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NUCLEAR ENERGY INSTITUTE

July 5, 2017

Mr. Michael E. Mayfield  
Acting Deputy Director  
Office of New Reactors  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

5/5/2017  
82 FR 21269

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**Subject:** NEI Comments on the Proposed Revision to NUREG-0800, Section 13.6.1, "Physical Security – Combined License and Operating Reactors" [Docket ID NRC-2017-0111]

**Project Number: 689**

Dear Mr. Mayfield:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)<sup>1</sup> appreciates the opportunity to provide comments on the subject Proposed Revision to NUREG-0800, Section 13.6.1, "Physical Security – Combined License and Operating Reactors." The purpose of this letter is to provide the attached comments which recommend several changes to the document.

NRC indicates that the reason for issuing this proposed revision is to incorporate changes that "reflect the current staff reviews, methods and practices based on lessons learned from the NRC's reviews of design certification and combined license applications..." The industry agrees that incorporating lessons learned in to NUREG-0800 is an important effort to ensure applicants have the necessary clarity of the regulatory process and in general the industry supports this proposed revision. The purpose of the comments provided in this letter is to recommend changes that the industry believes will improve the clarity and completeness of the document.

We appreciate the NRC staff's consideration of these comments. If you have any questions concerning this letter or the attached comments, please contact me or Thomas Zachariah (202.739.8058; [txz@nei.org](mailto:txz@nei.org)).

<sup>1</sup> The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

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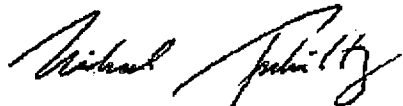
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Mr. Michael E. Mayfield

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Sincerely,



Michael D. Tschiltz

Attachment

c: Ms. Vonna L. Ordaz, NRO, NRC  
Ms. Deborah A. Jackson, NRO/DEIA, NRC  
Ms. Amy E. Cabbage, NRO/DEIA/ARPB, NRC  
Mr. William D. Reckley, NRO/DEIA/ARPB, NRC  
Mr. Mark D. Notich, NRO/DEI/NRGB, NRC  
Mr. Joseph Colaccino, NRO/DEI/NRGB, NRC  
Mr. James Anderson, NSIR/DPCP, NRC  
Ms. Cindy K. Bladey, ADM/DAS/RADB, NRC  
NRC Document Control Desk

**Industry Comments on NRC Proposed Revision to NUREG-0800, Section 13.6.1, "Physical Security – Combined License and Operating Reactors"**

Affected Section	Comment/Basis	Recommendation
1. General	There are numerous instances where the term "high assurance" appears in the document. The proposed revision does not clarify the term as compared to "reasonable assurance" consistent with SRM-SECY-16-0073 where the commission stated that "the staff should be mindful that the concept of "high assurance" of adequate protection found in our security regulations is equivalent to "reasonable assurance" when it comes to determining what level of regulation is appropriate."	The revision should clearly reference and reflect the commission direction provided in SRM-SECY-16-0073 and state that "high assurance" of adequate protection found in security regulations is equivalent to "reasonable assurance"
2. General	The document is repetitive in several areas; for example, it states in several places, and with several variations, that the review should ensure the design or application "meets the applicable performance and prescriptive regulatory requirements."	Suggest an editorial review to avoid repetition, which also should provide for making the document shorter and more efficient to implement.
3. General	"Detection, assessment, communication, and response, i.e., interdiction and neutralization of threats up to and including the design basis threat of radiological sabotage to prevent significant core damage and spent fuel sabotage" is an appropriate criterion that comports with 10 CFR 73. However, the SRP section should acknowledge the possibility that design features may effectively preclude significant core damage and spent fuel sabotage, or the dose consequences thereof, and provide guidance for how such an application may be reviewed.	<p>Incorporate guidance recognizing that design performance capabilities could obviate the requirement for onsite response capability. In lieu of the onsite response capability, rapid response of local law enforcement could be required when acceptable design performance capabilities such as the following are demonstrated:</p> <ul style="list-style-type: none"> <li>• Technology is not susceptible to significant core damage and spent fuel sabotage, or</li> <li>• Does not have achievable target set, or</li> <li>• Design features allow implementation of</li> </ul>

