

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

### **3.1 Security**

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

#### **3.1.1 Design Features**

- 1.1 Vital equipment is located only within a vital area.
- 1.2 Isolation zones and exterior areas within the protected area are provided with illumination to permit observation of abnormal presence or activity of persons or vehicles.
- 1.3 The external walls, doors, ceiling and floors in the main control room (MCR) and central alarm station are bullet resistant to at least a Underwriter's Laboratories Inc. (UL) level 4 round.
- 1.4 The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.
- 1.5 Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the Central and Secondary Alarm Stations upon intrusion into a vital area.
- 1.6 Security alarm annunciation occurs in the central alarm station and in at least one other continuously manned station not necessarily onsite.
- 1.7 Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.
- 1.8 Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm, etc.) and location.
- 1.9 The security alarm system will record each alarm annunciation including any false alarm, alarm check, and tamper indication by recording the alarm type, circuit, location, date, and time
- 1.10 Emergency exits through the vital area boundaries are alarmed.
- 1.11 Central and secondary alarm stations have conventional (land line) telephone service and other communication capabilities with local law enforcement authorities.
- 1.12 Central and secondary alarm stations are capable of continuous communication with security personnel.

### **3.1.2 Interface Requirements**

- 1.1 Access to vital equipment requires passage through at least two physical barriers.
- 1.2 Physical barriers for the protected area perimeter are not part of vital area barriers.
- 1.3 Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allow 20 feet of observation on either side of the barrier. Where permanent buildings do not allow a 20 foot observation distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier.
- 1.4 Intrusion detection system can detect penetration or attempted penetration of the protected area barrier.
- 1.5 The external walls, doors, ceiling and floors in the last access control function for access to the protected area are bullet resistant to at least a UL level 4 round.
- 1.6 Access control points are established to control personnel and vehicle access into the protected area.
- 1.7 Access control points are established to detect firearms, explosives, and incendiary devices at the protected area personnel access points.
- 1.8 A security access control system with numbered picture badges is installed for use by individuals who are authorized access to protected areas without escort.
- 1.9 Emergency exits through the protected area perimeter are alarmed.

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

Certain documentation of security features will be 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 lists the security ITAAC.

**Table 3.1-1— Security ITAAC (4 Sheets)**

	<b>Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1.1	Vital equipment is located only within a vital area.	Inspections will be performed to confirm that vital equipment is located within a vital area.	A report exists and concludes that vital equipment is located only within a vital area.
1.2	Isolation zones and exterior areas within the protected area are provided with illumination to permit observation of abnormal presence or activity of persons or vehicles.	Inspection of the illumination in the isolation zones and external areas of the protected area will be performed to confirm sufficient illumination to permit observation.	A report exists and concludes that illumination in isolation zones and exterior areas within the protected area is at least 0.2 foot candles measured horizontally at ground level or, alternatively, sufficient to permit observation.
1.3	The external walls, doors, ceiling and floors in the MCR and central alarm station are bullet resistant to at least a UL level 4 round.	Type test, analysis or a combination of type test and analysis will be performed for the external walls, doors, ceilings, floors, and any windows in the walls in the MCR and central alarm station to ensure they are bullet resistant to at least a UL level 4 round.	A report exists and concludes that the external walls, doors, ceiling and floors in the MCR and central alarm station are bullet resistant to at least a UL level 4 round.
1.4	The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.	Type test, inspections, analysis or a combination of type tests, inspections and analysis will be performed for the vehicle barrier system to ensure it will protect against the DBT vehicle bombs based upon the stand-off distance for the system.	A report exists and concludes that the vehicle barrier system will protect against the DBT vehicle bombs based upon the stand-off distance for the system.
1.5	Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the Central and Secondary Alarm Stations upon intrusion into a vital area.	A test, inspection, or a combination of tests and inspections will be performed to verify that unoccupied vital areas are locked and that intrusion will be detected and annunciated in both the Central Alarm Station and Secondary Alarm Station.	A report exists and concludes that unoccupied vital areas are locked and intrusion is detected and annunciated in both the Central Alarm Station and Secondary Alarm Station.

