ArevaEPRDCPEm Resource

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Subject: U.S. EPR Design Certification Application RAI No. 253 (3040), FSAR Ch. 14
Attachments: RAI_253_(NSIR_DSP_RSRLB)_3040.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on June 18, 2009, and discussed with your staff on July 2, 2009. No changes were made to the draft RAI questions as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,
Getachew Tesfaye
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Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 657

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Request for Additional Information No. 253 (3040), Revision 0

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U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 14.03.12 - Physical Security Hardware - Inspections, Tests, Analyses, and Acceptance Criteria
Application Section: Tier 1 Chapter 3, Tire 2 Chapter 14, Technical Report ANP-10925 Appendix G

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

14.03.12-19

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10925): General Comments – Delete from the title "suggested" to provide finality of requirement for inspections, tests, and analyses and acceptance criteria (ITAAC) for security systems and hardware within the scope of the DC. Provide and indicate reference to design and performance requirements as described in the EPR standard design.

(U) Regulatory Basis: Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, requires that information submitted for a design certification (DC) must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant. Title 10 CFR 52.48 requires the applications filed will be reviewed for compliance with the standards set out in 10 CFR Part 73. Title 10 CFR 52.80(a) and 52.80(a)(2) requires content of applications to propose ITA and acceptance criteria that are necessary and sufficient to provide reasonable assurance the facility has been constructed and will be operated in conformity with the combined license. The ITAAC contained in the DC must be described for certification and for approval. The requirements for appropriate inspections of construction and installation in accordance with design and specifications must be identified in "Test Methods" and "Acceptance Criteria." Acceptance criteria must be sufficiently detailed to allow for inspection. The indication of "suggested" does not provide indication of final descriptions of Tier 2 information for ITAAC within the scope of the DC.

14.03.12-20

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 1.0, Objective (Page G-2 of ANP-10295): Identify additional areas that are considered vital areas (e.g., spent fuel pool, secondary alarm stations, secondary power supply system for alarm annunciation equipment, and secondary power supply for non-portable communications) in accordance with 10 CFR 73.55(e)(9)(v) and (vi) in Item 1.1 on Page G-2.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR

52.80(a)). Title 10 CFR 73.55(e)(9)(v) and (vi) identified vital areas must be identified in descriptions of ITA for ITAAC verification. The ITAAC contained in the DC must be described for certification and for approval.

14.03.12-21

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 1.0, Objective (Page G-2 of ANP-10295): Indicate verification of construction and installation of VA barriers in the objective to verify VA structures construction to provide protection against blast effects and delay functions. Identify acceptance criteria for the specific design and performance of structural requirements and construction credited by AREVA blast analysis for verification. Provide a cross reference to appropriate structural ITAAC if addressed by safety ITAAC for the vital island and structures.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. The design, construction, and installation of structural components of the VA barrier for blast overpressure protection must be verified.

14.03.12-22

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 3.0, Test Method (Page G-2 of ANP-10295): Provide clarification of the test method that would demonstrate that two barriers exist (Item 3.3) and physical barriers at PA and VA are separated (Item 3.4). Specifically, clarify whether the test method is an inspection that verify two barriers exists, the VA and PA barriers are separate, and distinct barriers constructed and installed in accordance with detailed design and specifications. Identify test method as inspection instead of “demonstrate.”

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-23

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 4.0, Data Required (Page G-2 of ANP-10295): Identified the detailed design and specifications of barriers and engineered systems and components protecting openings as additional data required in Sub-Section 4.0 to verify construction and installation of design features credited to provide security functions. Indicate verification of the vital barriers in accordance with detailed design and specifications that provide protection against blast effects and delay for access.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). Title 10 CFR 73.55(e)(9)(v) and (vi) identified vital areas must be identified in

descriptions of ITA for ITAAC verification. The ITAAC contained in the DC must be described for certification and for approval.

14.03.12-24

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 5.0, Acceptance Criteria (Page G-2 of ANP-10295): Include, in item 5.1, verification of additional vital areas consisting of the spent fuel pool, secondary alarm stations, secondary power supply system for alarm annunciation equipment, and secondary power supply for non-portable communications, in accordance with 10 CFR 73.55(e)(9)(v) and (vi).