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		mitigation strategies to prevent significant core damage and spent fuel sabotage
4. General	In various places in the SRP section, the application is referred to by part number (e.g., Part 2 = FSAR). The part designators are not always used consistently from one application to the next, and there is no associated requirement.	To avoid confusion, eliminate discussion of application "parts," or at a minimum, refer to parts is "typically" or "e.g." (not "i.e.").
5. Sec. I, Areas for Review, section beginning with "The NRC staff's review consists of the following," item 2	Here and elsewhere, RG-1.70 is cited, but NRC staff have announced their intent to supersede RG-1.70 with a combination of revisions to NUREG-0800 and RG-1.206.	Clarify here so that an SRP revision is not required when the other guidance documents are amended.
6. Sec. I, Areas for Review, Scope of the Technical Review for Physical Security, item 2	The discussion including, "...sufficiently detailed to demonstrate how regulatory requirements for <u>procurement</u> , construction, and installation of PSS..." implies regulatory requirements associated with procurement, construction, and installation.	Clarify applicable regulatory requirement(s) or rephrase to avoid implication that there are specific requirements associated with how PSS are procured, constructed, and installed (i.e., as opposed to requirements associated with what the design does and how it is operated).
7. Sec. I, Areas for Review, Scope of the Technical Review for Physical Security, item 3	The applicability of SECY-11-0024 seems incomplete and inconsistent here, where the discussion focuses on "the level of review for a particular [SSC] is derived from both the SSC's safety importance (i.e., whether the SSC is safety-related or nonsafety-related) and risk significance," but then "[while NUREG-0800] states that the risk-informed review framework is applicable to the review of all SSCs...[i]n the case of physical security, the review	1. Clarify that consequences of deliberate acts may factor into risk-informing the review, not only in terms of the staff being open to a limited set of target sets, but also the acceptability of engineered barriers that can limit or preclude access to those target sets, and understanding that if the consequence of such deliberate acts may be such that a risk-

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	<p>framework involves performance and prescriptive regulatory requirements that do not incorporate risk significance and address protection (against deliberate acts such as radiological sabotage) and prescriptive design requirements."</p> <p>The discussion goes on to say that, instead of safety significance factoring into risk-informing the review for physical security, instead "safety significance of adequate technical review for physical security is the assurance of adequate protection against deliberate acts, which are not specifically considered or analyzed in the FSAR."</p> <p>First, the guidance seems to focus on likelihood as the sole contributor to risk, such that, because many of the physical security requirements are prescriptive, there is no opportunity to risk-inform the review. This is not correct. Limited consequences from even deliberate acts should be taken into account as part of risk-informing the review, as is the case for research and test reactors.</p> <p>Second, "safety significance of adequate technical review for physical security is the assurance of adequate protection" does not make sense and should be clarified.</p> <p>Third, "which are not specifically considered or analyzed in the FSAR" is not accurate (as they are evaluated per the requirements of 10 CFR 73.</p>	<p>informed (consequence-oriented) approach is appropriate.</p> <p>2. If reconsideration is not given to risk-informing the design and review, clarify what "safety significance of adequate technical review for physical security is the assurance of adequate protection" is intended to convey.</p> <p>3. Clarify "against deliberate acts <u>that may not be specifically considered or analyzed elsewhere in the FSAR</u>"</p>
8. Sec. I, Areas for	Regarding: "The secondary reviewers provide assurance	Replace parenthetical with: "(e.g., safety, security,

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Review, Review Interfaces, item	<p>that the interfaces are addressed when the SSC's designs, operational requirements, and management systems are intended to perform multiple functions (i.e., safety, security, environmental protection, plant infrastructures, work controls, configuration management, the corrective-action program, etc.)."</p> <p>The parenthetical list of "multiple functions" is confusing and implies all-inclusiveness.</p>	environmental protection, administrative controls, etc.)."
9. Sec. II Acceptance Criteria, Requirements, General	Many of these requirements are simply reiterations of the regulation, which in some cases adds no value but adds bulk to the document.	Where no additional information is being added to clarify or focus the specific regulatory requirement, simply cite the applicable regulation that conveys a requirement. Do not summarize a regulatory citation if no additional information or clarification is being added.
10. Sec. II Acceptance Criteria, Requirements, item 9	"10 CFR 73.55, beginning with" seems unnecessary here, as each of the applicable subsections of 73.55 is cited individually	Remove "10 CFR 73.55, beginning with"
11. Sec. II, Acceptance Criteria, SRP Acceptance Criteria, Figure 1	<p>Figure 1, "Combined License Application Referencing a Certified Design," is not labeled.</p> <p>Additionally, the figure, and the paragraph above it, misuse (and therefore confuses) the term "complete" and "completion." "Complete" in 10 CFR 52 refers to the scope of design in terms of the SSCs included in the plant design, not (as implied here) how far the design has advanced toward readiness for construction.</p>	<p>Add "Figure 1" label.</p> <p>Replace "completion" with "finalization" in figure (two places) and in preceding paragraph.</p>

