

Radiological sabotage at a licensed nuclear power plant is defined as any deliberate act directed against a licensed nuclear power plant or against the structures, systems, or components of such a plant which could directly or indirectly endanger the public health and safety by exposure to radiation.

Licensed nuclear power plant safeguards systems will protect against design basis threat acts of radiological sabotage.

73.55(a) Security program performance criteria are:

- (1) High assurance of no release in excess of EPA-PAGs as defined in General Emergency (described in 10 CFR 50 Appendix E (NUREG 0654)).**
- (2) Protection of structures, systems, and components to counter a malevolent act that could cause conditions that would exceed Site Area Emergency (described in 10 CFR 50 Appendix E (NUREG 0654)).**
- (3) No single act prevents security or operational response.**
- (4) Upon positive indication of malevolent action against the facility, the plant will be placed in a condition that will minimize opportunities for operator errors and maximize the methods and means of providing core heat removal and containment functions.**
- (5) Continuously maintaining on site Security Force Members capable of successfully interdicting, with high assurance, an adversary force with the capabilities of the Design Basis Threat through:**
 - (i) Gaining advantage by use of protected defensive fighting positions;**
 - (ii) Timely positioning of Security Force Members such that they are fully prepared to interdict the adversary;**
 - (iii) Responding in sufficient and convincing numbers; and**
 - (iv) Security Force Members being appropriately armed, trained, and equipped for self-survival and defeat of adversaries.**
 - (v) ...**

Radiological sabotage at a licensed nuclear power plant is defined as any deliberate, malevolent act directed against the plant which endangers the public health and safety by exposure to radiation.

Specifically for a licensed nuclear power plant, this means that safeguards performance criteria are established to protect against design basis threat acts of radiological sabotage.

These program performance criteria are:

- (1) *High assurance of no release in excess of EPA-PAGs as defined in General Emergency (described in 10 CFR Part 50 Appendix E (NUREG 0654)).***
- (2) *Protection of structures, systems, and components to counter a malevolent act that could cause conditions that would exceed Site Area Emergency (described in 10 CFR Part 50 Appendix E (NUREG 0654)).***
- (3) *The security system is adequately redundant and diverse to ensure that no single act prevents an integrated plant response.***
- (4) *Commensurate with positive verification of malevolent action against the facility, the plant will be maintained and/or placed in a safe condition.***
- (5) *An on site security force capable of protecting against the design basis threat by means of a sufficient number of personnel in protected positions, appropriately armed, trained, and equipped, in place in time.***

NEI

**Analysis of Radiological Sabotage
Against Objectives
January 21, 2000**

Objectives	Part 100 Release	General Emergency
1. POWER REACTOR SPECIFIC	Yes for both—However there is concern that the term radiological sabotage used in other parts of the rule may have to be defined for the specific set of circumstances that exist for that part of regulations.	
2. MARGIN/SAFETY:	No for both—Each definition is trying to define the ultimate safety goal, not the margin needed for uncertainty or regulatory comfort. The intent is to define the limit against which security requirements are tested to provide the needed assurance that you do not exceed this limiting condition.	
■ NET IMPACT ON SAFETY (SAFETY/SAFETY Guards INTERFACE)	There is no difference in the safety impact of these two positions.	
■ DEFENSE IN DEPTH	No to both—Defense in depth should be used to support meeting this goal, not as the goal itself. This allows a better determination of the risks involved.	
■ PROTECTS PUBLIC	Yes—Plant siting criteria	Yes—evacuation criteria
■ CONSERVATIVE	Yes to both—Plant design provides a high level of redundancy and is based on conservative assumptions. Taking advantage of the general plant design criteria provides a conservative margin.	
■ UNACCEPTABLE RELEASE	Defines unacceptable release in the same terms that are used for the design of the rest of the plant. This is a well tested and accepted criteria.	Defines unacceptable release in terms of EPA requirements. But uses a secondary standard.
3. OUTCOMES MEET GOALS:	Yes.	No.

■ MAINTAINS PUBLIC CONFIDENCE	Links security to the rest of the plant with confidence provided by the overall plant operations and regulatory scheme.	Links to a little understood set of criteria developed to react to conditions outside plant design. Will require additional public interaction to explain what is meant.
4. USABLE:	Yes	Not sure—would need much more detailed analysis.
■ CLEAR AND PRAGMATIC	Very specific and provides a basis for linking to other areas.	Has not had the detailed analysis that is needed.
■ ENDURING (INDEPENDENT OF DB THREAT)	Yes, both enduring and independent	Is independent of the DBT. Is not enduring since its linkage is to criteria in the EP arena that have changed several times. Makes direct evaluation more difficult.
■ MEASURABLE AND OBJECTIVE	Yes, provides a clear single limit against which a variety of security situations can be measured for their potential to cause public injury	No, linked to analysis done for a different reason. Most of the work does not consider security events. EALS related to security are vague and a poor planning tool.
■ CONSISTENT (REGULATIONS AND CORNERSTONES)	Yes, used in a number of the cornerstones	No, a singular unique criteria from only one of the cornerstones.