CCNPP3COLA PEmails

From: Arora, Surinder
Sent: Tuesday, June 08, 2010 11:24 AM
To: 'Poche, Robert'
Cc: Lee, Pete; Steckel, James; CCNPP3COL Resource
Subject: Proposed Security Audit Plan
Attachments: Proposed CCNPP Unit 3 RCOLA June 2010 Security Audit Plan 06-04-2010 OGC - Edits to Accept Changes and Address Comment 06-07-10 (3).pdf

Rob,

As discussed, attached is the Audit Plan for your planning and preparation of the audit. Please provide the details of the audit location. We will have a site tour on the first day before the audit.

Please let me know if you have any questions.

Thanks.

SURINDER ARORA, PE
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Received Date: 6/8/2010 11:24:00 AM
From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

Recipients:
"Lee, Pete" <Pete.Lee@nrc.gov>
Tracking Status: None
"Steckel, James" <James.Steckel@nrc.gov>
Tracking Status: None
"CCNPP3COL Resource" <CCNPP3COL.Resource@nrc.gov>
Tracking Status: None
"'Poche, Robert'" <Robert.Poche@constellation.com>
Tracking Status: None

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PHYSICAL SECURITY AUDIT PLAN
June 28-30, 2010

CALVERT CLIFFS UNIT 3 COL APPLICATION
UniStar Nuclear Energy
Docket No. 52-016

Location: Lusby, Calvert County, Maryland

Purpose:

The purpose is to examine and evaluate supporting technical information on selected topics of the UniStar Nuclear Energy (UniStar) design of a physical protection system that protects the Calvert Cliffs Nuclear Power Plant Unit 3 (CCNPPU3) proposed in combined license application (COLA) under Docket No. 52-016. The outcome of the audit may result in identification of information or documentation that will require docketing to support NRC findings on high assurance of adequate protection and regulatory decisions.

Background:

Ongoing NRC staff review of applicant's information on the docket has identified information lacking complete and adequate descriptions related to the technical bases, assumptions, and design/performance requirements for the subject areas of the audit. The completeness of information on how an applicant meets performance and prescriptive regulatory requirements allows for the NRC staff to arrive at informed security findings. The docket information on the subject of audit scope requires additional focus for the NRC staff in preparation of RAIs and/or resolutions of open items.

Regulatory Audit Bases:

Subpart B of Title 10 CFR (10 CFR) 52, § 52.79, requires that information submitted for a COLA 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 52.79(a)(35) requires a COLA to contain a physical security plan describing how the applicant will meet the requirements of 10 CFR Part 73. The performance requirements of 10 CFR 73.55(b) require a licensee to provide high assurance of protection against the Design Basis Threat (DBT) of radiological sabotage.

The audit is required to identify technical information needed to address the integration of the design and licensing bases for physical protection systems and security programs within the scope of the COLA. The information on the docket includes Part 2 of the application, the FSAR, and referenced technical report, Calvert Cliffs Nuclear Power Plant Unit 3 Security Assessment (Revision 4), Part 8 of the COLA, the proposed changes to revised security assessment and security plans submitted by letter to the NRC dated March 2, 2010 in response to NRC RAI, and the interfaces between the US-EPR design certification information incorporated by reference for a physical protection system (i.e., detection, assessment, delay, and interdiction), including information related to target sets that must be protected, for meeting performance and prescriptive requirements of 10 CFR 73.

The descriptions of design bases for engineered physical protection systems are required for ITA of physical security ITAAC and the supporting documents (e.g., analyses, evaluations, engineering calculations, etc.) provide direct evidence for the designs of physical protection systems. The detail of contained in the Security Assessment and security plans contain safeguards and security-related information and are withheld from public in accordance with 10 CFR 2.390.

Regulatory Audit Scope:

The scope for the audit will focus on review related to design and performance requirements, assumptions, and supporting documents for the following site specific descriptions for physical protection described in Part 2, FSAR, Chapter 13.6, Physical Security, revision to reference Security Assessment, and Part 8 of the COLA that contained the Calvert Cliffs Nuclear Power Plan Unit 3 Physical Security Plan (PSP), Training and Qualification Plan, and Safeguards Contingency Plan:

- Security Assessment, Section 6.1, Target Set Analysis and PSP, Section 11.5: UniStar identified locations for final and complete target sets (e.g., frontline and support systems) and locations of equipment relied on for operator actions credited as elements of target sets for the CCNPP Unit 3.

- Security Assessment, Sections 6.3 and 6.4 and Appendices B and C, and PSP, Section 18, Response Requirements and Defense-in-Depth of Protection: UniStar's integration of internal and external layered protection of target sets for defense-in-depth, including the design bases for engineered systems relied on for security response and assurance of systems reliability and availability.

