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U.S. Nuclear Regulatory Commission  
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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3  
ITAAC Closure Notification on Completion of ITAAC 2.6.05.02ii [Index Number 629]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.6.05.02ii [Index Number 629]. This ITAAC verified that the Lighting system (ELS) has six groups of emergency lighting fixtures located in the Main Control Room (MCR) and at the Remote Shutdown Workstation (RSW) with each group powered by one of the Class 1E inverters, the ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR with each group being powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division). Testing was performed on the MCR and RSW lighting to verify that the normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW, and the emergency lighting can provide 10 foot candles at the safety panel and at the workstations in the MCR and at the RSW.

The closure process for this ITAAC is based on the guidance described in NEI-08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52" which is endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

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Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3  
Completion of ITAAC 2.6.05.02ii [Index Number 629]

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**Southern Nuclear Operating Company  
ND-22-0384  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3  
Completion of ITAAC 2.6.05.02ii [Index Number 629]**

## **ITAAC Statement**

### **Design Commitment**

2. The ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. Each group is powered by one of the Class1E inverters. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR. Each group is powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division).

5. The normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW.

6. The emergency lighting can provide 10 foot candles at the safety panel and at the workstations in the MCR and at the RSW.

### **Inspections, Tests, Analyses**

- i) Inspection of the as-built system will be performed.
- ii) Testing of the as-built system will be performed using one Class 1E inverter at a time.
- i) Testing of the as-built normal lighting in the MCR will be performed.
- ii) Testing of the as-built normal lighting at the RSW will be performed.
- i) Testing of the as-built emergency lighting in the MCR will be performed.
- ii) Testing of the as-built emergency lighting at the RSW will be performed.

### **Acceptance Criteria**

- i) The as-built ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR.
- ii) Each of the six as-built emergency lighting groups is supplied power from its respective Class 1E inverter and each of the four as-built panel lighting groups is supplied power from its respective Class 1E inverter.
- i) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the MCR provides at least 50 foot candles at the safety panel and at the workstations.
- ii) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the RSW provides at least 50 foot candles at the safety panel and at the workstations.



i) When adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting in the MCR provides at least 10 foot candles at the safety panel and at the workstations.

ii) When adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting provides at least 10 foot candles at the RSW.

### **ITAAC Determination Basis**

Multiple testing activities were performed to demonstrate the Lighting System (ELS) has six groups of emergency lighting fixtures located in the Main Control Room (MCR) and at the Remote Shutdown Workstation (RSW) with each group being powered by one of the Class 1E inverters, the ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR with each group being powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division), the normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW, and the emergency lighting can provide 10 foot candles at the safety panel and at the workstations in the MCR and at the RSW. The subject ITAAC requires inspections of the as-built ELS, testing of the as-built ELS using one Class 1E inverter at a time, testing of the as-built normal lighting in the MCR and RSW, and testing of the as-built emergency lighting in the MCR and RSW.

i) The as-built ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR.

The ELS in the MCR and RSW were inspected in accordance with ND-RA-001-012 (Reference 2). The results of the inspection are included in the Unit 3 ITAAC Technical Report SV3-ELS-ITR-800629 (Reference 1) and confirm that the as-built ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW and the ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR.

ii) Each of the six as-built emergency lighting groups is supplied power from its respective Class 1E inverter and each of the four as-built panel lighting groups is supplied power from its respective Class 1E inverter.

The six groups of emergency lighting fixtures located in the MCR and at the RSW, and the four groups of panel lighting fixtures located on or near the safety panels in the MCR, were tested as documented in References 1 and 3. These fixtures are supplied power from their respective Class 1E inverter through the respective Class 1E distribution panel.

Testing to verify that each of the six as-built emergency lighting groups is supplied power from its respective Class 1E inverter and each of the four as-built panel lighting groups is supplied power from its respective Class 1E inverter was performed in two parts. First, testing documented in Reference 3 verified that the respective Class 1E inverter supplies power to the respective distribution panel through a load bank test. Next, testing documented in Reference 1 verified that the respective distribution panel supplies power to each group of emergency and panel lighting fixtures by de-energizing and re-energizing the group from the lighting panel breaker in the distribution panel and verifying that each lighting fixture in the respective group turns off and on.

The test results are included in References 1 and 3 and confirm that each of the six as-built emergency light groups is supplied power from its respective Class 1E inverter and each of the four as-built panel lighting groups is supplied power from its respective Class 1E inverter.

i) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the MCR provides at least 50 foot candles at the safety panel and at the workstations.

The illumination levels of the normal lighting in the MCR were measured in accordance with testing documented in Reference 1. The testing was performed with all lighting fixtures powered from the main ac power source with the dimmer control set for maximum illumination, all large screen displays off, and all lighting in adjacent rooms with windows to the MCR off. The illumination levels at the safety panel and the workstations were measured with a light meter. The test results are included in Reference 1 and confirm that when adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the MCR provides at least 50 foot candles at the safety panel and at the workstations.

ii) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the RSW provides at least 50 foot candles at the safety panel and at the workstations.

The illumination levels of the normal lighting in the RSW were measured in accordance with the testing documented in Reference 1. The testing was performed with all lighting fixtures powered from the main ac power source with the dimmer control set for maximum illumination. The illumination levels at the safety panel and the workstations were measured with a light meter. The test results are included in Reference 1 and confirm that when adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the RSW provides at least 50 foot candles at the safety panel and at the workstations.

i) When adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting in the MCR provides at least 10 foot candles at the safety panel and at the workstations.

The illumination levels of the emergency lighting in the MCR were measured in accordance with the testing documented in Reference 1. Testing was performed with the normal power isolated at the main breaker of each lighting panel, all lighting fixtures powered from the Class 1E inverters, the dimmer control set for maximum illumination, all large screen displays off, and all lighting in adjacent rooms with windows to the MCR off. The illumination levels at the safety panel and the workstations were measured with a light meter. The test results are included in Reference 1 and confirm that when adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting in the MCR provides 10 foot candles at the safety panel and at the workstations.

ii) When adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting provides at least 10 foot candles at the RSW.

The illumination levels of the emergency lighting in the MCR and at the RSW are measured in accordance with the testing documented in Reference 1. Testing was performed with the normal power isolated at the main breaker of each lighting panel, all lighting fixtures powered from the Class 1E inverters, and the dimmer control set for maximum illumination. The illumination levels



at the safety panel and the workstations are measured with a light meter. The test results are included in Reference 1 and confirm that when adjusted for maximum illumination and powered by the six Class 1E inverters, the emergency lighting can provide 10 foot candles at the RSW.

References 1 and 3 are available for NRC review, as well as the Unit 3 ITAAC 2.6.05.02ii Completion Package (Reference 4).

#### **ITAAC Finding Review**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings and associated corrective actions. This review found no relevant ITAAC findings associated with this ITAAC. This review found no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package (Reference 4) and is available for NRC review.

#### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.6.05.02ii was performed for VEGP Unit 3 and that the prescribed acceptance criteria are met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

#### **References (available for NRC inspection)**

1. SV3-ELS-ITR-800629 Rev 0, "ELS MCR Lighting Fixtures Inverter: ITAAC 2.6.05.02ii"
2. ND-RA-001-012, "Functional Arrangement Scoping Process"
3. SV3-IDS-ITR-800601, "Unit 3 IDS Class 1E Equipment Signaled from Assigned Division: ITAAC 2.6.03.04a"
4. 2.6.03.04a-U3-CP-Rev0, "ITAAC Completion Package"