Security Systems Hardware—Equipment and/or features used for the physical security attributes of detection, delay, and response and to protect against the design basis threat of radiological sabotage as stated in 10 CFR 73.1(a). Examples of security system hardware include, but are not limited to, communication systems, annunciating alarms, locks, personnel access control, physical equipment barriers, and surveillance devices.

Requirements	Design Description	Inspections, Tests, Analysis	Acceptance Criteria	ITAAC
(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.	Vital equipment shall be located within a vital area.	Inspections of the as-built systems will be performed so that all vital equipment as designed is located within a vital area. Access to vital equipment requires passage through at least two physical barriers meeting performance requirements.	A report exists and concludes that all intended vital equipment as specified in the as-built drawings is located only within a vital area, which in turn, is located within a protected area such that access to the as-built vital equipment requires passage through at least two physical barriers meeting performance requirements.	**1**
(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.	Physical barriers for protected area perimeter.	An inspection of the protected area perimeter barrier will be performed to verify that physical barriers at the perimeter of the protected area are separated from any other barrier designated as a physical barrier.	A report exists and concludes that as-built physical barriers at the perimeter of the protected area are separated from any other barrier designated as a physical barrier.	**2**
(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.	Isolation zones	An inspection of the as-built isolation zone will be performed to verify that the isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are at least as large as specified in the design and allow observation of the activities of people on either side of the barrier in the event of its penetration or attempted penetration.	A report exists and concludes that verifies as-built isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and are at least as large as specified in the design to permit observation of the activities of people on either side of the barrier in the event of its penetration or attempted penetration.	**3**
(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area	An intrusion detection system detects penetration or	Inspections of the as-built PA detection systems will be performed to verify systems are	A report exists and concludes that the intrusion detection system detects	**4**

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barrier shall assure that adequate response by the security organization can be initiated.	attempted penetration of the Protected Area (PA) Barrier.	installed as designed and penetration or attempted penetration of the protected area barrier is detected and annunciated in both the Central Alarm Station (CAS) and Secondary Alarm Station (SAS).	penetration or attempted penetration of the PA barrier and annunciates in the Central and Secondary Alarm Stations.	
(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c)(3), (c)(4), and (h)(4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.	All exterior areas within the protected area are illuminated.	Inspection of the as-built illumination in the isolation zones of the PA and all external area within the PA is not less than 0.2 footcandle measured horizontally at ground level.	A report exists and concludes that as-built illumination in isolation zones and all exterior areas within the protected area is not less than 0.2 footcandle measured horizontally at ground level.	**5**
(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.	The walls, doors, ceiling and floors in the main control room, central alarm station, bullet-resistant enclosures, and the last access control function for access to the protected area are bullet resistant.	Type test, analysis or a combination of type test and analysis of the as-built systems of the walls, doors, ceilings, floors, and any windows in the walls, for the enclosure that houses the individual that has the last access control function for access into the PA are installed as designed.	A report exists and concludes that the bullet resistance features for the reactor control room, the central alarm station, and the location within which the last access control function for access to the protected area are installed as designed.	**6**
(7) Vehicle control measures, including vehicle barrier systems, must be established to protect against use of a land vehicle, as specified by the Commission, as a means of transportation to gain unauthorized proximity to vital areas. (8) Each licensee shall compare the vehicle control measures established in accordance with 10 CFR 73.55 (c)(7) to the Commission's design goals (i.e., to protect equipment, systems, devices, or material, the failure of which could directly or indirectly endanger public health and safety by exposure to radiation) and criteria for protection against a land vehicle bomb. Each licensee shall either:	Vehicle control measures which include vehicle barrier systems	Inspections, analysis or a combination of inspections and analysis of the as-built systems will be performed for vehicle control measures, including vehicle barrier systems, to ensure they have been constructed in accordance with their design.	A report exists and concludes that as-built vehicle control measures, including vehicle barrier systems, have been constructed in accordance with their design.	**7**

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(i) Confirm to the Commission that the vehicle control measures meet the design goals and criteria specified; or (ii) Propose alternative measures, in addition to the measures established in accordance with 10 CFR 73.55 (c)(7), describe the level of protection that these measures would provide against a land vehicle bomb, and compare the costs of the alternative measures with the costs of measures necessary to fully meet the design goals and criteria. The Commission will approve the proposed alternative measures if they provide substantial protection against a land vehicle bomb, and it is determined by an analysis, using the essential elements of 10 CFR 50.109, that the costs of fully meeting the design goals and criteria are not justified by the added protection that would be provided.				
(d) *Access Requirements.* (1) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals unless otherwise provided in this section must be made and authorization must be checked at these points. The search function for detection of firearms, explosives, and incendiary devices must be accomplished through the use of both firearms and explosive detection equipment capable of detecting those devices.	(i) Personnel and vehicle access points. (ii) Firearms and Explosive detection equipment.	Inspections of the as-built systems will be performed to verify that: (i) All personnel and vehicle access into the protected area is controlled. (ii) Detection equipment is capable of detecting explosives, incendiary devices, and firearms.	A report exists and concludes that: (i) All access points are configured as designed. (ii) Equipment used for detection of firearms and explosives function as intended in their design.	**8**
(5)(i) A numbered picture badge identification system must be used for all individuals who are authorized access to protected areas without escort.	A numbered picture badge identification system	An inspection of the numbered picture badge identification system is performed to verify that unescorted access to protected areas is granted only to personnel possessing a numbered picture badge.	A report exists and concludes that a numbered picture badge identification system is used for authorized access to protected areas without escort.	**9**
(7) The licensee shall: (D) Lock and protect by an activated intrusion alarm system all unoccupied vital areas.	Unoccupied vital areas are locked and alarmed with activated intrusion	A test, inspection, or a combination of tests or inspections to verify that the as-built unoccupied vital areas are	A report exists and concludes that the as-built unoccupied vital areas are locked and that intrusion will	**10**