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-25

(U) Appendix G, Section G.1, Vital Area Inspections, Sub-Section 5.0, Acceptance Criteria (Page G-2 of ANP-10925): Indicate, in Sub-Section 5.0, the following: (a) an acceptance criteria that all components of the vital equipment list are located within designated vital areas in accordance with referenced U.S. EPR design, and (b) an acceptance criteria that construction and installation of VA barriers and protection of opening are in accordance with detailed design and specifications.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-26

(U) Appendix G, Section G.2, Locking Devices, Sub-Section 3.0, Test Method (Page G-3 of ANP-10295): Clarify whether Item 1.1 includes locking devices or manipulative resistant locks used to secure delay barriers openings and the verification includes acceptance criteria for verifying an equivalent delay for all component of a delay barrier system. Clarify, and indicate if appropriate, whether the proposed ITA is generic and may be applied by a COL applicant for site specific security systems and hardware.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. Locking devices, door or window assemblies, and engineered protected openings are components of a barrier providing security delay functions.

14.03.12-27

(U) Appendix G, Section G.2, Locking Devices, Sub-Section 3.0, Test Method (Page G-3 of ANP-10295): Clarify how item 3.1, “Inspect each opening through Vital Area boundary capable of passage by personnel” is intended to achieve the objective identified in Sub-Section 1.0 to verify locking devices (i.e., provided and manipulative

resistant). Clarify whether item 3.1 would be an inspection that verifies openings are protected or small openings (i.e., under a specific size) that would not require protection against passage by a person.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-28

(U) Appendix G, Section G.2, Locking Devices, Sub-Section 3.0, Test Method (Page G-3 of ANP-10295): Provide descriptions for appropriate ITA for verifying other means of locking, such as automatic or remotely controlled locking capabilities that are incorporated by design and credited to activate delay barriers for security.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-29

(U) Appendix G, Section G.3, Perimeter and Intrusion Detection, Sub-Section 1.0, Objective (Page G-4 of ANP-10295): Include, in Item 1.4 of Sub-Section 1.0, the objective of verifying delay functions credited of the VA barriers along with its configuration for providing a continuous barrier. Indicate clearly that inspection of the configuration of the perimeter includes the objective of providing a continuous barrier of the VA. Clearly indicate whether the descriptions for perimeter and intrusion detection are generic to both the perimeter and intrusion detection systems at the VA boundary and PA.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-30

(U) Appendix G, Section G.3, Perimeter and Intrusion Detection, Sub-Section 3.0, Test Method (Page G-4 of ANP-10295): Clarify whether the test method includes inspections to verify that systems and components have been adequate installed in accordance with detailed design and specifications, and provide required detection coverage for each detector. Clearly indicate that inspections would include verification of as-built conditions to identify detection or barrier by-pass that would defeat of systems intended security functions.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-31

(U) Appendix G, Section G.3, Perimeter and Intrusion Detection, Sub-Section 3.0, Test Method and Sub-Section 5.0, Acceptance Criteria (Pages G-4 and G-5 of ANP-10295): Indicate inspection and testing to verify system installation and performances in accordance with detailed design and specifications for the perimeter and interior intrusion detection. Similarly, provide descriptions, in Sub-section 5.0, that requires verification of system installation and performances of VA perimeter and interior intrusion detection systems and components in accordance with detailed design and specifications and perform credited security functions.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-32

(U) Appendix G, Section G.3, Perimeter and Intrusion Detection, Sub-Section 3.0, Test Method and Sub-Section 5.0,(Pages G-4 and G-5 of ANP-10295): Provide descriptions for ITA and acceptance criteria for verifying the installation and performance of systems and components of the intrusion detection system(s) in accordance with 73.55(i)(3)(i) through (vii), 73.55(i)(4)(i)(F) and (G). Include descriptions of appropriate test method(s) and acceptance criteria. Consider referencing Section G-7, Alarm Testing, which is integral to testing detectors and would occur simultaneously.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-33

(U) Appendix G, Section G.3, Perimeter and Intrusion Detection, Sub-Section 3.0, Test Method and Sub-Section 5.0,(Pages G-4 and G-5 of ANP-10295): Indicate descriptions of acceptance criteria for testing of detection systems and components (e.g., all 30 tests result in successful detection, 39 of 40, or 48 of 50) in Sub-Section 5.0, Acceptance Criteria, in lieu of (or in addition to) Sub-Section 3.0, Test Method.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. The indication that all 30 tests result in successful detection, 39 out of 40

tests, or 48 out of 50 tests are criteria for statistical confidence acceptable for detection capabilities and needs to be established as performance acceptance criteria.

