + RCS2-pot-loss	11
PC3-loss + FC1a-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC3-loss + FC1a-loss + RCS3b-pot-loss	11
PC3-loss + FC1a-loss + RCS4-pot-loss	Condition not supported in PEG.
PC3-loss + FC1a-loss + RCS5-pot-loss	Condition not supported in PEG.
PC3-loss + FC1a-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC1b-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS2-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS4-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS5-pot-loss	Condition not supported in PEG.
PC3-loss + FC1b-loss + RCS6-pot-loss	Condition not supported in PEG.
PC3-loss + FC2-loss + RCS1a-pot-loss	43, failisol + Act5%
PC3-loss + FC2-loss + RCS1b-pot-loss	43
PC3-loss + FC2-loss + RCS2-pot-loss	43
PC3-loss + FC2-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC3-loss + FC2-loss + RCS3b-pot-loss	43
PC3-loss + FC2-loss + RCS4-pot-loss	Condition not supported in PEG.
PC3-loss + FC2-loss + RCS5-pot-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC3-loss + FC2-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC3-loss + RCS1a-pot.-loss	9, 11
PC3-loss + FC3-loss + RCS1b-pot.-loss	9, 11
PC3-loss + FC3-loss + RCS2-pot.-loss	9, 11
PC3-loss + FC3-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC3-loss + FC3-loss + RCS3b-pot.-loss	9, 11
PC3-loss + FC3-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC3-loss + FC3-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC3-loss + FC3-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC4-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC3-loss + FC4-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC3-loss + FC5-loss + RCS1a-pot.-loss	43, failisol + Rad5%
PC3-loss + FC5-loss + RCS1b-pot.-loss	43
PC3-loss + FC5-loss + RCS2-pot.-loss	43
PC3-loss + FC5-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC3-loss + FC5-loss + RCS3b-pot.-loss	43
PC3-loss + FC5-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC3-loss + FC5-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC3-loss + FC5-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC6-loss + RCS1a-pot.-loss	43, Failisol + FFM5%
PC3-loss + FC6-loss + RCS1b-pot.-loss	43
PC3-loss + FC6-loss + RCS2-pot.-loss	43
PC3-loss + FC6-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC3-loss + FC6-loss + RCS3b-pot.-loss	43
PC3-loss + FC6-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC3-loss + FC6-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC3-loss + FC6-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC7-loss + RCS1a-pot.-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC7-loss + RCS1b-pot.-loss	Subsumed in "Judgment" EAL.

Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
PC3-loss + FC7-loss + RCS2-pot-loss	Condition not supported in PEG.
PC3-loss + FC7-loss + RCS3a-pot-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC7-loss + RCS3b-pot-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC7-loss + RCS2-pot-loss	Condition not supported in PEG.
PC3-loss + FC7-loss + RCS4-pot-loss	Subsumed in "Judgment" EAL.
PC3-loss + FC7-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC1a-loss + RCS1a-pot-loss	11
PC4-loss + FC1a-loss + RCS1b-pot-loss	11
PC4-loss + FC1a-loss + RCS2-pot-loss	11
PC4-loss + FC1a-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC1a-loss + RCS3b-pot-loss	11
PC4-loss + FC1a-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC1a-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC1a-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC1b-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS2-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC1b-loss + RCS6-pot-loss	Condition not supported in PEG.
PC4-loss + FC2-loss + RCS1a-pot-loss	44, Secrel + Act5%
PC4-loss + FC2-loss + RCS1b-pot-loss	45
PC4-loss + FC2-loss + RCS2-pot-loss	45
PC4-loss + FC2-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC2-loss + RCS3b-pot-loss	45
PC4-loss + FC2-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC2-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC2-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC3-loss + RCS1a-pot-loss	9, 11
PC4-loss + FC3-loss + RCS1b-pot-loss	9, 11
PC4-loss + FC3-loss + RCS2-pot-loss	9, 11
PC4-loss + FC3-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC3-loss + RCS3b-pot-loss	9, 11

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC4-loss + FC3-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC3-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC3-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC4-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS2-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.
PC4-loss + FC5-loss + RCS1a-pot-loss	44, Secret + Rad5%
PC4-loss + FC5-loss + RCS1b-pot-loss	45
PC4-loss + FC5-loss + RCS2-pot-loss	45
PC4-loss + FC5-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC5-loss + RCS3b-pot-loss	45
PC4-loss + FC5-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC5-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC5-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC6-loss + RCS1a-pot-loss	44, Secret + FFM
PC4-loss + FC6-loss + RCS1b-pot-loss	45
PC4-loss + FC6-loss + RCS2-pot-loss	45
PC4-loss + FC6-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC6-loss + RCS3b-pot-loss	45
PC4-loss + FC6-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC6-loss + RCS5-pot-loss	Condition not supported in PEG.
PC4-loss + FC6-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS1a-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS1b-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS2-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC4-loss + FC7-loss + RCS3b-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS4-pot-loss	Condition not supported in PEG.
PC4-loss + FC7-loss + RCS5-pot-loss	Subsumed in "Judgment" EAL.
PC4-loss + FC7-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC5-loss + FC1a-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1a-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC5-loss + FC1b-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC5-loss + FC2-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC5-loss + FC3-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS2-pot.-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC5-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC5-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS2-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS4-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS5-pot-loss	Condition not supported in PEG.
PC5-loss + FC5-loss + RCS6-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS2-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS4-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS5-pot-loss	Condition not supported in PEG.
PC5-loss + FC6-loss + RCS6-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS2-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS4-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS5-pot-loss	Condition not supported in PEG.
PC5-loss + FC7-loss + RCS6-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS2-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC6a-loss + FC1a-loss + RCS4-pot-loss	Condition not supported in PEG.





**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>PC6a-loss + FC1a-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1a-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC1b-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC2-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC3-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC4-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>PC6a-loss + FC5-loss + RCS1b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS2-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS3b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS4-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS5-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC5-loss + RCS6-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS1a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS1b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS2-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS3b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS4-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS5-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC6-loss + RCS6-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS1a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS1b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS2-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS3b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS4-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS5-pot.-loss</del>	Condition not supported in PEG.
<del>PC6a-loss + FC7-loss + RCS6-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS1a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS1b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS2-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS3b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS4-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS5-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1a-loss + RCS6-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1b-loss + RCS1a-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1b-loss + RCS1b-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1b-loss + RCS2-pot.-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC1b-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.

Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
PC6b-loss + FC1b-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC1b-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC1b-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC1b-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC2-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC3-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC4-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC6b-loss + FC5-loss + RCS5-pot.-loss	Condition not supported in PEG.



Table D - Ginna Fission Product Barrier

## General Emergencies

<u>NESP-007</u>	<u>Remarks</u>
<del>PC6b-loss + FC5-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC6-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC6b-loss + FC7-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1a-loss + RCS1a-pot-loss</del>	11
<del>PC7-loss + FC1a-loss + RCS1b-pot-loss</del>	11
<del>PC7-loss + FC1a-loss + RCS2-pot-loss</del>	11
<del>PC7-loss + FC1a-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1a-loss + RCS3b-pot-loss</del>	11
<del>PC7-loss + FC1a-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1a-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1a-loss + RCS6-pot-loss</del>	Subsumed in "Judgment" EAL.
<del>PC7-loss + FC1b-loss + RCS1a-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS1b-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS2-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS3a-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS3b-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS4-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS5-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC1b-loss + RCS6-pot-loss</del>	Condition not supported in PEG.
<del>PC7-loss + FC2-loss + RCS1a-pot-loss</del>	40
<del>PC7-loss + FC2-loss + RCS1b-pot-loss</del>	40

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC7-loss + FC2-loss + RCS2-pot-loss	40
PC7-loss + FC2-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC7-loss + FC2-loss + RCS3b-pot-loss	40
PC7-loss + FC2-loss + RCS4-pot-loss	Condition not supported in PEG.
PC7-loss + FC2-loss + RCS5-pot-loss	Condition not supported in PEG.
PC7-loss + FC2-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC3-loss + RCS1a-pot-loss	9, 11
PC7-loss + FC3-loss + RCS1b-pot-loss	9, 11
PC7-loss + FC3-loss + RCS2-pot-loss	9, 11
PC7-loss + FC3-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC7-loss + FC3-loss + RCS3b-pot-loss	9, 11
PC7-loss + FC3-loss + RCS4-pot-loss	Condition not supported in PEG.
PC7-loss + FC3-loss + RCS5-pot-loss	Condition not supported in PEG.
PC7-loss + FC3-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC4-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS2-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC7-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.
PC7-loss + FC5-loss + RCS1a-pot-loss	40
PC7-loss + FC5-loss + RCS1b-pot-loss	40
PC7-loss + FC5-loss + RCS2-pot-loss	40
PC7-loss + FC5-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC7-loss + FC5-loss + RCS3b-pot-loss	40
PC7-loss + FC5-loss + RCS4-pot-loss	Condition not supported in PEG.
PC7-loss + FC5-loss + RCS5-pot-loss	Condition not supported in PEG.
PC7-loss + FC5-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC6-loss + RCS1a-pot-loss	40
PC7-loss + FC6-loss + RCS1b-pot-loss	40
PC7-loss + FC6-loss + RCS2-pot-loss	40
PC7-loss + FC6-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC7-loss + FC6-loss + RCS3b-pot-loss	40





**Table D -- Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC7-loss + FC6-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC7-loss + FC6-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC7-loss + FC6-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS1a-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS1b-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS2-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC7-loss + FC7-loss + RCS3b-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC7-loss + FC7-loss + RCS5-pot.-loss	Subsumed in "Judgment" EAL.
PC7-loss + FC7-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS1a-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS1b-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS2-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1a-loss + RCS3b-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1a-loss + RCS5-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1a-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC1b-loss + RCS1a-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS1b-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS2-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS3b-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS5-pot.-loss	Condition not supported in PEG.
PC8-loss + FC1b-loss + RCS6-pot.-loss	Condition not supported in PEG.
PC8-loss + FC2-loss + RCS1a-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC2-loss + RCS1b-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC2-loss + RCS2-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC2-loss + RCS3a-pot.-loss	Condition not supported in PEG.
PC8-loss + FC2-loss + RCS3b-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC2-loss + RCS4-pot.-loss	Condition not supported in PEG.
PC8-loss + FC2-loss + RCS5-pot.-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC2-loss + RCS6-pot.-loss	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
PC8-loss + FC3-loss + RCS1a-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC3-loss + RCS1b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC3-loss + RCS2-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC3-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC8-loss + FC3-loss + RCS3b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC3-loss + RCS4-pot-loss	Condition not supported in PEG.
PC8-loss + FC3-loss + RCS5-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC3-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC4-loss + RCS1a-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS1b-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS2-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS3b-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS4-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS5-pot-loss	Condition not supported in PEG.
PC8-loss + FC4-loss + RCS6-pot-loss	Condition not supported in PEG.
PC8-loss + FC5-loss + RCS1a-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC5-loss + RCS1b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC5-loss + RCS2-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC5-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC8-loss + FC5-loss + RCS3b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC5-loss + RCS4-pot-loss	Condition not supported in PEG.
PC8-loss + FC5-loss + RCS5-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC5-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS1a-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS1b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS2-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS3a-pot-loss	Condition not supported in PEG.
PC8-loss + FC6-loss + RCS3b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS4-pot-loss	Condition not supported in PEG.
PC8-loss + FC6-loss + RCS5-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC6-loss + RCS6-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC7-loss + RCS1a-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC7-loss + RCS1b-pot-loss	Subsumed in "Judgment" EAL.
PC8-loss + FC7-loss + RCS2-pot-loss	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>PC8-loss + FC7-loss + RCS3a-pot.-loss</del>	Condition not supported in PEG.
<del>PC8-loss + FC7-loss + RCS3b-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>PC8-loss + FC7-loss + RCS4-pot.-loss</del>	Condition not supported in PEG.
<del>PC8-loss + FC7-loss + RCS5-pot.-loss</del>	Subsumed in "Judgment" EAL.
<del>PC8-loss + FC7-loss + RCS6-pot.-loss</del>	Subsumed in "Judgment" EAL.
 <b>Loss of FC + loss of RCS + loss of PC</b>	
<del>FC1a-loss + RCS1a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS1b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC2a-loss</del>	11, 26
<del>FC1a-loss + RCS2-loss + PC2b-loss</del>	11
<del>FC1a-loss + RCS2-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC3-loss</del>	11



**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1a-loss + RCS2-loss + PC4-loss</del>	11
<del>FC1a-loss + RCS2-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS2-loss + PC7-loss</del>	11
<del>FC1a-loss + RCS2-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS3a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC2a-loss</del>	11, 26
<del>FC1a-loss + RCS3a-loss + PC2b-loss</del>	11, 6
<del>FC1a-loss + RCS3a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC3-loss</del>	11
<del>FC1a-loss + RCS3a-loss + PC4-loss</del>	11
<del>FC1a-loss + RCS3a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3a-loss + PC7-loss</del>	11
<del>FC1a-loss + RCS3a-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS3b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS3b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC2a-loss</del>	11, 26
<del>FC1a-loss + RCS4-loss + PC2b-loss</del>	11, 6
<del>FC1a-loss + RCS4-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC3-loss</del>	11
<del>FC1a-loss + RCS4-loss + PC4-loss</del>	11
<del>FC1a-loss + RCS4-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC6a-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1a-loss + RCS4-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS4-loss + PC7-loss</del>	11
<del>FC1a-loss + RCS4-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS5-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC2e-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS5-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC2e-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1a-loss + RCS6-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1a-loss + RCS6-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC1b-loss + RCS1a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC2e-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1a-loss + PC7-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1b-loss + RCS1a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS1b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS2-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC2a-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1b-loss + RCS3b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS3b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS4-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS5-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC2c-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC1b-loss + RCS6-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC1b-loss + RCS6-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS1b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC2a-loss</del>	26
<del>FC2-loss + RCS2-loss + PC2b-loss</del>	42
<del>FC2-loss + RCS2-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC3-loss</del>	43
<del>FC2-loss + RCS2-loss + PC4-loss</del>	45

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC2-loss + RCS2-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS2-loss + PC7-loss</del>	40
<del>FC2-loss + RCS2-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS3a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC2a-loss</del>	26
<del>FC2-loss + RCS3a-loss + PC2b-loss</del>	6, 42
<del>FC2-loss + RCS3a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC3-loss</del>	43
<del>FC2-loss + RCS3a-loss + PC4-loss</del>	45
<del>FC2-loss + RCS3a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3a-loss + PC7-loss</del>	40
<del>FC2-loss + RCS3a-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC2-loss + RCS3b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS3b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC2a-loss</del>	26
<del>FC2-loss + RCS4-loss + PC2b-loss</del>	6, 42
<del>FC2-loss + RCS4-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC3-loss</del>	43
<del>FC2-loss + RCS4-loss + PC4-loss</del>	45
<del>FC2-loss + RCS4-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC2-loss + RCS4-loss + PC6a-loss</del>	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC2-loss + RCS4-loss + PC6b-loss	Condition not supported in PEG.
FC2-loss + RCS4-loss + PC7-loss	Condition not supported in PEG.
FC2-loss + RCS4-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS5-loss + PC1-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC2a-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC2b-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC2c-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC3-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC4-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC5-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC6a-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC6b-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC7-loss	Condition not supported in PEG.
FC2-loss + RCS5-loss + PC8-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC1-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC2a-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS6-loss + PC2b-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS6-loss + PC2c-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC3-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC4-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS6-loss + PC5-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC6a-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC6b-loss	Condition not supported in PEG.
FC2-loss + RCS6-loss + PC7-loss	Subsumed in "Judgment" EAL.
FC2-loss + RCS6-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS1a-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC2a-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC2b-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC3-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC4-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS1a-loss + PC7-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC3-loss + RCS1a-loss + PC8-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC2a-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC2b-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC3-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC4-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC7-loss	Condition not supported in PEG.
FC3-loss + RCS1b-loss + PC8-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC2a-loss	9, 11, 26
FC3-loss + RCS2-loss + PC2b-loss	9, 11, 42
FC3-loss + RCS2-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC3-loss	43
FC3-loss + RCS2-loss + PC4-loss	45
FC3-loss + RCS2-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS2-loss + PC7-loss	40
FC3-loss + RCS2-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS3a-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS3a-loss + PC2a-loss	9, 11, 26
FC3-loss + RCS3a-loss + PC2b-loss	9, 11, 42
FC3-loss + RCS3a-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS3a-loss + PC3-loss	43
FC3-loss + RCS3a-loss + PC4-loss	45
FC3-loss + RCS3a-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS3a-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS3a-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS3a-loss + PC7-loss	40
FC3-loss + RCS3a-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS3b-loss + PC1-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC3-loss + RCS3b-loss + PC2a-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC2b-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC3-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC4-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC7-loss	Condition not supported in PEG.
FC3-loss + RCS3b-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS4-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC2a-loss	9, 11, 26
FC3-loss + RCS4-loss + PC2b-loss	9, 11, 42
FC3-loss + RCS4-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC3-loss	43
FC3-loss + RCS4-loss + PC4-loss	45
FC3-loss + RCS4-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS4-loss + PC7-loss	40
FC3-loss + RCS4-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS5-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC2a-loss	Condition not supported in PEG..
FC3-loss + RCS5-loss + PC2b-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC2c-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC3-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC4-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC7-loss	Condition not supported in PEG.
FC3-loss + RCS5-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC1-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss + PC2a-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC2b-loss	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier  
General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC3-loss + RCS6-loss + PC2e-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss + PC3-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC4-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC5-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss + PC6a-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss + PC6b-loss	Condition not supported in PEG.
FC3-loss + RCS6-loss + PC7-loss	Subsumed in "Judgment" EAL.
FC3-loss + RCS6-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC4-loss + RCS1a-loss + PC1-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC2a-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC2b-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC2c-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC3-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC4-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC5-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC6a-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC6b-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC7-loss	Condition not supported in PEG.
FC4-loss + RCS1a-loss + PC8-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC1-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC2a-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC2b-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC2c-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC3-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC4-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC5-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC6a-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC6b-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC7-loss	Condition not supported in PEG.
FC4-loss + RCS1b-loss + PC8-loss	Condition not supported in PEG.
FC4-loss + RCS2-loss + PC1-loss	Condition not supported in PEG.
FC4-loss + RCS2-loss + PC2a-loss	Condition not supported in PEG.
FC4-loss + RCS2-loss + PC2b-loss	Condition not supported in PEG.
FC4-loss + RCS2-loss + PC2c-loss	Condition not supported in PEG.
FC4-loss + RCS2-loss + PC3-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

NESP-007Remarks

<del>FC4-loss + RCS2-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS2-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS3b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC4-loss + RCS4-loss + PC6a-loss</del>	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**NESP-007Remarks

FC4-loss + RCS4-loss + PC6b-loss	Condition not supported in PEG.
FC4-loss + RCS4-loss + PC7-loss	Condition not supported in PEG.
FC4-loss + RCS4-loss + PC8-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC1-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC2a-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC2b-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC2c-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC3-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC4-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC5-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC6a-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC6b-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC7-loss	Condition not supported in PEG.
FC4-loss + RCS5-loss + PC8-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC1-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC2a-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC2b-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC2c-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC3-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC4-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC5-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC6a-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC6b-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC7-loss	Condition not supported in PEG.
FC4-loss + RCS6-loss + PC8-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC2a-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC2b-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC3-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC4-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS1a-loss + PC7-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC5-loss + RCS1a-loss + PC8-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC2a-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC2b-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC3-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC4-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC7-loss	Condition not supported in PEG.
FC5-loss + RCS1b-loss + PC8-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC2a-loss	26
FC5-loss + RCS2-loss + PC2b-loss	6, 42
FC5-loss + RCS2-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC3-loss	43
FC5-loss + RCS2-loss + PC4-loss	45
FC5-loss + RCS2-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS2-loss + PC7-loss	40
FC5-loss + RCS2-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS3a-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC2a-loss	26
FC5-loss + RCS3a-loss + PC2b-loss	6, 42
FC5-loss + RCS3a-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC3-loss	43
FC5-loss + RCS3a-loss + PC4-loss	45
FC5-loss + RCS3a-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS3a-loss + PC7-loss	40
FC5-loss + RCS3a-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS3b-loss + PC1-loss	Condition not supported in PEG.



**Table D - Ginna Fission Product Barrier****General Emergencies**NESP-007Remarks

FC5-loss + RCS3b-loss + PC2a-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC2b-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC3-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC4-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC7-loss	Condition not supported in PEG.
FC5-loss + RCS3b-loss + PC8-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC2a-loss	26
FC5-loss + RCS4-loss + PC2b-loss	6, 42
FC5-loss + RCS4-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC3-loss	43
FC5-loss + RCS4-loss + PC4-loss	45
FC5-loss + RCS4-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS4-loss + PC7-loss	40
FC5-loss + RCS4-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS5-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2a-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2b-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC2c-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC3-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC4-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC5-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC6a-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC6b-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC7-loss	Condition not supported in PEG.
FC5-loss + RCS5-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC1-loss	Condition not supported in PEG.
FC5-loss + RCS6-loss + PC2a-loss	Subsumed in "Judgment" EAL.
FC5-loss + RCS6-loss + PC2b-loss	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC5-loss + RCS6-loss + PC2e-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS6-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC5-loss + RCS6-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC5-loss + RCS6-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS6-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS6-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC5-loss + RCS6-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC5-loss + RCS6-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC6-loss + RCS1a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS1b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS2-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS2-loss + PC2a-loss</del>	41
<del>FC6-loss + RCS2-loss + PC2b-loss</del>	42
<del>FC6-loss + RCS2-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC6-loss + RCS2-loss + PC3-loss</del>	43

**Table D - Ginna Fission Product Barrier**  
**General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
FC6-loss + RCS2-loss + PC4-loss	45
FC6-loss + RCS2-loss + PC5-loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS2-loss + PC7-loss	40
FC6-loss + RCS2-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS3a-loss + PC1-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC2a-loss	26
FC6-loss + RCS3a-loss + PC2b-loss	6, 42
FC6-loss + RCS3a-loss + PC2c-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC3-loss	43
FC6-loss + RCS3a-loss + PC4-loss	45
FC6-loss + RCS3a-loss + PC5-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS3a-loss + PC7-loss	40
FC6-loss + RCS3a-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS3b-loss + PC1-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2a-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2b-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC2c-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC3-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC4-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC5-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC7-loss	Condition not supported in PEG.
FC6-loss + RCS3b-loss + PC8-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC1-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC2a-loss	26
FC6-loss + RCS4-loss + PC2b-loss	6, 42
FC6-loss + RCS4-loss + PC2c-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC3-loss	43
FC6-loss + RCS4-loss + PC4-loss	45
FC6-loss + RCS4-loss + PC5-loss	Condition not supported in PEG.

Table D - Ginna Fission Product Barrier

## General Emergencies

NESP-007Remarks

FC6-loss + RCS4-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS4-loss + PC7-loss	40
FC6-loss + RCS4-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS5-loss + PC1-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC2a-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC2b-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC2c-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC3-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC4-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC5-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC7-loss	Condition not supported in PEG.
FC6-loss + RCS5-loss + PC8-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC1-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC2a-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS6-loss + PC2b-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS6-loss + PC2c-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC3-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS6-loss + PC4-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS6-loss + PC5-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC6a-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC6b-loss	Condition not supported in PEG.
FC6-loss + RCS6-loss + PC7-loss	Subsumed in "Judgment" EAL.
FC6-loss + RCS6-loss + PC8-loss	Subsumed in "Judgment" EAL.
FC7-loss + RCS1a-loss + PC1-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC2a-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC2b-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC2c-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC3-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC4-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC5-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC6a-loss	Condition not supported in PEG.
FC7-loss + RCS1a-loss + PC6b-loss	Condition not supported in PEG.