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<p>12. Sec. II, Acceptance Criteria, SRP Acceptance Criteria, text following Figure 1</p>	<p>Past practice and other staff guidance makes it clear that the staff's findings are expected to be supported by audits and inspections of information maintained by the applicant and not necessarily included in the application itself. In contrast, the text beginning with "In most cases, descriptions provide by the applicant," and proceeding for the next two paragraphs, implies virtually every detail to support staff's conclusions must be included in the application, risking a continuation of the trend toward ever-increasing volume in license applications.</p> <p><i>"...descriptions provided by the applicant...that do not provide sufficient descriptions and do not illustrate or demonstrate how the engineered and administrative controls and management systems will satisfy the performance or prescriptive regulatory requirement and conform to SRP acceptance criteria will not be acceptable..."</i></p> <p><i>"...descriptions must provide a sufficient level of detail about the proposed physical security systems within the design for the Commission to determine that all applicable regulatory requirements will be met [including] details of how physical security systems will be designed, constructed, and installed and how operational requirements and management systems will be established, maintained, and implemented..."</i></p> <p><i>"...descriptions must provide sufficient details in the security plans, along with the FSAR, for the Commission to determine that all applicable regulatory requirements will</i></p>	<p>Expand on the final statement cited in the comment and clarify that review of applicant-maintained documentation is acceptable (and expected) in support of staff findings.</p>

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	<p><i>be met..."</i></p> <p><i>"...stating only that detail for how regulatory requirements will be met and will be provided in implementing procedures or can be found in implementing procedures are not acceptable [and] do not provide adequate licensing bases for findings..."</i></p> <p><i>"Although detailed procedures are not required to be submitted... the applicant [must describe] the licensing bases for how procedures will address regulatory requirements; how procedures will implement management measures and define the conduct of security operations; how those procedures will be established; how those procedures will be maintained and revised and how those revisions will be controlled."</i></p>	
<p>13. Sec. II, Acceptance Criteria, Specific SRP Acceptance Criteria, item 4</p>	<p>Recognizing it is cited directly from the regulation, Item 4.E is nonetheless out of date:</p> <p><i>The TVA Watts Bar Nuclear Plant, Unit 2, holding a current construction permit under the provisions of 10 CFR Part 50, shall meet the revised requirements in paragraphs (a) through (r), as applicable to the descriptions of physical security required to meet the requirements for a construction permit under the provision of 10 CFR Part 50 (10 CFR 73.55(a)(5)).</i></p>	<p>Clarify or delete from SRP</p>
<p>14. Sec. II, Acceptance Criteria, following "Specific SRP Acceptance Criteria," in section beginning</p>	<p>"The acceptable descriptions of designs and specifications of physical security systems in submitted COL applications is a minimum of 30 percent of a final or 100 percent of a detailed design..." is based on a subjective metric with no regulatory basis. There is no NRC guidance on what</p>	<p>Restate with objective, defined criteria</p>



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with "Here is the technical rationale for the application of these acceptance criteria," item 4	constitutes or defines "final design" or "detailed design."	
15. Sec. II, Acceptance Criteria, following "Specific SRP Acceptance Criteria," in section beginning with "The following factors are in the staff's generic review," items 3 and 4	The item 3 statement, "The reviewer should evaluate only information that has been submitted by the applicant or licensee on the docket," is incorrect and has no regulatory basis. Coupled with the statement in item 4, "The review of design descriptions includes drawings (plan and section views), line and block diagrams, system and component schematics, system locations and configurations, performance specifications for material and structural construction, specifications for performance, and intended security functions," implies a breathtaking level of detail required in the application or otherwise docketed. The increase in level of detail expectations as part of the application, or in docketed submittals that accompany the application, has resulted in the purported obligation for applicants to submit hundreds of thousands of pages of information, in contrast to past practice and staff guidance indicating that review of information <u>maintained by the applicant</u> is acceptable and expected. Recent claims by the staff that information "must be on the docket in order to be relied upon," based in large part by staff's fears of having to defend findings before the ACRS and/or ASLB, are resulting in excessive and undue regulatory burden.	This sort of guidance conveys the staff's mistaken belief that no information can be relied upon unless on the docket. The time has long since passed that NRC senior management and the Commission must take up this matter and resolve the "level of detail" issue, balancing the need for transparency in review with the need for regulatory efficiency.  Clarify this guidance to make it unambiguous that staff are expected to review information maintained by the applicant and may rely on findings reached during such reviews.
16. Page 19, Section 4.E	This paragraph discusses security requirements during construction of Watts Bar 2. That unit is now operating.	Remove this paragraph.

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17. Page 21, Section 5.B.(ii).b	Editorial- Double period at the end of this paragraph.	Remove second period.
18. Page 29, Section 11.D	Editorial- "excepted" appears, where it should be "exempted"	Replace "excepted" with "exempted".
19. Page 39, Section 7	Editorial- Double period and extra space at the end of the second to last sentence.	Remove second period and extra space.
20. Page 61, Section 17	Editorial- Struck-out words remains in text.	Remove struck-out words.