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Your ref: Docket No. 52-006
Our ref: DCP_NRC_002655

October 15, 2009

Subject: AP1000 Response to Request for Additional Information (SRP 14)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 14. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in this response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Enclosure 1 provides the response for the following RAI(s):

RAI-SRP 14.3.12-NSIR-07

Questions or requests for additional information related to the content and preparation of this response should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,

Robert Sisk, Manager
Licensing and Customer Interface
Regulatory Affairs and Standardization

/Enclosure

1. Response to Request for Additional Information on SRP Section 14

D063
NRO

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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 14

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP 14.3.12-NSIR-07
Revision: 0

Question:

(U) The AP1000 Westinghouse physical security hardware ITAAC addressed 10 CFR 73.55 prior to May 26, 2009. May 26, 2009, Part 73, "Power Reactor Security Requirements" Final Rule became effective for all designs that were not certified. Please submit the AP1000 ITAAC that addresses the Part 73 Power Reactor Security Requirements Final Rule.

(U) Regulatory Basis: 10 CFR 52.47(b)(1) requires a DC application to contain the proposed inspections, tests, analyses, and acceptance criteria (ITAAC) that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria are met, a plant that incorporates the design certification is built and will operate in conformity with the design certification.

Westinghouse Response:

The AP1000 Security ITAACs have been revised since the submittal of Revision 17 of the DCD based on RAIs. The latest AP1000 security ITAACs were submitted to the Staff in RAI-SRP-14.3.12-NSIR-06 (Reference 1). Westinghouse understands that additional adjustments in the security ITAACs are necessary based on industry interaction with the Staff and the revised 10 CFR 73.55.

The markup in the AP1000 security ITAACs are provided below in the DCD Markup section. The latest security ITAACs as submitted in Reference 1 are used as the baseline for any new revisions.

References:

1. RAI-SRP14.3.14-NSIR-06, "AP1000 Response to Request for Additional Information (SRP 14)", DCP/NRC2506, June 4, 2009

Design Control Document (DCD) Revision:
2.6.9 Plant Security System

Design Description

The physical security system provides physical features to detect, delay, assist response to, and defend against the design basis threat (DBT) for radiological sabotage. The physical security system consists of physical barriers and an intrusion detection system. The details of the physical security system are categorized as Safeguards Information. The physical security system provides protection for vital equipment and plant personnel.

1. The external walls, doors, ceiling, and floors in the main control room, ~~and~~ the central alarm station, and the secondary alarm station are bullet-resistant.

2. Not used

3. Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.

4. Vital areas are locked and alarmed with active intrusion detection systems that annunciate in the central and secondary alarm stations upon intrusion into a vital area.

5. a) Security alarm annunciation and video assessment information is available ~~occurs~~ in the central alarm station and the secondary alarm station ~~in at least one other continuously manned station not necessarily onsite~~.

   b) The central and secondary alarm stations are located inside a protected area, and the interior of both alarm stations is not visible from the perimeter of the protected area.

   c) The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to assess alarms and communicate with onsite and offsite response personnel.

6. The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.

7. a) Vital equipment is located only within a vital area.
   b) Access to vital equipment requires passage through at least two physical barriers.

8. 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.

9. Emergency exits through the protected area perimeter and the vital area boundaries are alarmed and equipped with a crash bar to allow for emergency egress.

10. Not used

11. Not used

12. Not used

13. The central and secondary alarm stations: a) have conventional (landline) telephone service and other communication capabilities with local law enforcement authorities and b) are capable of continuous communications with security personnel.

14. Not used

15. a) 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). Alarm annunciation shall indicate the type of alarm (e.g., intrusion alarms and emergency exit alarm) and location.

    b) Intrusion detection and assessment systems provide visual displays and audible annunciation of alarms in the central and secondary alarm station.

16. Equipment exists to record 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.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.6.9-1 specifies the inspections, tests, analyses, and associated acceptance criteria for the physical security system.

