## LeeRAIsPEm Resource

**From:** Hughes, Brian
**Sent:** Wednesday, November 18, 2009 3:58 PM
**To:** LeeRAIsPEm Resource
**Subject:** LEE-RAI-LTR-078(1) RELATED TO SRP 13.6 PHYSICAL SECURITY FOR THE W.S. LEE UNITS 2 & 3 COLA ( Corrected TYPO to change Q 13.06.2 to 13.06.23)
**Attachments:** LEE-RAI-LTR-078(1).doc

**Hearing Identifier:** Lee_COL_RAI
**Email Number:** 107

**Mail Envelope Properties** (3D388D66E29B124A910BAC867C3A359D3F2435E472)

**Subject:** LEE-RAI-LTR-078(1) RELATED TO SRP 13.6 PHYSICAL SECURITY FOR THE W.S. LEE UNITS 2 & 3 COLA ( Corrected TYPO to change Q 13.06.2 to 13.06.23)
**Sent Date:** 11/18/2009 3:57:41 PM
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**From:** Hughes, Brian

**Created By:** Brian.Hughes@nrc.gov

**Recipients:**
"LeeRAIsPEm Resource" <LeeRAIsPEm.Resource@nrc.gov>
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**Return Notification:** No
**Reply Requested:** No
**Sensitivity:** Normal
**Expiration Date:**
**Recipients Received:**

October 6, 2009

Mr. Peter S. Hastings, P.E.
Licensing Manager, Nuclear Plant Development
Duke Energy
526 South Church Street
Charlotte, NC 28201-1006

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 078 RELATED TO SRP SECTION: 13.6 PHYSICAL SECURITY FOR THE WILLIAM STATES LEE III UNITS 1 AND 2 COMBINED LICENSE APPLICATION

Dear Mr. Hastings:

By letter dated December 12, 2007, as supplemented by letters dated January 28, 2008, February 6, 2008 and February 8, 2008, Duke Energy submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advance passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-6582.

Sincerely,

/**RA**/

Brian Hughes, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-018
52-019

Enclosure:
Request for Additional Information

CC: see next page

P.Hastings

If you have any questions or comments concerning this matter, you may contact me at 301-415-6582.

Sincerely,

/**RA**/

Brian Hughes, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-018
52-019

eRAI Tracking No. 3529,3530,3531,3534,3535

Enclosure:
Request for Additional Information

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| OFFICE | NSIR/DRP/RSLB | NSIR/DRP/RSLB/BC | OGC | NWE1/L-PM |
|---|---|---|---|---|
| NAME | DGordon* | DHuyck* | MSpencer* | BHughes* |
| DATE | 08/13/2009 | 08/15/2009 | 09/01/2009 | 10/06/2009 |

*Approval captured electronically in the electronic RAI system.

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**Request for Additional Information No. 3529**

**10/5/2009**

**William States Lee III, Units 1 and 2**
**Duke Energy Carolinas, LLC**
**Docket No. 52-018 and 52-019**
**SRP Section: 13.06 - Physical Security**
**Application Section: 13.6**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-23

Physical Security Plan, Page 5, Section 4.1, 6th paragraph. Please clarify whether the Response Team Leader is armed. The 1st sentence does not include the term "armed" in the title of Response Team Leader, however, the second sentence includes the term "armed" prior to the title Response Team Leader. As appropriate, please address this inconsistency in the Critical Task Matrix inthe site Contingency Plan.

Regulatory Basis.

10 CFR 73.55(c)(7)(ii). "Implementing procedures must document the structure of the security organization and detail the types of duties, responsibilities, actions, and decisions to be performed or made by each position of the security organization."10 CFR 73.55(i)(4)(ii)(B). Continuously staff each alarm station with at least one trained and qualified alarm station operator. The alarm station operator must not be assigned otherduties or responsibilities which would interfere with the ability to execute the functions described in § 73.55(i)(4)(i) of this section.

**Request for Additional Information No. 3530**

**10/5/2009**

**William States Lee III, Units 1 and 2**
**Duke Energy Carolinas, LLC**
**Docket No. 52-018 and 52-019**
**SRP Section: 13.06 - Physical Security**
**Application Section: 13.6**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-20