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	detection systems that annunciate in the Central and Secondary Alarm Stations upon intrusion into a vital area.	locked and that intrusion will be detected and annunciated in both the CAS and SAS.	be detected and annunciated in both the CAS and SAS.	
(e) *Detection aids.* (1) All alarms required pursuant to this part must annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station not necessarily onsite, so that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. The onsite central alarm station must be considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors must be bullet-resisting. The onsite central alarm station must be located within a building in such a manner that the interior of the central alarm station is not visible from the perimeter of the protected area. This station must not contain any operational activities that would interfere with the execution of the alarm response function.	Alarm annunciation occurs in the central alarm station and in at least one other continuously manned station not necessarily onsite. The central alarm station is considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors is bullet-resisting. The central alarm station is located within a building in such a manner that the interior of the central alarm station is not visible from the perimeter of the protected area.	Type test, analysis or a combination of type test and analysis of the as-built systems will be performed to ensure that all alarms annunciate in the central alarm station.	A report exists and concludes that all alarms required pursuant to this part annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station.	**11**
(e)(1) Onsite secondary power supply systems for alarm annunciator equipment and non-portable communications equipment as required in paragraph (f) of this section must be located within vital areas.	Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.	Inspections, type test, analysis or a combination of inspections, type test and analysis of the as-built systems will be performed to ensure that onsite secondary power supply systems for alarm annunciator equipment and non-portable communications equipment system capacity and	A report exists and concludes that (1) onsite secondary power supply systems for alarm annunciator equipment and non-portable communications equipment meet system design capacity and capability and, (2)	**12**

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		capability is verified to meet design by testing. Location of equipment within a vital area is verified by inspection.	equipment is located within a vital area.	
(2) All alarm devices including transmission lines to annunciators shall be 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. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarms, emergency exit alarm, etc.) and location.	All 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.) Alarm annunciation shall indicate the type of alarm, (e.g., intrusion alarms, emergency exit alarm, etc.) and location.	An test is performed to verify that all alarms including transmission lines 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.	A report exists and concludes that all alarm devices including transmission lines to annunciators provide 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.	**13**
73.70(f) A record at each onsite alarm annunciation location of each alarm, false alarm, alarm check, and tamper indication that identifies the type of alarm, location, alarm circuit, date, and time. In addition, details of response by facility guards and watchmen to each alarm, intrusion, or other security incident shall be recorded. The license shall retain each record for three years after the record is made.	Record onsite alarm annunciation location of each alarm, false alarm, alarm check, and tamper indication that identifies the type of alarm, location, alarm circuit, date, and time.	Type test, analysis or a combination of type test and analysis of the as-built systems will be performed to ensure that each onsite alarm annunciation location of each alarm, false alarm, alarm check, and tamper indication records and identifies the type of alarm, location, alarm circuit, date, and time.	A report exists and concludes that a record of each onsite alarm annunciation identifies the location of each alarm, false alarm, alarm check, and tamper indication to include the type of alarm, location, alarm circuit, date, and time.	
(3) All emergency exits in each protected area and each vital area shall be alarmed.	All emergency exits in each protected area and each vital area shall be alarmed.	An inspection, analysis or a combination of inspection and analysis is performed to verify that all emergency exits in each protected area and each vital area are alarmed.	A report exists and concludes that all emergency exits in all protected areas and all vital area are alarmed.	**14**

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(f) *Communication requirements.* (1) Each security officer, watchman or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e)(1) of this section, who shall be capable of calling for assistance from other security officers, watchmen, and armed response personnel and from local law enforcement authorities. (2) The alarm stations required by paragraph (e)(1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (f)(1) of this section. (3) To provide the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, shall be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and shall terminate in each continuously manned alarm station required by paragraph (e)(1) of this section.	Communication requirements.	An inspection will be performed to verify that the alarm stations: (1) have conventional telephone service and other means for communication with the law enforcement authorities and (2) are capable of continuous communication with each security officer, watchman or armed response individual, or any security personnel that have responsibilities during a contingency event.	A report exists and concludes that the alarm stations: (1) have conventional telephone service and other means for communication with the law enforcement authorities and (2) are capable of continuous communication with each security officer, watchman or armed response individual, or any security personnel that have responsibilities during a contingency event.	**15**

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