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	<b>Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1.6	Security alarm annunciation occurs in the central alarm station and in at least one other continuously manned station not necessarily onsite.	Test, inspection or a combination of tests and inspections of the installed systems will be performed to ensure that security alarms annunciate in the central alarm station and in at least one other continuously manned station.	A report exists and concludes that security alarms annunciate in the central alarm station and in at least one other continuously manned station.
1.7	Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.	An inspection will be performed to ensure that the location of the secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is within a vital area.	A report exists and concludes that the secondary security power system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.
1.8	Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm, etc.) and location.	A test will be performed to verify that security alarms including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power) and that alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm, etc.) and location.	A report exists and concludes that security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power) and that alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm, etc.) and location.
1.9	The security alarm system will record each alarm annunciation including any false alarm, alarm check, and tamper indication by recording the alarm type, circuit, location, date, and time	Tests will be performed to ensure that equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date, and time.	A report exists and concludes that the security alarm system will record each alarm annunciation including any false alarm, alarm check, and tamper indication by recording the alarm type, circuit, location, date, and time.

**Table 3.1-1— Security ITAAC (4 Sheets)**

	<b>Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1.10	Emergency exits through the vital area boundaries are alarmed.	Test, inspection or a combination of tests and inspections will be performed to verify that emergency exits through the vital area boundaries are alarmed.	A report exists and concludes that emergency exits through the vital area boundary are alarmed.
1.11	Central and secondary alarm stations have conventional (land line) telephone service and other communication capabilities with local law enforcement authorities.	Test, inspection, or a combination of tests and inspections will be performed to verify that the alarm stations are equipped with conventional (land line) telephone service and other capability to communicate with local law enforcement authorities.	A report exists and concludes that the alarm stations are equipped with conventional (land line) telephone service and other capability to communicate with local law enforcement authorities.
1.12	Central and secondary alarm stations are capable of continuous communication with security personnel.	Test, inspection, or a combination of tests and inspections will be performed to verify that the alarm stations are equipped with the capability to continuously communicate with security officers, watchmen or armed response individuals, or other security personnel that have responsibilities during a contingency event.	A report exists and concludes that the alarm stations are equipped with the capability to continuously communicate with security officers, watchmen or armed response individuals, or other security personnel that have responsibilities during a contingency event.
1.13	Central and secondary alarm stations are located inside the protected area and are designed so that the interiors of both alarm stations are not visible from the perimeter of the protected area.	The central and secondary alarm station locations will be inspected to verify that the interiors of both alarm stations are not visible from the perimeter of the protected area. .	A report exists and concludes that the as-built central and secondary alarm stations are located inside the protected area, and the interiors of both alarm stations are not visible from the perimeter of the protected area.

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	<b>Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1.14	The alarm system does not allow the status of a detection point, locking mechanism or access control device to be changed without the knowledge and concurrence of the alarm station operator in the other alarm station.	Tests, inspections, or a combination of tests and inspections of intrusion detection equipment and access control equipment will be performed.	A report exists and concludes that the as-built alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed without the knowledge and concurrence of the alarm station operator in the other alarm station.
1.15	Central and secondary alarm stations are designed, equipped and constructed such that no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.	Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations will be performed.	A report exists and concludes that for the as-built central and secondary alarm stations no single act, in accordance with the design-basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to (1) detect and assess alarms, (2) initiate and coordinate an adequate response to alarms, (3) summon offsite assistance, and (4) provide effective command and control.
1.16	Both the central and secondary alarm stations are constructed, located, protected, and equipped to the standards for the central alarm station (alarm stations need not be identical in design but each shall be capable of performing all functions required of alarm stations).	Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations will be performed to verify that they are capable of performing all functions required of alarm stations.	A report exists and concludes that the central and secondary alarm stations are located, constructed, protected, and equipped to the standards of the central alarm station and are capable of performing all functions required of alarm stations. (Stations need not be identical in design.)