**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS1a-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1a-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC3-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC4-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC7-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS1b-loss + PC8-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS2-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS2-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3a-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3a-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3a-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3a-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3a-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3a-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.



**Table D - Ginna Fission Product Barrier****General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS3b-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3b-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3b-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3b-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3b-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS3b-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS3b-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS4-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS4-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS4-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS4-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS4-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS4-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS5-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS5-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS5-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS5-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS5-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS5-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC1-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS6-loss + PC2a-loss</del>	Subsumed in "Judgment" EAL.

**Table D - Ginna Fission Product Barrier  
General Emergencies**

<u>NESP-007</u>	<u>Remarks</u>
<del>FC7-loss + RCS6-loss + PC2b-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC2c-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS6-loss + PC3-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC4-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC5-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS6-loss + PC6a-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS6-loss + PC6b-loss</del>	Condition not supported in PEG.
<del>FC7-loss + RCS6-loss + PC7-loss</del>	Subsumed in "Judgment" EAL.
<del>FC7-loss + RCS6-loss + PC8-loss</del>	Subsumed in "Judgment" EAL.

**Appendix 1 - Fission Product Barrier Remarks**

1. The only source of significant containment pressure increase other than a faulted steam generator is an RCS boundary breach. By definition, loss of the RCS boundary and the loss of the primary containment boundary require a Site Area Emergency classification. Therefore, this EAL is unnecessary and can be deleted.
2. If an inconsistent loca response is observed, a loss of the RCS has occurred. By definition, loss of the RCS boundary and the loss of the primary containment boundary require a Site Area Emergency classification. Therefore, this EAL is unnecessary and can be deleted.
3. The initiation signal for containment isolations are result of an RCS breach. By definition, loss of the RCS boundary and the loss of the primary containment boundary require a Site Area Emergency classification. Therefore, this EAL is unnecessary and can be deleted.
4. In order to reach containment-red on the CSFST, containment design pressure has been reached or exceeded. This is indicative of a loss of RCS boundary. It is not possible to reach this condition without also being in a Heat Sink-Red or Core Cooling-Red CSFST which is a loss of RCS and the fuel clad barrier. The source of energy must be the result of severe degradation of core cooling or loss of heat sink. Since the EAL is a potential loss of containment by definition, this combination of conditions requires the declaration of a General Emergency. Therefore, this EAL is unnecessary and can be deleted.
5. Containment design pressure can only be reached as a result of a severe loca event. This represents a loss of the RCS barrier and a potential loss of the fuel cladding. By definition, this combination of conditions requires the declaration of at least an Alert classification. Therefore, this EAL is unnecessary and can be deleted.
6. Generation of this level of hydrogen concentration in the containment indicates that a loss of fuel clad barrier and loss of RCS barrier has occurred with a potential loss of the primary containment barrier. By definition, this combination of conditions requires the declaration of a General Emergency. Therefore, this EAL is unnecessary and can be deleted.
7. The conditions listed in this EAL represent a loss of the RCS barrier with a potential loss of containment. By definition, the loss of the RCS barrier requires the declaration of an Alert. Therefore, this EAL is unnecessary and can be deleted.

**Appendix 1 - Fission Product Barrier Remarks**

8. These containment radiation levels can only be reached as a result of a severe core damage. This represents a loss of the fuel clad barrier and the loss of the RCS barrier with a potential loss of the primary containment. By definition, this combination of conditions requires the declaration of a General Emergency. Therefore, this EAL is unnecessary and can be deleted.
9. Core Exit Thermocouple readings  $\geq 1200$  °F with a failure of restoration procedures represent a potential loss of the primary containment, a loss of fuel clad barrier, and a loss of subcooling which is a fundamental indication of a loss of the RCS barrier. By definition, this combination of conditions requires the declaration of a General Emergency. Therefore, this EAL is unnecessary and can be deleted.
10. A Core Exit Thermocouple reading  $\geq 700$  °F with reactor vessel water level below the top of active fuel requires entry to the Core Cooling-Red CSFST and warrants declaration of a General Emergency. See justification #11. Therefore, this EAL is unnecessary and can be deleted.
11. Core Cooling-Red on the CSFST is indicative of a Core Exit Thermocouple reading of  $\geq 1200$  °F, or reactor vessel water level below the top of active fuel with a Core Exit Thermocouple reading of  $\geq 700$  °F. EAL# FC3.1 and EAL# FC3.2 represent a loss and potential loss of the fuel clad based on Core Exit Thermocouple readings of 1200 °F and 700 °F, respectively. EAL# RCS2.1 represents a loss of subcooling, therefore, entry into Core Cooling-Red also represents a loss of the RCS barrier. EAL# PC6.2 is indicative of a Core Exit Thermocouple reading  $\geq 700$  °F and represents a potential loss of primary containment barrier. Thus, entry into Core Cooling-Red requires declaration of a General Emergency. Therefore, this EAL is unnecessary and can be deleted.
12. Core Cooling-Orange on the CSFST represents a potential loss of the fuel clad barrier and a loss of subcooling which is indicative of a loss of the RCS barrier. By definition, this combination of conditions requires the declaration of a Site Area Emergency. Therefore, this EAL is unnecessary and can be deleted.
13. Heat Sink-Red on the CSFST represents an extreme challenge to the heat sink function and, by EAL# SS4.1, requires the declaration of a Site Area Emergency. Therefore, this EAL is unnecessary and can be deleted.

**Appendix 1 - Fission Product Barrier Remarks**

14. A Core Exit Thermocouple reading  $\geq 700$  °F represents a potential loss of the fuel clad and a loss of subcooling which is a loss of the RCS barrier. By definition, this combination of conditions requires the declaration of a Site Area Emergency. Therefore, this EAL is unnecessary and can be deleted.
15. RVLIS less than or equal to the top of active fuel requires, by EAL# SS5.1, the declaration of a Site Area Emergency. Therefore, this EAL is unnecessary and can be deleted.
16. Deleted
17. A SGTR with a resultant path to the environment represents breach of both the RCS and the primary containment barriers. This combination of conditions requires, by definition, a Site Area Emergency declaration. Therefore, this EAL is unnecessary and can be deleted.
18. The containment radiation monitor reading for EAL# RCS4.1 bounds the reading given in EAL# FC5.1. Therefore, EAL# FC5.1 is unnecessary and can be deleted.
19. Heat Sink-Red on the CSFST represents a potential loss of the fuel clad barrier and the RCS barrier. This combination of conditions requires, by definition, the declaration of a Site Area Emergency. Therefore, this EAL is unnecessary and can be deleted.
20. The RCS leakage for EAL# RCS2.2 bounds the leakage given in EAL# RCS3.2. Therefore, EAL# RCS3.2 is unnecessary and can be deleted.
21. EAL# FC5.1 is a containment radiation level corresponding to 5% fuel clad failure. It is also indicative of an RCS failure because EAL# RCS4.1 will always be a value less than EAL# FC5.1. Therefore, EAL# FC5.1 alone requires declaration of a Site Area Emergency.
22. This combination of conditions would produce a containment radiation level at least at the level of EAL# FC5.1. Therefore, this combination of conditions is unnecessary and can be deleted.
23. EAL# FC6.1 is equivalent to the radiation level corresponding to EAL# FC5.1. Containment radiation levels associated with an RCS loss would be indicated by EAL# FC5.1. Therefore, this combination of conditions is unnecessary and can be deleted.



**Appendix 1 - Fission Product Barrier Remarks**

24. EAL# FC4.1 is indicative of reactor vessel water level less than the top of active fuel. This condition always requires a CSFST entry to Core Cooling-Orange or Core Cooling-Red. Core Cooling-Orange is addressed in EAL# FC1.2 and Core Cooling-Red is addressed in EAL# FC1.1. Therefore, declaration of a Site Area Emergency due to EAL# FC4.1 is unnecessary and can be deleted.
25. EAL# FC3.2 is indicative of a Core Exit Thermocouple reading at or above 700 °F. This condition always requires a CSFST entry to Core Cooling-Orange or Core Cooling-Red. Core Cooling-Orange is addressed in EAL# FC1.2 and Core Cooling-Red is addressed in EAL# FC1.1. Therefore, declaration of a Site Area Emergency due to EAL# FC3.1 is unnecessary and can be deleted.
26. EAL# PC2.1 is an entry into Containment Cooling-Red CSFST which requires a declaration of a General Emergency under EAL# PC1.1. Therefore, all combinations of conditions involving EAL# PC2.1 are unnecessary and can be deleted.
27. EAL# RCS2.1 is indicative of a loss of subcooling. EAL# FC1.1 is based on entry to Core Cooling-Red CSFST which is indicative of a loss of subcooling. Therefore, EAL# RCS2.1 can be deleted from this combination of conditions.
28. EAL# PC6.2 is indicative of a Core Exit Thermocouple reading of 700 °F. EAL# FC1.1 is based on entry to Core Cooling-Red CSFST. Core Cooling-Red cannot be entered without exceeding a 700 °F Core Exit Thermocouple reading. Therefore, this combination of conditions is unnecessary and can be deleted.
29. This combination of conditions is adequately covered by EAL# FC1.1 in combination with EAL# PC2.5.
30. EAL# PC6.2 is indicative of a Core Exit Thermocouple reading at or above 700 °F and reactor vessel water level below the top of active fuel. These conditions require an entry to Core Cooling-Red. Core Cooling-Red defines EAL# FC1.1. Therefore, EAL# PC6.2 can be deleted from this combination of conditions.
31. EAL# PC6.2 is indicative of a Core Exit Thermocouple reading at or above 700 °F with a failure of restoration procedures. Core Exit Thermocouple reading at or above 700 °F is a loss of subcooling which





**Appendix 1 - Fission Product Barrier Remarks**

- is the condition that defines EAL# RCS2.1. Therefore, EAL# RCS2.1 is unnecessary and can be deleted from this combination of conditions.
32. The purpose of EAL# RCS2.1 is to indicate the loss of the RCS barrier. In order to reach the condition of EAL# PC2.5, a breach of the RCS barrier is required. Thus, EAL# RCS2.1 is bounded by EAL# PC2.5. Therefore, EAL# RCS2.1 is unnecessary and can be deleted from this combination of conditions.
33. EAL# PC2.5 is indicative of a loss of the RCS barrier and a potential loss of the primary containment barrier. EAL# RCS3.1 is indicative of a loss of both RCS and primary containment barriers. A potential loss of primary containment barrier is irrelevant to this combination of conditions. Therefore, EAL# PC2.5 is unnecessary and can be deleted from this combination of conditions.
34. EAL# RCS4.1 corresponds to a containment radiation level which is always less than that in EAL# FC5.1. EAL# RCS4.1 only indicates a loss of the RCS barrier where as EAL# FC5.1 indicates a loss of both RCS and fuel clad barriers. Therefore, EAL# RCS4.1 is unnecessary in defining the General Emergency conditions. With this change, the resulting combination of conditions is identical to those given above with justification #32.
35. EAL# RCS4.1 represents containment radiation levels resulting from a loss of the RCS barrier. However, EAL# PC2.5 is indicative of a potential loss of the primary containment barrier and a loss of the RCS barrier. Therefore, EAL# RCS4.1 is bounded by EAL# PC2.5 and can be deleted from this combination of conditions.
36. EAL# FC1.2 is an entry to Core Cooling-Orange on the CSFST. EAL# RCS2.1 is an indication of a loss of subcooling and is also an entry to Core Cooling-Orange on the CSFST. Thus, EAL# FC1.2 bounds EAL# RCS2.1. Therefore, EAL# RCS2.1 is unnecessary and can be deleted from this combination of conditions.
37. RCS3.1 represents both a loss of RCS and loss of primary containment barrier. Therefore, PC2.1 can be deleted from any combination of RCS3.1 loss and fuel clad potential loss.
38. EAL# PC2.1, EAL# PC2.2, EAL# PC3.1, and EAL# PC4.1 represent a loss of the RCS and primary containment barriers. Therefore, EAL# RCS2.1 which represents a loss of RCS barrier is unnecessary and can be deleted from this combination of conditions.

**Appendix 1 - Fission Product Barrier Remarks**

39. By justification #38 above, any combination of EAL# PC2.1, EAL# PC2.2, EAL# PC3.1, or EAL# PC4.1 and any of the following: EAL# FC1.2, EAL# FC3.1, EAL# FC4.1, or EAL# FC6.2, results in the declaration of a General Emergency. Therefore, this combination of conditions is redundant and can be deleted.
40. EAL# PC7.1 is used only as loss of primary containment barrier for the Unusual Event declaration. For the Site Area Emergency and the General Emergency declaration, EAL# PC7.1 is subsumed into the "Judgment" EAL. Loss of containment airlock doors is event dependent. It is the only NUMARC primary containment barrier loss which is not associated with a loss of the RCS barrier. The airlock doors may be open for reasons other than an emergency situation (e. g., maintenance activities, etc.). Shift personnel will rapidly respond to failure of other barriers by reclosing the doors. If the doors are not reclosed, any loss of the RCS barrier that occurs with the doors open will appear as an inconsistent loca response. Therefore, this event need not be used to indicate a loss of the primary containment barrier unless the Emergency Director determines such a declaration is needed.
41. EAL# PC2.1 is indicative of a loss of the primary containment barrier and a loss of the RCS barrier. Any combination of EAL# PC2.1 with a loss of the fuel clad barrier alone requires declaration of a General Emergency. Therefore, the third EAL condition is unnecessary and can be deleted. Any other combinations of conditions using EAL# PC2.1 and fuel clad barrier losses are redundant and can be deleted.
42. EAL# PC2.2 is indicative of a loss of the primary containment barrier and a loss of the RCS barrier. Any combination of EAL# PC2.2 with a loss of the fuel clad barrier alone requires declaration of a General Emergency. Therefore, the third EAL condition is unnecessary and can be deleted. Any other combinations of conditions using EAL# PC2.2 and fuel clad barrier losses are redundant and can be deleted.
43. EAL# PC3.1 is indicative of a loss of the primary containment barrier and a loss of the RCS barrier. Any combination of EAL# PC3.1 with a loss of the fuel clad barrier alone requires declaration of a General Emergency. Therefore, the third EAL condition is unnecessary and can be deleted. Any other combinations of conditions using EAL# PC3.1 and fuel clad barrier losses are redundant and can be deleted.

**Appendix 1 - Fission Product Barrier Remarks**

45. Any combination of PC4.1 and either of following: FC2.1, FC3.1, FC5.1 or FC6.1 warrants declaration of a general emergency. Therefore this combination can be deleted.
46. Deleted
47. While RCS 1.1 is a potential loss of RCS, the concern for RCS loss is reactor vessel integrity. PC4.1 is a loss of containment in that a secondary side release with primary to secondary leakage > Tech. Spec. provides a pathway from the RCS to outside containment. While it is feasible for both of these conditions to exist simultaneously, they are not related such that the failure associated with red path integrity (reactor vessel structural failure) interfaces with the containment loss mechanism (steam generator tube leakage). Therefore this combination is not appropriate.



**Appendix 2 - Summary of Fission Product Barrier Evaluation**

The following summarizes the EALs which resulted from the analysis performed of the fission product barrier methodology of NUMARC-007 for R.E. Ginna:

**Unusual Event**

- PC4.1-loss
- PC7.1-loss
- Emergency Director Judgement

**Alert:**

- FC2.1-loss
- FC6.1 loss
- RCS1.1-pot loss
- RCS2.1-loss
- RCS4.1-loss
- RCS2.2-pot loss
- Emergency Director Judgement

**Site Area Emergency:**

- FC1.2-pot loss
- FC1.3-pot loss/RCS1.2-pot loss
- RCS3.1-loss
- FC5.1-loss

**Appendix 2 - Summary of Fission Product Barrier Evaluation****Site Area Emergency (cont):**

- FC6.1 loss + ANY:
  - RCS1.1-pot. loss
  - RCS2.2-pot. loss
  - RCS2.1-loss
- PC2.1-loss
- PC2.2-loss
- PC3.1-loss
- RCS2.2-pot loss + PC4.1-loss
- Emergency Director Judgement

**General Emergency:**

- PC1.1-pot. loss
- FC1.1-loss
- PC2.4-pot. loss
- PC5.1-pot. loss
- PC2.5-pot loss + ANY:
  - FC2.1-loss
  - FC5.1-loss
  - FC6.1-loss

**Appendix 2 - Summary of Fission Product Barrier Evaluation****General Emergency (cont):**

- RCS3.1-loss + ANY:
  - FC1.2-pot loss
  - FC1.3-pot loss
  - FC2.1-loss
  - FC3.2-pot loss
  - FC4.1-pot loss
  - FC5.1-loss
  - FC6.1 loss
- PC2.1-loss + ANY:
  - FC1.2-pot loss
  - FC1.3-pot loss
  - FC2.1-loss
  - FC3.2-pot loss
  - FC4.1-pot loss
  - FC5.1-loss
  - FC6.1 loss
- PC2.2-loss + ANY:
  - FC1.2-pot loss
  - FC1.3-pot loss
  - FC2.1-loss
  - FC3.2-pot loss
  - FC4.1-pot loss
  - FC5.1-loss
  - FC6.1 loss
- PC3.1-loss + ANY:
  - FC1.2-pot loss
  - FC1.3-pot loss
  - FC2.1-loss
  - FC3.2-pot loss
  - FC4.1-pot loss
  - FC5.1-loss
  - FC6.1 loss





**Appendix 2 - Summary of Fission Product Barrier Evaluation****General Emergency (cont):**

- PC4.1-loss + ANY:
  - FC1.2-pot loss
  - FC1.3-pot loss
  - FC2.1-loss
  - FC3.2-pot loss
  - FC4.1-pot loss
  - FC5.1-loss
  - FC6.1 loss
- PC6.1-pot. loss
- PC6.2-pot loss
- Emergency Director Judgement

PWR  
EAL Binning Document

Revision 0

**New York Power Authority**

J. A. Fitzpatrick Nuclear Power Plant  
*Indian Point Nuclear Power Plant Unit 3*

**Niagara Mohawk Power Corporation**

Nine Mile Point Unit 1  
Nine Mile Point Unit 2

**Consolidated Edison Company**

*Indian Point Station Unit 2*

**Rochester Gas and Electric Company**

*R. E. Ginna Nuclear Power Station*

**OSSI**

Operations Support Services, Inc.  
233 Water Street 2nd Floor Plymouth, MA 02360

**1.0 CSFST Status**

- 1.1 Subcriticality CSFST Status**  
SA2.1  
SS2.1
- 1.2 Core Cooling CSFST Status**  
FC1.1 (General)  
FC1.2 (SAE)  
PC6.1 (General)  
PC6.2 (General)  
SG2.1 (Core Cooling)
- 1.3 Heat Sink CSFST Status**  
FC1.3/RCS1.2 (SAE)  
SS4.1  
SG2.1 (Heat Sink)
- 1.4 Integrity CSFST Status**  
RCS1.1 (Alert)
- 1.5 Containment CSFST Status**  
PC1.1 (General)

**2.0 Reactor Fuel**

- 2.1 Coolant Activity**  
SU4.2  
FC2.1 (Alert)
- 2.2 Failed Fuel Detectors (*Ginna only*)**  
SU4.1  
FC6.1 (Alert)  
FC6.1 + RCS1.1 (SAE)  
+ RCS2.2 (SAE)  
+ RCS2.1 (SAE)
- 2.3 Containment Radiation**  
RCS4.1 (Alert)  
FC5.1 (SAE)  
PC5.1 (General)
- 2.4 Refueling Accidents or Other Radiation Monitors**  
AU2.1  
AA2.1  
AA2.2



### 3.0 Reactor Coolant System

- 3.1 **RCS Leakage**  
SU5.1  
RCS2.2 (Alert)  
SS5.1
- 3.2 **Primary to Secondary Leakage**  
PC4.1 (NUE)  
PC4.1 + RCS2.2 (SAE)
- 3.3 **RCS Subcooling**  
RCS2.1 (Alert)

### 4.0 Containment

- 4.1 **Containment Integrity Status**  
PC7.1 (NUE)  
PC2.1 (SAE)  
PC2.2 (SAE)  
PC3.1 (SAE)  
PC2.5 + FC2.1 (General)  
+ FC5.1  
+ FC6.1(*Ginna only*)  
PC2.1 + FC1.2(General)  
+ FC1.3  
+ FC2.1  
+ FC3.2  
+ FC4.1  
+ FC5.1  
+ FC6.1(*Ginna only*)  
PC2.2 + FC1.2(General)  
+ FC1.3  
+ FC2.1  
+ FC3.2  
+ FC4.1  
+ FC5.1  
+ FC6.1(*Ginna only*)  
PC3.1 + FC1.2(General)  
+ FC1.3  
+ FC2.1  
+ FC3.2  
+ FC4.1  
+ FC5.1  
+ FC6.1(*Ginna only*)



**4.2 SG Tube Rupture with Secondary Release**

RCS3.1(SAE)

RCS3.1 + FC1.2(General)

+ FC1.3

+ FC2.1

+ FC3.2

+ FC4.1

+ FC5.1

+ FC6.1(*Ginna only*)

PC4.1 + FC1.2(General)

+ FC1.3

+ FC2.1

+ FC3.2

+ FC4.1

+ FC5.1

+ FC6.1(*Ginna only*)**4.3 Combustible Gas Concentrations**

PC2.4(General)

**5.0 Radioactivity Release / Area Radiation****5.1 Effluent Monitors**

AU1.1

AA1.1

AS1.1

AG1.1

**5.2 Dose Projections/ Environmental Measurements**

AU1.2

AA1.2

AS1.3

AS1.4

AG1.3

AG1.4

**5.3 Area Radiation Levels**

AU2.4

AA3.1

AA3.2

**6.0 Electrical Failures****6.1 Loss of AC Power Sources**

SU1.1

SA1.1

SA5.1

SS1.1

SG1.1

**6.2 Loss of DC Power Sources**

SU7.1

SS3.1

**7.0 Equipment Failures****7.1 Technical Specification Requirements**

SU2.1

**7.2 System Failures or Control Room Evacuation**

HU1.6

HA1.6

HA5.1

HS2.1

SA3.1

**7.3 Loss of Indications/Alarm/Communication Capability**

SU3.1

SU6.1

SA4.1

SS6.1



**8.0 Hazards**

- 8.1 Security Threats**
  - HU4.1
  - HU4.2
  - HA4.1
  - HA4.2
  - HS1.1
  - HS1.2
  - HG1.1
  - HG1.2
- 8.2 Fire or Explosion**
  - HU2.1
  - HA2.1
- 8.3 Man-Made Events**
  - HU1.4
  - HU1.5
  - HU3.1
  - HU3.2
  - HA1.5
  - HA3.1
  - HA3.2
- 8.4 Natural Events**
  - HU1.1
  - HU1.2
  - HU1.3
  - HU1.7
  - HA1.1
  - HA1.2
  - HA1.3
  - HA1.7

**9.0 Other**

- FC7.1
- RCS6.1
- PC8.1
- HU5.1
- HA6.1
- HS3.1
- HG2.1

New York EAL Upgrade Project

**R.E. Ginna**  
**Emergency Action Levels**  
**Technical Bases**  
**Revision 0**

3/15/94

**OSSI**

Operations Support Services, Inc.  
233 Water Street 2nd Floor Plymouth, MA 02360

## PURPOSE

The purpose of this document is to provide an explanation and rationale for each of the emergency action levels (EALs) included in the EAL Upgrade Program for R.E. Ginna Nuclear Power Station (REGNPS). It is also intended to facilitate the review process of the REGNPS EALs and provide historical documentation for future reference. This document is also intended to be utilized by those individuals responsible for implementation of EPIP-1-0 "Ginna Station Event Evaluation and Classification" as a technical reference and aid in EAL interpretation.

## DISCUSSION

EALs are the plant-specific indications, conditions or instrument readings which are utilized to classify emergency conditions defined in the REGNPS Emergency Plan.

