

## **3.0 Nonsystem Based Design Descriptions and ITAAC**

### **3.1 Security**

#### **3.1.1 Design Features**

The physical security system provides physical features to detect, delay, assist response to, and defend against the design basis threat (DBT) for radiological sabotage:

1. Vital equipment is located within a vital area.
2. Access to vital equipment requires passage through at least two physical barriers.
3. The central alarm station and main control room are vital areas.
4. The locks used for protection of the vital areas are manipulative-resistant.
5. Physical barriers for protected area perimeter not part of vital area barrier.
6. Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area which permits observation on either side of the barrier.
7. The intrusion detection system detects penetration or attempted penetration of the protected area barrier.
8. Exterior areas within the protected area are illuminated to levels necessary to permit observation and detection.
9. The external walls, doors, ceiling and floors in the main control room, central alarm station, and the last access control function for access to the protected area are bullet resistant.
10. Vehicle control measures are in place which includes vehicle barrier systems to protect against malevolent use of a land vehicle.
11. Access points are used to control personnel and vehicle access into protected area including detection of firearms, explosives, and incendiary.
12. The site will authorize protected area access using a security access control system.
13. Unoccupied vital areas are equipped with locks that can be locked and alarmed with activated intrusion detection systems that annunciate in the central and secondary alarm stations upon intrusion into a vital area.

14. Alarm annunciation occurs in the central alarm station and in at least one other continuously manned station not necessarily onsite.
15. The secondary security power supply system for alarm annunciator equipment and nonportable communications equipment is located within a vital area.
16. Alarm devices include tamper indicating and self-checking capability (e.g., an automatic indication is provided when failure of the alarm system component or connectivity occurs, or when the system is on standby power).
17. The security alarm system will record each onsite alarm annunciation including the location of each alarm, false alarm, alarm check, and tamper indication to include the type of alarm, location, alarm circuit, date, and time.
18. Emergency exits from the protected area and from vital areas are alarmed.
19. Alarm stations have conventional telephone service and other means for communication with law enforcement authorities.
20. Alarm stations have capability for continuous communication capability with security personnel.

### 3.1.2

#### **Inspections, Tests, Analyses, and Acceptance Criteria**

Certain documentation of security features will be safeguards information (SGI) which has restricted availability under 10 CFR 73.21. The phrase “a report exists and concludes” is used in security-related ITAAC to indicate that a non-SGI executive summary with the applicable conclusions exists and will be part of the ITAAC closure. This executive summary is supported by a separate SGI document which contains the salient details leading to the conclusions of the executive summary.

Table 3.1-1—Inspections, Tests, Analyses, and Acceptance Criteria specifies the inspections, tests, analyses, and acceptance criteria for the physical security system.

**Table 3.1-1—Inspections, Tests, Analyses, and Acceptance Criteria (4 Sheets)**

	<b>Commitment</b>	<b>Inspections, Tests, and Analysis</b>	<b>Acceptance Criteria</b>
1	Vital equipment is located within a vital area.	Test, inspect, or perform a combination of tests or inspections of the location of equipment listed in the vital equipment list.	A report exists and concludes that the listed vital equipment is located within a vital area.
2	Access to vital equipment requires passage through at least two physical barriers.	Test, inspect, or perform a combination of tests or inspections of the access to equipment listed in the vital equipment list.	A report exists and concludes that the listed vital equipment is located such that access to the as-built vital equipment requires passage through at least two physical barriers meeting performance requirements.
3	The central alarm station and main control room are vital areas.	Test, inspect, or perform a combination of tests or inspections of the central alarm station and main control room.	A report exists and concludes that the central alarm station and main control room are located within a vital area.
4	The locks used for protection of the vital areas are manipulative-resistant.	Perform a type test, analysis or a combination of type test and analysis of the locks used for the protection of the vital areas.	A report exists and concludes that the locks used for the protection of the vital areas are manipulative resistant.
5	Physical barriers for protected area perimeter not part of vital area barrier.	Test, inspect, or perform a combination of tests or inspections of the vital areas.	A report exists and concludes that physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area physical barrier.
6	Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area which permits observation on either side of the barrier.	Test, inspect, or perform a combination of tests or inspections of the isolation zones adjacent to the perimeter of the protected area.	A report exists and concludes that isolation zones adjacent to the perimeter of the protected area and are at least as large as specified in the Physical Security Plan