- Security Assessment, Section 5.1, Vehicle and Waterborne Bombs, and PSP, Section 11.2. Vehicle Bombs: UniStar supporting references documenting the evaluations of minimum standoff distances required for vehicle barrier systems to protect against the land and waterborne vehicle bombs. Blast analysis evaluation and dispositions of changes to nuclear island and structures physical configurations (e.g., hatches opened for refueling or maintenance activities), the design of blast resistant doors, and the design for blast protection of openings for adequate safe-standoff distances for all modes of operations.

- Security Assessment, Section 6.4 and Appendix B, External Defensive Strategy: UniStar revisions to scenarios for defense-in-depth using red, blue, and green points of entry; update of results of external evaluations (1-12) that includes pre-event locations and multiple entry points; analyzed zones of ingress point protection; depth of coverage; coverage of vertical ascent of VA barriers or vital island; adversary time lines for scenarios and points of entry from PA to VA barrier; and scenario using waterborne vehicle. Review of UniStar revisions to depth of coverage (evaluations of lines of sight for fields of fire, defense-in-depth of coverage based on defensive posts), external delay features (including assumptions regarding structural walls), and PA primary and alternate access control,

- Security Assessment, Section 6.5 and Appendix C, Internal Defensive Strategy: UniStar revisions and integration of internal relocation time lines and pathway evaluations; depth of coverage (i.e., fields of fire) based on deployment scenarios for zones of entries analyzed with external strategy.

- Security Assessment, Appendix D and PSP, Section 11.2, Vehicle Barriers and Section 11.3, Protected Area Barriers: Design and performance requirements and configurations of: the sally port; passive and active vehicle barriers; PA intrusion detection systems; Access Control Building; protection against unauthorized train; channeling barriers; and alternate PA vehicle access.

Information and Other Material Necessary for the Regulatory Audit:

NRC staff requests UniStar provide a brief overview of design of a physical protection system (as described in the Security Assessment) to meet regulatory requirements of adequate protection against the DBT of radiological sabotage. The NRC requests a table top format for overview by UniStar of bounding adversary timelines, pathways, and security responses evaluated for defense-in-depth protection for identified locations of target sets. A tour of the proposed site for the CCNPP Unit 3 is requested for the afternoon of Monday, June 28, 2010.

The NRC staff requests UniStar to provide documentation supporting the results presented in the COLA related to physical protection systems and the supporting documentation of results from a systematic approach applied to determine the standard and considerations of site specific considerations for a final target set. The NRC staff requests that supporting documentation for the conclusions and results indicated in the Security Assessment be available, including the supporting information relied on as licensing basis for adequate standoff distance for locating a vehicle barrier system.

The following types of supporting documents are requested for review at the audit:

- Design drawings (D-size if available) showing plan and elevation views of all planned defensive positions for minimum numbers identified in the PSP and overlapping fields of fire of plant areas from the PA boundary to the nuclear island and structures (e.g., designated vital areas)

- Design drawings showing locations and configurations of: active and passive vehicle barrier systems; sally port and roadway barriers; passive and active vehicle barriers; PA intrusion detection systems; Access Control Building; protection against unauthorized trains; channel barriers; and alternate protected area vehicle access; delays systems credited in adversarial time lines; PA barriers; and protected PA penetrations.

- Documentation for evaluations of postulated pathways for adversaries, including timeline calculations from the PA barriers to VA barriers, and documented and evaluated adversary timelines and task times for pathways analyzed.

- All referenced documents and calculations identified in Security Assessment and PSP submitted under Part 8 of the COL application.

Audit Team:

The following individuals will participate in the audit:

- Pete Lee, NRC, Technical Reviewer
- Robert Dexter, NRC, Technical Reviewer
- Al Garrett, Security Vulnerability Analyst, NRC Contractor (PNNL)
- Dale Nebuda, Structural Engineer, NRC Contractor (USACE)
- Bruce Mrowca, NRC Contractor (ISL)

- Steve Pope. NRC Contractor (ISL)
- Surinder Arora, NRC Project Manager

No quality assurance (DCIP) support is required for this audit. Any materials deemed to be suitable for submittal or citation will be identified for future quality assurance program audit activities.

Logistics:

The audit will be conducted at Lusby, Maryland. The audit is scheduled to begin at 9:00 a.m. June 28, 2010 and end at 5:00 p.m. on June 30, 2010. Participating individuals will meet at the audit location.

Special Requests:

Appropriate handling and protection of Safeguards Information (SGI) shall be acknowledged and implemented throughout the audit.

Deliverables:

An audit report will be generated after completion of the audit. The audit outcome will be used to identify information not currently addressed on the docket and the submittal of additional information for making security findings and regulatory decisions. The audit will inform NRC staff preparation and issuance of any physical security RAIs for the interface of US-EPR standard design and CCNPP Unit 3 technical review based on currently docketed information (e.g., Parts 2, 7, and 8, and referenced technical report) for demonstration of a high assurance of adequate protection supporting the requested combined license for CCNPP Unit 3. The audit will assist NRC staff in the preparation and issuance of RAIs for the licensing review.