Subsequent to the acceptance by the NRC of NUMARC/NESP-007 "Methodology for Development of Emergency Action Levels" as an acceptable alternative to the NUREG 0654 EAL guidance, the four nuclear utilities in the State of New York decided to perform a joint implementation of the new methodology. This upgrade project involved the following plants:

- Nine Mile Point Unit 1 (NMPC)
- Nine Mile Point Unit 2 (NMPC)
- James A. FitzPatrick Nuclear Power Plant (NYPA)
- Indian Point Station 2 (ConEd)
- Indian Point 3 Nuclear Power Station (NYPA)
- R.E. Ginna Nuclear Power Station (RG&E)

While the upgraded EALs are site specific, an objective of the upgrade project was to ensure conformity and consistency between the sites to the extent possible.

The revised EALs were derived from the Initiating Conditions and example EALs given in the REGNPS Plant-Specific EAL Guideline (PEG). The PEG is the REGNPS interpretation of the NUMARC methodology for developing EALs. The PEG identifies deletions from the NUMARC methodology by striking out words and phrases that are not applicable to REGNPS; additions are identified by underlining new words and phrases. The source of documents for PEG changes from NUMARC methodology are listed in the references section of the PEG.

Many of the EALs derived from the NUMARC methodology are fission product barrier based. That is, the conditions which define the EALs are

based upon loss or potential loss of one or more of the three fission product barriers.

The primary fission product barriers are:

- A. Reactor Fuel Cladding: The fuel cladding is comprised of the zirconium tubes which house the ceramic uranium oxide pellets along with the end plugs which are welded into each end of the fuel rods.
- B. Reactor Coolant System (RCS): The RCS is comprised of the reactor vessel shell, vessel head, vessel nozzles and penetrations and all primary systems directly connected to the reactor vessel up to the first containment isolation valve.
- C. Containment: The containment is comprised of the vapor containment structure and all isolation valves required to maintain containment integrity under accident conditions.

The following criteria serves as the bases for event classification related to fission product barrier loss:

Unusual Event:

Any loss or potential loss of containment

Alert:

Any loss or any potential loss of either fuel clad or RCS

Site Area Emergency:

Any loss of both fuel clad and RCS

or

Any potential loss of both fuel clad and RCS

or

Any potential loss of either fuel clad or RCS with a loss of any additional barrier

General Emergency:

Loss of any two barriers with loss or potential loss of a third

Those EALs which reference one or more of the fission product barrier IC designators (FC, RCS and PC) in the PEG Reference section of the technical bases are derived from the Fission Product Barrier Analysis. The analysis entailed an evaluation of every combination of the plant specific barrier loss/potential loss indicators applied to the above criteria.

Where possible, the EALs have been made consistent with and utilize the conditions defined in the REGNPS Critical Safety Function Status Trees (CSFSTs). While the symptoms that drive operator actions specified in the CSFSTs are not indicative of all possible conditions which warrant emergency classification, they do define the symptoms, independent of initiating events, for which reactor plant safety and/or fission product barrier integrity are threatened. Where these symptoms are clearly representative of one of the PEG Initiating Conditions, they have been utilized as an EAL. This allows for rapid classification of emergency situations based on plant conditions without the need for additional evaluation or event diagnosis. Although some of the EALs presented here are based on conditions defined in the CSFSTs, classification of emergencies using these EALs is not dependent upon Emergency Operating Procedures (EOPs) entry or execution. The EALs can be utilized independently or in conjunction with the EOPs.

To the extent possible, the EALs are symptom based. That is, the action level is defined by values of key plant operating parameters which identify emergency or potential emergency conditions. This approach is appropriate because it allows the full scope of variations in the types of events to be classified as emergencies. But, a purely symptom based approach is not sufficient to address all events for which emergency classification is appropriate. Particular events to which no predetermined symptoms can be ascribed have also been utilized as EALs since they may be indicative of potentially more serious conditions not yet fully realized.

The EALs are grouped into nine categories to simplify their presentation and to promote a rapid understanding by their users. These categories are:

1. CSFST Status
2. Reactor Fuel
3. Reactor Coolant System
4. Containment
5. Radioactivity Release / Area Radiation
6. Electrical Failures
7. Equipment Failures
8. Hazards
9. Other

Categories 1 through 5 are primarily symptom based. The symptoms are indicative of actual or potential degradation of either fission product barriers or personnel safety.

Categories 6, 7 and 8 are event based. Electrical Failures are those events associated with losses of either AC or vital DC electrical power. Equipment Failures are abnormal and emergency events associated with vital plant system failures, while Hazards are those non-plant system related events which have affected or may affect plant safety.

Category 9 provides the Emergency Coordinator (Shift Supervisor) the latitude to classify and declare emergencies based on plant symptoms or events which in his judgment warrant classification. This judgment includes evaluation of loss or potential loss of one or more fission product barriers warranting emergency classification consistent with the NUMARC barrier loss criteria.

Categories are further divided into one or more subcategories depending on the types and number of plant conditions that dictate emergency classifications. For example, the Electrical Failures category has two subcategories whose values can be indicative of losses of electrical power sources: loss of AC power sources and loss of DC power sources. An EAL may or may not exist for each sub category at all four classification levels. Similarly, more than one EAL may exist for a sub category in a given emergency classification when appropriate (i.e. no EAL at the General Emergency level but three EALs at the Unusual Event level).

For each EAL, the following information is provided:

- Classification: Unusual Event, Alert, Site Area Emergency, or General Emergency
- Operating Mode Applicability: One or more of the following plant operating conditions are listed: Power Operation, Hot Shutdown, Cold Shutdown, Refuel and Defueled
- EAL: Description of the condition or set of conditions which comprise the EAL
- Basis: Description of the rationale for the EAL
- PEG Reference: PEG IC(s) and example EAL(s) from which the EAL is derived
- Basis Reference(s): Source documentation from which the EAL is derived

The identified operating modes are defined as follows

Power Operations

Reactor shutdown margin is less than Technical Specification minimum required with coolant temperature ( $T_{avg}$ ) at or above normal operating temperature.

Hot Shutdown

Reactor shutdown margin greater than or equal to Technical Specification minimum required with coolant temperature ( $T_{avg}$ ) less than normal operating temperature.

Cold Shutdown

Reactor shutdown margin greater than or equal to Technical Specification minimum required with coolant temperature ( $T_{avg}$ ) less than or equal to 200 °F.

Refuel

Reactor shutdown margin greater than or equal to Technical Specification minimum required for refueling operations and coolant temperature ( $T_{avg}$ ) less than or equal to 140 °F.

Defueled

Reactor vessel contains no irradiated fuel.

These operating modes correlate to the NUMARC-007 and PEG identified operating modes as follows:

NUMARC-007

Power Operations  
Startup/Hot standby  
Hot Shutdown  
Cold Shutdown  
Refuel  
Defueled  
All

Technical Bases

Power Operations  
Power Operation  
Hot Shutdown  
Cold Shutdown  
Refuel  
Defueled  
All

## **1.0 CSEST STATUS**

Plant Emergency Operating Procedures (EOPs) are designed to maintain and/or restore a set of critical safety functions which are prioritized for restoration efforts during accident conditions. By monitoring the critical safety functions status, the impact of multiple events can be inherently addressed.

The critical safety functions are monitored through the use of Critical Safety Function Status Trees (CSFSTs). When certain plant parameters exceed threshold values specified by the CSFST, the plant operator is directed to one or more functional restoration and/or EOPs in an attempt to restore those parameters to within acceptable limits. The following CSFSTs are utilized to be indicative of failures or potential failures of one or more fission product barriers:

- Subcriticality: Orange or Red paths in this CSFST indicate losses of reactivity control which may pose a threat to fuel clad and RCS integrity.
- Core Cooling: Orange or Red paths in this CSFST indicate losses of core subcooling and thus pose a direct threat to the integrity of the reactor fuel clad.
- Heat Sink: The Red path of this CSFST is indicative of a loss of ability to remove decay heat from the core and thus poses a direct threat to fuel clad integrity.
- Integrity: The Red path of this CSFST is indicative of a direct threat to RCS barrier integrity.
- Containment: Red path of this CSFST is indicative to a loss of RCS barrier and direct threat to the containment barrier integrity.





**1.0 CSFST Status    1.1 Subcriticality****1.1.1 Alert**

**ORANGE or RED path F-0.1 SUBCRITICALITY  
AND  
Emergency boration is required**

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Subcriticality - ORANGE path is entered based on failure of the intermediate range startup rate monitors to indicate negative or zero following reactor trip. This EAL addresses any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor to an extent requiring emergency boration. A manual trip is any set of actions by the reactor operator(s) at the reactor control console which causes control rods to be rapidly inserted into the core and brings the reactor subcritical (e. g., reactor trip button).

This condition indicates failure of the automatic and manual protection systems to trip the reactor to the extent which precludes the reactor being made sub-critical. Although a front line automatic protection system did not function in response to a plant transient, it is the continued criticality under conditions requiring a reactor trip which poses the potential threat to fuel clad integrity and thus warranting declaration of an Alert.

**PEG Reference:**

SA2.1

**Basis Reference(s):**

1. CSFST F-0.1, Subcriticality
2. FR-S.1, Response to Reactor Restart/ATWS
3. FR-S.2, Response to Loss of Core Shutdown



**1.0 CSFST Status 1.1 Subcriticality****1.1.2 Site Area Emergency**

RED path in F-0.1 SUBCRITICALITY

AND either:

Emergency boration is inoperable

OR

Power range not < 5% within 15 min. of initiation of emergency boration

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Subcriticality - RED path is entered based on failure of power range indication to decrease below 5% following a reactor trip. This portion of the EAL addresses any manual trip or automatic trip signal followed by a manual trip which fails to shut down the reactor to an extent that the reactor is producing more heat load for which the safety systems were designed. A manual trip is any set of actions by the reactor operator(s) at the reactor control console which causes control rods to be rapidly inserted into the core and brings the reactor subcritical (e. g., reactor trip button).

This condition indicates failure of both the automatic and manual protection systems to trip the reactor in conjunction with a failure of alternate boration systems to reduce reactor power below decay heat levels. The combination of failure of both front line and backup protection systems to function in response to a plant transient, along with the continued production of heat poses a direct threat to fuel clad and RCS integrity and thus warrants declaration of a Site Area Emergency.

15 minutes is specified to allow time for emergency boration to be effective and provides a discriminator between SA2.1 and SS2.1. The classification should be made as soon as it is apparent that emergency boration is not or will not be effective in reducing reactor power below 5%.

**PEG Reference:**

SS2.1

**Basis Reference(s):**

1. CSFST F-0.1, Subcriticality
2. FR-S.1, Response to Reactor Restart/ATWS
3. FR-S.2, Response to Loss of Core Shutdown

**1.0 CSFST Status 1.2 Core Cooling****1.2.1 Site Area Emergency**

ORANGE or RED path in F-0.2, CORE COOLING

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Core Cooling - ORANGE path is entered based on either:

- Core exit thermocouples > 700 °F
- OR
- RVLIS level < 43% w/ no RCPs (TAF)

Either condition indicates subcooling has been lost and that some clad damage may occur. It must also be assumed that the loss of RCS inventory is a result of a loss of RCS barrier. Therefore a Site Area Emergency is warranted based upon the potential loss of fuel clad with loss of RCS barriers.

**PEG Reference:**

FC1.2  
FC3.2  
FC4.1

**Basis Reference(s):**

1. CSFST F-0.2, Core Cooling

**1.0 CSFST Status 1.2 Core Cooling****1.2.2 General Emergency**

RED path in F-0.2, CORE COOLING

AND

Functional restoration procedures not effective within 15 min.

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Core Cooling - RED path is entered based on either:

- Core exit thermocouples > 1200 °F

OR

- Core exit thermocouples > 700 °F

AND

- RVLIS level < 43% (TAF)

Either condition indicates significant core exit superheating and core uncover and is considered a loss of the Fuel Clad Barrier. It must also be assumed that the loss of RCS inventory is a result of a loss of RCS barrier. These conditions, if not mitigated, will likely lead to core melt which will in turn result in a potential loss of containment. Therefore, declaration of a General Emergency is warranted.

Severe accident analyses (e. g., NUREG-1150) have concluded that function restoration procedures can arrest core degradation within the reactor vessel in a significant fraction of the core damage scenarios, and that the likelihood of containment failure is very small in these events. Given this, it is appropriate to provide a reasonable period to allow function restoration procedures to arrest the core melt sequence. Whether or not procedures will be effective should be apparent within 15 minutes. The Emergency Coordinator should make the declaration as soon as it is determined that the procedures have not been, or will not be effective.

For the purpose of this EAL the term 'effective' with regards to functional restoration procedures means that the CSFST Core Cooling - RED path entry criterion no longer exists.

**PEG Reference:**

FC1.1  
SG2.1 (Core Cooling)  
PC6.1  
PC6.2

**Basis Reference(s):**

1. CSFST F-0.2, Core Cooling



**1.0 CSFST Status 1.3 Heat Sink****1.3.1 Site Area Emergency**

RED path in F-0.3, HEAT SINK

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Heat Sink - RED path is entered based on both:

- both S/G's narrow range level < 5%
- AND
- Total feedwater flow to S/Gs < 200 gpm

The combination of these two conditions indicates the ultimate heat sink function is under extreme challenge. This EAL addresses loss of functions required for hot shutdown with the reactor at pressure and temperature. Under these conditions, there is an actual major failure of a system intended for protection of the public with potential for multiple fission product barrier loss. Therefore, declaration of a Site Area Emergency is warranted.

**PEG Reference:**

FC1.3  
RCS1.2  
SS4.1

**Basis Reference(s):**

1. CSFST F-0.3, Heat Sink



**1.0 CSFST Status 1.3 Heat Sink****1.3.2 General Emergency**

RED path in F-0.3, HEAT SINK  
AND  
RED path in F-0.1, SUBCRITICALITY

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Heat Sink - RED path is entered based on both:

- both S/G's narrow range level < 5%
- AND
- Total feedwater flow to S/Gs < 200 gpm

CSFST Subcriticality - RED path is entered based on  $\geq 5\%$  reactor power following a reactor trip.

The combination of these two conditions (Heat Sink-RED and reactor power  $\geq 5\%$ ) indicates the ultimate heat sink function is under extreme challenge. Additionally, the efforts to bring the reactor subcritical have been unsuccessful and, as a result, the reactor is producing more heat load for which the safety systems were designed. This situation could be the precursor for a core melt sequence.

A major consideration is the inability to initially remove heat during the early stages of this sequence. If emergency feedwater flow is insufficient to remove the amount of heat required by design from at least one steam generator, an extreme challenge should be considered to exist. This equates to a HEAT Sink RED condition.

In the event this challenge exists at a time when the reactor has not been brought below the power associated with safety system design power (5%) a core melt sequence is considered to exist. In this situation, core degradation can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the fission product barrier matrix declaration to permit maximum offsite intervention time.

**PEG Reference:**

SG2.1(Heat Sink)

**Basis Reference(s):**

1. CSFST F-0.3, Heat Sink
2. CSFST F-0.1, Subcriticality
3. FR-S.1, Response to Reactor Restart/ATWS
4. FR-S.2, Response to Loss of Core Shutdown

**1.0 CSFST Status 1.4 Integrity****1.4.1 Alert**

RED path on F-0.4, INTEGRITY

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Integrity - RED path is entered based on both:

- exceeding RCS cooldown rate of 100 °F/hr

AND

- all RCS cold leg temperatures to the left of the RCS Pressure/RCS Cold Leg Temperature Curve

The combination of these two conditions indicates the RCS barrier is under significant challenge and should be considered a potential loss of RCS barrier. Any loss or potential loss of RCS barrier warrants declaration of an Alert.

**PEG Reference:**

RCS1.1

**Basis Reference(s):**

1. CSFST F-0.4, Integrity



**1.0 CSFST Status 1.4 Integrity****1.4.2 Site Area Emergency**

RED path on F-0.4, INTEGRITY  
AND

Release of secondary side to atmosphere with primary to secondary leakage >  
0.1 gpm per steam generator

**Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Integrity - RED path is entered based on both:

- exceeding RCS cooldown rate of 100 °F/hr

AND

- all RCS cold leg temperatures to the left of the RCS Pressure/RCS Cold Leg Temperature Curve

The combination of these two conditions indicates the RCS barrier is under significant challenge and should be considered a potential loss of RCS barrier.

The release of secondary side to atmosphere with primary to secondary leakage greater than 0.1 GPM per steam generator is considered a loss of containment integrity.

The combination of excessive RCS cooldown in conjunction with SG tube leakage with release to the environment represents a potential loss of RCS barrier with loss of containment and therefore warrants declaration of a Site Area Emergency.

**PEG Reference:**

RCS1.1 + PC4.1

**Basis Reference(s):**

1. CSFST F-0.4, Integrity
2. Technical Specifications Section 3.1.5.2

**1.0 CSFST Status 1.5 Containment****1.5.1 General Emergency****RED path F-0.5, CONTAINMENT****Mode Applicability:**

Power Operations, Hot Shutdown

**Basis:**

CSFST Containment - RED path is entered based on exceeding containment design pressure of 60 psig. This pressure is well in excess of that expected from the design basis loss of coolant accident. This is indicative of a loss of both RCS and fuel clad boundaries in that it is not possible to reach this condition without also being in a Heat Sink-RED or Core Cooling-RED CSFST. The source of energy must be the result of severe degradation of core cooling or loss of heat sink. Since containment pressures at or approaching design levels is also a potential loss of containment, this combination of conditions requires the declaration of a General Emergency.

**PEG Reference:**

PC1.1

**Basis Reference(s):**

1. CSFST F-0.5, Containment



## **2.0 REACTOR FUEL**

The reactor fuel cladding serves as the primary fission product barrier. Over the useful life of a fuel bundle, the integrity of this barrier should remain intact as long as fuel cladding integrity limits are not exceeded.

Should fuel damage occur (breach of the fuel cladding integrity) radioactive fission products are released to the reactor coolant. The magnitude of such a release is dependent upon the extent of the damage as well as the mechanism by which the damage occurred. Once released into the reactor coolant, the highly radioactive fission products can pose significant radiological hazards inplant from reactor coolant process streams. If other fission product barriers were to fail, these radioactive fission products can pose significant offsite radiological consequences.

The following parameters/indicators are indicative of possible fuel failures:

- **Coolant Activity:** During normal operation, reactor coolant fission product activity is very low. Small concentrations of fission products in the coolant are primarily from the fission of tramp uranium in the fuel cladding or minor perforations in the cladding itself. Any significant increase from these base-line levels is indicative of fuel failures.
- **Failed Fuel Detector:** As with coolant activity, any fuel failures will release fission products to the reactor coolant. These fission products will be circulated with the reactor coolant and be detected by the failed fuel radiation detector in the RCS letdown line.
- **Containment Radiation Monitors:** Although not a direct indication or measurement of fuel damage, exceeding predetermined limits on containment high range radiation monitors under LOCA conditions is indicative possible fuel failures.
- **Refueling Accidents & Other Radiation Monitors:** Both area and process radiation monitoring systems designed to detect fission products during refueling conditions as well as visual observation can be utilized to indicate loss or potential loss of spent fuel cladding integrity.

**2.0 Reactor Fuel      2.1 Coolant Activity****2.1.1 Unusual Event**

Coolant sample activity:

>100% of 84/E bar  $\mu\text{Ci/cc}$  total specific activity

OR

> 0.2  $\mu\text{Ci/gm}$  I-131 equivalent and the conditions of Technical Specifications 3.1.4.3.b are exceeded

**Mode Applicability:**

All

**Basis:**

Elevated reactor coolant activity represents a potential degradation in the level of safety of the plant and a potential precursor of more serious problems. This EAL addresses reactor coolant samples exceeding coolant technical specifications.

**PEG Reference:**

SU4.2

**Basis Reference(s):**

1. Technical Specifications section 3.1.4

**2.0 Reactor Fuel      2.1 Coolant Activity****2.1.2 Alert**

Coolant activity > 300  $\mu\text{Ci/cc}$  I-131 equivalent

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

Elevated reactor coolant activity represents a potential degradation in the level of safety of the plant and a potential precursor of more serious problems. This amount of coolant activity corresponds to about 2% to 5% fuel clad damage. When reactor coolant activity reaches this level, significant clad heating has occurred and thus the fuel clad barrier is considered lost. Therefore, declaration of an Alert is warranted.

**PEG Reference:**

FC2.1

**Basis Reference(s):**

None

**2.0 Reactor Fuel      2.2 Failed Fuel Detectors****2.2.1 Unusual Event**

Letdown Line Monitor R-9 > 2 R/hr

**Mode Applicability:**

All

**Basis:**

Elevated letdown line activity represents a potential degradation in the level of safety of the plant and a potential precursor of more serious problems. This radiation level (2 R/hr) corresponds to 1% fuel failure (bases for the Technical Specifications coolant activity limits). Therefore, declaration of an Unusual Event is warranted.

**PEG Reference:**

SU4.1

**Basis Reference(s):**

1. Technical Specifications section 3.1.4
2. P-9 "Radiation Monitoring System"
3. EPIP 2-16 section 6.2.1.b

## **2.0 Reactor Fuel      2.2 Failed Fuel Detectors**

### **2.2.2 Alert**

Letdown Line Monitor R-9 > 10 R/hr

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

This condition indicates the loss of the fuel clad barrier. Failed Fuel Monitor readings of 2 R/hr corresponds to 1% fuel failures. Failed Fuel Monitor readings of 10 R/hr corresponds to 5% fuel failures and is considered an actual loss of fuel clad.

Note: Monitor R-9 automatically shifts scale from mR/hr to R/hr when indicated values exceed 1000 mR/hr.

#### **PEG Reference:**

FC6.1  
FC6.2

#### **Basis Reference(s):**

1. EPIP - 2-16 "Core Damage Estimation"
2. P-9 "Radiation Monitoring System"
3. EPIP 2-16 section 6.2.1.b

## **2.0 Reactor Fuel      2.2 Failed Fuel Detectors**

### **2.2.3 Site Area Emergency**

Letdown Line Monitor R-9 > 10 R/hr and any of the following:

- RED path on F-0.4, INTEGRITY
- Primary system leakage > 46 gpm
- RCS subcooling < EOP Fig. MIN SUBCOOLING

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

This EAL addresses combinations of fuel clad potential loss with RCS loss and potential loss indicators.

Failed Fuel Monitor readings of 10 R/hr corresponds to 5% fuel failures. This condition indicates the loss of the fuel clad barrier. Note: Monitor R-9 automatically shifts scale from mR/hr to R/hr when indicated values exceed 1000 mR/hr. This condition in combination with any of the following RCS loss/potential loss indicators warrants declaration of a Site Area Emergency:

RED path on F-0.4, INTEGRITY:      RED path indicates an extreme challenge to the safety function derived from appropriate instrument readings, and indicates a potential loss of RCS barrier.

RCS subcooling < EOP Fig. MIN SUBCOOLING:      This indicator addresses conditions where leakage from the RCS is greater than available inventory control capacity such that a loss of subcooling has occurred. The loss of subcooling as determined from E-0, Reactor Trip or Safety Injection is the fundamental indication that the inventory control systems are inadequate in maintaining RCS pressure and inventory against the mass loss through a leak.

Primary system leakage > 46 gpm:      This potential loss of RCS is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control System which is considered as two positive displacement charging pumps discharging to the charging header.