14.03.12-34

(U) Appendix G, Section G.4, Bullet Resistance (Pages G-5 and G-6 of ANP-10295): Identify SAS along with CAS in Sections 1.0, 3.0, 4.0, and 5.0 to ensure that the SAS enclosure bullet resistant capabilities will be verified. In addition, indicate in the objective the verification of all openings on walls, floors, and ceiling structural assemblies are protected to provide a bullet resistant enclosure.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. Enclosure of the CAS and SAS is required to be bullet resistant.

14.03.12-35

(U) Appendix G, Section G.4, Bullet Resistance (Pages G-5 and G-6 of ANP-10295): Reference Technical Report ANP-10295, Chapter 3, which provides discussions and establishes required minimum thickness of reinforce concrete to meet various UL level of bullet resistant in Section 2, Item 2.2. Clarify whether the calculations of minimum concrete thickness is a required prerequisite prior to performing ITA.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification.

14.03.12-36

(U) Appendix G, Section G.4, Bullet Resistance (Pages G-5 and G-6 of ANP-10295): Clarify whether “national standard met by each door” means or is intended to include nationally recognized independent testing laboratories listing or approval and federal government agency standards or certifications (e.g., UL, FM, DOJ, DOD, GSA, etc.).

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. Clarification is needed for national standards applicable to verification of door assemblies and to include consensus standards and codes (ASME, ASTM, ANS, NFPA, etc.) and independent testing laboratories or federal agencies.

14.03.12-37

(U) Appendix G, Section G.4, Bullet Resistance (Pages G-5 and G-6 of ANP-10295): In addition to doors in items 5.2, identify in Section 5, Acceptance Criteria, indicate verification that all openings on structural barriers are bullet resistant material of

constructions or protected to meet an equivalent security functions (i.e., stop a minimum of UL Level 4 round).

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. All openings into an enclosure must be protected. HVAC openings or penetrations must be protected against bullet resistant and provide intended functions of allowing air flow in and out of an enclosure.

14.03.12-38

(U) Appendix G, Section G.5, Vehicle Barrier System (Section 3.0 Test Method, Page G-7 of ANP-10295): Clarify that AREVA intent is to describe ITA of VBS that is outside of the security system or hardware of the DC (i.e., located in the PA). If so, provide the following in the Test Method: (1) descriptions for ITA and acceptance criteria for verifying installation of all components and system performance of the active VBS, including power and hydraulic systems (if applicable), control systems, tamper prevention, manual operations; (2) describe inspections required for the passive portions of the VBS to verify construction and installation in accordance with detailed design and specifications; (3) describe inspections and tests required to verify installation and operations of active barriers listed or certified by an independent testing laboratories or federal agencies; and (4) describe verification (i.e., review/evaluation) of structural analyses and engineering calculations associated with the detailed design of the passive portion of the VBS to withstand impact of vehicle of weight and varying speed above 0 miles per hour up to required maximum speed to verify that the detailed design of the VBS and describe acceptance criteria for acceptable displacement or penetration by pushing or sudden impact to verify that the VBS does not flex or give away beyond the MSSD.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. A COL applicant is required to describe required ITA for responsible security systems and hardware. On the basis that performance test of VBS would result in destruction of portions of the VBS, analyses is a reasonable method applied to verify and demonstrate performances and effectiveness of VBS.

14.03.12-39

(U) Appendix G, Section G.5, Vehicle Barrier System (Section 4.0, Data Required (Page G-7 of ANP-10295): Include detailed design and specifications, as-built drawings, and engineered calculations for the active portions of the VBS and structural calculations or analysis of the passive barriers of the VBS as data required. Include manufacture data for active barrier systems installation, power supplies, and functional tests as a pre-requisite of the data for required manufacture testing and detailed system design and calculations.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. A COL applicant is required to describe required ITA for responsible security systems and hardware.

14.03.12-40

(U) Appendix G, Section G.6, Access Control an Searches, Sub-Section 3.0, Test Method and Sub-Section 5.0 (Page G-8 and G-9 of ANP-10295): Clarify whether it is AREVA intent to describe ITA includes access control system that is outside of the security system or hardware included in the DC (i.e., facility and systems located in the PA). If so, in Sub-Section 3.0, indicate inspections and testing to verify the installation and performances in accordance with detailed design and specifications for personnel and vehicle access controls. Also, provide descriptions, in Sub-Section 5.0 that requires verification of installations and specific performances of access control systems and components in accordance with detailed design and specifications and testing to verify credited security functions described in the Physical Security Plan or referenced licensing documentation.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for approval and certification. A COL applicant is required to describe required ITA for responsible security systems and hardware.

