Candidate ASP events (cASP)
Pilot Screening Criteria
Draft 2, April 25, 2013

In an effort to make the identification of candidate ASP events as consistent as possible, it is recommended that existing requirements for reporting and existing related screening criteria or studies be utilized to the extent possible. Screening criteria will be evaluated by both the NRC and the INL during the process, and should be adjusted as necessary if it is determined that the screening criteria are either too broad or too narrow. A screening pilot program will be completed before the criteria is finalized and documented. To support this objective, the following list and attachments represent the initial criteria for screening candidate ASP (cASP) events for further evaluation. Events which do not meet one of these criteria are by default not recommended and no further justification will be made. The LER number and criteria number will be identified in the weekly report for any event that is screened-in as a cASP.

Criteria for identification of Candidate ASP (cASP) events

1. Unplanned scrams with complications – Any unplanned scram with a complication that results in a yes to any question per NEI 99-02 Rev. 6 and Attachment 1.

PWR

a. Did two or more control rods fail to fully insert?
b. Did the turbine fail to trip?
c. Was power lost to any ESF bus?
d. Was a Safety Injection signal received?
e. Was Main Feedwater unavailable or not recoverable using approved plant procedures following the scram?
f. Was the scram response procedure unable to be completed without entering another EOP?

BWR

g. Did an RPS actuation fail to indicate/establish a shutdown rod pattern for a cold clean core?
h. Was pressure control unable to be established following initial transient?
i. Was power lost to any Class 1E Emergency/ESF bus?
j. Was a Level 1 Injection signal received?
k. Was Main Feedwater unavailable or not recoverable using approved plant procedures following the scram?
l. Following initial transient did stabilization of reactor pressure/level and drywell pressure meet the entry conditions for EOPs?

2. Core damage initiators – Reactor scrams with either the initial plant fault or a functional impact in one of the following categories from NUREG/CR-5750 definitions and Attachment 2.

a. Loss of Offsite Power (LOOP), Partial LOOP (include shutdown events)
b. Loss of Safety Related Bus
c. Loss of Instrument Air (LOIA) include Loss of Control Air
d. Loss of Safety-Related Cooling Water (Service Water or Component Cooling Water)
e. Steam Generator Tube Rupture (SGTR)
f. Loss of Coolant Accidents (LOCA) include Interfacing System LOCA (ISLOCA)

g. High Energy Line Break (HELB)
h. Loss of Condenser Heat Sink (LOCHS)
i. Loss of Main Feedwater (LOMFW)

3. Safety System Functional Failures – Events which qualify as Safety System Functional Failures per NEI 99-02 Rev. 6 and Attachment 3 under 10 CFR 50.73(a)(2)(v) for the listed systems.

    a. Reactor Trip system,
    b. Auxiliary Feedwater, Main Feedwater, Emergency Feedwater
    c. Essential Service Water
    d. Emergency Core Cooling Systems,
        High Pressure Coolant Injection (HPCI)
        Low Pressure Coolant Injection (LPCI)
        High Pressure Core Spray (HPCS)
        Low Pressure Core Spray (LPCS)
        Residual Heat Removal (RHR)
        Decay Heat Removal (DHR)
        Automatic Depressurization System (ADS)
        Isolation Condenser (IC)
        Reactor Core Isolation Cooling (RCIC)

    e. Emergency AC and DC power systems,
    f. Ultimate Heat Sink
    g. Other systems with safety-related Systems, Structures & Components (SSCs) required by the Technical Specifications to be operable that are intended to mitigate the consequences of an accident as discussed in Chapters 6 and 15 of the Final Safety Analysis Report (or equivalent chapters)
    h. Any event where safety-related components were not available or failed to function as required which may or may not have failed the train or system. Single independent (i.e. random) component failures are not LER reportable if the redundant component in the same system did or would have fulfilled the safety function but should be cASP screened-in if identified in the event report. (Attachment 3, NUREG 1022 (11) Single Failures and 50.73(a) (2) (vi)).

Inoperability of containment isolation, secondary containment, control room ventilation, hydrogen control, containment spray or containment fan coolers will not be recommended. Screened-in cASP events are related to the risk of core damage as depicted by a level 1 PRA and not releases associated with a level 2 PRA.

4. Risk significant events based on a PRA analysis – Events in which the licensee indicates the conditional core damage probability was ≥ 1E-8.

5. Any event that, based on the reviewers' experience, could have resulted in potential core damage. The reviewer should document justification as a footnote in the weekly report.