#### **PEG Reference:**

**PEG Reference:**

FC6.2 + RCS1.1, RCS2.1, RCS2.2, RCS4.1 and PC4.1

**Basis Reference(s):**

1. EPIP - 2-16 "Core Damage Estimation"
2. CSFST F-0.4 Integrity
3. E-0, Reactor Trip or Safety Injection
4. F-0.5, Containment
5. FR-Z.1, Response to High Containment Radiation Level
6. Technical Specifications Section 3.1.5.2
7. FSAR Table 9.3.6

**2.0 Reactor Fuel      2.3 Containment Radiation****2.3.1 Alert**

Containment radiation monitor R-29/R-30 reading > 10 R/hr

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

The 10 R/hr reading is a value which indicates the release of reactor coolant to the containment. The reading was derived assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with normal operating concentrations (i. e., within T/S) into the containment atmosphere. This EAL is indicative of a RCS leak only. If the radiation monitor reading increased to that specified by Reactor Fuel EAL 2.3.2, significant fuel damage would also be indicated.

**PEG Reference:**

RCS4.1

**Basis Reference(s):**

1. F-0.5, Containment
2. FR-Z.1, Response to High Containment Radiation Level
3. EPIP 2-16, Core Damage Estimation





## **2.0 Reactor Fuel      2.3 Containment Radiation**

### **2.3.2 Site Area Emergency**

Containment radiation monitor R-29/R-30 reading > 100 R/hr

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

The 100 R/hr reading is a value which indicates the release of reactor coolant, with elevated activity indicative of fuel damage, into the containment. The reading is calculated assuming the instantaneous release and dispersal of the reactor coolant noble gas and iodine inventory associated with a concentration of 300  $\mu\text{Ci/gm}$  dose equivalent I-131 into the containment atmosphere. Reactor coolant concentrations of this magnitude are several times larger than the maximum concentrations (including iodine spiking) allowed within technical specifications and are therefore indicative of fuel damage (approximately 2-5 % clad failure depending on core inventory and RCS volume). This value is higher than that specified in EAL 2.3.1 which would be indicative of only the RCS barrier. Thus, this EAL indicates a loss of both the fuel clad barrier and a loss of RCS barrier warranting declaration of a Site Area Emergency.

#### **PEG Reference:**

FC5.1

#### **Basis Reference(s):**

1. P-9, Radiation Monitoring System, Section 2.2.2.6, pg. P-9:2
2. EPIP 2-16, Core Damage Estimation

**2.0 Reactor Fuel      2.3 Containment Radiation****2.3.3 General Emergency**

Containment radiation monitor R-29/R-30 reading > 1000 R/hr

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

The 1000 R/hr reading is a value which indicates significant fuel damage (>20% clad failure) well in excess of the EALs associated with both loss of fuel clad and loss of RCS barriers. A major release of radioactivity requiring offsite protective actions from core damage is not possible unless a major failure of fuel cladding allows radioactive material to be released from the core into the reactor coolant. Regardless of whether containment is challenged, this amount of activity in containment, if released, could have such severe consequences that it is prudent to treat this as a potential loss of containment, such that a General Emergency declaration is warranted. NUREG-1228 "Source Estimations During Incident Response to Severe Nuclear Power Plant Accidents," indicates that such conditions do not exist when the amount of clad damage is less than 20%.

**PEG Reference:**

PC5.1

**Basis Reference(s):**

1. EPIP 1-0, Ginna Station Event Evaluation and Classification
2. EPIP 2-16, Core Damage Estimation
3. NUREG-1228 "Source Estimations During Incident Response to Severe Nuclear Power Plant Accidents"
4. Technology for Energy Report No. R-81-012

## **2.0 Reactor Fuel      2.3 Refueling Accidents or Other Radiation Monitors**

### **2.4.1 Unusual Event**

Spent fuel pool (reactor cavity during refueling) water level cannot be restored and maintained above the spent fuel pool low water level alarm setpoint

#### **Mode Applicability:**

All

#### **Basis:**

In light of Reactor Cavity Seal failure, incidents at two different PWRs and loss of water in the Spent Fuel Pit/Fuel Transfer Canal at a BWR all occurring since 1984, explicit coverage of these types of events via EALs #1 and #2 is appropriate given their potential for increased doses to plant staff. Classification as an Unusual Event is warranted as a precursor to a more serious event.

The spent fuel pool low water level alarm setpoint of 20 in. below top of pool is actuated by LC-661. The definition of "... cannot be restored and maintained above ..." allows the operator to visually observe the low water level condition, if possible, and to attempt water level restoration instructions as long as water level remains above the top of irradiated fuel. Water level restoration instructions for loss of refueling cavity water level during refueling are performed in accordance with the RF-65 series of procedures.

When the fuel transfer canal is directly connected to the spent fuel pool and reactor cavity, there could exist the possibility of uncovering irradiated fuel in the fuel transfer canal. Therefore, this EAL is applicable for conditions in which irradiated fuel is being transferred to and from the RPV and spent fuel pool.

#### **PEG Reference:**

AU2.1

#### **Basis Reference(s):**

1. ER-SFP.1 "Loss of Spent Fuel Pit Cooling"
2. AR-K-29
3. RF-65 series



2000



## **2.0 Reactor Fuel      2.3 Refueling Accidents or Other Radiation Monitors**

### **2.4.2 Alert**

Confirmed sustained alarm on any of the following radiation monitors resulting from an uncontrolled fuel handling process:

- R-2 Containment Area Monitor
- R-5 Spent Fuel Pit
- R-12 Containment Noble Gas

### **Mode Applicability:**

All

### **Basis:**

NUREG-0818, "Emergency Action Levels for Light Water Reactors," forms the basis for this EAL. This EAL is defined by the specific area where irradiated fuel is located such as reactor cavity, reactor vessel, or spent fuel pool.

NUREG/CR-4982, "Severe Accident in Spent Fuel Pools in Support of Generic Safety Issue 82," July 1987, indicates that even if corrective actions are not taken, no prompt fatalities are predicted, and that risk of injury is low. In addition, NRC Information Notice No. 90-08, "KR-85 Hazards from Decayed Fuel" presents the following in its discussion:

"In the event of a serious accident involving decayed spent fuel, protective actions would be needed for personnel on site, while offsite doses (assuming an exclusion area radius of one mile from the plant site) would be well below the Environmental Protection Agency's Protective Action Guides. Accordingly, it is important to be able to properly survey and monitor for Kr-85 in the event of an accident with decayed spent fuel."

An "uncontrolled fuel handling process" is defined as any event or activity related to the movement of irradiated fuel which results in unexpected or uncontrolled conditions. This terminology has been specifically added to exclude anticipated increases in area radiation levels as a result of actions performed in accordance with approved procedures during refueling operations.

Thus, an Alert Classification for this event is appropriate. Escalation, if appropriate, would occur via Emergency Coordinator judgment in EAL Category 9.0.

The basis for the Containment Area Monitor setpoint (50 mR/hr) and Spent Fuel Pit monitor setpoint (25 mR/hr) are a spent fuel handling accident and is, therefore, appropriate for this EAL.

**PEG Reference:**

AA2.1

**Basis Reference(s):**

1. P-9 Radiation Monitoring System
2. NUREG-0818, "Emergency Action Levels for Light Water Reactors,"
3. NUREG/CR-4982, "Severe Accident in Spent Fuel Pools in Support of Generic Safety Issue 82"





## **2.0 Reactor Fuel      2.3 Refueling Accidents or Other Radiation Monitors**

### **2.4.3 Alert**

Report of visual observation of irradiated fuel uncovered

#### **Mode Applicability:**

All

#### **Basis:**

This EAL is defined by the specific areas where irradiated fuel is located such as reactor cavity, reactor vessel, or spent fuel pool.

There is no indication that water level in the spent fuel pool or refueling cavity has dropped to the level of the fuel other than by visual observation. Since there is no level indicating system in the fuel transfer canal, visual observation of loss of water level would also be required.

Sufficient time exists to take corrective actions for these conditions and there is little potential for substantial fuel damage. NUREG/CR-4982 "Severe Accident in Spent Fuel Pools in Support of Generic Safety Issue 82" indicates that even if corrective actions are not taken, no prompt fatalities are predicted and the risk of injury is low. In addition, NRC Information Notice No. 90-08, "KR-85 Hazards from Decayed Fuel" presents the following discussion:

"In the event of a serious accident involving decayed spent fuel, protective actions would be needed for personnel on site, while offsite doses (assuming an exclusion area radius of one mile from the plant site) would be well below the Environmental Protection Agency's Protective Action Guides. Accordingly, it is important to be able to properly survey and monitor for Kr-85 in the event of an accident with decayed spent fuel.

Thus, an Alert Classification for this event is appropriate. Escalation, if appropriate, would occur via radioactivity release category 5.0 or Emergency Coordinator judgment in EAL Category 9.0.

This EAL applies to spent fuel requiring water coverage and is not intended to address spent fuel which is licensed for dry storage.

**PEG Reference:**

AA2.2

**Basis Reference(s):**

1. P-9 Radiation Monitoring System
2. NUREG/CR-4982 "Severe Accident in Spent Fuel Pools in Support of Generic Safety Issue 82"
3. NRC Information Notice No. 90-08, "KR-85 Hazards from Decayed Fuel"

### **3.0 REACTOR COOLANT SYSTEM (RCS)**

The reactor vessel provides a volume for the coolant which covers the reactor core. The reactor vessel and associated pressure piping (reactor coolant system) together provide a barrier to limit the release of radioactive material should the reactor fuel cladding integrity fail.

There are three RCS parameters which are indicative of conditions which may pose a threat to RCS or fuel cladding integrity:

- **RCS Leakage:** Excessive (> Technical Specification) RCS leakage indications are utilized to indicate potential pipe cracks which may propagate to an extent threatening fuel clad, RCS and containment integrity. RCS leakage of a degree requiring ECCS to maintain RCS inventory poses a direct threat to fuel clad integrity. Reactor vessel water level is also directly related to the status of adequate core cooling, and therefore fuel cladding integrity.
- **Primary to Secondary Leakage:** A subset of RCS leakage, excessive primary to secondary leakage in conjunction with unisolable secondary releases to environment may result in losses of containment integrity as well as threaten fuel clad integrity for more severe SG tube ruptures.
- **RCS Subcooling:** A loss of RCS subcooling is a fundamental indication that the inventory control systems are inadequate in maintaining RCS pressure and inventory against mass loss through a leak.

**3.0 Reactor Coolant System      3.1 RCS Leakage****3.1.1 Unusual Event**

Unidentified or pressure boundary leakage > 10 gpm

OR

Identified leakage > 25 gpm

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

The conditions of this EAL may be a precursor of more serious conditions and, as a result, is considered to be a potential degradation of the level of safety of the plant. The 10 gpm value for the unidentified leakage and pressure boundary leakage was selected because it is observable with normal Control Room indications. Smaller values must be determined through time-consuming surveillance tests (e. g., mass balances). The 25 gpm value for identified leakage is set at a higher value because of the significance of identified leakage in comparison to unidentified or pressure boundary leakage.

Only operating modes in which there is fuel in the reactor coolant system and the system is pressurized are specified.

**PEG Reference:**

SU5.1

**Basis Reference(s):**

None

**3.0 Reactor Coolant System****3.1 RCS Leakage****3.1.2 Alert**

Primary system leakage > 46 gpm

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control System which is considered as two positive displacement charging pumps discharging to the charging header.

**PEG Reference:**

RCS2.2

**Basis Reference(s):**

1. FSAR Table 9.3.6



**3.0 Reactor Coolant System****3.1 RCS Leakage****3.1.3 Site Area Emergency**

RVLIS cannot be maintained > 43% 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 uncover is likely

**Mode Applicability:**

All

**Basis:**

The reactor vessel water level used in this EAL is the top of active fuel (TAF). This value corresponds to the level which is used in CSFSTs to indicate challenge to core cooling and loss of the fuel clad barrier. This is the minimum water level to assure core cooling without further degradation of the clad. Severe core damage can occur and reactor coolant system pressure boundary integrity may not be assured if reactor vessel water level is not maintained above that corresponding to RVLIS at 43%. RVLIS dynamic range indications are not utilized in this EAL since the RCPs would not be running under conditions where vessel level is approaching TAF.

Thus, declaration of a Site Area Emergency is warranted under the conditions specified by this EAL. Escalation to a General Emergency would be via radioactivity release category 5.0.

**PEG Reference:**

SS5.1  
FC4.1

**Basis Reference(s):**

1. FR-C.1 "Response to Inadequate Core Cooling"

**3.0 Reactor Coolant System****3.2 Primary to Secondary Leakage****3.2.1 Unusual Event**

Release of secondary side to atmosphere with primary to secondary leakage > 0.1 gpm per steam generator

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses SG tube leaks indicative of a loss of containment. Secondary side releases to atmosphere include those from the condenser air ejector, atmospheric dump valves, and mainsteam safety valves. For small leaks, not exceeding the normal charging capacity threshold in RCS leakage EAL 3.1.2, this EAL results in an Unusual Event. For larger leaks, RCS leakage EAL 3.2.2 would result in a Site Area Emergency. For SG tube ruptures which may involve multiple steam generators or unisolable secondary line breaks, SG tube rupture EAL 4.2.1 would also result in a Site Area Emergency.

**PEG Reference:**

PC4.1

**Basis Reference(s):**

1. Technical Specifications Section 3.1.5.2



**3.0 Reactor Coolant System****3.2 Primary to Secondary Leakage****3.2.2 Site Area Emergency**

Unisolable release of secondary side to atmosphere with primary to secondary leakage > 46 gpm

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses SG tube leaks indicative of a loss of both RCS and containment barriers. Secondary side releases to atmosphere include those from the condenser air ejector, atmospheric dump valves, and mainsteam safety valves. Primary to secondary leakage > 46 gpm is based on the inability to maintain normal liquid inventory within the Reactor Coolant System (RCS) by normal operation of the Chemical and Volume Control System which is considered as two positive displacement charging pumps discharging to the charging header. For primary to secondary leakage > 46 gpm in the absence of any secondary to atmosphere release, an Alert would be declared based on EAL 3.1.2.

This EAL represents the loss of both RCS and containment barriers and therefore warrants declaration of a Site Area Emergency.

**PEG Reference:**

PC4.1 + RCS2.2

**Basis Reference(s):**

1. Technical Specifications Section 3.1.5.2
2. E-3 "Steam Generator Tube Rupture"
3. FSAR Table 9.3.6



**3.0 Reactor Coolant System****3.3 RCS Subcooling****3.3.1 Alert**

RCS subcooling < EOP Fig. MIN SUBCOOLING

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses conditions where leakage from the RCS is greater than available inventory control capacity such that a loss of subcooling has occurred. The loss of subcooling is the fundamental indication that the inventory control systems are inadequate in maintaining RCS pressure and inventory against the mass loss through the leak.

Loss of the RCS barrier warrants declaration of an Alert.

**PEG Reference:**

RCS2.1

**Basis Reference(s):**

1. E-0, Reactor Trip Or Safety Injection

#### **4.0 CONTAINMENT**

The containment structure is an atmospheric vapor containment system. It forms a fission product barrier designed to contain the radioactive fission products generated from any postulated accident so as to preclude exceeding offsite exposure limits.

The containment structure is a low leakage system housing the reactor vessel, the reactor coolant piping, steam generators and other branch connections of the reactor primary system. The containment is equipped with isolation valves for systems which penetrate the containment boundary. These valves automatically actuate to isolate systems under emergency conditions.

There are three containment parameters which are indicative of conditions which may pose a threat to containment integrity or indicate degradation of RCS or reactor fuel clad integrity.

- Containment Integrity Status: Abnormally high containment pressure or failure of containment cooling systems following a LOCA are indicative of potential losses of the containment barrier integrity.

The existence of an unisolable CI or CVI line break outside containment constitutes a loss of containment integrity as well as a loss of RCS boundary. Inconsistent containment response to a known LOCA is also indicative of containment loss in conjunction with RCS barrier breach. Should a loss of fuel cladding integrity occur under either of these conditions, the potential for release of large amounts of radioactive materials to the environment exists.

- Steam Generator Tube Rupture with Secondary Release: SG tube ruptures in conjunction with a secondary system line break resulting in release to the environment constitutes losses of both RCS and containment integrity.

Primary to secondary leakage in excess of Technical Specifications in conjunction with fuel clad damage and secondary system leakage to the environment constitutes losses of fuel clad, RCS and containment integrity. This condition provides the potential for release of large amounts of radioactive materials to the environment.

- Combustible Gas Concentrations: The existence of combustible gas concentrations in containment pose a severe threat to containment integrity and are indicative of severely degraded reactor core and RCS conditions.

**4.0 Containment 4.1 Containment Integrity Status****4.1.1 Unusual Event**

Both doors open on containment airlock

OR

Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses an indication that unambiguously indicates loss of the containment barrier under conditions when containment integrity is required.

It is important to note however, that loss of containment due to both airlock doors being open is event dependent. Upon recognition, shift personnel would rapidly respond in an attempt to reestablish containment integrity. If the doors cannot be reclosed, any loss of the RCS barrier that occurs with the doors open would appear as an inconsistent LOCA response. Therefore, this event is not used as a definitive indicator of loss of the primary containment barrier for purposes of defining higher classification EALs. Rather it is left to the Emergency Coordinator's judgment whether such a loss has occurred.

**PEG Reference:**

PC7.1

**Basis Reference(s):**

None



**4.0 Containment    4.1 Containment Integrity Status****4.1.2 Site Area Emergency**

Rapid uncontrolled decrease in containment pressure following initial increase

OR

Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

Rapid unexplained loss of pressure (i. e., not attributable to containment spray or Fan Cooling Units or condensation effects) following an initial pressure increase indicates a loss of both RCS and containment integrity. Containment pressure and sump levels should increase as a result of the mass and energy release into containment from a LOCA. Thus, sump level or pressure not increasing indicates containment bypass (V-sequence) and a loss of containment integrity.

This EAL indicates loss of both RCS and containment and therefore warrants declaration of a Site Area Emergency.

**PEG Reference:**

PC2.1  
PC2.2

**Basis Reference(s):**

1. Alarm response procedure, AR-C-18, Revision 6
2. Alarm response procedure, AR-C-19, Revision 4
3. R. E. Ginna Updated FSAR, Figure 6.2-3 through 6.2-5

**4.0 Containment      4.1 Containment Integrity Status****4.1.3 Site Area Emergency**

Either:

CI or CVI valve(s) not closed when required following confirmed LOCA

OR

Inability to isolate any primary system discharging outside containment

AND

Radiological release pathway to the environment exists

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL is intended to address incomplete containment isolation that allows direct release to the environment. It represents a loss of both the RCS and containment barrier and therefore warrants declaration of a Site Area Emergency.

Failure of CI or CVI valves to isolate is intended to address incomplete containment isolation that allows direct release to the environment. It represents a loss of both the RCS and containment barrier.

"Inability to isolate any primary system discharging outside containment" is intended to address other primary systems, either direct or indirect, which the inability to isolate indicate loss of both RCS and containment.

**PEG Reference:**

PC3.1

**Basis Reference(s):**

1. FR-2.1 "Response to High Containment Pressure"



## 4.0 Containment      4.1 Containment Integrity Status

### 4.1.4 General Emergency

Safety injection signal due to LOCA with less than minimum operable containment heat removal equipment, Table 4.3

AND

Any indicators of fuel clad loss, Table 4.1

Table 4.3 Minimum Operable Containment Heat Removal Equipment		
CNMT Pressure	Recirc Fans Operable	Spray Pumps Required
<28 psig	2	N/A
≥28 psig	2 2	1 2

Table 4.1 Fuel Clad Loss Indicators
1. Coolant activity > 300 $\mu\text{Ci/cc}$ of I-131 2. Containment rad monitor R-29/R-30 reading >100 R/hr 3. Letdown Monitor R-9 reading > 10 R/hr

### Mode Applicability:

Power operation, hot shutdown

### Basis:

This EAL represents a potential loss of containment in conjunction with losses of both RCS and fuel clad.

A potential loss of containment is considered to exist in that the containment heat removal/depressurization systems (e. g., containment sprays, Recirc. Fans, but not including containment venting strategies) are either lost or performing in a degraded manner, as indicated by plant parameters such as containment pressure, pressurizer level and steam line pressure in excess of the setpoints at which the equipment was supposed to have actuated.

RCS is also assumed to be lost in this condition due to exceeding safety injection initiation setpoints: containment pressure ( $>4$  psig) or low pressurizer ( $< 1723$  psig).

Table 4.1 presents fuel clad loss indicators which represent 2 - 5% clad failures. Refer to EAL #'s 2.1.2, 2.2.2, and 2.3.2 for bases of these indicators.

**PEG Reference:**

PC2.5 + FC2.1, FC5.1 and FC6.1

**Basis Reference(s):**

1. Technical Specifications, Table 3.5-4, pg. 3.5-17
2. R. E. Ginna UFSAR, Section 6.2.2.1.2.4, pg. 6.2-28
3. Technical Specifications, Article 5.2.1, pg. 5.2-1
4. FR-Z.1, Response to High Containment Pressure, Revision 3
5. R. E. Ginna UFSAR, Section 6.2.2.1, pg. 6.2-24b
6. R. E. Ginna UFSAR, Section 6.2.2.2, pg. 6.2-32 and Figure 6.2-11
7. EPIP 2-16, Core Damage Estimation
8. P-9, Radiation Monitoring System, Revision 67, Section 2.2.2.6, pg. P-9:2

## 4.0 Containment 4.1 Containment Integrity Status

### 4.1.5 General Emergency

Either:

Rapid uncontrolled decrease in containment pressure following initial increase

OR

Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions

AND

Any indicators of fuel clad damage, Table 4.2

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  
Coolant activity > 300  $\mu\text{Ci/cc}$  of I-131  
Containment rad monitor R-29/R-30 reading > 100 R/hr  
Letdown Monitor R-9 reading > 10 R/hr

### Mode Applicability:

Power operation, hot shutdown

### Basis:

This EAL indicates loss of both RCS and containment with loss or potential loss of the fuel cladding and therefore warrants declaration of a General Emergency.

Rapid unexplained loss of pressure (i. e., not attributable to containment spray or Fan Cooling Units or condensation effects) following an initial pressure increase indicates a loss of both RCS and containment integrity. Containment pressure and sump levels should increase as a result of the mass and energy release into containment from a LOCA. Thus, sump level or pressure not increasing indicates containment bypass (V-sequence) and a loss of containment integrity.



2000-00



Table 4.2 presents fuel clad loss and potential loss indicators:

- ORANGE path in F-0.2, Core Cooling: Refer to EAL #1.1.1 basis
- RED path in F-0.3, Heat Sink: Refer to EAL #1.2.1 basis
- Coolant activity > 300  $\mu$ Ci/cc of I-131: Refer to EAL #2.1.2 basis
- Containment rad monitor reading >100 R/hr: Refer to EAL #2.3.2 basis
- Letdown Monitor R-9 reading > 10 R/hr: Refer to EAL #2.2.2 basis

**PEG Reference:**

PC2.1/PC2.2 + FC1.2, FC1.3, FC2.1, FC3.2, FC4.1, FC5.1 and FC6.1

**Basis Reference(s):**

1. Alarm response procedure, AR-C-18, Revision 6
2. Alarm response procedure, AR-C-19, Revision 4
3. R. E. Ginna Updated FSAR, Figure 6.2-3 through 6.2-5
4. EPIP 2-16, Core Damage Estimation
5. CSFST F-0.2, Core Cooling, Revision 3
6. CSFST F-0.3, Heat Sink, Revision 3
7. FR-C.1, Response to Inadequate Core Cooling, Revision 7
8. FR-C.2, Response to Degraded Core Cooling, Revision 6, step 9.a
9. FR-C.2, Response to Degraded Core Cooling, Revision 6, Note, pg. 3
10. P-9 "Radiation Monitoring System"

## 4.0 Containment      4.1 Containment Integrity Status

### 4.1.6 General Emergency

Either:

CI or CVI valve(s) not closed when required following confirmed LOCA  
OR

Inability to isolate any primary system discharging outside containment  
AND

Radiological release pathway to the environment exists  
AND

Any indicators of fuel clad damage, Table 4.2

Table 4.2      Fuel Clad Damage Indicators

<p>ORANGE or RED path in F-0.2, CORE COOLING RED path in F-0.3, HEAT SINK Coolant activity &gt; 300 <math>\mu\text{Ci/cc}</math> of I-131 Containment rad monitor R-29/R-30 reading &gt; 100 R/hr Letdown Monitor R-9 reading &gt; 10 R/hr</p>
--

### Mode Applicability:

Power operation, hot shutdown

### Basis:

This EAL indicates loss of both RCS and containment with loss or potential loss of the fuel cladding and therefore warrants declaration of a General Emergency.