14.03.12-41

(U) Appendix G, Section G.6, Access Control an Searches, Sub-Section 3.0, Test Method (Pages G-8 and G-9 of ANP-10295): Clearly indicate, in item 3.1 of Sub-Section 3, the inspection of system configuration for access control system within the facility and the inspection of both the interior and exterior access control system for openings that would allow for by-pass of personnel or material contrabands.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe required ITA for responsible security systems and hardware. The access controls also include preventing passage of contraband. Exterior, above and underneath, of the facility must be inspected to identify possible by-pass of access control system or the access control facility

14.03.12-42

(U) Appendix G, Section G.6, Access Control and Searches, Sub-Section 3.0, Test Method and Sub-Section 5.0, Acceptance Criteria (Pages G-8 and G-9 of ANP-10295): Identify test method and acceptance criteria for verifying that the access control facility provides an equivalent level of required delay and detection for attempted penetrations

for a continuous physical barrier, along with required intrusion detection/assessment, at the VA and PA boundaries.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe required ITA for responsible security systems and hardware. The access controls also include preventing passage of contraband. The facility must be inspected to identify possible by-pass of access control system by traversing over or under the access control facility.

14.03.12-43

(U) Appendix G, Section G.6, Access Control and Searches, Sub-Section 3.0, Test Method and Sub-Section 5.0, Acceptance Criteria (Pages G-8 and G-9 of ANP-10295): Provide test methods (i.e., inspections and performance tests) for verifying adequacy of personnel identification system (card readers, biometric, CCTV, etc.). Include inspections, testing, and acceptance criteria such as: access control card reader inspection and testing, verification of system supervision, indications of alarm, tamper and trouble indications, and barriers and features for anti-pass-back protection, verifying biometric device sensitivity, and verifying CCTV field of view and performance for access control design and planned application.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware.

14.03.12-44

(U) Appendix G, Section G.6, Access Control an Searches, Sub-Section 5.0, Acceptance Criteria (Page G-9 of ANP-10295): Provide clarification and technical basis for acceptance of a false alarm rate for detection of fire arms as indicated in Item 5.4.2 of Sub-Section 5.0. Include reference to NRC, NEI, industry standards, manufacture data, AREVA technical reports, or operating experiences that provides the technical basis for acceptable system effectiveness and false alarm rates.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware.

14.03.12-45

(U) Appendix G, Section G.6, Access Control and Searches, Sub-Section 3.0, Test Method and Sub-Section 5.0, Acceptance Criteria (Pages G-8 and G-9 of ANP-10295):

Describe ITA required for verifying the configuration and performance of entry search equipment (e.g., metal detectors, X-ray machines, explosive detectors), physical barriers, and entry control devices in accordance with detailed design and specifications. Describe required ITA for verification of access authorization equipment (e.g., badge readers, biometric, etc.) and access barrier (e.g., doors, turnstiles, etc.) interlocks. Describe acceptance criteria for verifying performance of engineered search equipments provided at an access control facility. Include, for explosive detectors, the acceptance criteria for demonstrating the capabilities to detect all types of explosives associated with the DBT.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware.

14.03.12-46

(U) Appendix G, Section G7, Alarm Testing, Sub-Section 1.0, Objectives (Pages G-9 and G-10 of ANP-10295): Indicate SAS, along with CAS, in Sections 1.0 to ensure that the SAS alarms functions are verified. Revise statement in Item 1.1 to indicate requirements in accordance with Title 10 CFR 73.55(i)(4)(iii) that requires equal and redundant CAS and SAS. Identify required ITA of security systems for alarm annunciation, monitoring, communications, assessment, and line supervision and tamper alarms in accordance with design and specifications. Describe required ITA for assessment cameras and verifying system performance, including fields of view and power supply as applicable.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware.

14.03.12-47

(U) Appendix G, Section G.7, Alarm Testing, Sub-Section 3.0, Test Method, and 5.0, Acceptance Criteria (Page G-10 of ANP-10295): Describe appropriate test abstracts (e.g., test objective, data required, ITA, etc.) for verifying primary and secondary power supply for CAS and SAS, including installation and testing of switch over from primary to secondary power and performance of UPS for continuity of electrical power supply with disruptions of security system and functions.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware. Clearly indicate requirement for inspection and testing of installation and performance in accordance with detailed design and specifications.