Table 2.6.9-1 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
1. The external walls, doors, ceiling, and floors in the main control room, the central alarm station, and the secondary alarm station are bullet-resistant.	See Tier 1 Material, Table 3.3-6, item 14.	See Tier 1 Material, Table 3.3-6, item 14.
2. Not used		
3. Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within the vital area.	See Tier 1 Material, Table 3.3-6, item 16.	See Tier 1 Material, Table 3.3-6, item 6.
4. Vital areas are locked and alarmed with active intrusion detection systems that annunciate in the central and secondary alarm stations upon intrusion into a vital area.	See Tier 1 Material, Table 3.3-6, item 17.	See Tier 1 Material, Table 3.3-6, item 17.
5. a) Security alarm annunciation and video assessment information is available ~~occurs~~ in the central alarm station and the secondary alarm station ~~in at least one other continuously manned station not necessarily onsite~~.	Test, inspection, or a combination of test 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~~.	Security alarms annunciation and video assessment information is available concurrently in the ~~continuously manned~~ central alarm station and the secondary alarm station ~~located within the protected area and in at least one other continuously manned station~~.
5. b) The central and secondary alarm station are located inside a protected area, and the interior of both alarm stations is not visible from the perimeter of the protected area.	Inspections of the central and secondary alarm stations will be performed.	The central and secondary alarm stations are located inside a protected area and the interior of both alarm stations are not visible from the perimeter of the protected area.

Table 2.6.9-1 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
5. c) The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to assess alarms and communicate with onsite and offsite response personnel.	Inspections and/or analysis of the central and secondary alarm station will be performed.	The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, equipment needed to maintain the functional capability of either alarm station to assess alarms and communicate with onsite and offsite response personnel exists.
6. The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.	~~Type test, analysis, or a combination of type test and analysis~~ An inspection 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 of the system.
7.a) Vital equipment is located only within a vital area.	Inspection will be performed to confirm that vital equipment is located within a vital area.	Vital equipment is located only within a vital area.
7.b) Access to vital equipment requires passage through at least two physical barriers.	Inspection will be performed to confirm that access to vital equipment requires passage through at least two physical barriers.	Access to vital equipment requires passage through at least two physical barriers.
8. 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~~.	The illumination in isolation zones and exterior areas within the protected area is 0.2 foot candles measured horizontally at ground level or, alternatively, sufficient to permit observation.

Table 2.6.9-1 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
9. Emergency exits through the protected area perimeter and the vital area boundaries are alarmed and equipped with a crash bar to allow for emergency egress.	Test, inspection, or a combination of tests and inspections will be performed to verify that the emergency exits through the protected area perimeter and the vital area boundaries are alarmed.	The emergency exists through the protected area perimeter and the vital area boundaries are alarmed and equipped with a crash bar to allow for emergency egress.
10. Not used		
11. Not used		
12. Not used		
13. The central and secondary alarm stations: a) have conventional (landline) telephone service and other communication capabilities with local law enforcement authorities and b) are capable of continuous communication with security personnel.	Test, inspection, analysis, or a combination of test, inspection and analysis will be preformed to verify that the alarm stations: i) Are equipped with conventional (landline) telephone service and other capability to communicate with local law enforcement authorities, and ii) Are equipped with the capability to continuously communicate 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: i) Are equipped with conventional (landline) telephone service and other capability to communicate with local law enforcement authorities, and ii) Are equipped with the capability to continuously communicate with each security officer, watchman, or armed response individual, or any security personnel that have responsibilities during a contingency event.
14. Not used		

Table 2.6.9-1 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
15. 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). Alarm annunciation shall indicate the type of alarm (e.g., intrusion alarms and emergency exit alarm) 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 and emergency exit alarms) 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 and emergency exit alarms) and location.
15. b) Intrusion detection and assessment systems provide visual displays and audible annunciation of alarms in the central and secondary alarm station.	Test will be performed on intrusion detection and assessment equipment.	The intrusion detection system provides visual displays and audible annunciations of alarms in both the central and secondary alarm stations.
16. Equipment exists to record 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.	Test, analysis, or a combination of test and analysis 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 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.

3.3 Buildings

14. The walls, doors, ceiling, and floors in the main control room and the central alarm station are bullet-resistant.

Table 3.3-6
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
14. The walls, doors, ceiling, and floors in the main control room, ~~and~~ the central alarm station, and the secondary alarm station are bullet-resistant.	Type test, analysis, or a combination of type test and analysis will be performed for the walls, doors, ceilings, and floors in the main control room, ~~and~~ the central alarm station, and the secondary alarm station.	A report exists and concludes that the walls, doors, ceilings, and floors in the main control room, ~~and~~ central alarm station, and the secondary alarm station are bullet-resistant.

PRA Revision: None

Technical Report (TR) Revision: None