Failure of CI or CVI valves to isolate is intended to address incomplete containment isolation that allows direct release to the environment. It represents a loss of both the RCS and containment barrier.

"Inability to isolate any primary system discharging outside containment" is intended to address other primary systems, either direct or indirect, which the inability to isolate indicate loss of both RCS and containment.

Table 4.2 presents fuel clad loss and potential loss indicators:

- ORANGE path in F-0.2, Core Cooling: Refer to EAL #1.1.1 basis
- RED path in F-0.3, Heat Sink: Refer to EAL #1.2.1 basis
- Coolant activity > 300  $\mu\text{Ci/cc}$  of I-131: Refer to EAL #2.1.2 basis
- Containment rad monitor reading > 100 R/hr: Refer to EAL #2.3.2 basis
- Letdown Monitor R-9 reading > 10 R/hr: Refer to EAL #2.2.2 basis

**PEG Reference:**

PC3.1 + FC1.2, FC1.3, FC2.1, FC3.2, FC4.1, FC5.1 and FC6.1

**Basis Reference(s):**

1. FR-2.1 "Response to High Containment Pressure"
2. CSFST F-0.2, "Core Cooling"
3. FR-C.1, "Response to Inadequate Core Cooling"
4. EPIP 2-16, Core Damage Estimation
5. CSFST F-0.2, Core Cooling, Revision 3
6. CSFST F-0.3, Heat Sink, Revision 3
7. FR-C.1, Response to Inadequate Core Cooling, Revision 7
8. FR-C.2, Response to Degraded Core Cooling, Revision 6, step 9.a
9. FR-C.2, Response to Degraded Core Cooling, Revision 6, Note, pg. 3
10. P-9 "Radiation Monitoring System"





## **4.0 Containment      4.2 SG Tube Rupture w/ Secondary Release**

### **4.2.1 Site Area Emergency**

Unisolable secondary side line break with SG tube rupture as identified in E-3 "Steam Generator Tube Rupture"

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

This EAL is intended to address the full spectrum of Steam Generator (SG) tube rupture events in conjunction with a loss of containment due to a significant secondary line break. This EAL addresses ruptured SG(s) with an unisolable secondary line break corresponding to the loss of 2 of 3 fission product barriers (RCS barrier and containment barrier). This allows the direct release of radioactive fission and activation products to the environment. Resultant offsite dose rates are a function of many variables. Examples include: coolant activity, actual leak rate, SG carry over, iodine partitioning, and meteorology.

The indications utilized should be consistent with the diagnostic activities of the emergency operating procedures (EOPs), if available. This should include indication of reduction in primary coolant inventory, increased secondary radiation levels, and an uncontrolled or complete depressurization of the ruptured SG. Secondary radiation increases should be observed via radiation monitoring of condenser air ejector discharge, SG blowdown, main steam, and/or SG sampling system. Determination of the "uncontrolled" depressurization of the ruptured SG should be based on indication that the pressure decrease in the ruptured steam generator is not a function of operator action. This should prevent declaration based on a depressurization that results from an EOP induced cooldown of the RCS that does not involve the prolonged release of contaminated secondary coolant from the affected SG to the environment. This EAL encompasses steam breaks, feed breaks, and stuck open safety or relief valves.

#### **PEG Reference:**

RCS3.1



**Basis Reference(s):**

1. E-3 "Steam Generator Tube Rupture"



**4.0 Containment 4.2 SG Tube Rupture w/ Secondary Release****4.2.2 General Emergency**

Release of secondary side to atmosphere with primary to secondary leakage >  
**0.1 gpm** per steam generator

**AND**

Any indicators of fuel clad damage, Table 4.2

**Table 4.2 Fuel Clad Damage Indicators**

<p>ORANGE or RED path in F-0.2, CORE COOLING  RED path in F-0.3, HEAT SINK  Coolant activity &gt; 300 <math>\mu</math>Ci/cc of I-131  Containment rad monitor R-29/R-30 reading &gt;100 R/hr  Letdown Monitor R-9 reading &gt; 10 R/hr</p>
--

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses SG tube leaks indicative of a loss of containment in conjunction with a loss or potential loss of fuel cladding. Secondary side releases to atmosphere include those from the condenser air ejector, atmospheric dump valves, and mainsteam safety valves.

Table 4.2 presents fuel clad loss and potential loss indicators:

- ORANGE path in F-0.2, Core Cooling: Refer to EAL #1.1.1 basis
- RED path in F-0.3, Heat Sink: Refer to EAL #1.2.1 basis
- Coolant activity > 300  $\mu$ Ci/cc of I-131: Refer to EAL #2.1.2 basis
- Containment rad monitor reading >100 R/hr: Refer to EAL #2.3.2 basis
- Letdown Monitor R-9 reading > 10 R/hr: Refer to EAL #2.2.2 basis

This condition represents a loss of both RCS and primary containment with the loss or potential loss of fuel cladding and thus warrants declaration of a General Emergency.



**PEG Reference:**

PC4.1/RCS 3.1+ FC1.2, FC1.3, FC2.1, FC3.2, FC4.1, FC5.1 and FC6.1

**Basis Reference(s):**

1. Technical Specifications Section 3.1.5.2
2. EPIP 2-16, Core Damage Estimation
3. CSFST F-0.2, Core Cooling, Revision 3
4. CSFST F-0.3, Heat Sink, Revision 3
5. FR-C.1, Response to Inadequate Core Cooling, Revision 7
6. FR-C.2, Response to Degraded Core Cooling, Revision 6, step 9.a
7. FR-C.2, Response to Degraded Core Cooling, Revision 6, Note, pg. 3
8. P-9 "Radiation Monitoring System"

## **4.0 Containment      4.3 Combustible Gas Concentrations**

### **4.3.1 General Emergency**

**≥ 4% hydrogen concentration in containment**

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

Existence of an explosive mixture (4 % hydrogen) means a hydrogen and oxygen concentration of at least the lower deflagration limit curve exists.

When hydrogen and oxygen concentrations reach or exceed the deflagration limits, imminent loss of the containment barrier exists. To generate such levels of combustible gas, loss of the fuel clad and RCS barriers must have occurred.

This EAL represents loss of both fuel clad and RCS with the potential loss of containment and therefore warrants declaration of a General Emergency.

#### **PEG Reference:**

PC2.4

#### **Basis Reference(s):**

1. [later]



## **5.0 RADIOACTIVITY RELEASE / AREA RADIATION**

Many EALs are based on actual or potential degradation of fission product barriers because of the increased potential for offsite radioactivity release. Degradation of fission product barriers though, is not always apparent via non-radiological symptoms. Therefore, direct indication of increased radiological effluents or area radiation levels are appropriate symptoms for emergency classification.

At lower levels, abnormal radioactivity releases may be indicative of a failure of containment systems or precursors to more significant releases. At higher release rates, offsite radiological conditions may result which require offsite protective actions. Increased area radiation levels in plant may also be indicative of the failure of containment systems or preclude access to plant vital equipment necessary to ensure plant safety.

There are two basic indications of radioactivity release rates and one for area radiation levels which warrant emergency classifications.

- Effluent Monitors: Direct indication of effluent radiation monitoring systems provides a rapid assessment mechanism to determine releases in excess of classifiable limits.
- Dose Projections / Environmental Measurements: Projected offsite doses (based on effluent monitor readings) or actual offsite field measurements indicating doses or dose rates above classifiable limits.
- Area Radiation Level: Sustained general area radiation levels in excess of those indicating loss of control of radioactive materials or those levels which may preclude access to vital plant areas also warrant emergency classification.

**5.0 Radioactivity Release / Area Radiation****5.1 Effluent Monitors****5.1.1 Unusual Event**

A valid reading on any monitors Table 5.1 column "NUE" for > 60 min.

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	NUE	Alert	SAE	GE
R-11	1.62E6 cpm	N/A	N/A	N/A
R-12	7.80E6 cpm	1.07E7 cpm	N/A	N/A
R-13	2.20E4 cpm	N/A	N/A	N/A
R-14	6.40E5 cpm	1.61E6 cpm	N/A	N/A
R-15	4.00E5 cpm	2.31E7 cpm	N/A	N/A
R-18	3.60E5 cpm	offscale hi	N/A	N/A
R-12A(7/9)	N/A	N/A	6.00 $\mu\text{Ci/cc}$	60.00 $\mu\text{Ci/cc}$
R-14A(7/9)	N/A	N/A	5.33E-1 $\mu\text{Ci/cc}$	5.33 $\mu\text{Ci/cc}$
R-15A(7/9)	N/A	N/A	11.50 $\mu\text{Ci/cc}$	115.00 $\mu\text{Ci/cc}$

**Mode Applicability:**

All

**Basis:**

The "value shown" for each monitor is two times the calculated Technical Specification release rates as specified in P-9 section 2.4.

Unplanned releases in excess of two times the site technical specifications that continue for 60 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. The final integrated dose (which is very low in the Unusual Event emergency class) is not the primary concern here; it is the degradation in plant control implied by the fact that the release was not isolated within 60 minutes. Therefore, it is not intended that the release be averaged over 60 minutes. For example, a release of 4 times T/S for 30 minutes does not exceed this initiating condition. Further, the Emergency Coordinator should not wait until 60 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 60 minutes.

Monitor indications are calculated on the basis of the methodology of the site Offsite Dose Calculation Manual (ODCM). Annual average meteorology is used.

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

**PEG Reference:**

AU1.1

**Basis Reference(s):**

1. EPIP 2-3 Emergency Release Rate Determination
2. P-9 Radiation Monitoring System
3. EPIP 2-18 Control Room Dose Assessment
4. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
5. "Calculations for NUMARC EALs" by P.S. Polfleit File EAL.XLS
6. RD-15.0 ODCM

**5.0 Radioactivity Release / Area Radiation****5.1 Effluent Monitors****5.1.2 Alert**

A valid reading on any monitors Table 5.1 column "Alert" for > 15 min.

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	NUE	Alert	SAE	GE
R-11	1.62E6 cpm	N/A	N/A	N/A
R-12	7.80E6 cpm	1.07E7 cpm	N/A	N/A
R-13	2.20E4 cpm	N/A	N/A	N/A
R-14	6.40E5 cpm	1.61E6 cpm	N/A	N/A
R-15	4.00E5 cpm	2.31E7 cpm	N/A	N/A
R-18	3.60E5 cpm	offscale hi	N/A	N/A
R-12A(7/9)	N/A	N/A	6.00 $\mu\text{Ci/cc}$	60.00 $\mu\text{Ci/cc}$
R-14A(7/9)	N/A	N/A	5.33E-1 $\mu\text{Ci/cc}$	5.33 $\mu\text{Ci/cc}$
R-15A(7/9)	N/A	N/A	11.50 $\mu\text{Ci/cc}$	115.00 $\mu\text{Ci/cc}$

**Mode Applicability:**

All

**Basis:**

This event escalates from the Unusual Event by escalating the magnitude of the release by a factor of 100. Prorating the 500 mR/yr criterion for both time (8766 hr/yr) and the 200 multiplier, the associated site boundary dose rate would be 10 mR/hr. The required release duration was reduced to 15 minutes in recognition of the increased severity.

Monitor indications are calculated on the basis of the methodology of the EPIP 2-18 Control Room Dose Assessment. Annual average meteorology is used.

As previously stated, the 10 mR/hr value is based on a proration of 200 times the 500 mR/yr basis of the 10CFR20 non-occupational MPC limits, rounded down to 10 mR/hr. The values for the gaseous effluent radiation monitors are based upon not exceeding 10 mR/hr at the site boundary as a result of the release.

The conversion factors are based upon the mixture of noble gas present in reactor coolant during the 1/25/82 tube rupture - normal operations.

Since there is no high range monitor associated with liquid effluent monitor R-18 and the 200x Technical Specification value is beyond it's upper scale, an indication of "offscale hi" is conservatively used.

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

**PEG Reference:**

AA1.1

**Basis Reference(s):**

1. EPIP 2-3 Emergency Release Rate Determination
2. P-9 Radiation Monitoring System
3. EPIP 2-18 Control Room Dose Assessment
4. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
5. "Calculations for NUMARC EALs" by P.S. Polfleit File EAL.XLS

**5.0 Radioactivity Release / Area Radiation****5.1 Effluent Monitors****5.1.3 Site Area Emergency**

A valid reading on any monitors Table 5.1 column "SAE" for > 15 min.

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	NUE	Alert	SAE	GE
R-11	1.62E6 cpm	N/A	N/A	N/A
R-12	7.80E6 cpm	1.07E7 cpm	N/A	N/A
R-13	2.20E4 cpm	N/A	N/A	N/A
R-14	6.40E5 cpm	1.61E6 cpm	N/A	N/A
R-15	4.00E5 cpm	2.31E7 cpm	N/A	N/A
R-18	3.60E5 cpm	offscale hi	N/A	N/A
R-12A(7/9)	N/A	N/A	6.00 $\mu\text{Ci/cc}$	60.00 $\mu\text{Ci/cc}$
R-14A(7/9)	N/A	N/A	5.33E-1 $\mu\text{Ci/cc}$	5.33 $\mu\text{Ci/cc}$
R-15A(7/9)	N/A	N/A	11.50 $\mu\text{Ci/cc}$	115.00 $\mu\text{Ci/cc}$

**Mode Applicability:**

All

**Basis:**

The values shown were determined utilizing EPIP 2-18 "Control Room Dose Assessment" based upon a 100 mR whole body exposure. The calculations made the assumption of neutral stability and an 8 mph wind speed. These conditions represent annual average meteorology. EPIP 2-18 specifies that whole body dose is limiting with respect to emergency classification and protective action recommendations based upon the assumption of a noble gas to iodine ratio of 1E-4.

The 100 mR integrated dose is based on the proposed 10CFR20 annual average population exposure. This value also provides a desirable gradient (one order of magnitude) between the Alert, Site Area Emergency, and General Emergency classes. It is deemed that exposures less than this limit are not consistent with the Site Area Emergency class description. The 500 mR integrated child thyroid dose was established in consideration of the 1:5 ratio of the EPA Protective Action Guidelines for whole body thyroid.



Integrated doses are generally not monitored in real-time. In establishing the emergency action levels, a duration of one hour is assumed, based on a site boundary dose of 100 mR/hour whole body or 500 mR/hour child thyroid, whichever is more limiting (depends on source term assumptions).

Although EPIP 2-18 provides for R-31/32 release determinations, the variability of results based upon the number of ARV's and/or SV's precludes the use of any single monitor default value for these monitors.

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

**PEG Reference:**

AS1.1

**Basis Reference(s):**

1. P-9 Radiation Monitoring System
2. EPIP 2-18 Control Room Dose Assessment
3. FSAR Table 2.3
4. "Calculations for NUMARC EALs" by P.S. Polfleit File EAL.XLS



**5.0 Radioactivity Release / Area Radiation****5.1 Effluent Monitors****5.1.4 General Emergency**

A valid reading on any monitors Table 5.1 column "GE" for > 15 min.

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	NUE	Alert	SAE	GE
R-11	1.62E6 cpm	N/A	N/A	N/A
R-12	7.80E6 cpm	1.07E7 cpm	N/A	N/A
R-13	2.20E4 cpm	N/A	N/A	N/A
R-14	6.40E5 cpm	1.61E6 cpm	N/A	N/A
R-15	4.00E5 cpm	2.31E7 cpm	N/A	N/A
R-18	3.60E5 cpm	offscale hi	N/A	N/A
R-12A(7/9)	N/A	N/A	6.00 $\mu\text{Ci/cc}$	60.00 $\mu\text{Ci/cc}$
R-14A(7/9)	N/A	N/A	5.33E-1 $\mu\text{Ci/cc}$	5.33 $\mu\text{Ci/cc}$
R-15A(7/9)	N/A	N/A	11.50 $\mu\text{Ci/cc}$	115.00 $\mu\text{Ci/cc}$

**Mode Applicability:**

All

**Basis:**

The values shown were determined utilizing EPIP 2-18 "Control Room Dose Assessment" based upon a 1000 mR whole body exposure. The calculations made the assumption of neutral stability and an 8 mph wind speed. These conditions represent annual average meteorology. EPIP 2-18 specifies that whole body dose is limiting with respect to emergency classification and protective action recommendations based upon the assumption of a noble gas to iodine ratio of 1E-4.

The 1000 mR whole body and the 5000 mR child thyroid integrated dose are based on the EPA protective action guidance which indicates that public protective actions are indicated if the dose exceeds 1 rem whole body or 5 rem child thyroid. This is consistent with the emergency class description for a General Emergency. This level constitutes the upper level of the desirable gradient for the Site Area Emergency.

Integrated doses are generally not monitored in real-time. In establishing the emergency action levels, a duration of one hour is assumed, based on a

site boundary dose of 1000 mR/hour whole body or 5000 mR/hour child thyroid, whichever is more limiting (depends on source term assumptions).

Although EPIP 2-18 provides for R-31/32 release determinations, the variability of results based upon the number of ARV's and/or SV's precludes the use of any single monitor default value for these monitors.

Valid means that a radiation monitor reading has been confirmed by the operators to be correct.

**PEG Reference:**

AG1.1

**Basis Reference(s):**

1. P-9 Radiation Monitoring System
2. EPIP 2-18 Control Room Dose Assessment
3. FSAR Table 2.3
4. "Calculations for NUMARC EALs" by P.S. Polfleit File EAL.XLS

## **5.0 Radioactivity Release / Area Radiation**

### **5.2 Dose Projections/ Environmental Measurements/ Release Rates**

#### **5.2.1 Unusual Event**

Confirmed sample analyses for gaseous or liquid release rates  $> 2 \times$  technical specifications limits for  $> 60$  min.

#### **Mode Applicability:**

All

#### **Basis:**

Unplanned releases in excess of two times the site technical specifications that continue for 60 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. The final integrated dose (which is very low in the Unusual Event emergency class) is not the primary concern here; it is the degradation in plant control implied by the fact that the release was not isolated within 60 minutes. Therefore, it is not intended that the release be averaged over 60 minutes. For example, a release of 4 times T/S for 30 minutes does not exceed this initiating condition. Further, the Emergency Coordinator should not wait until 60 minutes has elapsed, but should declare the event as soon as it is determined that the release duration has or will likely exceed 60 minutes

#### **PEG Reference:**

AU1.2

#### **Basis Reference(s):**

1. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3

**5.0 Radioactivity Release / Area Radiation****5.2 Dose Projections/ Environmental Measurements/ Release Rates****5.2.2 Alert**

Confirmed sample analyses for gaseous or liquid release rates  $> 200 \times$  technical specifications limits for  $> 15$  min.

**Mode Applicability:**

All

**Basis:**

Confirmed sample analyses in excess of two hundred times the site technical specifications that continue for 15 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. This event escalates from the Unusual Event by increasing the magnitude of the release by a factor of 100 over the Unusual Event level (i. e., 200 times Technical Specifications). Prorating the 500 mR/yr basis of the 10CFR20 non-occupational MPC limits for both time (8766 hr/yr) and the 200 multiplier, the associated site boundary dose rate would be 10 mR/hr. The required release duration was reduced to 15 minutes in recognition of the increased severity.

**PEG Reference:**

AA1.2

**Basis Reference(s):**

1. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3

## 5.0 Radioactivity Release / Area Radiation

### 5.2 Dose Projections/ Environmental Measurements/ Release Rates

#### 5.2.3 Alert

Dose projections or field surveys which indicate doses / dose rates > Table 5.2 column "Alert" at the site boundary or beyond.

Table 5.2 Dose Projection / Env. Measurement Classification Thresholds			
	Alert	SAE	GE
TEDE	10 mR	100 mR	1000 mR
CDE Thyroid	N/A	500 mR	5000 mR
TEDE rate	10 mR/hr	100 mR/hr	1000 mR/hr
CDE Thyroid rate	N/A	500 mR/hr	5000 mR/hr

#### Mode Applicability:

All

#### Basis:

Offsite integrated doses in excess of 10 mR TEDE or dose rates in excess of 10 mR/hr TEDE represent an uncontrolled situation and hence, a potential degradation in the level of safety. This event escalates from the Unusual Event by increasing the magnitude of the release by a factor of 100 over the Unusual Event level (i. e., 200 times Technical Specifications). Prorating the 500 mR/yr basis of 10CFR20 for both time (8766 hr/yr) and the 200 multiplier, the associated site boundary dose rate would be 10 mR/hr.

As previously stated, the 10 mR/hr value is based on a proration of 200 times the 500 mR/yr basis of 10CFR20, rounded down to 10 mR/hr.



**PEG Reference:**

AA1.2

**Basis Reference(s):**

1. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
2. EPIP 2-3 Emergency Release Rate Determination
3. P-9 Radiation Monitoring System
4. EPIP 2-18 Control Room Dose Assessment

## 5.0 Radioactivity Release / Area Radiation

### 5.2 Dose Projections/ Environmental Measurements/ Release Rates

#### 5.2.4 Site Area Emergency

Dose projections or field surveys which indicate doses / dose rates > Table 5.2 column "SAE" at the site boundary or beyond.

Table 5.2 Dose Projection / Env. Measurement Classification Thresholds			
	Alert	SAE	GE
TEDE	10 mR	100 mR	1000 mR
CDE Thyroid	N/A	500 mR	5000 mR
TEDE rate	10 mR/hr	100 mR/hr	1000 mR/hr
CDE Thyroid rate	N/A	500 mR/hr	5000 mR/hr

#### Mode Applicability:

All

#### Basis:

The 100 mR integrated TEDE dose in this EAL is based on the proposed 10CFR20 annual average population exposure. This value also provides a desirable gradient (one order of magnitude) between the Alert, Site Area Emergency, and General Emergency classes. It is deemed that exposures less than this limit are not consistent with the Site Area Emergency class description. The 500 mR integrated CDE thyroid dose was established in consideration of the 1:5 ratio of the EPA Protective Action Guidelines for whole body thyroid. In establishing the dose rate emergency action levels, a duration of one hour is assumed. Therefore, the dose rate EALs are based on a site boundary dose rate of 100 mR/hr TEDE or 500 mR/hr CDE thyroid, whichever is more limiting.

#### PEG Reference:

AS1.3

AS1.4



**Basis Reference(s):**

1. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
2. EPIP 2-3 Emergency Release Rate Determination
3. P-9 Radiation Monitoring System
4. EPIP 2-18 Control Room Dose Assessment



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## 5.0 Radioactivity Release / Area Radiation

### 5.2 Dose Projections/ Environmental Measurements/ Release Rates

#### 5.2.5 General Emergency

Dose projections or field surveys which indicate doses / dose rates > Table 5.2 column "GE" at the site boundary or beyond.

Table 5.2 Dose Projection / Env. Measurement Classification Thresholds			
	Alert	SAE	GE
TEDE	10 mR	100 mR	1000 mR
CDE Thyroid	N/A	500 mR	5000 mR
TEDE rate	10 mR/hr	100 mR/hr	1000 mR/hr
CDE Thyroid rate	N/A	500 mR/hr	5000 mR/hr

#### Mode Applicability:

All

#### Basis:

The General Emergency values of Table 5.2 are based on the boundary dose resulting from an actual or imminent release of gaseous radioactivity that exceeds 1000 mR TEDE or 5000 mR CDE thyroid for the actual or projected duration of the release. The 1000 mR TEDE and the 5000 mR CDE thyroid integrated dose are based on the EPA protective action guidance which indicates that public protective actions are indicated if the dose exceeds 1 rem TEDE or 5 rem CDE thyroid. This is consistent with the emergency class description for a General Emergency. This level constitutes the upper level of the desirable gradient for the Site Area Emergency. Actual meteorology is specifically identified since it gives the most accurate dose assessment. Actual meteorology (including forecasts) should be used whenever possible. In establishing the dose rate emergency action levels, a duration of one hour is assumed. Therefore, the dose rate EALs are based on a site boundary dose rate of 1000 mR/hr TEDE or 5000 mR/hr CDE thyroid, whichever is more limiting.