14.03.12-48

(U) Appendix G, Section G.8, Security Communications System, Sub-Sections 1.0 through 5.0 (Page G-11 and G-12 of ANP-10295): Indicate and describe in each of the Sub-Sections the ITA required for security radio communications systems. Describe the test method and the requirements to inspect all installation of systems and components, including power supply (if independently provided from electrical safety bus). Clearly state the requirements for inspection and testing of installation and performance in accordance with detailed design and specifications. Identify performance testing required to verify availability radio communications throughout the interior of vital island and structures and include criteria for determining and identifying communications dead spots.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe required ITAAC and ITA for responsible security systems and hardware.

14.03.12-49

(U) Appendix G, Section G.8, Security Communications System, Sub-Section 3.0, Test Method (Page G-12 of ANP-10295): Identify inspection to verify installations of conventional phone or public address systems, along with functional testing (i.e., transmission and receipt of voice communications) in accordance with design and specifications for the security communications. Identify inspections and verification for secondary power supply to security communications systems and required inspections and tests of backup communications described in Technical Report ANP-10925.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware

14.03.12-50

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10295): General Comments – Include an acceptance criteria for protection of CAS and SAS against a against single act and redundancy functions. Indicate requirement for inspections of construction and installation in accordance with detailed design and specifications (including locations) and establish acceptance criteria that the CAS and SAS are protected against a single act, along with the redundancy for performing security functions.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for

approval. A COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware.

14.03.12-51

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10295): General Comment: Identify requirement for appropriate ITA of construction and installation in accordance with detailed design and specifications in descriptions under "Test Method" and "Acceptance Criteria." Provide references to and indicate verification of design and performance requirements as described in the certified U.S. EPR standard design and referenced documentations.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware. Acceptance criteria must be sufficiently detailed or specific to allow for inspection. Requirements for appropriate inspections of construction and installation in accordance with design and specification should be identified in "Test Method" and "Acceptance Criteria."

14.03.12-52

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10295): Provide clarification of the integrations of require ITA between discussions in Appendix G of ANP-10295 with Tier 2, FSAR Chapter 14.2.12.10.7 (Test #114) and Chapter 14.2.12.11.7 (Test #30) for security lighting and communications systems, respectively.

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware that are outside of the scope of the DC. Acceptance criteria must be sufficiently detailed or specific to allow for inspection. Requirements for appropriate inspections of construction and installation in accordance with design and specification should be identified in "Test Method" and "Acceptance Criteria." Additional information is need to understand how Tier 2, Chapter 14.2.12.10, "Electrical Systems," describe ITA for physical protection systems and hardware are related (and coordinated with) Tier 2 descriptions of ITA in ANP-10295

14.03.12-53

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10295): Describe how the descriptions of ITA are referenced or related to the discussions in Tier 2, FSAR Chapter 14.3.3.3, Tier 1, Chapter 3, Non-System Based Design Descriptions and ITAAC (Page 14.3-7). Provide clarification for the integrations

of require ITA discussed in Appendix G of ANP-10295 with appropriate Tier 2, FSAR chapter(s).

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. Acceptance criteria must be sufficiently detailed or specific to allow for inspection.

14.03.12-54

(U) Appendix G, Suggested Inspections and Tests (Page G-2 through G-12 of ANP-10295): Indicate in Appendix G or appropriate section of ANP-10295, a COL information for referenced COL applicant to establish ITAAC and specific ITA for physical protection systems that are outside of the scope of the DC (i.e., systems between the VA and PA/OCA that are credited to provide security functions).

(U) Regulatory Basis: Same as previously stated (i.e., Subpart B of Title 10 CFR (10 CFR) 52, § 52.47, 10 CFR 52.48, 10 CFR Part 73, 10 CFR 73.55(b), and 10 CFR 52.80(a)). The ITAAC contained in the DC must be described for certification and for approval. A COL applicant is required to describe ITAAC and required ITA for responsible security systems and hardware. FSAR Chapter 14.3, page 14.3-2 , states that “A COL applicant that references the U.S. EPR design certification will provide ITAAC for emergency planning, physical security, and site-specific portions of the facility that are not included in the Tier 1 ITAAC associated with the certified design (10 CFR 52.80(a)).” Appropriate COL information item is needed to address ITAAC within the responsibility of the COL applicant and should be cross-referenced in ANP-10295. .

(U) *Note*: *The information addressing specific details related to security features or providing security functions will be safeguards information (SGI) and should be marked and protected in accordance with 10 CFR 73.21. The applicant should portion mark text in the response to request for information (RAI) as appropriate to identify SGI (or security-related information) that reveals the specific details of security features incorporated in the US-EPR design. The RAI responses supplementing the DC Tier 1 document must be publicly available.*