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	<b>Commitment</b>	<b>Inspections, Tests, and Analysis</b>	<b>Acceptance Criteria</b>
7	The intrusion detection system detects penetration or attempted penetration of the protected area barrier.	Perform a type test, analysis or a combination of type test and analysis of the intrusion detection system and security alarm system.	A report exists and concludes the intrusion detection system performs within design criteria for penetration or attempted penetration into the protected area barrier or the vital area portals and annunciates in the central and secondary alarm stations.
8	Exterior areas within the protected area are illuminated to levels necessary to permit observation and detection.	Perform a type test, analysis or a combination of type test and analysis of the security lighting system.	A report exists and concludes the illumination in the exterior portion of the protected area is sufficient to permit observation and detection per design.
9	The external walls, doors, ceiling and floors in the main control room, central alarm station, and the last access control function for access to the protected area are bullet resistant.	Perform a type test, analysis or a combination of type test and analysis of the systems of the external walls, doors, ceilings, floors, and windows in the walls in the main control room and central alarm station.	A report exists and concludes that the bullet resistance features installed for the main control room and central alarm station are bullet resistant to a UL level 4 round.
10	Vehicle control measures are in place which includes vehicle barrier systems to protect against malevolent use of a land vehicle.	Perform a type test, analysis or a combination of type test and analysis of the vehicle barrier system.	A report exists and concludes that the vehicle barrier meets or exceeds the design stand-off distance.
11	Access points are used to control personnel and vehicle access into protected area including detection of firearms, explosives, and incendiary.	Perform a type test, analysis or a combination of type test and analysis of the security access control system.	A report exists and concludes one or more access control points to the protected area are established with equipment installed which meets or exceeds Physical Security Plan requirements for detection of firearms,

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	<b>Commitment</b>	<b>Inspections, Tests, and Analysis</b>	<b>Acceptance Criteria</b>
			incendiary devices, and explosives.
12	The site will authorize protected area access using a security access control system.	Perform a type test, analysis or a combination of type test and analysis of the security access control system.	A report exists and concludes the access control system can identify and authorize personnel entering the protected area.
13	Unoccupied vital areas are equipped with locks that can be locked and alarmed with activated intrusion detection systems that annunciate in the central and secondary alarm stations upon intrusion into a vital area.	Test, inspect, or perform a combination of tests or inspections of the unoccupied vital areas.	A report exists and concludes that unoccupied vital areas can be locked and that intrusion can be detected and annunciated in both the central alarm station and secondary alarm station.
14	Alarm annunciation occurs in the central alarm station and in at least one other continuously manned station not necessarily onsite.	Perform a type test, analysis or a combination of type test and analysis of the alarm devices required by the security alarms system description to alarm in the central and secondary alarm stations.	A report exists and concludes that the listed alarm devices annunciate in the central and secondary alarm stations.
15	The secondary security power supply system for alarm annunciator equipment and nonportable communications equipment is located within a vital area.	Test, inspect, or perform a combination of tests or inspections of the secondary security power supply equipment	A report exists and concludes that the secondary security power equipment is located within a vital area.
16	Alarm devices include tamper indicating and self-checking capability (e.g., an automatic indication is provided when failure of the alarm system component or connectivity occurs, or when the system is on standby	Perform a type test, analysis or a combination of type test and analysis of the alarm devices listed as requiring central and secondary alarm station annunciation in security alarm system description.	A report exists and concludes that listed alarm devices provide tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system component or connectivity occurs, or when

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	<b>Commitment</b>	<b>Inspections, Tests, and Analysis</b>	<b>Acceptance Criteria</b>
	power).		the system is on standby power.)
17	The security alarm system will record each onsite alarm annunciation including the location of each alarm, false alarm, alarm check, and tamper indication to include the type of alarm, location, alarm circuit, date, and time.	Perform a type test, analysis or a combination of type test and analysis of the alarm devices listed as requiring central and secondary alarm station annunciation in security alarm system description.	A report exists and concludes that the alarm system is capable of recording each onsite alarm annunciation including the location of each alarm, false alarm, alarm check, and tamper indication to include the type of alarm, location, alarm circuit, date, and time.
18	Emergency exits from the protected area and from vital areas are alarmed.	Perform a type test, analysis or a combination of type test and analysis of the emergency exits within the vital areas and protected area.	A report exists and concludes that emergency exits from the protected areas and from vital areas are alarmed
19	Alarm stations have conventional telephone service and other means for communication with law enforcement authorities.	Perform a type test, analysis or a combination of type test and analysis of the security communication system.	A report exists and concludes the central and secondary alarm stations have communication capabilities with local law enforcement authorities listed in the Physical Security Plan.
20	Alarm stations have capability for continuous communication capability with security personnel.	Perform a type test, analysis or a combination of type test and analysis of the security defensive positions listed in the security communication system description.	A report exists and concludes that the central and secondary alarm stations are capable of continuous communication with each designated security defensive positions.