**PEG Reference:**

AG1.3  
AG1.4

**Basis Reference(s):**

1. Technical Specifications, Amendment No. 24, Articles 3.9.1.1 thru 3.9.2.3
2. EPIP 2-3 Emergency Release Rate Determination
3. P-9 Radiation Monitoring System
4. EPIP 2-18 Control Room Dose Assessment

## **5.0 Radioactivity Release / Area Radiation**

### **5.3 Area Radiation Levels**

#### **5.3.1 Unusual Event**

Any sustained direct ARM readings  $> 100 \times$  alarm or offscale hi resulting from an uncontrolled process

#### **Mode Applicability:**

All

#### **Basis:**

Valid elevated area radiation levels usually have long lead times relative to the potential for radiological release beyond the site boundary, thus impact to public health and safety is very low. It should be noted that the CAS and SAS do not have installed radiation monitors. Therefore, evaluation of this EAL would require survey of these areas.

This EAL addresses unplanned increases in radiation levels inside the plant. These radiation levels represent a degradation in the control of radioactive material and a potential degradation in the level of safety of the plant. Area radiation levels above 100 times the alarm setpoint have been selected because they are readily identifiable on ARM instrumentation. Since ARM setpoints are nominally set one decade over normal levels, 100 times the alarm setpoint provides an appropriate threshold for emergency classification. For those ARMs whose upper range limit are less than 100 times the alarm setpoint, a value of offscale high is used. This EAL escalates to an Alert, if the increases impair the level of safe plant operation.

#### **PEG Reference:**

AU2.4

#### **Basis Reference(s):**

None

## **5.0 Radioactivity Release / Area Radiation**

### **5.3 Area Radiation Levels**

#### **5.3.2 Alert**

Sustained area radiation levels  $> 15 \text{ mR/hr}$  in either:

Control Room

OR

Central Alarm Station and Secondary Alarm Station

#### **Mode Applicability:**

All

#### **Basis:**

This EAL addresses increased radiation levels that impede necessary access to operating stations requiring continuous occupancy to maintain safe plant operation or perform a safe plant shutdown. Areas requiring continuous occupancy include the Control Room, the central alarm station (CAS) and the secondary security alarm station (SAS). The security alarm stations are included in this EAL because of their importance to permitting access to areas required to assure safe plant operations.

The value of  $15 \text{ mR/hr}$  is derived from the GDC 19 value of 5 rem in 30 days with adjustment for expected occupancy times. Although Section III.D.3 of NUREG-0737, "Clarification of TMI Action Plan Requirements", provides that the  $15 \text{ mR/hr}$  value can be averaged over the 30 days, the value is used here without averaging. A 30 day duration implies an event potentially more significant than an Alert.

It is the impaired ability to operate the plant that results in the actual or potential degradation of the level of safety of the plant. The cause or magnitude of the increase in radiation levels is not a concern of this EAL. The Emergency Coordinator must consider the source or cause of the increased radiation levels and determine if any other EALs may be involved. For example, a dose rate of  $15 \text{ mR/hr}$  in the Control Room may be a problem in itself. However, the increase may also be indicative of high dose rates in the containment due to a LOCA. In this latter case, a Site Area Emergency or a General Emergency may be indicated by other EAL categories.

This EAL is not intended to apply to anticipated temporary radiation increases due to planned events (e. g., radwaste container movement, depleted resin transfers, etc.).

**PEG Reference:**

AA3.1

**Basis Reference(s):**

1. GDC 19
2. NUREG-0737, "Clarification of TMI Action Plan Requirements",  
Section III.D.3
3. P-9 Radiation Monitoring System Rev. 67





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## 5.0 Radioactivity Release / Area Radiation

### 5.3 Area Radiation Levels

#### 5.3.3 Alert

Sustained abnormal area radiation levels  $> 8 \text{ R/hr}$  within any areas, Table 5.3

AND

Access is required for safe operation or shutdown

Table 5.3 Plant Areas
<ul style="list-style-type: none"><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Turbine Building</li><li>• Emergency Diesel Building</li><li>• Screen House</li><li>• Standby Auxiliary Feedwater Building</li></ul>

#### Mode Applicability:

All

#### Basis:

This EAL addresses increased radiation levels in areas requiring infrequent access in order to maintain safe plant operation or perform a safe plant shutdown. Area radiation levels at or above  $8 \text{ R/hr}$  are indicative of radiation fields which may limit personnel access or adversely affect equipment whose operation may be needed to assure adequate core cooling or shutdown the reactor. The basis of the value is described in NMPC memo File Code NMP31027 "Exposure Guidelines For Unusual/Accident Conditions". The areas selected are consistent with those listed in other EALs and represent those structures which house systems and equipment necessary for the safe operation and shutdown of the plant.

It is the impaired ability to operate the plant that results in the actual or potential degradation of the level of safety of the plant. The cause or magnitude of the increase in radiation levels is not a concern of this EAL. The Emergency Coordinator must consider the source or cause of the increased radiation levels and determine if any other EAL may be involved. For example, a dose rate of  $8 \text{ R/hr}$  may be a problem in itself. However, the increase may also be indicative of high dose rates in the containment due to a

LOCA. In this latter case, a Site Area Emergency or a General Emergency may be indicated by other EAL categories.

This EAL is not meant to apply to increases in the containment radiation monitors as these are events which are addressed in other EALs. Nor is it intended to apply to anticipated temporary radiation increases due to planned events (e. g., radwaste container movement, deplete resin transfers, etc.).

**PEG Reference:**

AA3.2

**Basis Reference(s):**

1. Niagara Mohawk Power Corporation memo File Code NMP31027  
"Exposure Guidelines For Unusual/Accident Conditions", Revision 1,  
3/18/93

## **6.0 ELECTRICAL FAILURES**

Loss of vital plant electrical power can compromise plant safety system operability including decay heat removal and emergency core cooling systems which may be necessary to ensure fission product barrier integrity.

The events of this category have been grouped into the following two loss of electrical power types:

- Loss of AC Power Sources: This category includes losses of onsite and/or offsite AC power sources including station blackout events.
- Loss of DC Power Sources: This category involves total losses of vital plant 125 vdc power sources.

**6.0 Electrical Failures****6.1 Loss of AC Power Sources****6.1.1 Unusual Event**

Loss of ability to supply power to the safeguard buses from offsite circuits 751 and 767 for > 15 min.

**Mode Applicability:**

All

**Basis:**

Prolonged loss of all offsite AC power reduces required redundancy and potentially degrades the level of safety of the plant by rendering the plant more vulnerable to a complete loss of AC power (station blackout). Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

**PEG Reference:**

SU1.1

**Basis Reference(s):**

1. RGE-6 "4160V Electrical Distribution System"
2. RGE-7 "480V Distribution "

**6.0 Electrical Failures****6.1 Loss of AC Power Sources****6.1.2 Alert**

Loss of all safeguards bus AC power for > 15 min.

**Mode Applicability:**

Cold Shutdown, Refueling, Defueled

**Basis:**

Loss of all AC power compromises all plant safety systems requiring electric power. This EAL is indicated by: loss of all offsite AND onsite AC power to safeguards buses 14/18 AND 16/17 for greater than 15 minutes. When in cold shutdown, refueling, or defueled mode the event can be classified as an Alert, because of the significantly reduced decay heat, lower temperature and pressure, increasing the time to restore one of the emergency busses, relative to that specified for the Site Area Emergency EAL. Escalating to the Site Area Emergency, if appropriate, is by Abnormal Rad Levels/Radiological Effluent, or Emergency Coordinator Judgment ICs. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

**PEG Reference:**

SA1.1

**Basis Reference(s):**

1. RGE-6 "4160V Electrical Distribution System"



**6.0 Electrical Failures****6.1 Loss of AC Power Sources****6.1.3 Alert**

Available safeguard train AC power reduced to only one of the following for > 15 min.:

- EDG 1A (14/18)
- EDG 1B (16/17)
- Station Auxiliary Transformer 12A
- Station Auxiliary Transformer 12B

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

The condition indicated by this EAL is the degradation of the offsite power with a concurrent failure of one emergency generator to supply power to its emergency busses. Another related condition could be the loss of all offsite power and loss of onsite emergency diesels with only one train of emergency busses being fed from the unit main generator, or the loss of onsite emergency diesels with only one train of emergency busses being fed from offsite power. The subsequent loss of this single power source would escalate the event to a Site Area Emergency.

**PEG Reference:**

SA5.1

**Basis Reference(s):**

1. RGE-6 "4160V Electrical Distribution"
2. RGE-7 "480v Distribution"



**6.0 Electrical Failures****6.1 Loss of AC Power Sources****6.1.4 Site Area Emergency**

Loss of all safeguards bus AC power for > 15 min.

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

Loss of all AC power compromises all plant safety systems requiring electric power. This EAL is indicated by: loss of all offsite AND onsite AC power to safeguards buses 14/18 AND 16/17 for greater than 15 minutes. Prolonged loss of all AC power will cause core uncover and loss of containment integrity, thus this event can escalate to a General Emergency. The time duration should be selected to exclude transient or momentary power losses, but should not exceed 15 minutes.

**PEG Reference:**

SS1.1

**Basis Reference(s):**

1. RGE-6 "4160V Electrical Distribution"
2. RGE-7 "480v Distribution"

**6.0 Electrical Failures****6.1 Loss of AC Power Sources****6.1.5 General Emergency**

Loss of all safeguards bus AC power

AND either:

Power cannot be restored to any safeguards bus in  $\leq 4$  hrs

OR

ORANGE or RED path on F-0.2, "CORE COOLING"

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

Loss of all AC power compromises all plant safety systems requiring electric power. Prolonged loss of all AC power will lead to loss of fuel clad, RCS, and containment. Although this EAL may be viewed as redundant to the RPV Water Level EALs, its inclusion is necessary to better assure timely recognition and emergency response.

This EAL is specified to assure that in the unlikely event of prolonged station blackout, timely recognition of the seriousness of the event occurs and that declaration of a General Emergency occurs as early as is appropriate, based on a reasonable assessment of the event trajectory.

The likelihood of restoring at least one emergency bus should be based on a realistic appraisal of the situation since a delay in an upgrade decision based on only a chance of mitigating the event could result in a loss of valuable time in preparing and implementing public protective actions.

In addition, under these conditions, fission product barrier monitoring capability may be degraded. Although it may be difficult to predict when power can be restored, the Emergency Coordinator should declare a General Emergency based on two major considerations:

1. Are there any present indications that core cooling is already degraded to the point that Loss or Potential Loss of fission product barriers is imminent?

2. If there are no present indications of such core cooling degradation, how likely is it that power can be restored in time to assure that a loss of two barriers with a potential loss of the third barrier can be prevented?

Thus, indication of continuing core cooling degradation must be based on fission product barrier monitoring with particular emphasis on Emergency Coordinator judgment as it relates to imminent loss or potential loss of fission product barriers and degraded ability to monitor fission product barriers.

The time to restore AC power is based on site blackout coping analysis performed in conformance with 10CFR50.63 and Regulatory Guide 1.155, "Station Blackout", with appropriate allowance for offsite emergency response.

**PEG Reference:**

SG1.1

**Basis Reference(s):**

1. F-0.2, "CORE COOLING,"
2. NRC letter to Dr. Mecredy dated 1/30/92 "RE Ginna Nuclear Power Plant Station Blackout Analysis (TAC M68548)
3. RGE-6 "4160v Electrical Distribution System"
4. RGE-7 "480v Distribution"

**6.0 Electrical Failures****6.2 Loss of DC Power Sources****6.2.1 Unusual Event**

< 105 vdc bus voltage indications on 125 vdc batteries 1A and 1B  
for > 15 min.

**Mode Applicability:**

Cold Shutdown, Refueling

**Basis:**

The purpose of this EAL is to recognize a loss of DC power compromising the ability to monitor and control the removal of decay heat during cold shutdown or refueling operations. This EAL is intended to be anticipatory in as much as the operating crew may not have necessary indication and control of equipment needed to respond to the loss.

The bus voltage is based on the minimum bus voltage necessary for the operation of safety related equipment. This voltage value incorporates a margin of at least 15 minutes of operation before the onset of inability to operate loads.

**PEG Reference:**

SU7.1

**Basis Reference(s):**

1. RGE-9 "Instrument Bus and DC Power System"

**6.0 Electrical Failures****6.2 Loss of DC Power Sources****6.2.2 Site Area Emergency**

> 105 vdc bus voltage indications on 125 vdc batteries 1A and 1B  
for > 15 min.

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

Loss of all DC power compromises ability to monitor and control plant safety functions. Prolonged loss of all DC power will cause core uncovering and loss of containment integrity when there is significant decay heat and sensible heat in the reactor system. Escalation to a General Emergency would occur by other EAL categories. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

The bus voltage is based on the minimum bus voltage necessary for the operation of safety related equipment. This voltage value incorporates a margin of at least 15 minutes of operation before the onset of inability to operate loads.

**PEG Reference:**

SS3.1

**Basis Reference(s):**

1. RGE-9 "Instrument Bus and DC Power System"

## **7.0 EQUIPMENT FAILURES**

Numerous plant system related equipment failure events which warrant emergency classification, based upon their potential to pose actual or potential threats to plant safety, have been identified in this category.

The events of this category have been grouped into the following event types:

- Technical Specifications: Only one EAL falls under this event type related to the failure of the plant to be brought to the required plant operating condition required by technical specifications.
- System Failures or Control Room Evacuation: This category includes events which are indicative of losses of operability of safety systems such as ECCS, isolation functions, Control Room habitability or cold and hot shutdown capabilities.
- Loss of Indication, Alarm, or Communication Capability: Certain events which degrade the plant operators ability to effectively assess plant conditions or communicate with essential personnel within or external to the plant warrant emergency classification. Under this event type are losses of annunciators and/or communication equipment.



5.4



## **7.0 Equipment Failures      7.1 Technical Specification Requirements**

### **7.1.1 Unusual Event**

Plant is not brought to required operating mode within Technical Specifications LCO Action Statement Time.

#### **Mode Applicability:**

Power operation, hot shutdown

#### **Basis:**

Limiting Conditions of Operation (LCOs) require the plant to be brought to a required shutdown mode when the Technical Specification required configuration cannot be restored. Depending on the circumstances, this may or may not be an emergency or precursor to a more severe condition. In any case, the initiation of plant shutdown required by the site Technical Specification requires a one hour report under 10CFR50.72 (b) non-emergency events. The plant is within its safety envelope when being shut down within the allowable action statement time in the Technical Specifications. An immediate Notification of an Unusual Event is required when the plant is not brought to the required operating mode within the allowable action statement time in the Technical Specifications. Declaration of an Unusual Event is based on the time at which the LCO-specified action statement time period elapses under the site Technical Specifications and is not related to how long a condition may have existed. Other required Technical Specification shutdowns that involve precursors to more serious events are addressed by other EALs.

#### **PEG Reference:**

SU2.1

#### **Basis Reference(s):**

1. Technical Specifications Section 3.0



**7.0 Equipment Failures      7.2 System Failures or Control Room Evacuation****7.2.1 Unusual Event**

Report of main turbine failure resulting in casing penetration or damage to turbine seals or generator seals.

**Mode Applicability:**

Power Operation, hot shutdown

**Basis:**

This EAL is intended to address main turbine rotating component failures of sufficient magnitude to cause observable damage to the turbine casing or to the seals of the turbine generator. Of major concern is the potential for leakage of combustible fluids (lubricating oils) and gases (hydrogen cooling) to the plant environs. Actual fires and flammable gas build up are appropriately classified through other EALs. This EAL is consistent with the definition of an Unusual Event while maintaining the anticipatory nature desired and recognizing the risk to non-safety related equipment.

**PEG Reference:**

HU1.6

**Basis Reference(s):**

None

## **7.0 Equipment Failures      7.2 System Failures or Control Room Evacuation**

### **7.2.2 Alert**

Turbine failure generated missiles result in any visible structural damage to plant vital equipment

#### **Mode Applicability:**

Power Operations, Hot Shutdown

#### **Basis:**

This EAL addresses the threat to safety related equipment imposed by missiles generated by main turbine rotating component failures. The involved equipment includes safety-related equipment, their controls, and their power supplies. This EAL is consistent with the definition of an ALERT in that, if missiles have damaged or penetrated areas containing safety-related equipment, the potential exists for substantial degradation of the level of safety of the plant.

#### **PEG Reference:**

HA1.6

#### **Basis Reference(s):**

None

**7.0 Equipment Failures    7.2 System Failures or Control Room Evacuation**

**7.2.3 Alert**

Control Room evacuation

**Mode Applicability:**

All

**Basis:**

With the Control Room evacuated, additional support, monitoring and direction through the Technical Support Center and/or other emergency operations center is necessary. Inability to establish plant control from outside the Control Room will escalate this event to a Site Area Emergency.

**PEG Reference:**

HA5.1

**Basis Reference(s):**

1. AP-CR.1 Control Room Inaccessibility



## **7.0 Equipment Failures      7.2 System Failures or Control Room Evacuation**

### **7.2.4 Alert**

Reactor coolant temperature cannot be maintained  $< 200^{\circ}\text{F}$

#### **Mode Applicability:**

Cold Shutdown, Refueling

#### **Basis:**

This EAL addresses complete loss of functions required for core cooling during refueling and cold shutdown modes. Escalation to Site Area Emergency or General Emergency would be through other EALs.

A reactor coolant temperature increase that approaches or exceeds the cold shutdown technical specification limit warrants declaration of an Alert irrespective of the availability of technical specification required functions to maintain cold shutdown. The concern of this EAL is the loss of ability to maintain the plant in cold shutdown which is defined by reactor coolant temperature and not the operability of equipment which supports removal of heat from the reactor.

#### **PEG Reference:**

SA3.1

#### **Basis Reference(s):**

1. AP-RHR.1 "Loss of RHR"
2. Technical Specifications Section 1.2
3. AP-RHR-2 "Loss of RHR While Operating at Reduced RCS Inventory Conditions"

**7.0 Equipment Failures****7.2 System Failures or Control Room Evacuation****7.2.5 Site Area Emergency**

Control Room evacuation

AND

Core cooling cannot be established per AP-CR.1 "Control Room Inaccessibility" in  $\leq 20$  min.

**Mode Applicability:**

All

**Basis:**

This EAL indicates that expeditious transfer of safety systems has not occurred but fission product barrier damage may not yet be indicated. The time interval for transfer is based on analysis or assessments as to how quickly control must be reestablished without core uncovering and/or core damage.

REGNPS Appendix R submittal indicates that 20 minutes is the maximum time for which control of plant safety systems should occur under worst case conditions.

In cold shutdown and refueling modes, operator concern is directed toward maintaining core cooling such as is discussed in Generic Letter 88-17, "Loss of Decay Heat Removal." In power operation, and hot shutdown modes, operator concern is primarily directed toward maintaining critical safety functions and thereby assuring fission product barrier integrity.

**PEG Reference:**

HS2.1

**Basis Reference(s):**

1. AP-CR.1 Control Room Inaccessibility
2. Appendix R Section 6.4.5 page 6-35
3. Generic Letter 88-17, "Loss of Decay Heat Removal."

**7.0 Equipment Failures****7.3 Loss of Indications /Alarms /  
Communication Capability****7.3.1 Unusual Event**

Unplanned loss of annunciators or indications on any Control Room Panels,  
Table 7.3 for > 15 min.

AND

Increased surveillance is required for safe plant operation

Table 7.3 Vital Control Room Panels							
A	AA	B	C	D	E	F	G

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL recognizes the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment. Recognition of the availability of computer based indication equipment is considered (PPCS and SAS).

"Unplanned" loss of annunciators or indicators excludes scheduled maintenance and testing activities.

It is not intended that plant personnel perform a detailed count of the instrumentation lost but the use of judgment by the Shift Supervisor as the threshold for determining the severity of the plant conditions. This judgment is supported by the specific opinion of the Shift Supervisor that additional operating personnel will be required to provide increased monitoring of system operation to safely operate the plant.

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptable power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this EAL due to difficulty associated with assessment of plant conditions. The loss of specific, or several, safety system indicators should remain a function of that specific system or component operability status. This will be addressed by their specific Technical Specification. The initiation of a Technical Specification

imposed plant shutdown related to the instrument loss will be reported via 10CFR50.72. If the shutdown is not in compliance with the Technical Specification action, the Unusual Event is based on EAL 7.1.1, Inability to Reach Required Shutdown Within Technical Specification Limits.

Annunciators or indicators for this EAL must include those identified in the Abnormal Operating procedures, in the Emergency Operating Procedures, and in other EALs (e. g., area, process, and/or effluent rad monitors, etc.).

Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

Due to the limited number of safety systems in operation during cold shutdown, refueling, and defueled modes, this EAL is not applicable during these modes of operation.

This Unusual Event will be escalated to an Alert if a transient is in progress during the loss of annunciation or indication.

**PEG Reference:**

SU3.1

**Basis Reference(s):**

None



## **7.0 Equipment Failures    7.3 Loss of Indications /Alarms / Communication Capability**

### **7.3.2 Unusual Event**

Loss of all communications capability affecting the ability to either:  
Perform routine operations  
OR  
Notify offsite agencies or personnel

#### **Mode Applicability:**

All

#### **Basis:**

The purpose of this EAL is to recognize a loss of communications capability that either defeats the plant operations staff ability to perform routine tasks necessary for plant operations or the ability to communicate problems with offsite authorities. The loss of offsite communications ability is expected to be significantly more comprehensive than the condition addressed by 10CFR50.72.

The onsite communications loss must encompass the loss of all means of routine communications (i. e., phones, sound powered phone systems, page party system, and radios/walkie talkies).

The offsite communications loss must encompass the loss of all means of communications with offsite authorities. This should include ENS, Bell lines, FAX transmissions, and dedicated phone systems. This EAL is intended to be used only when extraordinary means are being utilized to make communications possible (relaying of information from radio transmissions, individuals being sent to offsite locations, etc.).

#### **PEG Reference:**

SU6.1

#### **Basis Reference(s):**

1. A-56, "Communication Systems at Ginna Station"

## 7.0 Equipment Failures      7.3 Loss of Indications /Alarms / Communication Capability

### 7.3.3 Alert

Unplanned loss of annunciators or indications on any Control Room Panels,  
Table 7.3 for > 15 min.

AND

Increased surveillance is required for safe plant operation

AND either:

A plant transient in progress

OR

PPCS and SAS are unavailable

Table 7.3 Vital Control Room Panels							
A	AA	B	C	D	E	F	G

### Mode Applicability:

Power operation, hot shutdown

### Basis:

This EAL recognizes the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment during a transient. Recognition of the availability of computer based indication equipment is considered (PPCS, SAS, etc.).

"Unplanned" loss of annunciators or indicators does not include scheduled maintenance and testing activities.

It is not intended that plant personnel perform a detailed count of the instrumentation lost but the use of judgment by the Shift Supervisor as the threshold for determining the severity of the plant conditions. This judgment is supported by the specific opinion of the Shift Supervisor that additional operating personnel will be required to provide increased monitoring of system operation to safely operate the plant.