Physical Security Plan, Page 10, Section 11.2. Please clarify the design and components of the VBS. The 2nd sentence states that the VBS is a "single" passive system; the 3rd sentence begins with the phrase "passive portions." Section 11.2.2 appears to address active barriers. Verify that only one VBS

is used and that this VBS is comprised of both passive and active barriers for protection against the DBT vehicle bomb. In addition, please clarify, if the "steep terrain" addressed in this section is the only natural terrain feature determined to satisfy NRC criteria for use as a VBS component. Please discuss whether soil composition, trees, rocks, or other features were considered along with the steep terrain to conclude that this natural terrain feature is sufficient. This paragraph describes the moat as a man-made feature, but the last sentence states that the moat was designed in accordance with NUREG/CR-4250, "Vehicle Barriers: Emphasis on Natural Features." Describe what applicable NRCguidance (e.g. RIS 2008-06 "Protection Against The Malevolent Use Of Vehicles When Utilizing Landform Obstacles" , PDC-TR-06-05 "Evaluating Adequacy of Landform Obstacles as Vehicle Barriers" (dated August 2007), RG 5.68,NUREG/CR 6190, NUREG/CR-4250) was considered for this portion of the VBS, as well as the remaining portions of the VBS described in section 11.2.2 of the PSP.

Further, please clarify the function of the W-beam guardrail and how the South Carolina Department of Transportation specification for the W-Beam guardrail system meets NRC criteria for either a VBS or Channeling Barriers. Please describe whether the combination of the guardrail, moat, and fence constitute theVBS, or if each component serves a unique function.

Regulatory Basis.10 CFR 73.55(e)(1)(ii). Describe in the security plan, physical barriers, barrier systems, and their functions within the physical protection program.

10 CFR 73.55(e)(2). The licensee shall retain, in accordance with §73.70, all analyses and descriptions of the physical barriers and barrier systems used to satisfy the requirements ofthis section, and shall protect these records in accordance with the requirements of § 73.21.

13.06-21

Physical Security Plan, Page 11, Section 11.2.2.
Please clarify what is meant by term "strategically" within the boundaries of the OCA. Verify that the VBS is located exterior to the Isolation zone and reference the criteria used to determine the minimum stand-off distance required for protection against the DBT vehicle bomb. Please clarify the function performed by the "OCA Checkpoint" identified in your Contingency Plan, Page C-26, Section 8.

Regulatory Basis.

10 CFR 73.55(e)(10)(i)(A). Licensees shall: "Design, construct, install, and maintain avehicle barrier system, to include passive and active barriers, at a stand-off distance adequate to protect personnel, equipment, and systems necessary to prevent significantcore damage and spent fuel sabotage against the effects of the design basis threat ofradiological sabotage land vehicle bomb assault."

> 10 CFR 73.55(e)(1)(ii). Describe in the security plan, physical barriers, barrier systems,and their functions within the physical protection program.

13.06-22

Physical Security Plan, Page 12, Section 11.2.3.
Please describe the criteria used to determine that the stand-off distance from waterways meets NRC requirements. Please include a discussion of whether the analysis considers distance that the DBT watercraft can travel from the water and over-land based on size, weight, and velocity as it pertains to ensuring the adequate stand-off distance is maintained for protection against the DBT waterborne vehicle bomb.

Regulatory Basis.

10 CFR 73.55(e)(10). Consistent with the physical protection program design requirements of 73.55(b), and in accordance with the site-specific analysis, the licensees shall establish and maintain vehicle control measures, as necessary, to protect against the design basis threat of radiological sabotage vehicle bomb assault."

**Request for Additional Information No. 3531**
**10/5/2009**

**William States Lee III, Units 1 and 2**
**Duke Energy Carolinas, LLC**
**Docket No. 52-018 and 52-019**
**SRP Section: 13.06 - Physical Security**
**Application Section: 13.6**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-17

Physical Security Plan, Page 13, Section 11.3.
Describe the physical protection measures to be implemented at the PAP, to include windows, to ensure NRC requirements for detection, assessment, and response are met.

Regulatory Basis.

10 CFR 73.55(e)(8)(iv). Where building walls or roofs comprise a portion of the protected area perimeter barrier, an isolation zone is not necessary provided that the detection and, assessment requirements of this section are met, appropriate barriers are installed, and the area is described in the security plans.

13.06-18

Physical Security Plan, Page 13, Section 11.3 does not appear to describe the types of measures taken for protection against unauthorized access by train and the methodology chosen to provide periodic surveillance of these measures. Generally describe the measures to be taken and/or the general circumstances under which any one of the required measures may be used.

Regulatory Basis.
10 CFR 73.55(e)(10)(i)(D). Where a site has rail access to the protected area, install a train derailer, remove a section of track, or restrict access to railroad sidings and provide periodic surveillance of these measures.

13.06-19

Physical Security Plan, Page 13, Section 11.3. Please clarify whether the subterranean penetrations and underground pathways discussed in this section are the same or unique to one another. Also, verify that the physical protection measures described in the 1st paragraph for underground pathways are applicable to subterranean penetrations or describe what measures will be applied at these locations.

Regulatory Basis.
10 CFR 73.55(e)(8)(ii). Penetrations through the protected area barrier must be secured and monitored in a manner that prevents or delays, and detects the exploitation of any penetration.