It is further recognized that most plant designs provide redundant safety system indication powered from separate uninterruptable power supplies. While failure of a large portion of annunciators is more likely than a failure of a large portion of indications, the concern is included in this EAL due to difficulty associated with assessment of plant conditions. The loss of specific,



or several, safety system indicators should remain a function of that specific system or component operability status. This will be addressed by the specific Technical Specification. The initiation of a Technical Specification imposed plant shutdown related to the instrument loss will be reported via 10CFR50.72.

Annunciators or indicators for this EAL includes those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (e. g., area, process, and/or effluent rad monitors, etc.).

"Significant transient" includes response to automatic or manually initiated functions such as trips, runbacks involving greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or greater.

If both a major portion of the annunciation system and all computer monitoring are unavailable to the extent that the additional operating personnel are required to monitor indications, the Alert is required.

Due to the limited number of safety systems in operation during cold shutdown, refueling and defueled modes, no EAL is indicated during these modes of operation.

This Alert will be escalated to a Site Area Emergency if the operating crew cannot monitor the transient in progress.

**PEG Reference:**

SA4.1

**Basis Reference(s):**

None

## 7.0 Equipment Failures      7.3 Loss of Indications /Alarms / Communication Capability

### 7.3.4 Site Area Emergency

Loss of annunciators or indications on any Control Room Panels, Table 7.3  
 AND  
 Complete loss of ability to monitor all critical safety function status  
 AND  
 A plant transient in progress

Table 7.3      Vital Control Room Panels							
A	AA	B	C	D	E	F	G

#### Mode Applicability:

Power operation, hot shutdown

#### Basis:

This EAL recognizes the inability of the Control Room staff to monitor the plant response to a transient. A Site Area Emergency is considered to exist if the Control Room staff cannot monitor safety functions needed for protection of the public.

Annunciators for this EAL should be limited to include those identified in the Abnormal Operating Procedures, in the CSFST's and Emergency Operating Procedures, and in other EALs (e. g., rad monitors, etc.).

"Significant transient" includes response to automatic or manually initiated functions such as scrams, runbacks involving greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or greater.

Indications needed to monitor critical safety functions necessary for protection of the public must include Control Room indications, computer generated indications and dedicated annunciation capability. The specific indications should be those used to determine such functions as the ability to shut down the reactor, maintain the core cooled and in a coolable geometry, to remove heat from the core, to maintain the reactor coolant system intact, and to maintain containment intact.



"Planned" actions are excluded from the EAL since the loss of instrumentation of this magnitude is of such significance during a transient that the cause of the loss is not an ameliorating factor.

**PEG Reference:**

SS6.1

**Basis Reference(s):**

None





## **8.0 Hazards**

Hazards are those non-plant system related events which can directly or indirectly impact plant operation or reactor plant and personnel safety.

The events of this category have been grouped into the following types:

- **Security Threats:** This category includes unauthorized entry attempts into the Protected Area as well as bomb threats and sabotage attempts. Also addressed are actual security compromises threatening loss of physical control of the plant.
- **Fire or Explosion:** Fires can pose significant hazards to personnel and reactor safety. Appropriate for classification are fires within the site Protected Area or which may affect operability of vital equipment.
- **Man-made Events:** Man-made events are those non-naturally occurring events which can cause damage to plant facilities such as aircraft crashes, missile impacts, toxic or flammable gas leaks or explosions from whatever source.
- **Natural Events:** Events such as hurricanes, earthquakes or tornados which have potential to cause damage to plant structures or equipment significant enough to threaten personnel or plant safety.

**8.0 Hazards****8.1 Security Threats****8.1.1 Unusual Event**

Bomb device or other indication of attempted sabotage discovered within plant Protected Area.

**Mode Applicability:**

All

**Basis:**

This EAL is based on the REGNPS Security Contingency Plan. Security events which do not represent at least a potential degradation in the level of safety of the plant, are reported under 10CFR73.71 or in some cases under 10CFR50.72.

The plant Protected Area boundary is within the security isolation zone and is defined in the security plan. Bomb devices discovered within the plant vital area would result in EAL escalation.

**PEG Reference:**

HU4.1  
HU4.2

**Basis Reference(s):**

1. REGNPS Security Contingency Plan

**8.0 Hazards****8.1 Security Threats****8.1.2 Alert**

Intrusion into plant Protected Area by an adversary.

**Mode Applicability:**

All

**Basis:**

This class of security events represents an escalated threat to plant safety above that contained in the Unusual Event. For the purposes of this EAL, the intrusion by unauthorized personnel inside the Protected Area boundary can be considered a significant security threat. Intrusion into a vital area by unauthorized personnel will escalate this event to a Site Area Emergency.

**PEG Reference:**

HA4.1  
HA4.2

**Basis Reference(s):**

1. REGNPS Security Contingency Plan

## **8.0 Hazards**

## **8.1 Security Threats**

### **8.1.3 Site Area Emergency**

Intrusion into a plant security vital area by an adversary.

#### **Mode Applicability:**

All

#### **Basis:**

This class of security events represents an escalated threat to plant safety above that contained in the Alert in that unauthorized personnel have progressed from the Protected Area to the vital area.

#### **PEG Reference:**

HS1.1  
HS1.2

#### **Basis Reference(s):**

1. REGNPS Security Contingency Plan

**8.0 Hazards**

**8.1 Security Threats**

**8.1.4 General Emergency**

Security event which results in:

Loss of plant control from the Control Room

AND

Loss of remote shutdown capability

**Mode Applicability:**

All

**Basis:**

This EAL encompasses conditions under which unauthorized personnel have taken physical control of vital areas required to reach and maintain safe shutdown.

**PEG Reference:**

HG1.1

HG1.2

**Basis Reference(s):**

1. REGNPS Security Contingency Plan



**8.0 Hazards****8.2 Fire or Explosion****8.2.1 Unusual Event**

Confirmed fire in any plant area, Table 8.2 or 8.3 not extinguished in  $\leq 15$  min. of Control Room notification:

Table 8.2	Plant Areas
<ul style="list-style-type: none"><li>• Turbine Building</li><li>• TSC</li><li>• Service Building</li><li>• Contaminated Storage Building</li></ul>	

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

The purpose of this EAL is to address the magnitude and extent of fires that may be potentially significant precursors to damage to safety systems. This excludes such items as fires within administration buildings, waste-basket fires, and other small fires of no safety consequence.

**PEG Reference:**

HU2.1

**Basis Reference(s):**

1. Site Plot Plan





**8.0 Hazards****8.2 Fire or Explosion****8.2.2 Alert**

Fire or explosion in any plant area, Table 8.2 or Table 8.3 which results in damage to plant equipment or structures needed for safe plant operation

Table 8.2	Plant Areas
<ul style="list-style-type: none"><li>• Turbine Building</li><li>• TSC</li><li>• Service Building</li><li>• Contaminated Storage Building</li></ul>	

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

The listed areas contain functions and systems required for the safe shutdown of the plant. The REGNPS safe shutdown analysis was consulted for equipment and plant areas required for the applicable mode.

With regard to explosions, only those explosions of sufficient force to damage permanent structures or equipment required for safe operation within the identified plant areas should be considered. As used here, an explosion is a rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment, that potentially imparts significant energy to nearby structures and materials. No attempt is made in this EAL to assess the actual magnitude of the damage. The declaration of an Alert and the activation of the TSC will provide the Emergency Coordinator with the resources needed

to perform damage assessments. The Emergency Coordinator also needs to consider any security aspects of the explosions.

**PEG Reference:**

HA2.1

**Basis Reference(s):**

1. Site Plot Plan

**8.0 Hazards****8.3 Man-Made Events****8.3.1 Unusual Event**

Vehicle crash into or projectile which impacts plant structures or systems within Protected Area boundary

**Mode Applicability:**

All

**Basis:**

The Protected Area boundary is within the security isolation zone and is defined in the site security plan.

This EAL addresses such items as plane, helicopter, train, barge, car or truck crash, or impact of other projectiles that may potentially damage plant structures containing functions and systems required for safe shutdown of the plant. If the crash is confirmed to affect a plant vital area, the event may be escalated to Alert.

**PEG Reference:**

HU1.4

**Basis Reference(s):**

1. Site Plot Plan

**8.0 Hazards****8.3 Man-Made Events****8.3.2 Unusual Event**

Report by plant personnel of an explosion within Protected Area boundary resulting in visible damage to permanent structures or equipment

**Mode Applicability:**

All

**Basis:**

The Protected Area boundary is within the security isolation zone and is defined in the site security plan.

For this EAL, only those explosions of sufficient force to damage permanent structures or equipment within the Protected Area should be considered. As used here, an explosion is a rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment, that potentially imparts significant energy to near by structures and materials. No attempt is made in this EAL to assess the actual magnitude of the damage. The occurrence of the explosion with reports of evidence of damage (e. g., deformation, scorching) is sufficient for declaration. The Emergency Coordinator also needs to consider any security aspects of the explosion.

**PEG Reference:**

HU1.5

**Basis Reference(s):**

1. Site Plot Plan

**8.0 Hazards****8.3 Man-Made Events****8.3.3 Unusual Event**

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

**Mode Applicability:**

All

**Basis:**

This EAL is based on releases in concentrations within the site boundary that will affect the health of plant personnel or affecting the safe operation of the plant with the plant being within the evacuation area of an offsite event (i. e., tanker truck accident releasing toxic gases, etc.). The evacuation area is as determined from the DOT Evacuation Tables for Selected Hazardous Materials, in the DOT Emergency Response Guide for Hazardous Materials.

Should an explosion occur within a specified plant area, an Alert would be declared based on EAL 8.2.2.

**PEG Reference:**

HU3.1  
HU3.2

**Basis Reference(s):**

None

**8.0 Hazards****8.3 Man-Made Events****8.3.4 Alert**

Vehicle crash or projectile impact which precludes personnel access to or damages equipment in plant vital areas, Table 8.3

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

This EAL addresses events that may have resulted in a plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial report should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage.

This EAL addresses such items as plane, helicopter, train, barge, car or truck crash, or impact of projectiles into a plant vital area.

**PEG Reference:**

HA1.5

**Basis Reference(s):**

None





**8.0 Hazards****8.3 Man-Made Events****8.3.5 Alert**

Report or detection of toxic or flammable gases within a plant area, Table 8.3, in concentrations that will be life threatening to plant personnel or preclude access to equipment needed for safe plant operation

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

This EAL is based on gases that have entered a plant structure precluding access to equipment necessary for the safe operation of the plant. This EAL applies to buildings and areas contiguous to plant vital areas or other significant buildings or areas. The intent of this EAL is not to include buildings (i. e., warehouses) or other areas that are not contiguous or immediately adjacent to plant vital areas. It is appropriate that increased monitoring be done to ascertain whether consequential damage has occurred.

**PEG Reference:**

HA3.1  
HA3.2

**Basis Reference(s):**

None

**8.0 Hazards****8.4 Natural Events****8.4.1 Unusual Event**

Earthquake felt inplant by any operator

AND

Confirmation of earthquake of an intensity > 0.01 g per SC-5 "Earthquake Emergency Plan".

**Mode Applicability:**

All

**Basis:**

REGNPS seismic instrumentation actuates at 0.01 g.

Damage to some portions of the site may occur but it should not affect ability of safety functions to operate. Methods of detection can be based on instrumentation validated by a reliable source, operator assessment, or indication received from outside agencies. As defined in the EPRI-sponsored "Guidelines for Nuclear Plant Response to an Earthquake", dated October 1989, a "felt earthquake" is:

"An earthquake of sufficient intensity such that: (a) the inventory ground motion is felt at the nuclear plant site and recognized as an earthquake based on a consensus of Control Room operators on duty at the time, and (b) for plants with operable seismic instrumentation, the seismic switches of the plant are activated. For most plants with seismic instrumentation, the seismic switches are set at an acceleration of about 0.01 g."

**PEG Reference:**

HU1.1

**Basis Reference(s):**

1. SC-5 Earthquake Emergency Plan
2. EPRI document, "Guidelines for Nuclear Plant Response to an Earthquake", dated October 1989

**8.0 Hazards****8.4 Natural Events****8.4.2 Unusual Event**

Report by plant personnel of tornado within plant Protected Area boundary

**Mode Applicability:**

All

**Basis:**

This EAL is based on the assumption that a tornado striking (touching down) within the Protected Area boundary may have potentially damaged plant structures containing functions or systems required for safe shutdown of the plant. If such damage is confirmed visually or by other in-plant indications, the event may be escalated to Alert.

**PEG Reference:**

HU1.2

**Basis Reference(s):**

None



**8.0 Hazards****8.4 Natural Events****8.4.3 Unusual Event**

Assessment by Control Room personnel that a natural event has occurred precluding access to a plant vital area, Table 8.3

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

This EAL allows for the Control Room to determine that an event has occurred and take appropriate action based on personal assessment as opposed to verification (i. e., an earthquake is felt but does not register on any plant-specific instrumentation, etc.).

**PEG Reference:**

HU1.3

**Basis Reference(s):**

None



**8.0 Hazards****8.4 Natural Events****8.4.4 Unusual Event**

Deer Creek flooding over entrance road bridge

OR

Lake level > 252 ft

OR

Screen House Suction Bay water level < 15 ft (low-low level alarm)

**Mode Applicability:**

All

**Basis:**

This covers high and low lake water level conditions that could be precursors of more serious events. Deer creek flooding over entrance road bridge may preclude emergency response personnel access and egress. Lake water level > 252 ft. corresponds to plant design levels. Screen House Suction Bay level < 15 ft. corresponds to the low-low level alarm point and which requires load reduction below 50%.

**PEG Reference:**

HU1.7

**Basis Reference(s):**

1. SC-4 High Water (Flood) Emergency Plan
2. SC-4.1 Low Screenhouse Water Level
3. Interoffice Memo "Screenhouse Pump Bay Water Level" dated 1/24/94 to Terry White from William Rapin and Jeffrey Wayland

**8.0 Hazards****8.4 Natural Events****8.4.5 Alert**

Earthquake felt inplant by any plant operations personnel

AND

Confirmation of earthquake of an intensity  $> 0.08$  g per SC-5 "Earthquake Emergency Plan"

**Mode Applicability:**

All

**Basis:**

This EAL addresses events that may have resulted in a plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial report should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage.

This EAL is based on the FSAR design basis operating earthquake of 0.08 g. Seismic events of this magnitude can cause damage to plant safety functions.

**PEG Reference:**

HA1.1

**Basis Reference(s):**

1. SC-5 "Earthquake Emergency Plan"



**8.0 Hazards****8.4 Natural Events****8.4.6 Alert**

Sustained winds > 75 mph

OR

Tornado strikes a plant vital area, Table 8.3

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

This EAL addresses events that may have resulted in a plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial report should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage.

This EAL is based on the FSAR assumed "severe environmental loading" condition of 75 mph. Wind loads of this magnitude can cause damage to safety functions.

**PEG Reference:**

HA1.2

**Basis Reference(s):**

1. RGE FSAR Section 3.3.2.1.4

**8.0 Hazards****8.4 Natural Events****8.4.7 Alert**

Assessment by the Control Room personnel that a natural event has resulted in damage to equipment needed for safe plant operation, Table 8.3

Table 8.3	Plant Vital Areas
<ul style="list-style-type: none"><li>• Control Building</li><li>• Reactor Containment Building</li><li>• Auxiliary Building</li><li>• Intermediate Building</li><li>• Emergency Diesel Building</li><li>• Standby Auxiliary Feedwater Building</li><li>• Screen House</li></ul>	

**Mode Applicability:**

All

**Basis:**

This EAL addresses events that may have resulted in a plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial report should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage.

This EAL specifies areas in which structures containing systems and functions required for safe shutdown of the plant are located.

**PEG Reference:**

HA1.3

**Basis Reference(s):**

None

**8.0 Hazards****8.4 Natural Events****8.4.8 Alert**

Flood water accumulating on screen house operating floor

OR

Lake level > 253 ft

OR

Screen House Suction Bay water level < 13 ft

**Mode Applicability:**

All

**Basis:**

This EAL addresses events that may have resulted in a plant vital area being subjected to levels beyond design limits, and thus damage may be assumed to have occurred to plant safety systems. The initial report should not be interpreted as mandating a lengthy damage assessment prior to classification. No attempt is made in this EAL to assess the actual magnitude of the damage.

This EAL covers high and low lake water level conditions that exceed levels which threaten vital equipment. Flood water accumulating on the screen house operating floor or lake levels > 253 ft. corresponds to levels threatening vital equipment. Screen House Suction Bay level < 13 ft. corresponds to the level below which the motor driven firewater pump suction bowls are uncovered.

**PEG Reference:**

HA1.7

**Basis Reference(s):**

1. SC-4 High Water (Flood) Emergency Plan
2. SC-4.1 Low Screenhouse Water Level
3. Interoffice Memo "Screenhouse Pump Bay Water Level" dated 1/24/94 to Terry White from William Rapin and Jeffrey Wayland

## **9.0 OTHER**

The EALs defined in categories 1.0 through 8.0 specify the predetermined symptoms or events which are indicative of emergency or potential emergency conditions, and which warrant classification. While these EALs have been developed to address the full spectrum of possible emergency conditions which may warrant classification and subsequent implementation of the Emergency Plan, a provision for classification of emergencies based on operator/management experience and judgment is still necessary. The EALs of this category provide the Shift Supervisor or Emergency Coordinator the latitude to classify emergency conditions consistent with the established classification criteria, based upon their judgment.

**9.0 Other****9.1.1 Unusual Event**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead to or has led to a potential degradation of the level of safety of the plant.

**Mode Applicability:**

All

**Basis:**

This EAL addresses unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the Unusual Event emergency class.

From a broad perspective, one area that may warrant Emergency Coordinator judgment is related to likely or actual breakdown of site specific event mitigating actions. Examples to consider include inadequate emergency response procedures, transient response either unexpected or not understood, failure or unavailability of emergency systems during an accident in excess of that assumed in accident analysis, or insufficient availability of equipment and/or support personnel.

**PEG Reference:**

HU5.1

**Basis Reference(s):**

None

**9.0 Other****9.1.2 Unusual Event**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead to or has led to a loss or potential loss of containment.

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses any other factors that are to be used by the Emergency Coordinator in determining whether the containment barrier is lost or potentially lost. In addition, the inability to monitor the barrier should also be incorporated in this EAL as a factor in Emergency Coordinator judgment that the barrier may be considered lost or potentially lost.

**PEG Reference:**

PC8.1

**Basis Reference(s):**

None

**9.0 Other****9.1.3 Alert**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could cause or has caused actual substantial degradation of the level of safety of the plant.

**Mode Applicability:**

All

**Basis:**

This EAL addresses unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the Alert emergency class.

**PEG Reference:**

HA6.1

**Basis Reference(s):**

None





**9.0 Other****9.1.4 Alert**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to a loss or potential loss of either fuel clad or RCS barrier.

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses any other factors that are to be used by the Emergency Coordinator in determining whether the fuel clad or RCS barriers are lost or potentially lost. In addition, the inability to monitor the barriers should also be considered in this EAL as a factor in Emergency Coordinator judgment that the barriers may be considered lost or potentially lost.

**PEG Reference:**

FC7.1  
RCS6.1

**Basis Reference(s):**

None

**9.0 Other****9.1.5 Site Area Emergency**

As determined by the Shift Supervisor or Emergency Coordinator, 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.

**Mode Applicability:**

All

**Basis:**

This EAL addresses unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the emergency class description for Site Area Emergency.

**PEG Reference:**

HS3.1

**Basis Reference(s):**

None

**9.0 Other****9.1.6 Site Area Emergency**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to either:

Loss or potential loss of both fuel clad and RCS barrier

OR

Loss or potential loss of either fuel clad or RCS barrier in conjunction with a loss of containment

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses unanticipated conditions affecting fission product barriers which are not addressed explicitly elsewhere. Declaration of an emergency is warranted because conditions exist which are believed by the Emergency Coordinator to fall under the emergency class description for Site Area Emergency.

**PEG Reference:**

FC7.1  
RCS6.1  
PC8.1

**Basis Reference(s):**

None

**9.0 Other****9.1.7 General Emergency**

As determined by the Shift Supervisor or Emergency Coordinator, 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.

**Mode Applicability:**

All

**Basis:**

This EAL addresses unanticipated conditions not addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the General Emergency class.

Releases can reasonably be expected to exceed EPA PAG plume exposure levels outside the site boundary.

**PEG Reference:**

HG2.1

**Basis Reference(s):**

None

**9.0 Other****9.1.8 General Emergency**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to a loss of any two fission product barriers and loss or potential loss of the third.

**Mode Applicability:**

Power operation, hot shutdown

**Basis:**

This EAL addresses unanticipated conditions affecting fission product barriers which are not addressed explicitly elsewhere. Declaration of an emergency is warranted because conditions exist which are believed by the Emergency Coordinator to fall under the emergency class description for the General Emergency class.

**PEG Reference:**

FC7.1  
RCS6.1  
PC8.1

**Basis Reference(s):**

None

## **ATTACHMENT A**

### **WORD LIST/DEFINITIONS**

**Actuate**

To put into operation; to move to action; commonly used to refer to automated, multi-faceted operations. "Actuate ECCS".

**Adversary**

As applied to security EALs, an individual whose intent is to commit sabotage, disrupt Station operations or otherwise commit a crime on station property.

**Alert**

Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

**Available**

The state or condition of being ready and able to be used (placed into operation) to accomplish the stated (or implied) action or function. As applied to a system, this requires the operability of necessary support systems (electrical power supplies, cooling water, lubrication, etc.).

**Can/Cannot be determined (</>)**

The current value or status of an identified parameter relative to that specified can/cannot be ascertained using all available indications (direct and indirect, singly or in combination).

**Can/Cannot be maintained above/below (</>)**

The value of the identified parameter(s) is/is not able to be kept above /below specified limits. This determination includes making an evaluation that considers both current and future system performance in relation to the current value and trend of the parameter(s). Neither implies that the parameter must actually exceed the limit before the action is taken nor that the action must be taken before the limit is reached.

**Can/Cannot be restored above/below (</>)**

The value of the identified parameter(s) is/is not able to be returned to above/below specified limits after having passed those limits. This determination includes making an evaluation that considers both current and future systems performances in relation to the current value and trend of the parameter(s). Does not imply any specific time interval but does not permit prolonged operation beyond a limit without taking the specified action.

As applied to loss of electrical power sources (ex.: Power cannot be restored to any vital bus in  $\leq 4$  hrs) the specified power source cannot be returned to service within the specified time. This determination includes making an evaluation that considers both current and future restoration capabilities. Implies that the declaration should be made as soon as the determination is made that the power source cannot be restored within the specified time.

**Close**

To position a valve or damper so as to prevent flow of the process fluid.

To make an electrical connection to supply power.

**Confirm / Confirmation**

To validate, through visual observation or physical inspection, that an assumed condition is as expected or required, without taking action to alter the "as found" configuration.

**Control**

Take action, as necessary, to maintain the value of a specified parameter within applicable limits; to fix or adjust the time, amount, or rate of; to regulate or restrict.

**Decrease**

To become progressively less in size, amount, number, or intensity.

**Discharge**

Removal of a fluid/gas from a volume or system.



**Enter**

To go into.

**Establish**

To perform actions necessary to meet a stated condition. "Establish communication with the Control Room."

**Evacuate**

To remove the contents of; to remove personnel from an area.

**Exceeds**

To go or be beyond a stated or implied limit, measure, or degree.

**Exist**

To have being with respect to understood limitations or conditions.

**Failure**

A state of inability to perform a normal function.

**General Emergency**

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with 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.

**If**

Logic term which indicates that taking the action prescribed is contingent upon the current existence of the stated condition(s). If the identified conditions do not exist, the prescribed action is not to be taken and execution of operator actions must proceed promptly in accordance with subsequent instructions.

**Increase**

To become progressively greater in size, amount, number or intensity.

**Indicate**

To point out or point to; to display the value of a process variable; to be a sign or symbol.

**Initiate**

The act of placing equipment or a system into service, either manually or automatically. Activation of a function or protective feature (i.e. initiate a manual trip).

**Injection**

The act of forcing a fluid into a volume or vessel.

**Inoperable**

Not able to perform it's intended function

**Intrusion**

The act of entering without authorization

**Loss**

Failure of operability or lack of access to.

**Maintain**

Take action, as necessary, to keep the value of the specified parameter within the applicable limits.

**Monitor**

Observe and evaluate at a frequency sufficient to remain apprised of the value, trend, and rate of change of the specified parameter.

**Notify**

To give notice of or report the occurrence of; to make known to; to inform specified personnel; to advise; to communicate; to contact; to relay.

**Open**

To position a valve or damper so as to allow flow of the process fluid.

To break an electrical connection which removes a power supply from an electrical device.

To make available for entry or passage by turning back, removing, or clearing away.

**Operable**

Able to perform it's intended function

**Perform**

To carry out an action; to accomplish; to affect; to reach an objective.

**Primary System**

The pipes, valves, and other equipment which connect directly to the reactor vessel or reactor coolant system such that a reduction in reactor coolant system pressure will effect a decrease in the steam or water being discharged through an unisolated break in the system.

**Remove**

To change the location or position of.

**Report**

To describe as being in a specific state.

**Require**

To demand as necessary or essential.

**Restore**

Take the appropriate action requires to return the value of an identified parameter to within applicable limits.

**Rise**

Describes an increase in a parameter as the result of an operator or automatic action.

**Sample**

To perform an analysis on a specified media to determine its properties.

**Shut down**

To perform operations necessary to cause equipment to cease or suspend operation; to stop. "Shut down unnecessary equipment."

**Site Area Emergency**

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels except near the site boundary.

**Sustained**

Prolonged. Not intermittent or of transitory nature

**Trip**

To de-energize a pump or fan motor; to position a breaker so as to interrupt or prevent the flow of current in the associated circuit; to manually activate a semi-automatic feature.

To take action to cause shutdown of the reactor by rapidly inserting a control rod or control rods (PWR).

**Uncontrolled**

An evolution lacking control but is not the result of operator action.

**Unplanned**

Not as an expected result of deliberate action.

**Until**

Indicates that the associated prescribed action is to proceed only so long as the identified condition does not exist.

**Unusual Event**

Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

**Valid**

Supported or corroborated on a sound basis.

**Vent**

To open an effluent (exhaust) flowpath from an enclosed volume; to reduce pressure in an enclosed volume.

**Verify**

To confirm a condition and take action to establish that condition if required.  
"Verify reactor trip, verify SI pumps running."

## **R. E. Ginna Emergency Action Levels**

Category 1.0	CSFST Status
Category 2.0	Reactor Fuel
Category 3.0	Reactor Coolant System
Category 4.0	Containment
Category 5.0	Radioactivity Release
Category 6.0	Electrical Failures
Category 7.0	Equipment Failures
Category 8.0	Hazards
Category 9.0	Other

3/23/94

**Category 1.0  
CSFST Status**

**1.0 CSFST Status**

**1.1 Subcriticality**

**1.1.1 Alert**

ORANGE or RED path F-0.1 SUBCRITICALITY  
AND

Emergency boration is required

*Power Operations, Hot Shutdown*

**1.1.2 Site Area Emergency**

RED path in F-0.1 SUBCRITICALITY  
AND either:

Emergency boration is inoperable

OR

Power range not < 5% within 15 min. of initiation of  
emergency boration

*Power Operations, Hot Shutdown*

**1.0 CSFST Status**

**1.2 Core Cooling**

**1.2.1 Site Area Emergency**

ORANGE or RED path in F-0.2, CORE COOLING

*Power Operations, Hot Shutdown*

**1.2.2 General Emergency**

RED path in F-0.2, CORE COOLING  
AND

Functional restoration procedures not effective within  
15 min.

*Power Operations, Hot Shutdown*

**Category 1.0**  
**CSFST Status**

**1.0 CSFST Status**

**1.3 Heat Sink**

**1.3.1 Site Area Emergency**

RED path in F-0.3, HEAT SINK

*Power Operations, Hot Shutdown*

**1.3.2 General Emergency**

RED path in F-0.3, HEAT SINK

AND

RED path in F-0.1, SUBCRITICALITY

*Power Operations*

**1.0 CSFST Status**

**1.4 Integrity**

**1.4.1 Alert**

RED path on F-0.4, INTEGRITY

*Power Operations, Hot Shutdown*



**Category 1.0**  
**CSFST Status**

**1.0 CSFST Status**

**1.5 Containment**

**1.5.1 General Emergency**

RED path F-0.5, CONTAINMENT

*Power Operations, Hot Shutdown*

**Category 2.0  
Reactor Fuel**

**2.0 Reactor Fuel**

**2.1 Coolant Activity**

**2.1.1 Unusual Event**

Coolant sample activity:

**>100% of 84/E bar  $\mu\text{Ci/cc}$  total specific activity**

**OR**

**> 0.2  $\mu\text{Ci/cc}$  I-131 equivalent and the conditions of  
Technical Specifications 3.1.4.3.b are exceeded**

*All*

**2.1.2 Alert**

**Coolant activity > 300  $\mu\text{Ci/cc}$  I-131 equivalent**

*Power operation, hot shutdown*

**2.0 Reactor Fuel**

**2.2 Failed Fuel Detectors**

**2.2.1 Unusual Event**

**Letdown Line Monitor R-9 > 2 R/hr**

*All*

**2.2.2 Alert**

**Letdown Line Monitor R-9 > 10 R/hr**

*Power operation, hot shutdown*

**2.2.3 Site Area Emergency**

**Letdown Line Monitor R-9 > 10 R/hr and any of the  
following:**

- **RED path on F-0.4, INTEGRITY**
- **Primary system leakage > 46 gpm**
- **RCS subcooling < EOP Fig. MIN SUBCOOLING**

*Power operation, hot shutdown*



**Category 2.0**  
**Reactor Fuel**

**2.0 Reactor Fuel**

**2.3 Containment Radiation**

**2.3.1 Alert**

Containment radiation monitor R-29/R-30 reading > 10 R/hr

*Power operation, hot shutdown*

**2.3.2 Site Area Emergency**

Containment radiation monitor R-29/R-30 reading > 100 R/hr

*Power operation, hot shutdown*

**2.3.3 General Emergency**

Containment radiation monitor R-29/R-30 reading > 1000 R/hr

*Power operation, hot shutdown*

**2.0 Reactor Fuel**

**2.4 Refueling Accidents or Other Radiation Monitors**

**2.4.1 Unusual Event**

Spent fuel pool (reactor cavity during refueling) water level cannot be restored and maintained above the spent fuel pool low water level alarm setpoint

*All*

**2.4.2 Alert**

Confirmed sustained alarm on any of the following radiation monitors resulting from an uncontrolled fuel handling process:

- R-2 Containment Area Monitor
- R-5 Spent Fuel Pit
- R-12 Containment Noble Gas

*All*

**2.4.3 Alert**

Report of visual observation of irradiated fuel uncovered

*All*

**Category 3.0**  
**Reactor Coolant System**

**3.0 Reactor Coolant System**

**3.1 RCS Leakage**

**3.1.1 Unusual Event**

Unidentified or pressure boundary leakage > 10 gpm

OR

Identified leakage > 25 gpm

*Power operation, hot shutdown*

**3.1.2 Alert**

Primary system leakage > 46 gpm

*Power operation, hot shutdown*

**3.1.3 Site Area Emergency**

RVLIS cannot be maintained > 43% 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 uncover is likely

*All*

**3.0 Reactor Coolant System**

**3.2 Primary to Secondary Leakage**

**3.2.1 Unusual Event**

Release of secondary side to atmosphere with primary to secondary leakage > 0.1 gpm per steam generator

*Power operation, hot shutdown*

**3.2.2 Site Area Emergency**

Unisolable release of secondary side to atmosphere with primary to secondary leakage > 46 gpm

*Power operation, hot shutdown*

**Category 3.0**  
**Reactor Coolant System**

**3.0 Reactor Coolant System**

**3.3 RCS Subcooling**

**3.3.1 Alert**

RCS subcooling < EOP Fig. MIN SUBCOOLING

*Power operation, hot shutdown*

**Category 4.0  
Containment**

**4.0 Containment**

**4.1 Containment Integrity Status**

**4.1.1 Unusual Event**

Both doors open on containment airlock

OR

Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment

*Power operation, hot shutdown*

**4.1.2 Site Area Emergency**

Rapid uncontrolled decrease in containment pressure following initial increase

OR

Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions

*Power operation, hot shutdown*

**4.0 Containment**

**4.1 Containment Integrity Status**

**4.1.3 Site Area Emergency**

Either:

CI or CVI valve(s) not closed when required following confirmed LOCA

OR

Inability to isolate any primary system discharging outside containment

AND

Radiological release pathway to the environment exists

*Power operation, hot shutdown*

**4.1.4 General Emergency**

Safety injection signal due to LOCA with less than minimum operable containment heat removal equipment, Table 4.3

AND

Any indicators of fuel clad loss, Table 4.1

*Power operation, hot shutdown*

**Category 4.0  
Containment**

**4.0 Containment**

**4.1 Containment Integrity Status**

**4.1.5 General Emergency**

Either:

Rapid uncontrolled decrease in containment pressure following initial increase

OR

Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions

AND

Any indicators of fuel clad damage, Table 4.2

*Power operation, hot shutdown*

**4.1.6 General Emergency**

Either:

CI or CVI valve(s) not closed when required following confirmed LOCA

OR

Inability to isolate any primary system discharging outside containment

AND

Radiological release pathway to the environment exists

AND

Any indicators of fuel clad damage, Table 4.2

*Power operation, hot shutdown*

**4.0 Containment**

**4.2 SG Tube Rupture w/ Secondary Release**

**4.2.1 Site Area Emergency**

Unisolable secondary side line break with SG tube rupture as identified in E-3 "Steam Generator Tube Rupture"

*Power operation, hot shutdown*

**4.2.2 General Emergency**

Release of secondary side to atmosphere with primary to secondary leakage > 0.1 gpm per steam generator

AND

Any indicators of fuel clad damage, Table 4.2

*Power operation, hot shutdown*



**Category 4.0  
Containment**

**4.0 Containment**

**4.3 Combustible Gas Concentrations**

**4.3.1 General Emergency**

≥ 4% hydrogen concentration in containment

*Power operation, hot shutdown*

**Table 4.1 Fuel Clad Loss Indicators**

1. Coolant activity > 300  $\mu\text{Ci/cc}$  of I-131
2. Containment rad monitor R-29/R-30 reading > 100 R/hr
3. Letdown Monitor R-9 reading > 10 R/hr

**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
- Coolant activity > 300  $\mu\text{Ci/cc}$  of I-131
- Containment rad monitor R-29/R-30 reading > 100 R/hr
- Letdown Monitor R-9 reading > 10 R/hr

**Table 4.3 Minimum Operable Containment Heat Removal Equipment**

CNMT Pressure	Recirc Fans Operable	Spray Pumps Required
<28 psig	2	N/A
≥28 psig	2 2	1 2

**Category 5.0**  
**Radioactivity Release**

**5.0 Radioactivity Release / Area Radiation**

**5.1 Effluent Monitors**

**5.1.1 Unusual Event**

A valid reading on any monitors Table 5.1 column  
"NUE" for > 60 min.

*All*

**5.1.2 Alert**

A valid reading on any monitors Table 5.1 column  
"Alert" for > 15 min.

*All*

**5.1.3 Site Area Emergency**

A valid reading on any monitors Table 5.1 column  
"SAE" for > 15 min.

*All*

**5.1.4 General Emergency**

A valid reading on any monitors Table 5.1 column  
"GE" for > 15 min.

*All*

**5.0 Radioactivity Release / Area Radiation**

**5.2 Dose Projections/ Environmental  
Measurements/ Release Rates**

**5.2.1 Unusual Event**

Confirmed sample analyses for gaseous or liquid  
release rates > 2 x technical specifications limits for >  
60 min.

*All*

**5.2.2 Alert**

Confirmed sample analyses for gaseous or liquid  
release rates > 200 x technical specifications limits for  
> 15 min.

*All*

**5.2.3 Alert**

Dose projections or field surveys which indicate doses /  
dose rates > Table 5.2 column "Alert" at the site  
boundary or beyond.

*All*

**Category 5.0**  
**Radioactivity Release**

**5.0 Radioactivity Release / Area Radiation**

**5.2 Dose Projections/ Environmental Measurements/ Release Rates**

**5.2.4 Site Area Emergency**

Dose projections or field surveys which indicate doses / dose rates > Table 5.2 column "SAE" at the site boundary or beyond.

*All*

**5.2.5 General Emergency**

Dose projections or field surveys which indicate doses / dose rates > Table 5.2 column "GE" at the site boundary or beyond.

*All*

**5.0 Radioactivity Release / Area Radiation**

**5.3 Area Radiation Levels**

**5.3.1 Unusual Event**

Any sustained direct ARM readings > 100 x alarm or offscale hi resulting from an uncontrolled process

*All*

**5.3.2 Alert**

Sustained area radiation levels > 15 mR/hr in either:  
Control Room  
OR  
Central Alarm Station and Secondary Alarm Station

*All*

**5.3.3 Alert**

Sustained abnormal area radiation levels > 8 R/hr within any areas, Table 5.3  
AND  
Access is required for safe operation or shutdown

*All*

**Category 5.0**  
**Radioactivity Release**

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	NUE	Alert	SAE	GE
R-11	1.62E6 cpm	N/A	N/A	N/A
R-12	7.80E6 cpm	1.07E7 cpm	N/A	N/A
R-13	2.20E4 cpm	N/A	N/A	N/A
R-14	6.40E5 cpm	1.61E6 cpm	N/A	N/A
R-15	4.00E5 cpm	2.31E7 cpm	N/A	N/A
R-18	3.60E5 cpm	offscale hi	N/A	N/A
R-12A(7/9)	N/A	N/A	6.00 $\mu\text{Ci/cc}$	60.00 $\mu\text{Ci/cc}$
R-14A(7/9)	N/A	N/A	5.33E-1 $\mu\text{Ci/cc}$	5.33 $\mu\text{Ci/cc}$
R-15A(7/9)	N/A	N/A	11.50 $\mu\text{Ci/cc}$	115.00 $\mu\text{Ci/cc}$

Table 5.2 Dose Projection / Env. Measurement Classification Thresholds			
	Alert	SAE	GE
TEDE	10 mR	100 mR	1000 mR
CDE Thyroid	N/A	500 mR	5000 mR
TEDE rate	10 mR/hr	100 mR/hr	1000 mR/hr
CDE Thyroid rate	N/A	500 mR/hr	5000 mR/hr

**Category 6.0**  
**Electrical Failures**

**6.0 Electrical Failures**

**6.1 Loss of AC Power Sources**

**6.1.1 Unusual Event**

Loss of ability to supply power to the safeguard buses from offsite circuits 751 and 767 for > 15 min.

*All*

**6.1.2 Alert**

Loss of all safeguards bus AC power for > 15 min.

*Cold Shutdown, Refueling, Defueled*

**6.1.3 Alert**

Available safeguard train AC power reduced to only one of the following for > 15 min.:

- EDG 1A (14/18)
- EDG 1B (16/17)
- Station Auxiliary Transformer 12A
- Station Auxiliary Transformer 12B

*Power operation, hot shutdown*

**6.0 Electrical Failures**

**6.1 Loss of AC Power Sources**

**6.1.4 Site Area Emergency**

Loss of all safeguards bus AC power for > 15 min.

*Power operation, hot shutdown*

**6.1.5 General Emergency**

Loss of all safeguards bus AC power

AND either:

Power cannot be restored to any safeguards bus in  
≤ 4 hrs

OR

ORANGE or RED path on F-0.2, "CORE  
COOLING"

*Power operation, hot shutdown*

**Category 6.0**  
**Electrical Failures**

**6.0 Electrical Failures**

**6.2 Loss of DC Power Sources**

**6.2.1 Unusual Event**

< 105 vdc bus voltage indications on 125 vdc batteries  
1A and 1B for > 15 min.

*Cold Shutdown, Refueling*

**6.2.2 Site Area Emergency**

> 105 vdc bus voltage indications on 125 vdc batteries  
1A and 1B for > 15 min.

*Power operation, hot shutdown*

**Category 7.0**  
**Equipment Failures**

**7.0 Equipment Failures**

**7.1 Technical Specification\Requirements**

**7.1.1 Unusual Event**

Plant is not brought to required operating mode within  
Technical Specifications LCO Action Statement Time.

*Power operation, hot shutdown*

**7.0 Equipment Failures**

**7.2 System Failures or Control Room  
Evacuation**

**7.2.1 Unusual Event**

Report of main turbine failure resulting in casing  
penetration or damage to turbine seals or generator  
seals.

*Power Operations*

**7.2.2 Alert**

Turbine failure generated missiles result in any visible  
structural damage to plant vital equipment

*Power Operations, Hot Shutdown*

**7.2.3 Alert**

Control Room evacuation

*All*

**7.2.4 Alert**

Reactor coolant temperature cannot be maintained <  
200 °F

*Cold Shutdown, Refueling*

**Category 7.0**  
**Equipment Failures**

**7.0 Equipment Failures**

**7.2 System Failures or Control Room  
Evacuation**

**7.2.5 Site Area Emergency**

Control Room evacuation

AND

Core cooling cannot be established per AP-CR.1  
"Control Room Inaccessibility" in  $\leq 20$  min.

*All*

**7.0 Equipment Failures**

**7.3 Loss of Indications /Alarms /  
Communication Capability**

**7.3.1 Unusual Event**

Unplanned loss of annunciators or indications on any  
Control Room Panels, Table 7.3 for  $> 15$  min.

AND

Increased surveillance is required for safe plant  
operation

*Power operation, hot shutdown*

**7.3.2 Unusual Event**

Loss of all communications capability affecting the  
ability to either:

Perform routine operations

OR

Notify offsite agencies or personnel

*All*



**Category 7.0**  
**Equipment Failures**

**7.0 Equipment Failures**

**7.3 Loss of Indications /Alarms /  
Communication Capability**

**7.3.3 Alert**

Unplanned loss of annunciators or indications on any  
Control Room Panels, Table 7.3 for > 15 min.

AND

Increased surveillance is required for safe plant  
operation

AND either:

A plant transient in progress

OR

PPCS and SAS are unavailable

*Power operation, hot shutdown*

**7.3.4 Site Area Emergency**

Loss of annunciators or indications on any Control  
Room Panels, Table 7.3

AND

Complete loss of ability to monitor all critical safety  
function status

AND

A plant transient in progress

*Power operation, hot shutdown*

Table 7.3 Vital Control Room Panels							
A	AA	B	C	D	E	F	G

**Category 8.0  
Hazards**

**8.0 Hazards**

**8.1 Security Threats**

**8.1.1 Unusual Event**

Bomb device or other indication of attempted sabotage discovered within plant Protected Area.

*All*

**8.1.2 Alert**

Intrusion into plant Protected Area by an adversary.

*All*

**8.1.3 Site Area Emergency**

Intrusion into a plant security vital area by an adversary.

*All*

**8.1.4 General Emergency**

Security event which results in:

Loss of plant control from the Control Room

AND

Loss of remote shutdown capability

*All*

**8.0 Hazards**

**8.2 Fire or Explosion**

**8.2.1 Unusual Event**

Confirmed fire in any plant area, Table 8.2 or Table 8.3 not extinguished in  $\leq 15$  min. of Control Room notification:

*All*

**8.2.2 Alert**

Fire or explosion in any plant area, Table 8.2 or 8.3 which results in damage to plant equipment or structures needed for safe plant operation

*All*

**Category 8.0  
Hazards**

**8.0 Hazards**

**8.3 Man-Made Events**

**8.3.1 Unusual Event**

Vehicle crash into or projectile which impacts plant structures or systems within Protected Area boundary

*All*

**8.3.2 Unusual Event**

Report by plant personnel of an explosion within Protected Area boundary resulting in visible damage to permanent structures or equipment

*All*

**8.3.3 Unusual Event**

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

*All*

**8.0 Hazards**

**8.3 Man-Made Events**

**8.3.4 Alert**

Vehicle crash or projectile impact which precludes personnel access to or damages equipment in plant vital areas, Table 8.3

*All*

**8.3.5 Alert**

Report or detection of toxic or flammable gases within a plant area, Table 8.3, in concentrations that will be life threatening to plant personnel or preclude access to equipment needed for safe plant operation

*All*



**Category 8.0  
Hazards**

**8.0 Hazards**

**8.4 Natural Events**

**8.4.1 Unusual Event**

Earthquake felt inplant by any operator  
AND

Confirmation of earthquake of an intensity  $> 0.01$  g  
per SC-5 "Earthquake Emergency Plan".

*All*

**8.4.2 Unusual Event**

Report by plant personnel of tornado within plant  
Protected Area boundary

*All*

**8.4.3 Unusual Event**

Assessment by Control Room personnel that a natural  
event has occurred precluding access to a plant vital  
area, Table 8.3

*All*

**8.0 Hazards**

**8.4 Natural Events**

**8.4.4 Unusual Event**

Deer Creek flooding over entrance road bridge  
OR

Lake level  $> 252$  ft

OR

Screen House Suction Bay water level  $< 15$  ft (low-low  
level alarm)

*All*

**8.4.5 Alert**

Earthquake felt inplant by any plant operations  
personnel

AND

Confirmation of earthquake of an intensity  $> 0.08$  g  
per SC-5 "Earthquake Emergency Plan"

*All*

**8.4.6 Alert**

Sustained winds  $> 75$  mph

OR

Tornado strikes a plant vital area, Table 8.3

*All*

**Category 8.0  
Hazards**

**8.0 Hazards**

**8.4 Natural Events**

**8.4.7 Alert**

Assessment by the Control Room personnel that a natural event has resulted in damage to equipment needed for safe plant operation, Table 8.3

*All*

**8.4.8 Alert**

Flood water accumulating on screen house operating floor

OR

Lake level > 253 ft

OR

Screen House Suction Bay water level < 13 ft

*All*

**Table 8.2 Plant Areas**

- Turbine Building
- TSC
- Service Building
- Contaminated Storage Building

**Table 8.3 Plant Vital Areas**

- Control Building
- Reactor Containment Building
- Auxiliary Building
- Intermediate Building
- Emergency Diesel Building
- Standby Auxiliary Feedwater Building
- Screen House

of the  
of the  
of the

Handbook of

**Category 9.0**  
**Other**

**9.0 Other**

**9.1.1 Unusual Event**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead to or has led to a potential degradation of the level of safety of the plant.

*All*

**9.1.2 Unusual Event**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead to or has led to a loss or potential loss of containment.

*Power operation, hot shutdown*

**9.1.3 Alert**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could cause or has caused actual substantial degradation of the level of safety of the plant.

*All*

**9.0 Other**

**9.1.4 Alert**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to a loss or potential loss of either fuel clad or RCS barrier.

*Power operation, hot shutdown*

**9.1.5 Site Area Emergency**

As determined by the Shift Supervisor or Emergency Coordinator, 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.

*All*

**9.1.6 Site Area Emergency**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to either:

Loss or potential loss of both fuel clad and RCS barrier

OR

Loss or potential loss of either fuel clad or RCS barrier in conjunction with a loss of containment

*Power operation, hot shutdown*



## **9.0 Other**

### **9.1.7 General Emergency**

As determined by the Shift Supervisor or Emergency Coordinator, 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.

*All*

### **9.1.8 General Emergency**

Any event, as determined by the Shift Supervisor or Emergency Coordinator, that could lead or has led to a loss of any two fission product barriers and loss or potential loss of the third.

*Power operation, hot shutdown*