**Request for Additional Information No. 3534**
**10/5/2009**

**William States Lee III, Units 1 and 2**
**Duke Energy Carolinas, LLC**
**Docket No. 52-018 and 52-019**
**SRP Section: 13.06 - Physical Security**
**Application Section: 13.6**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-15

The Physical Security Plan, Page 17, Section 14.1 contains a commitment to adopting Regulatory Guide 5.66. Section C in revision 1 of RG 5.66 states:" Licensees who adopt this regulatory guide should include the following statement in their physical security plans: All elements of Regulatory Guide 5.66, Revision 1, have been implemented to satisfy the requirements of 10 CFR 73.56 and 10 CFR Part 26 related to unescorted access and unescorted access authorization."

The PSP does not appear to contain the above statement. Please provide this additional information, or justify its exclusion.

Regulatory Basis: 10 CFR 73.55(b) (7) The licensee shall establish, maintain, and implement an access authorization program in accordance with § 73.56 and shall describe the program in the Physical Security Plan.

13.06-16

Physical Security Plan, Page 19, Section 14.4.1. Clarify/justify the intent of setting a PA vehicle search criteria (minimum explosive weight) in excess of that discussed in RG 5.69 for hand-carried explosive amounts. The explosive amounts discussed in RG 5.69 are intended to provide a standard foruse by licensees when performing site-specific analyses and/or force-on-force testing, and are notapplicable to PA vehicle search criteria. 10 CFR 73.55(h)(1) requires all personnel, vehicles, and materials to the search process prior to granting access to the PA to detect, deter, and prevent the introduction of firearms, explosives, incendiary devices, or otheritems which could be used to commit radiological sabotage. The establishment of a minimum explosive amount for PA vehicle searches is contrary to 10 CFR 73.55(h)(1). Please provide additionalclarification and justification for this search criterion.

Regulatory Basis.

10 CFR 73.55(h)(1). The objective of the search program is to detect, deter, and prevent the introduction of firearms, explosives, incendiary devices, or other items which could beused to commit radiological sabotage.

**Request for Additional Information No. 3535**
**10/5/2009**

**William States Lee III, Units 1 and 2**
**Duke Energy Carolinas, LLC**
**Docket No. 52-018 and 52-019**
**SRP Section: 13.06 - Physical Security**
**Application Section: 13.6**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-12

Physical Security Plan, Page 22, Section 14.4.5 "Personnel Portals." Clarify the need for procedural details regarding response to an "advisory" alarm annunciation at the PAP as a result of a number of failed attempts at a hand geometry/badge reader. If these details are retained, delete the phrase "if necessary" for consistency with 10 CFR 73.55(k)(8). Clarify whether the individual causingan alarm can gain unescorted access to the PA "prior to or after" the cause of the alarm is determined, the identity and access authorization of the individual is positively verified, andthe card reader is determined to be operating as intended or must be taken out-of-servicefor repair.

Regulatory Basis.

10 CFR 73.55(g)(6)(ii)(A). Identification badges may be removed from the protected area only when measures are in place to confirm the true identity and authorization for unescorted access of the badge holder before allowing unescorted access to the protected area.

10 CFR 73.55(k)(8). "... Upon receipt of an alarm or other indication of a threat, the licensee shall: (i) Determine the existence and level of a threat in accordance with pre-established assessment methodologies and procedures.

10 CFR 73.55(g)(1)(i)(E). Assign an individual the responsibility for the last access control function (controlling admission to the protected area) and isolate the individual within a bullet-resisting structure to assure the ability of the individual to respond or summon assistance.

13.06-13

Physical Security Plan, Page 22, Section 14.4.5, "Personnel Portals". Please clarify, by position title, who is authorized to lock and/or unlock the turnstiles during normal operations, upon power failure, and/or during an emergency. Please describe the criteria that will be used to determinewhen a turnstile can be unlocked during an emergency and/or after the action has beentaken to lock the turnstile.

Regulatory Basis.
10 CFR 73.55(g)(1)(i)(E). Assign an individual the responsibility for the last access controlfunction (controlling admission to the protected area) and isolate the individual within abullet-resisting structure to assure the ability of the individual to respond or summonassistance.

13.06-14

Physical Security Plan, Page 22, Section 14.4.5, "Vehicle Portals". Please clarify the role of the individual assigned the responsibility for the last access control function if the "final" accesscontrol of personnel is completed through hand geometry and card readers.

Regulatory Basis.

10 CFR 73.55(g)(1)(i)(E). Assign an individual the responsibility for the last access control function (controlling admission to the protected area) and isolate the individual within abullet-resisting structure to assure the ability of the individual to respond or summon assistance.